Citywide Stormwater Master Plan Report

Prepared for

The City of Ottawa, Kansas

June 2007

9400 Ward Parkway
Kansas City, Missouri, 64114
Project: 37431

Citywide Stormwater Master Plan Report

June 26, 2007

Mr. Andy Haney
Director of Public Works
City of Ottawa
101 S. Hickory
Ottawa, Kansas 66067-2347

City of Ottawa, Kansas
Stormwater Master Plan
Final Report Submittal
37431-1.01

Dear Mr. Haney:

Burns & McDonnell Engineering Company is pleased to present the final ***Stormwater Master Plan*** for the City of Ottawa, Kansas. The study sets forth our analysis of the performance capabilities of the existing storm drainage system and our recommendations for improvements to the existing facilities. Enclosed for your use and distribution are six (6) copies of the report which contains the narrative text, exhibits and data summaries.

It has been our pleasure working with you and your staff in the completion of this report, and we appreciate the opportunity to be of future service to the City. We trust this report will be of continuing value to the City in you stormwater management activities. If you have any questions, please feel free to contact us at (816)822-3214.

Sincerely,

Leon J. Staab, P.E.
Project Manager

enclosures

9400 Ward Parkway
Kansas City, Missouri 64114-3319
Tel: 816 333-9400
Fax: 816 333-3690
www.burnsmcd.com

Stormwater Master Plan

prepared for

City of Ottawa, Kansas

June 2007

Project No. 37431

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri

With subconsultants

Shockey Consulting Services
Lenexa, Kansas

Taylor Design Group
Ottawa, Kansas

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INDEX AND CERTIFICATION

Stormwater Master Plan
City of Ottawa, Kansas

Project 37431

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Certification

I hereby certify, as a Professional Engineer in the state of Kansas, that the information in the document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the City of Ottawa, Kansas or others without specific verification or adaptation by the Engineer.

_____
Leon J. Staab, PE (KS 13580)
Date:_____
(Reproductions are not valid unless signed, dated, and embossed with Engineer's seal)

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Executive Summary

EXECUTIVE SUMMARY

GENERAL INFORMATION

This Executive Summary presents a condensed discussion of the Stormwater Master Plan authorized by the City of Ottawa in an Agreement for Engineering Services dated September 2, 2004.

The following sections of this report, accompanied by the watershed mapping, computer models and exhibits comprise the detailed report and supporting information of the watershed's major drainage systems.

Services performed by Burns & McDonnell Engineering Company of Kansas City, Missouri to complete the study included, but were not limited to, the following tasks:

- Assembling, reviewing and organizing pertinent existing mapping, records, reports, criteria and floodplain studies available from the City, other agencies and sources.
- Completion of field surveys and investigation of the primary conveyance system including culvert and bridge structures; inlet structures; pipes, arches and culverts equal to or greater than 24 inches in diameter; and major channels.
- Preparation of the hydrologic analysis including watershed and subwatershed delineation; existing conditions analysis; verification of peak flows; and the future conditions analysis.
- Preparation of the hydraulic model including existing conditions modeling; model calibration; and future conditions modeling.
- Development of system improvements and management programs.
- Completion of Engineer's Opinion of Probable Project Costs for the proposed capital improvements.

RECOMMENDED SYSTEM IMPROVEMENTS

Project 1 - Industrial Park Improvements (Priority Rating 1)

As shown on **Figure 6.3**, storm drainage in the Industrial Park area generally runs along North Street. The channel generally flows from east to west and makes several road and railroad crossings. Results of the study indicate that several houses at the intersection of North Street and Mulberry Street are have potential to flood, though flooding has never been reported. However, modeling results are not

substantiated with actual observation of flooding. To lessen the potential of localized flooding, the 100-year water surface elevation could be reduced to approximately 902 feet.

There are three structures located downstream of the intersection of North Street and Mulberry Street: the Burlington Northern and Santa Fe (BNSF) Railway culverts, the U.S. Highway 59 culverts, and the Midland Railway Line bridge. Modeling suggests that two of these three existing structures contribute excessive backwater elevations at the intersection of North Street and Mulberry Street. The first of these is the two culverts below the Burlington Northern and Santa Fe (BNSF) Railway. The model indicates that these culverts are slightly undersized, but also that the flow through them is fairly shallow. The second problem occurs where the channel flows under the Midland Railway line. This bridge may be too small to convey the necessary flows and excessive backwater could be created. This backwater migrates upstream to a culvert under the BNSF railroad and reduces its capacity.

Several options were considered including replacing structures, upstream detention, and channel improvements. The opinion of probable cost for this project is based on boring or jacking five 60-inch reinforced concrete pipes under the BNSF Railroad. This solution proved to be the minimum to remove the intersection of Mulberry Street and North Street (and the houses immediately south of the intersection) from the 100-year floodplain.

Project 2 - N. Oak and Dundee Street Improvements (Priority Rating 15)

A new ditch and enclosed storm sewer system could be constructed from Dundee Street to the south edge of the Kalmar Industries parking lot (see **Figure 6.4**). The project would require the realignment of the existing channel from Dundee Street to the Kalmar Industries parking lot. Modeling suggests that this channel would need to have an 8-foot bottom width with 4:1 side slopes. A new inlet would collect surface drainage and convey it to a new enclosed storm sewer below the parking lot. An inlet would be added along the northeast side of the lot to collect surface flow and to allow for a directional change in the sewer. The enclosed system would consist of approximately 520 feet of 30-inch RCP. Once beyond the limits of the parking lot, the enclosed system would discharge into the existing ditch which would need to be improved to a 4-foot flat bottom ditch with 4:1 side slopes. To obtain the necessary channel and pipe slopes, a portion of the railroad ditch would also need to be improved and a constant grade between the sewer outfall and the railroad culvert may be required.

At the time of this study, Kalmar Industries is addressing these stormwater issues as they make plans to expand their facility. According to the City, the initial plans somewhat conflict with the recommendations of this report. The recommendations of this report present one solution to the problem

and were made without the knowledge the proposed improvements to the site. Kalmar Industries will likely propose a solution tailored to their expansion.

Project 3 - N. Hickory and Poplar Street System Improvements (Priority Rating 5)

As shown on **Figure 6.5**, the recommended improvements for this project involve the removal and replacement of the existing system that is bounded by Hickory Street on the west; Blackhawk Street on the north; Mulberry Street on the east; and Keokuk Street on the south. As reported by City staff and corroborated by modeling results, the existing storm sewer system does not have the capacity to meet current design requirements. As a result, localized flooding of street and houses could be expected. At one location near the intersection of Logan and Hickory, a house was constructed directly over the drainage channel. **Figure 6.5** shows the proposed new system. The proposed alignment is generally identical to the existing system. One exception is at the downstream end where the system was moved away from the existing houses. Also shown on Figure 6-5 are four properties along the east side of Hickory Street that have been constructed in a topographical depression. Construction of capital improvements to completely remove those structures from the floodplain may be cost prohibitive. The City may want to consider the option of property buyout in lieu of or in addition to the recommended improvements to the system.

Project 4 - Concrete Lined Channel (K-68, Beech to Willow) (Priority Rating 14)

The City maintains two roadside ditches on the south side of U.S. Highway 68 between Beech and Willow Street (see **Figure 6.6**). While modeling does not suggest capacity problems with either ditch, City Staff reported difficulties maintaining these ditches. Specifically, the ditches fill with trash and sediment and water often ponds at these locations. To alleviate these maintenance issues, the ditches could be lined with concrete to facilitate positive drainage and to eliminate ponding water.

The City also identified the pumping station at Willow Street as having insufficient capacity. When capacity is exceeded, the drainage system backs up into the ditch and silt and debris is deposited. City Staff suggests that the issue could also be resolved by elevating the swag in 2nd Street, increasing the ponding area downstream by acquiring private properties on the north side of the road bed, or increasing pumping capacity at the Willow Street pump station.

Project 5 - Ash and Willow Street Improvements (Priority Rating 7)

The existing system generally running in an alley between Ash and Willow Street was determined to be undersized during the system performance analysis (see **Figure 6.7**). The City stated that this was an older system and concurred with modeling results that this was an area prone to flooding.

Currently, drainage is conveyed through a series of 24-inch reinforced concrete pipes at the upstream end and then discharged into an open channel system consisting of ditches and culverts beneath approaches. From aerial topography and contours, there does not appear to be sufficient space for the replacement of open channels and culverts. Therefore, it was concluded that to convey the desired level of service the existing system would have to be completely converted to an enclosed system with increased pipe sizes.

At the outfall of the enclosed system, it will also be necessary to lower the existing channel invert approximately 4 feet so that the proposed improvements could be tied into the existing downstream system. This would allow upstream components a minimum cover of 2 feet and sufficient slopes on pipes to allow the conveyance of 10-year flows.

Project 6 - Skunk Run Improvements (Priority Rating 6)

During low flows in the Marais Des Cygne River, runoff from Skunk Run is detained in a ponding area near the levee and then conveyed to the Marais Des Cygnes River by gravity through a 10-foot x 10-foot RCB culvert. When stages in the Marais Des Cygnes exceed an elevation of 885.00 feet, the storage pond is emptied by pumping. Urbanization of the Skunk Run Watershed may have caused a decrease in the level of services afforded by the existing outfall system. The capacity of the detention pond and/or the capacity of the pumps may no longer be sufficient to adequately convey flows over the levee.

As shown on **Figure 6.8**, a maximum ponding elevation of 885.00 feet is desired so that the surrounding houses are not inundated by the water stored in the ponding area. To accomplish this goal, additional storage and/or additional pumping capacity may need to be added to the system.

Project 7 - Country Club Lake Principal Spillway (Priority Rating 10)

As flows exceed the storage capacity of the Country Club Lake, overflow is carried through the emergency spillway to a grate inlet located between the lake and Kansas Highway 68. Flows are collected and then conveyed through a 10.5-foot x 10.5-foot RCB culvert located beneath Logan Street (see **Figure 6.9**). The City has reported trash and debris collecting at this grate inlet which results in ponding at this location and possible overtopping of Kansas Highway 68.

Currently, no principal spillway exists on the lake to control the discharge from small storm events. One solution to the problem would be to add a principal spillway to better regulate discharges. The principal spillway would consist of a riser pipe and trash rack. Normal discharges from the lake would be conveyed directly from the lake to the 10.5-foot x 10.5-foot RCB under Highway 68. Trash and debris would be collected in the lake rather than in the roadside ditch.

Project 8 - Expanding Detention for Visitor Center (Priority Rating 11)

According to the City's Comprehensive Plan 2003, it is anticipated that the Visitor Center Watershed north of Kansas Highway 68 will see growth in commercial, industrial and residential developments. Left unregulated, development would likely increase peak runoff rates. Over time, the existing infrastructure would provide a lower level of service than originally designed and an increase of downstream flooding occurrences could be realized.

Stormwater detention is considered an ideal Best Management Practice in developing watersheds. As shown on **Figure 6.10**, the Visitor Center Watershed has four locations where detention currently exists. Existing basins appear to be used for agriculture purposes, and some work may need to be performed to improve embankments or increase storage capacity.

City staff has also noted potential plans for new park land in the Visitor Center Watershed. These two proposed regional detention basins would provide an excellent opportunity for a park with water features. The proposed basins could be designed for wet detention and could provide both stormwater management and recreational uses. In addition, it is also recommended to reserve the space needed for detention (and park land) in the immediate future. This might be accomplished by revising the City's Comprehensive Plan. The areas to be reserved are currently with "Industrial" land uses. They could be changed to "Park/Open Space" as a reminder to City planners.

Project 9 - Kansas Highway 68 Culverts (Priority Rating 12)

Future development is expected in the northern portion of the Visitor Center watershed. The purpose of Project 9 was to analyze the two existing 6.8-foot x 4-foot reinforced box culverts located at Kansas Highway 68 to determine if the culvert capacity was adequate to convey future flows (see **Figure 6.11**).

Modeling predicts that future development of the watershed will have a significant impact on the level of service provided by the existing culverts (without the benefits associated with Project 8). For existing conditions, the culverts have the capacity to convey the 25-year event without overtopping the roadway. As the watershed develops, peak discharges may increase and the same 25-year rainfall event may overtop the roadway by 15 cfs or by approximately 0.15 feet.

Because the road is a state highway, a 50-year level of service may be desired of the culverts. For future conditions, 67 cfs of overtopping is predicted if not regulation occurs as the watershed becomes fully urbanized. To improve the level of service to meet future needs, the existing culverts could be replaced with two 9-foot x 4-foot reinforced box culverts. However, replacement of these existing culverts may not be necessary. There is manageable increase in peak flow rates for future conditions. If development

is regulated correctly, then stormwater runoff under future conditions could be equal to or even less than currently observed. If Project 8 was undertaken, it is probable that the predicted overtopping of the roadway could be eliminated with upstream detention.

Project 10 - S. Oak and Poplar Street System Replacement (Priority Rating 4)

Modeling results and confirmation from the City indicate that the current pipe capacities between Oak Street and Poplar Street are not adequate to convey the 10-year event. In addition, portions of the existing sewer may not have sufficient cover. At some locations, the top of the pipe is at the surface of the alley.

As shown on **Figure 6.12**, the recommended improvement for this project is the removal and replacement of the existing system from Fifth Street to Ninth Street. Pipe sizes should be increased and the depth of cover over the pipe increased.

Project 11 - Osage Drive Channel Improvements (Priority Rating 9)

Runoff originating south of 17th Street is conveyed in a natural channel along Osage Drive to 15th Street and from there conveyed through pipes to an open channel (see **Figure 6.13**). City staff has reported problems with the condition and capacity of this section. Problems associated with this channel and downstream pipes are likely to worsen as development occurs south of 17th Street.

Approximately 1,300 linear feet of channel improvements are recommended for this section. These improvements would consist of a 10-foot wide flat bottom ditch with 12:1 side slopes. To provide a level of service for the 10-year storm event, the concrete lining would need to be at least 3 feet deep.

It is also recommended that downstream pipe capacity be increased to three 24-inch concrete arch pipes to convey flows beneath Osage Drive and 15th Street.

Project 12 – Eisenhower Road Improvements (Priority Rating 3)

Overtopping of Eisenhower Road north of 23rd Street (see **Figure 6.14**) has been reported by City Staff. Water on the road was observed in June 2005 after heavy rainfall. City Staff believes that the overtopping flows were not caused by an event on Nugent Creek. Rather, runoff originating from the adjacent fields west of Eisenhower collects in the road side ditch on the west side of Eisenhower, which does not have sufficient capacity. Elevation data developed by City Staff suggests that the average available slope in the road side ditches is less than 0.5 percent. The elevation data also suggests that given the nearly flat slope, the ditches do not always maintain a uniform, downward slope.

During the course of this study, it was learned that the City has plans to grade the ditches to increase conveyance capacity. In addition to grading, one culvert serving a private access road will be improved. The existing culvert will be removed and reset to accommodate new grading, and a second culvert of equal size will be added to increase capacity. The current belief is that the private drive culvert causes an obstruction that forces water onto the road.

City Staff also reported runoff from the area southwest of the intersection of 23rd Street and Eisenhower as a significant issue. This stormwater is not being sufficiently conveyed across 23rd Street to the west side of Eisenhower. City Staff indicated that the existing system of ditches and culverts may be undersized and could be the cause of a the water flowing north along the west side of the 23rd Street and Eisenhower intersection.

This report makes no recommendation for a stormwater capital improvement project at this location. Any improvements to the storm drainage system should be addressed with planned roadway work. To keep runoff from the roadway surface, the City should consider raising the intersection of Eisenhower Road and 23rd Street. Eisenhower Road between 19th Street and 23rd Street will need to be raised and 23rd Street between Eisenhower Road and Old Highway 50 should also be raised. Roadway improvements should improve the conveyance of roadside ditches and cross road conveyance structures.

Project 13 - 23rd Street Culverts (Priority Rating 2)

The City's Comprehensive Plan shows the area south of 23rd Street and between Eisenhower Road and Old Highway 50 as planned "Commercial/Industrial" development. Three drainage swales currently traverse the site dividing the land into four separate areas. It is anticipated by the City that development on this property will lead to the consolidation of the drainage patterns into a single crossing of West 23rd Street (see **Figure 6.15**). This consolidation might result from the desire of a developer to restructure the existing drainage system to better facilitate the layout of a development and maximize land use.

The purpose of this project is to ascertain the size and approximate cost of constructing a single culvert under West 23rd Street to accommodate future development. It was estimated that four 6-foot x 3-foot RCB's would be needed if the drainage areas for the three existing culverts were combined. It should be noted that new roadside ditches necessary to serve this new culvert would be very flat and could create mosquito habitat. These issues should be address when the site is developed or when 23rd Street is improved.

Project 14 - Lakeside Estates Detention (Priority Rating 13)

A lake once existed between Osage Drive and Willow Street north of 17th Street (see **Figure 6.16**). At the time of this study, the embankment of the lake had been intentionally breeched and the basin no longer retains water.

The City's Comprehensive Plan shows that the undeveloped area south of 17th Street could develop as a residential area. Prior to development occurring, it is recommended that the embankment and spillways be reconstructed to detain runoff from the developing area. The detention basin could act as a best management practice while the upstream watershed develops. Construction runoff could be routed to the basin where suspended sediments would be removed from runoff. After development activities cease, the sediment trapped in the basin would need to be removed to re-establish the original amount of detention storage.

The second benefit of this basin would be stormwater detention. The reconstruction of the basin would attenuate the increased peak flows and help to protect the Pin Oak subdivision from the effects of future development.

Typically, the City requires developers to address detention issues within proposed developments. If this were the case, this project would no longer be a City project, but a private project. However, once reconstructed it is recommended that the City obtain the property or an easement for the detention area. This would afford the City better control of the detention within the storage area.

Project 15 - Kansas Highway 68 and Main Street Culvert Replacement (Priority Rating 8)

In 1967, the Kansas Department of Transportation Project made improvements to the intersection of Main and Keokuk Streets (Kansas Highway 68). At the time of the project, a 190-foot culvert existed under Main Street. The existing culvert was constructed of laid up brick, rock and other miscellaneous material. The existing culvert was left in place and incorporated into the new design. Approximately 150 feet of new 6-foot x 4-foot RCB was added to the upstream end of the existing culvert (see **Figure 6.17**).

The older section of the culvert should be replaced due to the structural inadequacies. Modeling results suggest that the box culvert should be increased to a 9-foot x 4-foot RCB in order to ensure the

conveyance of the 50-year[1] event under future conditions. Because the newer section of the culvert is still structurally sound, it is not a recommendation to remove and replace it.

If the existing 6-foot x 4-foot RCB is not replaced, then the older, downstream portion of the culvert should be removed and replaced with a culvert of identical size.

PROJECT SUMMARY

Table ES.1 summarizes the recommended projects and estimated costs for each of these projects. The estimated costs provided in Section 6 of this report reflect 2005 dollars. The opinions of costs shown in the table have been escalated 10% to account for inflation and increases in construction costs from 2005 to 2007.

The improvements suggested as part of this report are discussed and ranked based on the estimated level of service, potential flooding, frequency of flooding and engineering judgment. When assigning priorities for each project, the projects were first grouped into categories of high, medium and low based on the criteria discuss below. The initial categorizations were provided to City Staff and a numerical ranking was then assigned based staff input. A more detailed discussion of priorities can be found in Section 1 of the report.

The opinions of cost shown in **SECTION 6** reflect pricing at the time of the estimate and reflect 2005 dollar values.

The opinions of cost shown in the **EXECUTIVE SUMMARY** reflect the prices in **SECTION 6** escalated 10 percent to account for increases in labor, material and equipment through March 2007.

Table ES.1
Summary of Projects

Project No.	Priority	Project Name	Opinion of Cost (Thousands)**		
			Construction	Engineering	Total
1	1	Industrial Park Improvements	$804	$241	$1,045

[1] While the design criteria prescribed by the Kansas Department of Transportation is a 50-year event, the City of Ottawa requires that an arterial street have the capacity to convey a 100-year event without overtopping.

Table ES.1
Summary of Projects

Project No.	Priority	Project Name	Opinion of Cost (Thousands)**		
			Construction	Engineering	Total
13	2	23rd Street Culverts	$52	$15	$67
12	3	Eisenhower Road Improvements	N/A	N/A	N/A
10	4	Oak & Poplar Street System Replacement	$2,576	$773	$3,350
3	5	Hickory & Poplar Street Improvements	$2,061	$618	$2,680
6	6	Skunk Run Outfall Improvements	$4,430	$443	$4,873
5	7	Ash & Willow Street System Replacement	$640	$191	$832
15	8	Kansas Highway 68 & Main Street Culvert Replacement	$392	$118	$509
11	9	Osage Drive Channel Improvements	$1,447	$435	$1,881
7	10	Country Club Lake Principal Spillway	$77	$23	$100
8	11	Expanding Detention for Visitor Center	$790*	$213	$1,003
9	12	Kansas Highway 68 Culverts	$380	$114	$494
14	13	Lakeside Estates Detention	$89*	$17	$106
4	14	Concrete Line Channel (K-68, Beech to Willow)	$383	$114	$497
2	15	Oak & Dundee Street System Improvements	$398	$119	$517
TOTAL			**$14,518**	**$3,435**	**$17,953**

* Property acquisition costs are included in the construction cost.

** Estimated 2007 Dollars

Estimates for construction costs include a 30% contingency.

*** * * NOTE TO REPROGRAPHICS * * ***

Insert Figure ES-1
11” x 17” color plot

Section 1
Introduction & Purpose

1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE

The City of Ottawa is poised for rapid and prosperous growth in the coming years. Its location near metropolitan Kansas City makes it a desirable living area. The recent influx of major warehousing operations and industrial/manufacturing operations makes it an employment center. Future plans for US Highway 59 will make access from Lawrence even more convenient. The Kansas Highway 68 corridor is on the verge of future development and the new US 59 Freeway/Interstate 35 interchange will be another improvement that will bring growth to the City.

Increased growth and activity invariably bring more streets, rooftops and other runoff producing surfaces. This additional runoff has already begun to impact the watercourses in and around Ottawa, and these impacts will continue to increase in magnitude. As development occurs just outside the City, these watersheds begin to have more significant impacts on the City's infrastructure. To manage and minimize these negative stormwater impacts, the City has elected to develop a comprehensive stormwater master plan.

In September 2004, the City of Ottawa, Kansas embarked on a program to develop a stormwater master plan for major watersheds tributary to the City. This program is based on a recognized need to upgrade existing inadequate stormwater conveyance systems and to plan for new systems in developing areas.

1.2 PROJECT TEAM

Burns & McDonnell Engineering was the prime contractor for this study. Burns & McDonnell was responsible for the hydrologic and hydraulic analyses, preparation of the master plan report, and oversight of subconsultants. Shockey Consulting Services facilitated the public relations portions of the study. Taylor Design group provided survey information and conducted the field surveys.

Burns & McDonnell Engineering	**Shockey Consulting Services**	**Taylor Design Group**
9400 Ward Parkway	7611 Park Street	P.O. Box 327
Kansas City, Missouri 64114	Lenexa, Kansas 66216	Ottawa, Kansas 66067
phone: (816) 333-9400	Ph: (913)248-9585	Ph: (785)242-8845
Leon J. Staab, PE	Sheila Shockey	Clint Stewart

1.3 SCOPE OF SERVICE

The scope of the Stormwater Master Plan generally includes the following:

- Analyzing and evaluating the performance of the City's existing enclosed storm drainage system.
- Identifying conveyance problems and providing a plan for capital improvements.
- Re-evaluating and re-defining the 100-year and 500-year floodplain boundaries for the streams currently not regulated by FEMA.
- Soliciting public involvement.

1.4 STUDY AREA

The City of Ottawa is an eastern Kansas municipality encompassing an area of approximately seven (7) square miles. The study area included detailed analysis within the City limits and an additional twenty six (26) square miles located in unincorporated Franklin County. The total drainage area of thirty three (33) square miles consisted of eighteen (18) major watersheds. The overall extent of the study area is indicated on **Exhibit A.1**. The exhibit also presents the various watersheds included in this study; defines the extent of additional topographic mapping provided with this study; the location of storm drainage systems studied, and primary hydrographic features.

1.4.1 Detailed Study Area

For this study, the detailed study area includes open channels, culverts, bridges and the enclosed storm system within the corporate limits of the City as indicated on **Exhibit A.1**.

1.4.2 Non-Detailed Study Area

The non-detailed analysis is comprised of watersheds beyond the City limits and/or the limits of the detailed mapping. Analysis of these areas will be necessary to produce continuous models, but less detail is needed. There will be no survey work or evaluations made in the non-detailed areas of the study.

1.4.3 Enclosed Storm Sewer System

The “enclosed storm system” includes storm sewers, small culverts, roadside ditches and drainage swales used to collect and convey stormwater runoff through the City. The system generally includes the conveyance structures not associated with a natural channel. For this study, only those portions of the enclosed storm sewer system that lie within the City boundaries and having an equivalent pipe size of 24-inches or greater were analyzed. The analysis was made to detect possible deficiencies in the system and not to establish or revise the floodplains within the City.

Analysis of the enclosed storm system focused on the following watersheds:

- Forest Park
- Possum Run
- Sycamore Street
- Sugar Creek
- Country Club
- Willow Street
- Skunk Run
- E. 7th Street
- Rock Creek
- Pin Oak
- W. 13th Street

1.4.4 Flooding Sources

"Flooding Sources" is a term used by FEMA to denote streams that are regulated for flood insurance. For this master plan, the following watercourses were analyzed in detail. Base flood elevations and the 100-year and 500-year floodplains were established, but it was not within the scope of this study to prepare a FEMA map revision. Flood plain elevations were determined for the following streams where tributary areas exceed 160 acres.

- Wilson Creek
- Main stem from North Street south to the Marais des Cygnes River.
    - The Industrial Park watershed, a left-bank tributary of Wilson Creek, from its mouth at Wilson Creek, east to a point near Industrial Avenue north of North Street.

- Country Club Watershed
- Visitor Information Center Watershed north of Logan Street
- Rock Creek
    - Main stem from its crossing of Interstate Highway 35 east of the U.S. Highway 59/I-35 interchange north and east to its confluence with the Caylor Quarry tributary.

- Nugent Creek
- Pin Oak
- Eisenhower / 23rd Street

1.5 INFORMATION PROVIDED BY CLIENT

In the preparation of this report, the information provided by the Client was used to make certain assumptions with respect to conditions which may exist in the future. While Burns & McDonnell believes the assumptions made are reasonable for the purposes of this report, Burns & McDonnell makes no representation that the conditions assumed will, in fact, occur. In addition, while Burns & McDonnell has no reason to believe that the information provided by the Client, and on which this report is based, is

inaccurate in any material respect, Burns & McDonnell has not independently verified such information and cannot guarantee its accuracy or completeness. To the extent that actual future conditions differ from those assumed herein or from the information provided to Burns & McDonnell, the actual results will vary from those forecast.

1.6 EVALUATION OF PRIORITIES

1.6.1 Methodology

The improvements suggested as part of this report are discussed and ranked based on the estimated level of service, potential flooding, frequency of flooding and engineering judgment. When assigning priorities for each project, the projects were first grouped into categories of high, medium and low based on the criteria discuss below. The initial categorizations were provided to City Staff and a numerical ranking was then assigned based staff input.

1.6.2 HIGH Priority Definition

A ***HIGH*** priority is assigned to those areas meeting one of the following:

- Habitable buildings were located in the floodplain and flooding is frequent
- Flooding could pose an immediate threat to public safety
- Opportunities for proactive, non-structural measures will be lost if not initiated expeditiously

1.6.3 MEDIUM Priority Definition

A ***MEDIUM*** priority is assigned to those areas meeting all of the following criteria:

- Flooding problem does not involve a habitable building located in the floodplain.
- Flooding problem does not pose an immediate threat to public safety.
- The required level of service for a bridge or culvert on a major roadway is expected to be exceeded.

1.6.4 LOW Priority Definition

A ***LOW*** priority is assigned to those areas meeting all of the following criteria:

- Flooding problem does not involve a habitable building located in the floodplain.
- Flooding problem does not pose an immediate threat to public safety
- The required level of service for a bridge or culvert on a minor roadway is expected to be exceeded.

- Modeling indicates a possible problem (generally a decrease in the level of service) if upstream tributary area becomes urbanized

1.6.5 Level of Service

When a watercourse crosses a roadway, there are usually two ways that the water can cross the road: through the culvert or bridge or over the top of the road. Overtopping poses a danger to the general public because moving water can sweep vehicles from the roadway. Though overtopping is not desirable, it is usually economically unfeasible to design all bridges and culverts to high level of service. Cities usually weigh the risks versus the cost and design different roadway classifications to different levels of service. For example, residential streets are usually designed for a moderate level service where 10 percent of the storms are expected to overtop the road. Arterial streets and highways are design for high levels of service only 1 to 2 percent of the storms events are expected to overtop the road. For most cities the level of service provided by drainage structures is defined by three things:

- The road classification. Roads that carry more traffic are typically designed to provide a higher level of service.
- The return period for the design storm that is conveyed through bridge or culvert opening.
- The depth of flow over the top of the road for the 100-year flood event.

APWA Section 5600 dictates that enclosed and open channel conveyance system components should be designed for the following return period storms, irrespective of the land use in which the system is located or the land use in the drainage area tributary to the system:

Table 1.1
APWA Level of Services Requirements

Description	In-System Capacity:	Overflow Channels
Floodway in 100-year Flood Plain	100-year	The combined capacity of the overflow channel and in-system conveyance element shall be sufficient to convey the l00-year storm at all locations; except that an overflow depth not exceeding seven (7) inches at the lowest point of the traveled way will be permitted where culverts cross streets.
Bridges, Pipes, and Culverts on Crossing Arterial Streets or State Highways	50-year	
All other System Components	10-year	

1.7 ESTIMATES AND PROJECTIONS

The estimates prepared by Burns & McDonnell relating to construction costs, schedules, operation and maintenance costs, and modeling results are based on our experience, qualifications and judgment as a professional consultant. Because Burns & McDonnell has no control over weather; cost and availability of labor, material and equipment; labor productivity; construction contractor's procedures and methods; unavoidable delays; construction contractor's methods of determining prices; economic conditions;, government regulations and laws (including the interpretation thereof); competitive bidding or market conditions and other factors affecting such estimates or projections, Burns & McDonnell does not guarantee that actual costs, performance, schedules, etc., will not vary from the estimates and projections prepared.

The opinions of cost shown in Section 6 reflect pricing at the time of the estimate and reflect 2005 dollar values.

The opinions of cost shown in the Executive Summary reflect the prices in Section 6 escalated 10 percent to account for increases in labor, material and equipment through March 2007.

Section 2
Data Collection

2.0 DATA COLLECTION

2.1 PROJECT MAPPING

2.1.1 Existing Topography

In 1992, Wilson & Company (Salina, Kansas) developed photogrammetric mapping of the City of Ottawa. This information has since served as the base mapping for the City. The mapping information was provided by the City in CAD and GIS format. Topography was developed using the following spatial reference:

- Projected Coordinate System: NAD_1983_Lambert_Conformal_Conic
- Projection: Lambert Conformal Conic
- False Easting: 1312422.65020593
- False Northing: 1312413.78020593
- Central Meridian: -98.50000000
- Standard Parallel 1: 37.26666000
- Standard Parallel 2: 38.56666700
- Latitude Of Origin: 36.66666700
- Linear Unit: Foot US
- Vertical Datum: North American Vertical Datum 1988 (NAVD88)

2.1.2 New Topography

As part of this study, additional topography was obtained to supplement the information already in possession of the City. Mapping was provided by Wilson & Company and utilized the existing controlled aerial photography that was flown in 1992. The new mapping utilizes an identical format and specifications that Wilson & Company provided previously to the City. Data was collected to produce a 1”=200’ mapping base with two-foot contour intervals. Additional mapping was obtained in the following areas:

- E1/2 S34 T16S R19E
- SW1/4 S24 T16S R19E
- S1/2 S23 T16S R19E
- W1/2 S26 T16S R19E
- NE1/4 S3 T17S R19E
- SE1/4 S3 T17S R19E
- SW1/4 S3 T17S R19E
- S10 T17S R19E

2.1.3 Surveys

2.1.3.1 General

A field survey was conducted to obtain necessary channel conveyance information and the physical dimensions of the hydraulic structures. Surveying is referenced to Kansas State Plane Coordinates and the National Geodetic Vertical Datum of 1988 (NGVD88).

Survey data was provided by Taylor Design Group, P.A. in a comma separated text file format. A text file was delivered for each of the surveyed structures. The text files contained five columns: the first column represents the survey point ID, the second column represents the Y coordinate, the X coordinate is housed in the third column, the Z coordinate is in the fourth column, and the fifth column housed a feature code ID. The horizontal (X, Y) coordinates were provided in Ground Coordinates (or in the local coordinate system). Taylor Design Group also provided a conversion worksheet that contained conversion factors to convert ground coordinates to Grid Coordinates (such as Kansas State Plane South feet). The worksheet listed 10 control points, distributed throughout the area, and their associated ground coordinates, grid coordinates, and conversion factor. The individual conversion factors for the 10 control points were averaged together by Taylor Design Group to establish an overall "average combined factor."

The survey text files were converted to Microsoft Excel spreadsheets so that new grid coordinates could be calculated by multiplying the surveyed grid coordinates by the conversion factor. Several tests were conducted to determine which conversion factor to use. Initial tests applied the conversion factor from the control point nearest the surveyed structure. Applying the average combined conversion factor to all of the surveyed grid coordinates was also tested and determined, by visual inspection on aerial photography, to establish the best Kansas State Plane Coordinate equivalent. Every coordinate pair, for every surveyed structure point, was multiplied by the average combined factor to convert the surveyed coordinates into the Kansas State Plane (ft) coordinate system. Each spreadsheet was then converted to a ".dbf" file and then input into ArcGIS to create the structure survey point feature classes.

2.1.3.2 Bridges and Culverts

Bridges and culverts having a tributary area of at least 160 acres and located within the corporate limits of the City, and not considered part of the enclosed storm sewer system were surveyed. The field survey was conducted using GPS or conventional survey techniques. Information collected was used to define the conveyance opening of the structure, and included the following information:

- One (1) channel cross-section at the upstream face of the structure.

- Structure opening information, including location of piers, location of abutments, culvert invert, headwall types, culvert dimensions, etc.
- Low chord and top of road elevations.
- Roadway or crossing top of road centerline elevation section to define weir flow overtopping the structure.

For this study, approximately thirty (30) bridges and culverts were surveyed.

2.1.4 Field Reconnaissance

Field reconnaissance of the enclosed storm sewer system was limited in nature. Locations of manholes and pipes were approximated using the City's existing mapping and field observation. Accessible structures (manholes and curb inlets) were opened and measurements were taken from the top to the invert. The top elevation of the manhole was estimated from the mapping provided by the City. Pipe sizes and materials were generally obtained from the City's storm sewer maps and verified during the field investigation.

2.1.5 USGS Quadrangles

In areas of the "non-detailed" study area where detailed mapping was not available, mapping obtained from USGS Quadrangles was used. Though not as precise as the mapping provided by the City, the information was suitable for watershed delineation and development of other hydrologic parameters.

The USGS data used was part of the National Elevation Database (NED), which is a seamless mosaic of the best available elevation data; typically 7.5-minute data. This data is acquired in an ArcINFO grid format. 10-foot contour lines were generated, using ArcGIS, from the grid. The area of the 2-foot contour data provided by the City of Ottawa was used to clip a hole out of the USGS NED data, which was then filled by the higher quality data from the City. The two contour files were used together to create a single Triangulated Irregular Network (TIN) of the study area. This TIN was subsequently used for hydrologic analysis.

2.1.6 Aerial Photographs

Aerial photographs were obtained from the Kansas Data Access and Support Center (DASC)[2].

[2] http://gisdasc.kgs.ku.edu/

Section 3
Hydrologic Modeling

3.0 HYDROLOGIC MODELING

3.1 INTRODUCTION

The hydrologic analysis for this study was done with XP-SWMM 2000 stormwater management modeling software (Version 8.52) from XP Software Incorporated. The software generates runoff hydrographs at desired locations in the watershed for specific storm events based on the specific input parameters for each component of the process. For this study, the RUNOFF module was used to generate hydrographs for return periods of 2, 5, 10, 25, 50 and 100 years. Parameters used in the hydrologic modeling include the Soil Conservation Service's (SCS) Type II hypothetical storm generated from rainfall frequency data for precipitation; the SCS curve number for the loss rate; the SCS dimensionless unit hydrograph; and physical characteristics of each subarea.

3.2 WATERSHED DELINEATION

3.2.1 Subwatershed Boundaries

The Study Area was divided into eighteen subwatershed areas. Subwatershed names were recommended by City staff, and a two digit prefix was assigned for each subwatershed. The prefix was used for modeling purposes and is discussed below. Subwatershed boundaries are shown on **Exhibit A.5** and a complete listing of subwatersheds and associated identifiers can be found in **Table 3.1**.

Table 3.1
Summary of Subwatersheds

Subwatershed Name	Identifier
Country Club	CC
East 4th Street	E4
East 7th Street	E7
Eisenhower / 23rd Street	E23
Forest Park	FP
Industrial Park	IP
Lower Wilson Creek	LW
Nugent Creek	NC
Pin Oak	PO
Possum Run	PR
Rock Creek	RC
Skunk Run	SR
Sugar Creek	SC
Sycamore Street	SY
Upper Wilson Creek	UW
Visitor Center	VC
West 13th Street	W13
Willow Street	WL

3.2.2 Subarea Boundaries

Subwatersheds were divided into smaller subareas ranging in size up to 160 acres. Larger subareas are found in the non-detailed study area. Smaller subareas are prevalent in the detailed study area where additional precision is required for modeling of the enclosed storm sewer systems. Delineation of subareas was based on hydrologic and/or hydraulic features, such as terrain, channels, combines, and culverts or bridges within the Study Area.

Exhibit A.5 shows the subareas delineations associated with the study.

3.3 PRECIPITATION

3.3.1 General

Every storm event that occurs within a watershed is unique. Some storms are short and intense and deposit a large amount of rainfall in a short period of time. Other storms have a constant rainfall intensity that occurs over a long period of time. Because there is no means to predict the characteristics of a given storm, a synthetic or design storm is typically used for hydrologic modeling. A design storm is simply an assumed distribution of rainfall over a given amount of time.

3.3.2 Rainfall Distribution

For this study, a Soil Conservation Service (SCS) Type II rainfall distribution was used. The SCS distribution was prepared for use in the United States for storms of 6 and 24-hour durations. The Type II storm distribution is applicable to the Study Area. The distribution of rainfall is shown in **Figure 3.1**.

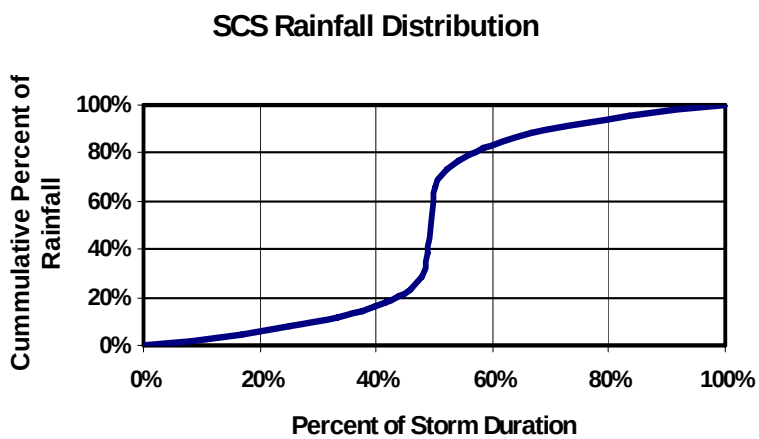


Figure 3.1

3.3.3 Rainfall Depths

Rainfall Intensity Tables for Counties in Kansas[3] was used to determine the rainfall depths for various storm recurrence periods and various time periods and shown in **Table 3.2** below:

[3] Kansas Department of Transportation, *Rainfall Intensity Tables for Counties in Kansas*, Revised, June 1997.

Table 3.2
Rainfall Depths for Franklin County, Kansas

Time	Depth (inches)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
5 min	0.45	0.54	0.61	0.70	0.78	0.85
10 min	0.75	0.91	1.02	1.18	131.17	1.44
15 min	0.95	1.16	1.30	1.52	1.68	1.85
30 min	1.32	1.65	1.88	2.22	2.47	2.73
1 hr	1.70	2.16	2.48	2.94	3.30	3.65
2 hr	2.10	2.66	3.06	3.62	4.06	4.50
3 hr	2.19	2.88	3.33	3.99	4.50	5.01
6 hr	1.95	2.51	2.86	3.42	3.86	4.25
12 hr	3.12	4.08	4.68	5.64	6.24	6.96
24 hr	3.60	4.80	5.52	6.48	7.20	8.16

3.3.4 Rainfall Duration

The design storm used in the analysis of a drainage system is the pattern of rainfall over a specific duration for a given return period. The duration that puts the greatest demand on the system is termed the "critical storm duration" and is roughly equal to the time of concentration of the watershed. Time of concentration, T_c, is the time at which the entire drainage area begins to contribute runoff. It may also be defined as the time required for runoff to flow from the farthest point in the watershed to the outlet. The "critical" duration represents the minimum time required to insure that runoff from all parts of the drainage area is included in the peak discharge measured at the outlet. The design storm duration used in this project was the 24-hour storm for all return periods.

3.4 RUNOFF

3.4.1 Soils

NRCS soils information used for calculating hydrologic parameters was obtained in an electronic format from the Kansas Data Access & Support Center (DASC). According to the source, soil scientists manually compiled field maps on 1:24000 scale one-third-quadrangle ortho-photography in the 1927 North American Datum (see **Exhibit A.4**).

3.4.2 Land Use

3.4.2.1 Existing Surface Conditions

In order to determine the parameters needed for the hydrologic model, a hydrologic land use map was developed for the watershed (see **Exhibit A.2**). Land use parameters influencing runoff were estimated from aerial photography and field observations. The curve numbers shown in **Table 3.3** were taken from TR-55, *Urban Hydrology for Small Watersheds*[4]. Curve numbers represent antecedent moisture condition II.

Table 3.3
Runoff Coefficients

	Curve Numbers for Hydrologic Soil Group			
Cover Type / Land Use	**A**	**B**	**C**	**D**
Agricultural	77	86	91	94
Airport	83	89	92	93
Apartments / Duplexes	77	85	90	92
Commercial	89	92	94	95
Crop	67	78	85	89
Farm	59	74	82	86
High Density Residential	61	75	83	87
Industrial / Heavy Commercial	81	88	91	93
Low Density Residential	54	70	80	85
Medium Density Residential	57	72	81	86
Parks & Open Space	49	69	79	84
Pasture	49	69	79	84
Railroad	76	85	89	91
Reservoirs / Lakes	98	98	98	98
Residential	51	68	79	84
Right of Way	83	89	92	93
Schools	77	85	90	92
Trees	36	60	73	79
Vacant Commercial	77	86	91	94
Vacant Residential	77	86	91	94

[4] U.S. Department of Agriculture, Natural Resource Conservation Service, Conservation Engineering Division, *Urban Hydrology for Small Watersheds, Technical Release 55*, June 1986.

3.4.2.2 Future Surface Conditions

Future surface conditions were obtained from the *Ottawa, Kansas Comprehensive Plan 2003* which was developed by Bucher, Willis, & Ratliff Corporation for the City of Ottawa (see **Exhibit A.3**). In general, if an area of land was shown as developed under existing surface conditions, then the future condition was assumed to be the same land use. If an area of land was undeveloped under existing conditions (agriculture, vacant, trees, pasture, etc.), then the land use was revised to match future conditions.

3.4.3 Loss Method

The SCS Curve Number Loss Method was utilized according to the technical guidelines prescribed by the TR-55 Manual. Based on the combinations of soils types and land use characteristics shown in **Table 3.3**, a weighted runoff curve number was estimated for each subarea. This was done by subdividing each subarea into polygons representing every combination of land use and soils type. With a curve number assigned to each polygon, a weighted curve number was calculated for the entire subarea as follows.

$$\text{Weighted Curve No.} = \sum(A_i \times CN_i) / \sum A_I$$

Where

A_i = area of each shape

A_I = area of the subarea, acres

CN_i = Curve No. assigned to a given polygon

3.4.4 Time of Concentration

The time of concentration for a watershed is the time for runoff to travel from the hydraulically most distant point of the watershed to the discharge point of the watershed. Since SCS methodology was used for the development of the hydrology for most of the study, it was intended to use to the SCS lag equation and the SCS relationship between lag time and time of concentration to determine the time of concentration for each of the subareas.

However, these equations used for estimating travel times yielded high time of concentrations for many of the subareas and were concluded to not be appropriate for this watershed analysis. Several other methods were examined, but the one that yielded the most realistic results was the TR55 equation for estimating travel times for shallow concentrated flow for unpaved conditions.

$$V = 16.1345\ (s)^{0.5}$$

Where: V = average velocity, ft/sec

s = slope of hydraulic grade line (watercourse slope), ft/ft

Time of concentration was then calculated by dividing length by the estimated velocity.

$$T_c = L / 60(V)$$

Where:

T_c = time of concentration, minutes

L = length of overland flow, ft

V = average velocity, ft/sec

3.4.5 Hydrographs

For each subarea, a flow hydrograph was calculated using the SCS dimensionless curvilinear unit hydrograph method.

3.4.6 Conveyance Routing

XP-SWMM performs hydraulic flow routing for open channel and/or closed conduit systems. The Hydraulic module receives hydrograph input from the Runoff module and performs dynamic routing of stormwater flows through the storm drainage system to an outfall. The program is capable of modeling branched or looped networks, backwater conditions, free-surface flow, pressure flow or surcharge, flow reversals, flow transfer by weirs, orifices and pumps, and storage facilities.

Conveyance elements (channels, pipes, etc.) were given a value for the Manning's "n" coefficient, which is a measure of the roughness of the element and is used in both XP-SWMM and HEC-RAS to calculate flows and water surface elevations. These "n" values were selected using field observations, project photos, aerial photos, and engineering judgment. Additionally, selected channels were idealized and modeled with trapezoidal or 8-point cross-sections within the Hydraulic module. Where trapezoidal cross sections were used to represent both channel and overbank a composite "n" value was derived from a preliminary 100-year storm processed in HEC-RAS.

Overland flow channels were used above all closed conduits to eliminate ponding and facilitate the movement of surface flow downstream allowing for more conservative peak flows. Each overland flow channel simulated a cross sectional shape appropriate for its location. This cross-sectional shape could

represent a roadway sag over a culvert, a gutter section, a backyard swale, or a side yard swale between properties.

3.5 MODEL CALIBRATION

Streams within the study area are not gauged. Therefore, it is not possible to calibrate the model by definition. However, it is possible to ascertain the soundness of the calculated flows by comparison to the USGS regression equations.

3.5.1 USGS Regression Equations

Estimates of flood-peak discharges for standard recurrence intervals are available from the U. S. Geological Survey in the form of a set of published regression equations. These equations were used to calibrate existing condition 100-year peak flows. Two sets of regression equations were necessary for the calibration of the models.

3.5.1.1 Rural Regression Equations

The first step was to estimate the peak discharges at given points in each watershed assuming that the streams are unregulated[5] and rural. The U. S. Geological Survey has published regression equations particular to the State of Kansas[6].

Table 3.4
Rural Regression Equation Parameters

Variable	Description of Variable
Q_i	Peak estimated rural discharge for a given return period
CDA	Contributing drainage area in square miles
P	Mean annual precipitation in inches
Sl	Slope of the main channel in feet per mile
S	Average soil permeability in inches per hour.

For contributing drainage areas greater than 30 square miles, the 100-yr peak discharge is estimated by the following equation:

$$Q_{100} = 5.93(CDA)^{0.471}(P)^{1.733}(S)^{-0.332}$$

[5] "Unregulated streams" implies no stormwater detention in the watershed.
[6] Patrick P. Rasmussen and Charles A. Perry, *Estimation of Peak Streamflows for Unregulated Rural Streams in Kansas*, Water-Resources Investigations Report 00-4079, U. S. Geological Survey and Kansas Department of Transportation, Lawrence, KS 2000.

For contributing drainage areas from 0.17 to less than 30 square miles, the 100-yr peak discharge is estimated by the following equation:

$$Q_{100} = 19.80(CDA)^{0.634}(P)^{1.288}$$

Because all subareas for this study were less than 30 square miles, the second equation was used to estimate all rural flows. The mean annual precipitation in inches used for each of the subbasins was 38.2 inches. This value was interpolated from Figure 3 of *Estimation of Peak Streamflows for Unregulated Rural Streams in Kansas.*

3.5.1.2 Urban Regression Equations

Because some streams associated with this study are neither unregulated nor rural, a second set of regression equations was used to adjust the flows obtained from the rural regression equations. The U. S. Geological Survey also has published regression equations pertaining to a nationwide study of urban watersheds.

Table 3.5
Urban Regression Equation Parameters

Variable	Description of Variable
UQ_i	Peak estimated urban discharge for a given return period.
RQ_i	Peak estimated rural discharge for a given return period (as described in the preceding paragraph)
A	Basin area in square miles
SL	Channel slope in feet per mile
RI2	Rainfall intensity for the 2-hour, 2-year storm in inches.
ST	Basin storage, the % of the basin occupied by lakes, ponds reservoirs, swamps & wetlands.
BDF	Basin development factor
IA	The percentage of the watershed occupied by impervious surfaces

For estimating the 100-yr peak discharge for urban watersheds, the following equation was used:

$$UQ_{100} = 2.50A^{0.29}SL^{0.15}(RI2+3)^{1.76}(ST+8)^{-0.52}(13-BDF)^{-0.28}IA^{0.06}RQ_{100}^{0.63}$$

A rainfall intensity of 2.1 inches for the 2-hour, 2-year storm was used for all subbasins. This value was obtained from *Technical Paper No. 40 Rainfall Frequency Atlas of the United States* (TP-40)[7]. Basin storage was determined by using USGS Quadrangles maps, the 2-foot contours obtained from the City, and the NRCS soil information.

The basin development factor (BDF) was estimated by dividing the basin into thirds and within each third assigning a zero or a one to four different characteristics of the basin that are related to urbanization: channel improvements, channel linings, storm drains, and curb-and-gutter streets. For example, a completely developed basin with maximum urban impacts would have a score of 12; whereas, a totally undeveloped basin would have a score of zero.

The percent of impervious surface within a basin was estimated by referencing the existing land use map (which was developed for this study), the aerial photography, and taking field observations into consideration.

3.5.1.3 Results

Owing to the nature of the process, and the limited types of data used in obtaining these estimates, the possible error is quite large in the USGS estimates. The standard error produces an interval around the computed value for any of these equations that will include about two thirds of the actual values that might occur. The average standard error for the different recurrence intervals ranges from ± 38% to ± 49% for urban equations and between ± 43.5% to ± 60.5% for the rural equations.

Both rural and urban 100-year flows were examined in the analysis of this watershed for existing conditions. An urban basin is one in which greater than 5 percent of the drainage area is subject to commercial, industrial, or residential development. The analysis results are summarized below.

Table 3.6 shows the peak 100-year discharge and the peak 100-year discharge per total drainage area for the SWMM results, the USGS rural equation results, and the USGS urban equation results. The last column of **Table 3.6** shows the limits of the USGS equations for the peak 100-year discharge per total drainage area. For the 100-year event, the average standard error of prediction was ± 57.5% of the estimated discharge for the rural basins and ± 44% of the estimated discharge for urban subbasins.

[7] *Technical Paper No. 40 Rainfall Frequency Atlas of the United States* (TP-40), National Weather Service.

Table 3.6
Model Calibration Results

		SWMM		USGS Rural		USGS Urban		Limits of USGS	
Area ID	**Area mi^2**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100}/ Area cfs/Ac**	**Q_{100}/ Area cfs/Ac**
Lower Wilson									
LWMC01	8.38	4778	0.89	8314	1.55			2.44	0.66
LWMC06	8.03	4731	0.92	8092	1.57			2.48	0.67
LWMC09	7.84	4837	0.96	7967	1.59			2.5	0.67
LWMC11	0.86	665	1.21	1960	3.57			5.62	1.52
LWMC12	0.71	604	1.33	1740	3.82			6.02	1.62
Upper Wilson									
UWMC02	4.99	3482	1.09	5987	1.87			2.95	0.8
UWMC05	4.23	3845	1.42	5385	1.99			3.14	0.85
UWMC08	2.19	2409	1.72	3546	2.53			3.99	1.08
UWMC10	0.87	1729	3.11	1975	3.55			5.6	1.51
Industrial Park									
UWMC01	1.92	2103	1.71			2852	2.32	3.34	1.3
IPMC09	1.56	2008	2.01			2727	2.73	3.93	1.53
IPMC13	1.13	1467	2.03			2071	2.87	4.13	1.61
IPMC15	0.85	1419	2.62			1524	2.82	4.06	1.58
Forest Park									
FPMC00	0.21	480	3.58			739	5.52	7.95	3.09
East 7th Street									
E7MC00**	0.06	150	5.68			321	8.26	11.9	4.63
East 4th Street									
E4MC00**	0.04	222	5.71			237	8.97	12.92	5.02
Sycamore Street									
SYMC00**	0.01	49	5.8			131	15.55	22.39	8.71
Possum Run									
PRMC01	0.34	911	4.14			1402	6.37	9.17	3.57
PRMC07	0.18	354	3.09			763	6.65	9.58	3.72
PRMC09	0.16	341	3.25			718	6.85	9.86	3.83
PRMC14	0.15	365	3.77			677	7	10.08	3.92
Country Club									
CCMC00	0.47	750	2.5			1244	4.14	5.97	2.32

Table 3.6
Model Calibration Results

		SWMM		USGS Rural		USGS Urban		Limits of USGS	
Area ID	**Area mi^2**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100} cfs**	**Q_{100}/ Area cfs/Ac**	**Q_{100}/ Area cfs/Ac**	**Q_{100}/ Area cfs/Ac**
CCMC02	0.3	521	2.74			772	4.06	5.84	2.27
CCMC10	0.22	528	3.72			676	4.76	6.85	2.66
Visitor Center									
VCMC01	1.06	1528	2.25	2241	3.3			5.2	1.4
VCMC03	0.48	1353	4.43	1351	4.42			6.97	1.88
VCMC04	0.28	922	5.07	972	5.35			8.42	2.27
VCMC06	0.18	658	5.76	725	6.34			9.98	2.69
Willow Street									
WLMC00	0.49	755	2.42			1483	4.76	6.86	2.67
WLMC06	0.35	660	2.91			1078	4.75	6.84	2.66
WLMC09	0.22	479	3.45			669	4.83	6.95	2.7
WLMC11	0.14	295	3.37			572	6.54	9.41	3.66
Skunk Run									
SRMC02	1.2	2357	3.06			3691	4.79	6.9	2.68
SRMC07	0.94	1902	3.15			2917	4.83	6.95	2.7
SRMC22	0.56	1113	3.09			1863	5.17	7.44	2.9
SRMC31	0.37	883	3.77			1357	5.8	8.35	3.25
SRMC40**	0.13	248	4.21			510	5.95	8.57	3.33
Nugent Creek									
NCMC01	4.8	4309	1.4	5830*	1.9			2.99	0.81
NCMC04	4.4	4366	1.55	5570*	1.98			3.12	0.84
NCMC08	2.8	3710	2.07	4180*	2.33			3.67	0.99
E23MC01	1.2	2496	3.25	2410*	3.14			4.94	1.33
Rock Creek									
RCMC01	17.2	9543	0.87	13200*	1.2			1.89	0.51
RCMC02	15.8	9526	0.94	12500*	1.24			1.95	0.53
RCMC13	15.2	9571	0.98	12200*	1.25			1.98	0.53
RCMC31	13.9	9645	1.08	11500*	1.29			2.04	0.55

*Estimated discharge obtained from the Franklin County Flood Study.
** Drainage area is less than 0.17 square miles.

Figure 3.2 illustrates SWMM results, USGS results, and the limits of the USGS equations for the Forest Park, the East 4th Street, the Sycamore Street, and the Visitor Center Watersheds.

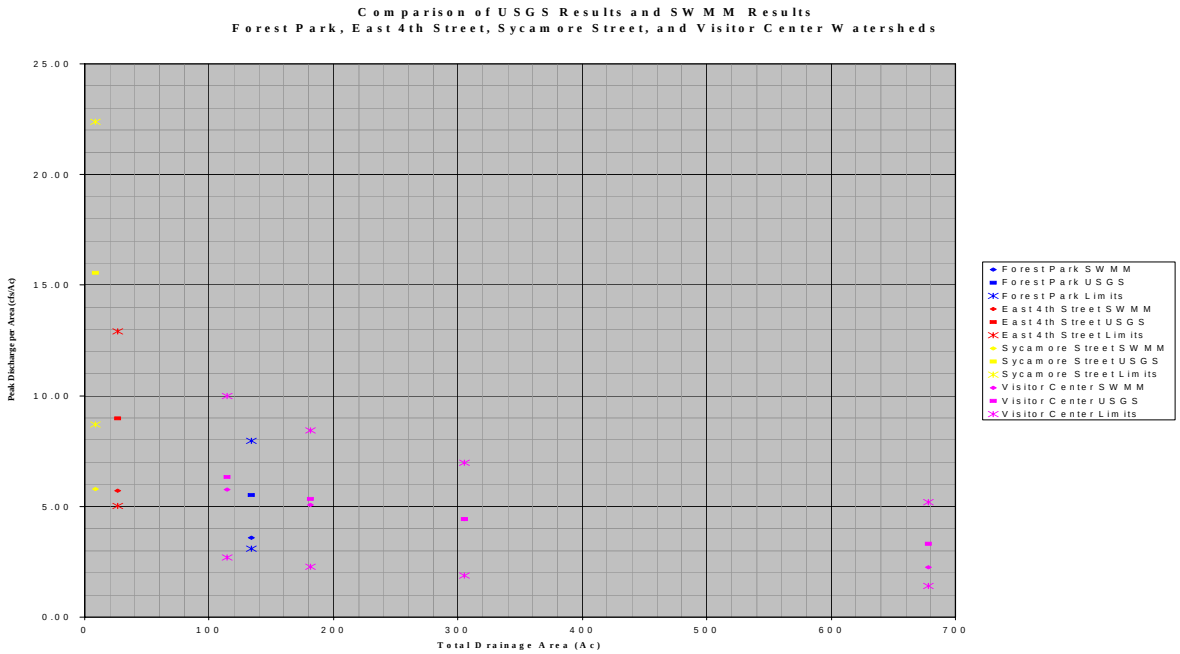


Figure 3.2

Figure 3.3 shows calibration results for the Upper Wilson Creek, the Lower Wilson Creek, the Rock Creek and the Country Club Watersheds.

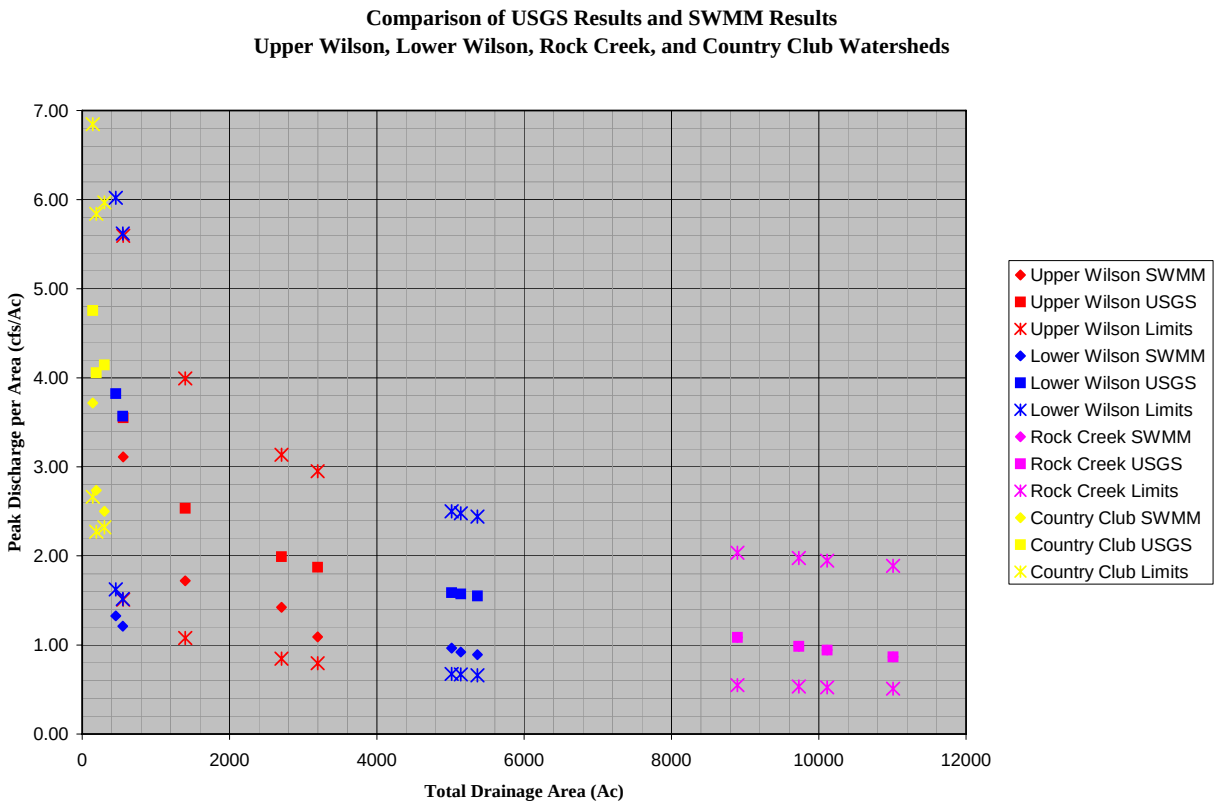


Figure 3.3

Figure 3.4 compares SWMM and USGS results for the Willow Street, the Nugent Creek, and the Industrial Park Watersheds.

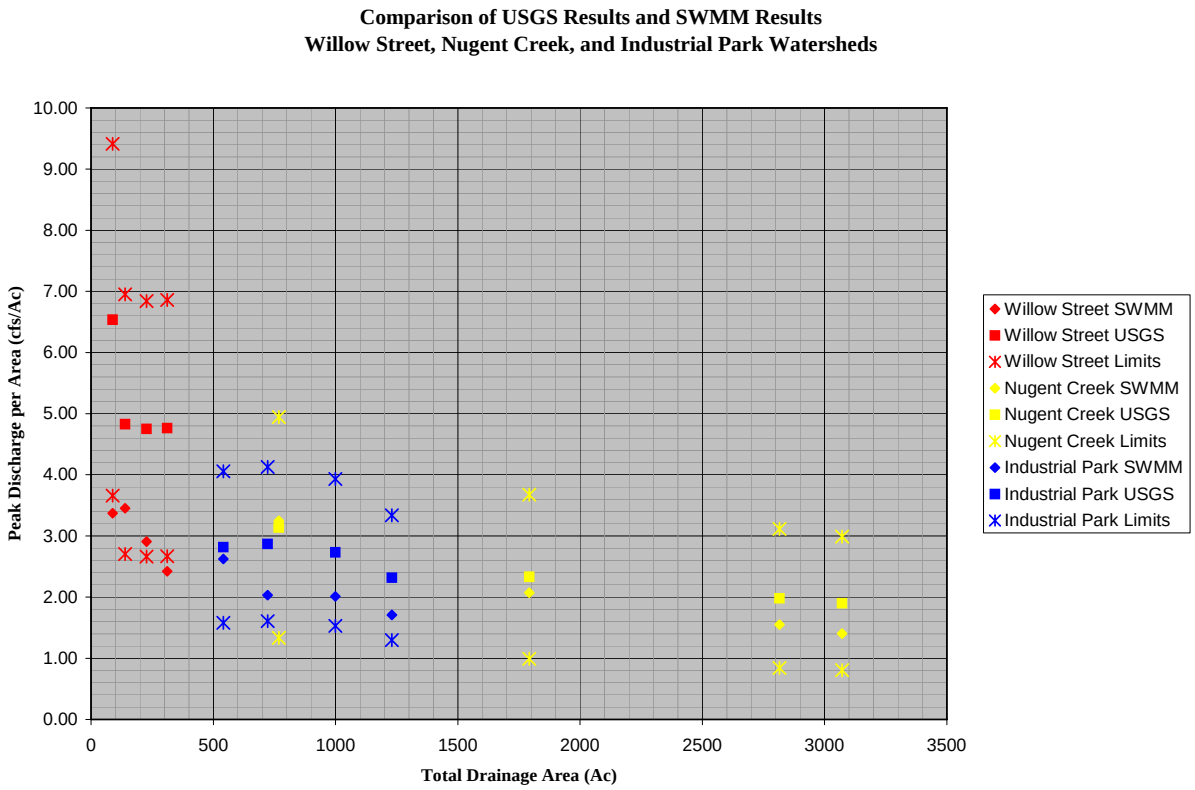


Figure 3.4

Figure 3.5 shows results for the Skunk Run, the Possum Run, and East 7th Street Watersheds.

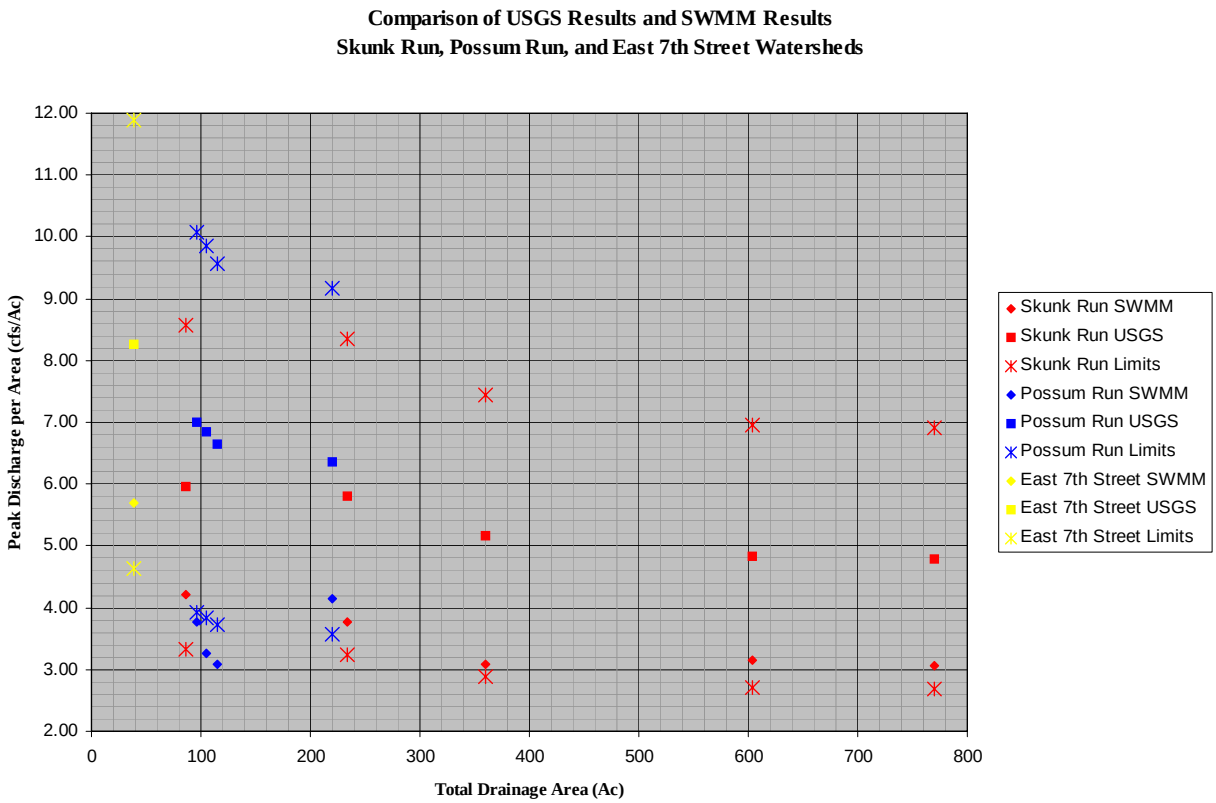


Figure 3.5

It may be noted that 100-year peak discharge estimates for the USGS regression equations for Rock Creek and Nugent Creek were obtained from the Franklin County Flood Study prepared by URS Corporation. Equations, references, and assumptions used during the development of the USGS estimates as stated in the Franklin County Flood Study were similar to those used for this watershed study.

3.5.1.4 SWMM Constraints

As illustrated in the above table and figures, SWMM results were generally lower than the USGS results. This can be attributed to several reasons. The most significant reason being the storage of flows within the SWMM model.

Ensuring all channels had sufficient capacity and incorporating overland flow channels over the enclosed system was one way to allow flow to be passed downstream and not stored. This increased flows significantly and decreased the volume of flow stored by SWMM.

Another constraint of the SWMM model was the attenuation of flow within the channels. This was considered to be the major contributor to the lower than anticipated flow rates.

3.5.1.5 USGS Regression Equation Constraints

There were several constraints on the USGS regression equations that, in addition to the SWMM constraints, may have resulted in the variation between USGS flows and SWMM flows.

The USGS regression equation used to estimate peak discharge for rural areas contains only two variables: the contributing drainage area and the annual mean precipitation. With only two variables, this equation does not consider any characteristics of the watershed being analyzed.

Another constraint of the rural equation is it was developed for use on drainage areas ranging between 0.17 to less than 30 square miles. As denoted in the above table, there are several subbasins that do not meet these criteria and have a drainage area of less than 0.17 square miles.

For the urban areas, the USGS regression equation does take into account more of the characteristics of the watershed. However, this equation is so strongly impacted by the input of the peak discharge calculated from the rural equations that if the rural results are high it is inevitable that the urban results will also be high.

Other factors in the urban equation also have an impact upon results. The BDF and the percent impervious area are both variables that depend significantly upon engineering judgment and as result can fluctuate immensely.

3.5.1.6 Conclusion

Results obtained from SWMM were generally lower than those estimated using the USGS regression equations. However, the majority the SWMM points analyzed fell within the average standard error.

For example, as shown in **Table 3.6**, the calculated SWMM peak discharge per area for the point VCMC01 was 2.25. The limits of the USGS for this particular drainage area were 5.20 to 1.40. This illustrates that this 100-year peak discharge per acre is within the acceptable standard error. This corroborated that the SWMM results were in fact satisfactory compared to the USGS regression results.

Although it is never desirable to proceed without gauge data for calibration, it was done here, as it is commonly done elsewhere due to the scarcity of gauged streams. Lacking this validation, the process of checking methods against one another is useful because it allows the model builder to demonstrate that the model results are consistent with generally accepted practices in calculating these statistics.

Section 4
Hydraulic Modeling

4.0 HYDRAULIC MODELING

4.1 INTRODUCTION

The hydraulic analysis of streams within the study was done using two models. In areas where floodplains were to be established (Nugent Creek, Wilson Creek, Rock Creek and Visitor Information Center), HEC-RAS (Version 3.1.1) was used to calculate water surface profiles for steady, gradually varied flow in natural and improved open channels. In areas where only the level of service was a concern, the hydraulic block of the XP-SWMM model was used.

This section discusses the procedures used for the study and describes in detail data development, model development, model-input parameters, data format, naming conventions, and calibration. **Exhibit A.6** shows the basic structure of the hydraulic model as well as the newly established floodplains.

4.2 HEC-RAS MODELS

4.2.1 Digital Terrain Model

A digital terrain model (DTM) was developed from the mapping data provided by the City and from the additional mapping obtained as part of the study. The DTM's purpose for this study was to allow computer software to extract channel centerlines and cross section data. Using HEC-GeoRAS, the information contained in the mapping was extracted from the DTM and imported into the HEC-RAS model.

4.2.2 Stream Network

The stream network was derived from the hydrography information contained in the City data. A GIS feature class was developed from the contour mapping by digitizing the apparent stream course. In effect, the stream network represents the channel centerlines of the streams modeled in HEC-RAS.

4.2.3 Stream Cross Sections

Placement and alignment of cross sections were determined by engineering judgment. In general, cross sections were placed closer together than a maximum spacing of 500 feet.

Additional cross sections were added at bridges and culverts. As prescribed in the HEC-RAS Hydraulic Reference Manual, four cross sections are associated with each hydraulic structure as follows:

- Cross Section 1 is placed approximately 4 times the opening width downstream of the structure.

- Cross Section 2 is placed at the downstream face of the structure, just outside of the roadway embankment.
- Cross Section 3 is placed at the upstream face of the structure, just outside of the roadway embankment.
- Cross Section 4 is placed approximately 1 times the width of the opening upstream of structure.

Cross sections were delineated from left to right looking in the downstream direction and were drawn so that each end projected beyond the maximum extent of the 500-year floodplain. Cross section stations reflect the distance in feet from confluence.

4.2.4 Flow Paths

HEC-RAS estimated friction losses between cross sections using roughness coefficients and distances between cross section. A GIS shape file was developed using contour mapping and the cross section data to define three distinct flow paths: the left overbank, channel, and right overbank regions of flow. Flow path lengths were incorporated into the HEC-RAS model using HEC-GEORAS.

4.2.5 Roughness Coefficients

Roughness coefficients are empirical parameters used to relate surface conditions to conveyance friction losses in the HEC-RAS model. **Table 4.1** shows the relationship between land cover and Manning's "n" values. Typically, roughness coefficients used for this study were taken from the HEC-RAS Reference Manual.

Table 4.1
Roughness Coefficients

Land Cover	Roughness Coefficient
Urban residential (high/low density)	0.060
Urban commercial	0.050
Pavement	0.013
Floodplain; no brush	0.035
Floodplain; brush and trees	0.090
Dense trees	0.11 to 0.15
Light brush and trees	0.060
Grass, no brush	0.035
Crops	0.035

4.2.6 Bridges and Culverts

For this study, approximately thirty (30) bridges and culverts were modeled in accordance with the recommended procedures outlined in the HEC-RAS Hydraulic Reference Manual.

4.2.6.1 Cross Sections

HEC-RAS requires four cross sections when modeling a bridge or culvert. Specific locations of cross sections at a hydraulic structure are described above in Section 4.2.3.

4.2.6.2 Bridge Deck / Roadway

Bridge Deck/Roadway information was acquired from the topographic survey. Where survey data proved to be insufficient, the data was supplemented with information from the base mapping.

4.2.6.3 Modeling Approach

Typically, the highest energy answer between Energy (Standard Step) and Momentum method was selected for low flow calculations. For high flow calculations, the Pressure and/or Weir method was used. As an exception, perched bridges and culverts were modeled using Energy methods. It should be noted that this approach to bridge modeling was a general philosophy, but not a hard and fast rule. The results from each bridge were evaluated, and engineering judgment was used to obtain reasonable results.

4.2.6.4 Internal Bridge Cross Sections

As general rule, internal bridge cross sections were not modified. However, some revisions to internal cross sections may have been necessary. Specifically, when Cross Sections 2 and 3 were not cut perpendicular to the bridge face, the deck / roadway would be obscured by the cross-sections. With weir area (roadway) obscured, HEC-RAS uses the cross section points as the weir. As a result, the calculated head on the weir is often overestimated. Where this conservatism was of particular concern, the internal bridge cross section was modified so that the all of the roadway points were used for weir flow.

4.2.7 Ineffective Flow Areas

Ineffective flow areas were determined using cross-section plots, contour information and photos. Ineffective flow area examples include:

- Floodplain areas significantly below the top of the channel bank not hydraulically connected to the channel downstream
- Floodplain areas within hydraulic shadow of roadway encroachments caused by contraction and expansion of flow through bridge or culvert openings

- Floodplain areas within hydraulic shadow of other obstructions or irregularities in the stream valley floodplain

4.2.8 Expansion and Contraction Coefficients

Expansion and contraction coefficients were estimated based on the ratio of effective flow area in the floodplain occurring at stream valley cross-sections, roadway crossings, and dams. **Table 4.2** lists typical coefficients used in the model. For roadway crossings, expansion and contraction coefficients were applied to the first two cross-sections upstream and one cross-section downstream of the structure.

Table 4.2
Expansion and Contraction Coefficients

Transition Type	Expansion Coefficient	Contraction Coefficient
Gradual	0.3	0.1
Roadway Crossing	0.5	0.3
Abrupt	0.8	0.6
Data from *HEC-RAS Hydraulic Manual*		

4.2.9 Flow Data

For this study, one-dimensional, steady state flows were used as a basis for hydraulic modeling. The peak flow rates at points of interest in the watershed were estimated using the Runoff module described in Hydrologic Modeling section this report.

4.2.9.1 Profiles

Peak flow rates from the 2, 5, 10, 25, 50, and 100-year storms were used in the hydraulic analysis.

4.2.9.2 Flow Change Locations

At a minimum, HEC-RAS requires a flow rate to be established at the top of each reach. Theoretically, flow rates increase continuously along a reach because of lateral inflow of runoff. While it would be impossible to account for continuous increases in flow rate, it is appropriate to increase the flows at particular cross section locations. These locations in the hydraulic model are reflective of hydrograph calculations in the hydrologic model.

4.2.9.3 Boundary Conditions

In accordance with guidelines established by FEMA, boundary conditions were established using normal depth calculations.

4.2.9.4 Flow Conditions

Floodplain information was calculated for two types of land uses: Existing Surface Conditions and Future Surface Conditions.

4.2.9.5 Detention / Storage

Attenuation created by ponds, lakes, and some highway embankments was modeled in XP-SWMM, and the results were incorporated into HEC-RAS.

4.2.10 Floodway Analysis

Floodway limits were not determined as part of this study.

4.2.11 Calibration

Due to the lack of any physical data (such as gauge records) indicating high water elevations for a known flow recurrence interval, true calibration of the hydraulic models could not be performed. Results of the model were gauged against anecdotal information obtained from the public meetings and from problem areas identified by City Staff.

4.2.12 Quality Control / Debugging

Once the HEC-RAS models were calibrated, a final examination of the input parameters was made using the Check-RAS program distributed by FEMA (Version 1.1).

According to the documentation accompanying the program, the "*Check-RAS is a program designed to check the reasonableness of the data found in HEC-RAS. Geometric, steady flow and output data are three types of data used to verify that hydraulic estimates and assumptions made in the model appear to be justified and are in accordance with the assumptions and limitations of the HEC-RAS program and applicable FEMA requirements.*"

Check-RAS allows users to examine a variety of parameters from HEC-RAS data files, as well as generate, view, and print reports, which include tables and messages. Using the HELP message database can reference additional information about the messages identified.

Although the HEC-RAS program provides several messages, CHECK-RAS differs from HEC-RAS in several ways. Only, CHECK-RAS does the following:

- Categorizes floodplain modeling into five distinct areas of checks
- Provides a summary table and messages for each area of check

- Assesses the suitability of roughness coefficients and transition loss coefficients
- Assesses the suitability of starting water-surface elevations
- Assesses bridges and culverts modeling
- Provides a detailed floodway analysis
- Compares important parameters among multiple profiles
- Proposes solutions through the use of the Help screens

Each Check-RAS warning was reviewed and evaluated for applicability. Necessary changes were made to the HEC-RAS model.

Section 5
System Performance

5.0 SYSTEM PERFORMANCE

5.1 INTRODUCTION

After completion of the hydraulic analysis, the overall existing system performance was analyzed to determine where problem areas occur within the watersheds. This section will describe the overall location, land use, existing drainage system, and deficiencies within the existing system for each watershed.

When determining if a location was inadequate, a desired level of service was defined for each type of system. A 10-year level of service was considered adequate for the enclosed portions of the systems, and a 25-year level of service was desired for culverts and bridges located along an open channel system. In addition, the concrete channel running throughout Skunk Run was analyzed as having a desired 50-year level of service.

5.2 INDUSTRIAL PARK WATERSHED

5.2.1 Location

As shown on **Exhibit A.1**, the Industrial Park Watershed lies on the northern edge of the City and has a tributary area of approximately 1240 acres. The northern limit is located between Pawnee Road and Sand Creek Road. The western boundary is generally 1000 feet west of Main Street and the eastern boundary is located between Davis Avenue and Nebraska Road. Wilson Street bounds the watershed on the south.

5.2.2 Land Use

This watershed is approximately 33% developed and 67% undeveloped. The developed area is comprised of residential, industrial, and commercial areas. The undeveloped area is crop or pasture and is generally located on the north and east sides of the watershed.

Future land use categorizes the eastern portion of this watershed as residential development and also as long term development.

5.2.3 Existing Drainage System

The main drainage system of Industrial Park is an open channel conveyance system consisting of natural channels, culverts, and bridges. Upstream flows along the main branch travel through a series of RCB's and open channels including two 12-foot x 6-foot RCB's located beneath the North Street and Cherry Street intersection.

Small enclosed systems and open channels convey a majority of the residential runoff in this watershed to the main system. These flows are passed through two 8-foot x 12-foot RCB's at the BNSF Railway just northwest of the North Street and Mulberry Street intersection.

Flows contributing to the main system at the downstream end of the watershed are generally from agricultural areas. Conveyance continues to be through open channels, culverts, and bridges including: three 12-foot x 12-foot RCB's under U.S. Highway 59; a bridge located along the Midland Railway line; and a bridge along Pawnee Road.

Downstream of the Pawnee Road Bridge, the main channel of Industrial Park combines with the Upper Wilson Creek. Flows at this location are considered part of the Upper Wilson Creek watershed.

5.2.4 System Performance

Overall, there are several locations along the main system and secondary systems were culverts, bridges and the enclosed system do not adequately meet the desired level of service. Areas that did not meet these criteria were deemed as problem areas and are discussed herein. **Exhibit A.6** can be referenced for locations of system components.

5.2.5 Problems Identified by City

5.2.5.1 Kalmar Industries

Kalmar Industries is located north of the N. Oak and Dundee Street intersection. Residential flows south of Dundee Street are carried through a small enclosed system and then discharged into an open channel. A portion of this channel runs along the Kalmar Industries property. The City reports that the channel capacity is insufficient and results in overflow onto the Kalmar Industries parking lot.

5.2.6 Problems Identified by Modeling

5.2.6.1 Culverts Upstream of North Street

The three sets of RCB's located at North Street and upstream are problem areas. Modeling suggests that the RCB's beneath North Street (IPMC15) are undersized and as a result North Street is overtopped during the 25-year event.

Further upstream, the two RCB's (IPMC19 and IPMC17) are also undersized and result in driveways being overtopped during the 25-year event.

5.2.6.2 Culverts at North Street and Cherry Street Intersection

Along the main conveyance system, the two 6-foot x 6-foot RCB's under the intersection of North Street and Cherry Street do not have sufficient capacity. Modeling suggests that this intersection is overtopped during 25-year event.

5.2.6.3 Bridge at Pawnee Road

The bridge located at Pawnee Road at the downstream side of the watershed was also identified as a problem area during the analysis. According to HEC-RAS results, the bridge would be overtopped during the 25-year event.

Ponding in this area in not a crucial concern since it is an undeveloped area in this vicinity, but a level of service of a 25-year event must be met for the roadway.

5.2.6.4 Enclosed System at Dundee Street and Oak Street Intersection

Modeling suggests that the enclosed system located near the intersection of Dundee Street and Oak Street is undersized.

This system, consisting of two 24-inch (IPL2A05 and IPL2A04) and one 30-inch (IPL2A03) reinforced concrete pipes, carries the majority of the flow from the residential area located south of Dundee Street to a natural channel. The 10-year flow event exceeds the combined capacity of all three pipes which could result in possible ponding on Dundee Street at this location.

5.2.6.5 System along Mulberry Street

The upstream enclosed system (IPL411-IPL406) running parallel to Mulberry Street appears to be a problem area. The system is comprised of 24-inch and 30-inch storm sewers. According to modeling, the 30-inch adequately conveys the 10-year event. However, the 24-inch pipes may be undersized to meet the desired level of service.

Further downstream in the open channel conveyance system, a 30-inch CMP (IPL404) under an entrance approach is also not sized adequately to meet the 25-year event requirement, but does not overtop the roadway.

As a result of these undersized pipes, modeling suggests that ponding would most likely occur in the ditches without significant overtopping of roadways. However, it is a concern because it is located in the residential portion of the watershed.

5.2.6.6 Garfield Street and Cherry Street Intersection Area

The small enclosed system of three 24-inch reinforced concrete pipes (IPL6A03-IPL6A01) in the vicinity of the Garfield Street and Cherry Street intersection are undersized to convey the 10-year event. In addition to ponding in the ditches, there may be overtopping of the roadways.

A CMPA (IPL602), 42-inch x 24-inch, located beneath the intersection of Cherry Street and Enterprise Street is also inadequately sized. However, the model results suggest that the intersection would not be overtopped and this culvert is located in an undeveloped area.

5.3 UPPER WILSON CREEK WATERSHED

5.3.1 Location

Upper Wilson Creek Watershed is located in the northeast part of the overall study area. The watershed is generally bound to the north by Riley Road and to the south by Pawnee Road. The western boundary extends approximately three-fourths of a mile west of Eisenhower Road with the eastern boundary being located between Montana Road and Tauy Creek. The total drainage area is approximately 3200 acres.

5.3.2 Land Use

Under current land use conditions, this watershed is approximately 15% developed. The developed area is made up of industrial and commercial areas with a few residential structures. This small percentage of the watershed is typically located in the middle to southern part of Upper Wilson Creek and is generally along the BNSF Railway, which runs through the middle of the basin.

For existing conditions, the majority of this watershed is considered undeveloped and is characterized by agricultural lands including pastures, crops, and scattered farms.

Future conditions for this watershed do not vary significantly from existing conditions. Some areas located on the east side of Upper Wilson Creek are slated for future long term development.

5.3.3 Existing Drainage System

The majority of this watershed is considered part of the non-detailed analysis; therefore, detailed mapping and surveying was not acquired for most of this area. However, land use mapping characterizes this area as generally undeveloped and of agricultural nature, it can be assumed that the existing drainage system is typically an open channel conveyance with limited to no enclosed systems.

At Pawnee Road and south, this basin is considered part of the detailed study area and survey information and mapping was available. All upstream drainage from Upper Wilson Creek flows through two 12-foot

x 6-foot RCB's located beneath Pawnee Road. Immediately south of this location, Upper Wilson Creek combines with the Industrial Park Watershed and carries flows southwest to Lower Wilson Creek.

5.3.4 System Performance

As stated, only a small part of this watershed is considered to be part of the detailed analysis. As such, only the downstream part of Upper Wilson Creek was looked at for system performance.

5.3.5 Problems Identified by City

No problems were identified by the City for this watershed.

5.3.6 Problems Identified by Modeling

5.3.6.1 Culverts at Pawnee Road

Modeling suggests that the two 12-foot x 6-foot RCB's at Pawnee Road used to convey upstream flows are undersized for the 25-year event. The roadway may be overtopped in this vicinity to create a problem area; in addition, there are several buildings directly upstream of this structure that could be flooded during the 10-year event or greater events.

5.4 LOWER WILSON CREEK WATERSHED

5.4.1 Location

Lower Wilson Creek Watershed encompasses approximately 900 acres. The total contributing drainage area to Lower Wilson Creek is approximately 5350 acres, which includes contributing area from the Upper Wilson Creek and Industrial Park watersheds.

Boundary limits for this watershed are Reno Road on the north, Marais Des Cygnes River on the south, and the ridge between Sand Creek and Lower Wilson Creek on the west. In the upstream portion of the basin, the watershed is bounded on the east by the ridge between Lower Wilson Creek and Upper Wilson Creek. Downstream, the watershed is generally bounded on the east by Cleveland Street (see **Exhibit A.1**).

5.4.2 Land Use

Existing conditions show the watershed generally being undeveloped with only 16% being urbanized. Development is typically south of the BNSF Railway and can be described as commercial and industrial with some residential areas. The undeveloped portions of the watershed can be characterized by agricultural, pasture, crop, trees, and parks/open spaces. Future development in this watershed was not indicated by the future land use plan.

5.4.3 Existing Drainage System

Similar to Upper Wilson Creek, a significant part of this basin is not within the detailed analysis limits. Considering the land use mapping, it can be assumed that this system is an open channel system with culverts and/or bridges to convey flow beneath roadway embankments. Where detailed surveying and mapping were available, it is apparent that the existing system consists of natural channels and bridges.

Lower Wilson Creek and Upper Wilson Creek combine just downstream of Pawnee Road. The channel from here continues south under the BNSF Railway bridge and continues under the Wilson Street bridge. The channel then travels over a concrete, inline weir and eventually empties to the Marais Des Cygnes River.

5.4.4 System Performance

System performance was considered at Pawnee Road and downstream due to the detailed analysis limits.

5.4.5 Problems Identified by City

No problems were identified by the City for this watershed.

5.4.6 Problems Identified by Modeling

5.4.6.1 Culverts at Pawnee Road

Modeling suggests that the two 6-foot x 3-foot RCB's beneath Pawnee Road are not sized adequately. The roadway profile appears to sag at this location resulting in overtopping of Pawnee Road during the 25-year flood event.

5.5 FOREST PARK WATERSHED

5.5.1 Location

Located just north of the Marais Des Cygnes River, this small watershed has a total drainage area of approximately 130 acres (see **Exhibit A.1**). It is bounded on the north by Wilson Street and to the south by the Marais Des Cygnes River. The general west boundary is Cleveland Street and the east boundary is the BNSF Railway.

5.5.2 Land Use

Currently, approximately 23% of the watershed is developed and is characterized by residential and industrial/heavy commercial areas. The undeveloped region is in the southwest portion of the basin and consists of parks and open space. Future development is not anticipated within this watershed.

5.5.3 Existing Drainage System

Forest Park consists of four separate drainage systems that are combined on the landward side of the levee before being discharged into the Marais Des Cygnes River. One system consists of an open channel that flows into a 30-inch CMP. This system is responsible for carrying runoff from the residential area located in the north part of the watershed and for carrying runoff from the park on the west side of the basin.

Park runoff is also collected and carried to the main system through a grate inlet and 24-inch concrete pipe.

A small enclosed system with pipe sizes ranging from 15 inches up to 24 inches collects runoff from the large industrial and railroad area located on the northeast side of the watershed.

Flows from the east are carried by the fourth drainage system consisting of a series of concrete pipes.

All of these systems are combined and conveyed through the levee by a 6-foot concrete pipe and discharged into the Marais Des Cygnes River.

5.5.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.5.5 Problems Identified by Modeling

As shown by modeling efforts, all of the enclosed systems within this watershed are undersized for the 10-year event except for the 36-inch pipe (FPL101) coming in from the east and the 6-foot concrete pipe outfall.

5.5.5.1 Open Channel and 30-inch Pipe

The trapezoidal channel carrying flows from the residential area and the park may allow flows into the overbank according to modeling. The 30-inch pipe in which the channel empties may also be undersized.

As a result, possible flooding along the banks of the channel and ponding at the entrance to the 30-inch pipe may occur. Further evaluation, however, of this area suggests that it may not be a significant problem area because there is no development in the immediate vicinity of the channel. Ponding near the entrance of the culvert should not cause water levels to exceed the adjacent roadway during the 10-year event.

5.5.5.2 Enclosed System from Northeast

Suggested by modeling results, the entire enclosed system starting at FPL208 to FPMC03 may not be adequate to convey the 10-year event. Modeling shows the area inlets, grate inlets, and curb inlets to be surcharged along this secondary system.

At the upstream end of the system, ponding may occur in the vicinity of the grate inlets, but the roadway embankments do not appear to have significant overtopping occurring. However, Locust Street at FPL202 and FPL201 will more than likely have some flows overtopping the roadway.

5.5.5.3 Enclosed System from East

The pipes between FPL104 and FPL102 appear to be undersized, and surcharging may occur at the upstream grate inlet (FPL104) and curb inlet (FPL103) along Tecumseh Street. Although not significant, the surcharging at the curb inlet (FPL103) along Tecumseh Street may result in some nuisance ponding in the street. It does not appear that the entire roadway embankment would be overtopped at this location.

5.6 POSSUM RUN WATERSHED

5.6.1 Location

North of the Marais Des Cygnes River, the Possum Run Watershed is located within City limits. The drainage area for this basin is 220 acres. The general watershed limits are Grant Street on the north, Sycamore Street on the east, the BNSF Railway on the west, and the Marais Des Cygnes River on the south (see **Exhibit A.1**).

5.6.2 Land Use

This watershed is almost completely developed with only 7% being undeveloped. The developed area primarily consists of medium to heavy residential areas with commercial areas along Main Street. Being located directly in City limits, the small percentage of undeveloped area is characterized by parks and open space.

Since the vast majority of this watershed is already developed, future land use does not predict any substantial further development within this basin. Therefore, existing conditions and future conditions land use are closely related for the Possum Run watershed.

5.6.3 Existing Drainage System

The existing drainage system for this watershed is a combination of open channels and enclosed systems. Three separate branches drain into a downstream detention area which discharges into two 7-foot x 7-foot RCB's under the levee. This structure empties into the Marais Des Cygnes River.

Runoff from apartments and commercial buildings on the south side of the watershed is collected by a small enclosed system. This system is a series of concrete pipes with diameters from 24 inches up to 36 inches. Flows originate from the south and discharge into the detention area.

The main system conveys flows from the north and northwest part of the watershed. The system begins with an enclosed system consisting of smaller-sized pipes that discharge into a natural channel. The channel continues south to approximately Red Jacket Street at which point a secondary enclosed system combines with the main system. The main system from here is an open conveyance system.

From Red Jacket Street south, the channel goes through a 6-foot concrete pipe, daylights, and then continues through another 6-foot concrete pipe and then to an open channel. At the Logan Street and King Street intersection, the channel travels through two 36-inch x 30-inch CMPA's and then continues south as a natural channel to two 72-inch x 54-inch CMPA's. After the CMPA's, a 6-foot x 4-foot RCB discharges into another natural channel which in turn flows into a 5-foot diameter pipe that empties into the detention area.

The third main branch is an enclosed system on the upstream end and an open channel system at the downstream end. Drainage collected along this line is mostly from residential land uses. From the intersection of Poplar Street/Massasoit Street and downstream to the intersection of Cedar Street/Powhattan Street, the system is a series of 15-inch and 24-inch concrete pipes. The system continues west at this point through a 4-foot x 4-foot RCB and outlets into a natural channel. The channel flows south and under a small bridge and then downstream through a 7-foot x 3-foot elliptical concrete pipe to natural channel. Beneath Keokuk Street is a 6-foot x 6-foot concrete RCB that flows into the detention area.

At the detention area, all flows are combined and discharged through the reinforced concrete structure at the levee.

5.6.4 Problems Identified by City

5.6.4.1 N. Hickory and Poplar Street System

The City has reported problems with the enclosed system from the Poplar and Massasoit Street intersection downstream to the Powhattan and Cedar Street intersection. In addition to the line being undersized, the alignment of the existing system needs to be altered to avoid existing structures.

5.6.4.2 Logan Street Culverts

Culverts located beneath Logan Street near the King and Logan Street intersection are undersized. The City has reported frequent nuisance flooding within this area.

5.6.5 Problems Identified by Modeling

5.6.5.1 Wilson Street Enclosed System

The small enclosed system near the Wilson and Main Street intersection may be undersized to carry flows from the 10-year flood event. Modeling indicates that curb inlets at this intersection (PRMC21 and PRMC20) and curb inlets (PRMC19 and PRMC18) along Wilson Street will surcharge causing street flooding at these locations.

5.6.5.2 Red Jacket Street System

Several of the pipes within this reach may be undersized for the 10-year event. Structures PRL304 downstream to PRL301 are surcharging under these flow conditions according to modeling results.

The surcharging of these structures causes ponding in the street and may result in overtopping of the embankments at the Main Street and Red Jacket Street intersection and also at the King Street and Red Jacket Street intersection.

5.6.5.3 Logan Street Culverts

Two 36-inch x 30-inch CMPA's (PRMC12) at the intersection of King Street and Logan Street may be undersized. As a result, water that ponds on the surface may cause damage to the adjacent commercial buildings. Commercial buildings located in the vicinity are between elevation 890 feet and 892 feet with modeling results indicating water surface elevations reaching approximately 891 feet. It is also possible that the roadway embankments will realize some flooding as well.

5.6.5.4 N. Hickory and Poplar Street System

Pipes within the enclosed system beginning at the Poplar Street and Massasoit Street intersection (PRL218) are shown to be undersized all the way downstream to the Powhattan Street and Cedar Street

intersection (PRL209). Modeling predicts that the structures along this line will surcharge. Because most of these structures are curb inlets, surcharging would result in ponding of water on roadways and in some cases may cause overtopping of the roadway embankment.

5.7 SYCAMORE STREET WATERSHED

5.7.1 Location

As shown on **Exhibit A.1**, this is a small watershed nestled between Possum Run and Country Club basins. The total runoff area contributing to this overall watershed is approximately 8.5 acres. The watershed is generally bounded by Massasoit Street to the north, Mulberry Street to the west, Sycamore Street to the east, and the Marais Des Cygnes River to the south.

5.7.2 Land Use

Current conditions reflect that this watershed is 100% developed with residential homes. Because the basin is already completely developed, future land use conditions will not change.

5.7.3 Existing Drainage System

The existing drainage system modeled is entirely an enclosed system. Water flows into the system at the Sycamore Street and Logan Street intersection through 3-foot x 2-foot corrugated metal ellipses. Downstream, the system is comprised of 30 inch concrete pipes that discharge into the Marais Des Cygnes River.

5.7.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.7.5 Problems Identified by Modeling

Modeling indicates that the first 3-foot x 2-foot corrugated metal ellipse (SYMC05) and one of the 30-inch concrete pipes (SYMC02) are not sized to convey the 10-year flows. However, these areas were not deemed as problem areas because the structures at these locations were not surcharging. All other pipes along this line conveyed flows adequately.

5.8 COUNTRY CLUB WATERSHED

5.8.1 Location

The majority of this watershed is located within City limits and is roughly bounded on the north by Wilson Street, on the west by Sycamore Street, on the east by Davis Street, and on the south by the Marais Des Cygnes River.

The total contributing drainage area for the Country Club watershed is approximately 300 acres.

5.8.2 Land Use

Currently, 43% of the watershed is developed and 57% is undeveloped. The developed area, which is primarily located on the northeast side of the basin, consists mainly of residential homes. The undeveloped region consists of the Country Club golf course, pasture land, parks and open spaces, and vacant residential areas. The future land use plan does predict commercial and residential development in those undeveloped areas of the Country Club watershed except were designated parks and open spaces already exist.

5.8.3 Existing Drainage System

The current drainage system consists of two separate line reaches that combine just upstream of the Marais Des Cygnes River. These systems are partially enclosed system and partially open channel flow.

The majority of the residential runoff is collected by the system located on the west side of the basin. Near Cherry Street, the system is a series of 24-inch concrete pipes and a 32-inch x 24-inch concrete ellipse. From this point downstream, the system is open channel conveyance.

Runoff is conveyed south through a natural channel and then through two 24-inch concrete pipes. The pipes discharge into a concrete channel just north of Powhattan Street. Below Powhattan, the system continues south and travels through two 6-foot x 2-foot elliptical concrete pipes to a natural channel and then through a 4.5-foot x 3-foot elliptical concrete pipe. The channel daylights briefly and then travels through a 7-foot x 4-foot RCB to a natural channel.

The drainage system on the east side of the basin conveys drainage from the undeveloped areas. The system is typically open channel with culverts and a small enclosed system on the secondary tributaries. Located at the headwaters of this system is a 4-foot CMP beneath Davis Avenue. From Davis Avenue, flow is conveyed through a natural channel to an 18-inch CMP under a golf cart path. Flow is then routed through a 4-foot by 3.75-foot concrete box culvert which empties into a small reservoir. Flow accumulates in the reservoir until water levels exceed the drainage ditch elevation, which carries flows east to a grate inlet.

Flows drop down into the grate inlet and are conveyed beneath Logan Street through a 10.5-foot x 10.5-foot RCB. Just downstream of the box culvert, a secondary system ranging in size from 24 to 36 inches combines with the main channel.

Approximately 1000 feet upstream of the outfall, both systems converge and flow south to the Marais Des Cygnes River.

5.8.4 Problems Identified by City

5.8.4.1 Country Club Lake

Overflow from the Country Club Lake is currently conveyed through an emergency spillway which empties into a small open channel. The open channel discharges into a grate inlet located at the upstream end of a 10.5-foot x 10.5-foot RCB culvert beneath Logan Street.

Information obtained from the City stated possible overtopping of Logan Street was an issue due to water being ponded at the grate inlet. It was suspected by City staff that the accumulation of trash and debris on the grate inlet was causing the flooding problems.

5.8.5 Problems Identified by Modeling

5.8.5.1 System between Red Jacket Street and Logan Street

The small enclosed system at the upstream end of the western system may not be adequately sized to convey a 10-year event. The three structures located along Cherry Street are curb inlets that surcharge under these flow rates. This results in water ponding at structures CCL112 and CCL111, which is the low point in the roadway profile, and may cause overtopping of the embankment at this location.

Further downstream, the two 24-inch CMP's (CCL109) are also undersized. However, accumulation of flows at this point is not crucial since this area is undeveloped.

The 4.5-foot x 3-foot elliptical concrete pipe (CCL107) that parallels Spruce Street may be undersized according to modeling results. However, flooding around the entrance of this structure may not be critical because the area is open space.

5.8.5.2 Culvert at Davis Avenue

The hydraulic analysis shows the roadway at Davis Avenue is overtopped even during low flow events, such as the 5-year event. Because the 4-foot CMP (CCMC13) does not adequately convey flow rates to meet a 25-year level of service, this area is considered to be a problem area.

5.8.5.3 Golf Cart Paths

Located in the Country Club, there are two structures beneath golf cart paths. The first is an 18-inch diameter CMP. The second structure further downstream is a 4-foot x 3.75-foot concrete box. Both golf cart path embankments are overtopped during 25-year flows.

Although it should be noted that these structures are undersized, this vicinity should not be considered a true problem area since the embankments are golf cart paths and not roadways. The hydraulic modeling also shows the residences located on the west side of the channel are out of the 100-year floodplain.

5.9 VISITOR INFORMATION CENTER WATERSHED

5.9.1 Location

Located on the northeast side of the watershed study area, the Visitor Information Center Watershed has a contributing area of approximately 675 acres. The limits of the watershed are generally Osborne Terrace on the north; Davis Avenue on the west; Howell Drive on the east; and the Marais Des Cygnes River on the south (see **Exhibit A.1**).

5.9.2 Land Use

Current conditions for this basin show 17% of the watershed is developed. This developed area is residential, commercial, and industrial areas. The majority of the basin is undeveloped agricultural, pasture, and forested areas. Although the majority of this watershed is currently undeveloped, the City's Future Development Plan targets this area for development in the near future.

5.9.3 Existing Drainage System

The conveyance system in this watershed is comprised of open channels. There is little infrastructure and the system is natural, open channels. One exception is the 6.8-foot x 4-foot RCB which conveys flows beneath Kansas Highway 68.

5.9.4 Problems Identified by City

As described in the Land Use section above, it is anticipated that Visitor Center will become urbanized in the near future. Development will result in increased flow rates and may cause flooding downstream. The City voiced a concern about future stormwater management of this area.

5.9.5 Problems Identified by Modeling

No significant problems were identified in this watershed according to modeling results.

5.10 EISENHOWER / 23RD STREET WATERSHED

5.10.1 Location

The Eisenhower/23rd Street Watershed is located at the headwaters of the Nugent Creek Watershed (see **Exhibit A.1**). The basin is typically bounded on the north by 19th Street, on the west by Eisenhower Road, on the east by U.S. Highway 50, and the south by Old 50 Highway. The majority of the watershed

is within the detailed study limits with only the southern part being outside of the limits. There are approximately 780 acres that contribute to this basin.

5.10.2 Land Use

Residential, commercial, and industrial areas characterize the 25% of this watershed that is developed land. Commercial and industrial buildings are generally located in the north and east part of the basin, with residential homes sparsely located throughout the watershed. The majority of the basin is undeveloped with agricultural lands, trees, crops, open spaces, and pasture. However, the City's Future Land Use Plan suggests that the majority of the area could be developed with residential homes and businesses.

5.10.3 Existing Drainage System

The existing drainage system as modeled is open channel along the main channel and begins at U.S. Highway 50.

On the north side of the watershed near 19th Street, there is a small enclosed system consisting of 15-inch and 24-inch concrete pipe. This secondary system flows into a natural channel immediately south of 19th Street and combines with the main branch approximately 2000 feet northwest of the 23rd Street and U.S. Highway 50 intersection. At the downstream end four 8-foot x 4-foot RCB's allow flow to travel beneath Eisenhower Road.

5.10.4 Problems Identified by City

5.10.4.1 Eisenhower Culverts

City staff has reported that Eisenhower Road at Nugent Creek does overtop. During a heavy rainfall event in June 2005, water was observed on the roadway. The City speculates that the roadway was not overtopped because of Nugent Creek flows, but because the roadside ditches have insufficient capacity to carry runoff from adjacent fields.

5.10.4.2 23rd Street Culverts

Currently, flow south of 23rd Street between Eisenhower Road and Kansas Highway 50 is conveyed beneath 23rd Street through a number of culverts. It is the City's desire to make the 23rd Street corridor more suitable for future development. Channel improvements and structure replacement would be anticipated.

5.10.5 Problems Identified by Modeling

It should be noted that flows used for the small enclosed system and for events less than the 100-year event were obtained from the hydrologic analysis completed for this study. For mapping of the 100-year floodplain using HEC-RAS, 100-year peak flows were obtained from the Franklin County Flood Study. It was deemed reasonable to use these flows for the floodplain mapping since the Franklin County Flood Study results will be used for FEMA mapping and considered regulatory upon completion.

5.10.5.1 Enclosed System near 19th Street

Three of the 24-inch concrete pipes are not sized for the 10-year event: E23L1A01, E23L103, and E23L102. Ponding may occur at these structures, but flooding does not appear to be severe enough to overtop roadway embankments in this area.

5.10.5.2 Culverts at Eisenhower Road

The four 8-foot x 4-foot reinforced box culverts (E23MC01) located beneath Eisenhower Road are overtopped during the 10-year event and greater events. Flooding in the vicinity of the culverts is not considered a problem since this area is undeveloped; however, a level of service on the roadway should be at least the 25-year event.

5.11 NUGENT CREEK WATERSHED

5.11.1 Location

As shown on **Exhibit A.1**, Nugent Creek runs along the southwest side of the overall study area. Several smaller watersheds contribute flows to this watershed. Approximately 750 acres are considered the Nugent Creek watershed with a total contributing area for this watershed of 3070 acres, which includes drainage from Sugar Creek, Pin Oak, West 13th Street, and Eisenhower/23rd Street watersheds.

The limits of the Nugent Creek watershed are the Marais Des Cygnes River on the north, Eisenhower Road on the east, Louisiana Road on the west, and Interstate 35 on the south. The majority of this watershed is considered part of the detailed analysis and has detailed survey information available. South of Labette Road, the watershed is considered to be part of the non-detailed analysis and USGS mapping was used for survey information.

5.11.2 Land Use

The area considered as the Nugent Creek watershed is generally undeveloped with only 12% being considered developed. The small developed area is on the south side of Labette Road and consists of low density residential homes. The undeveloped areas making up the majority of the land use for this basin

are characterized by trees, farms, crops, and pastures. South of Marshall Road, the City's Future Land Use Plan defines areas of the Nugent Creek watershed as residential and long term development.

5.11.3 Existing Drainage System

The main conveyance system in this watershed is Nugent Creek. This system is open channel with a number of structures located along the channel to convey flows through roadway embankments.

The drainage system begins west of Eisenhower Road where flows from the Eisenhower/23rd Street watershed are discharged through the culvert structure beneath Eisenhower. The main channel of Nugent Creek travels west where it combines with a secondary tributary. From here, the channel turns north to Marshall Road at which point flow is conveyed beneath the roadway by two 6-foot x 7-foot RCB's. At this structure, a secondary system also converges with the main channel.

South of the Farmland Road loop, runoff from the West 13th Street watershed are combined with Nugent Creek. The main channel continues on and combines with a secondary tributary which carries flows from the Sugar Creek watershed and the Pin Oak watershed. After this confluence, Nugent Creek crosses under the Kansas Highway 68 Bridge and continues north to 2nd Street. There it travels through two 3-foot CMP's. Just downstream from 2nd Street, Nugent Creek empties into the Marais Des Cygnes River.

5.11.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.11.5 Problems Identified by Modeling

The 100-year floodplain mapping was completed using flows from the Franklin County Flood Study as explained in **Section 5.9.3.2**. All other flows were obtained from the hydrological analysis completed for this study.

5.11.5.1 Culverts at Marshall Road

As indicated by the hydraulic analysis, the two 6-foot x 7-foot RCB's located beneath Marshall Road do not convey the 25-year flood event. In fact, the embankment is overtopped at the low point for flood events as low as the 2-year event.

5.11.5.2 Culverts at 2nd Street

The roadway profile of 2nd Street sags at the point where the two 3-foot CMP's are located. With the culverts possibly being undersized and the roadway being at a low point, flows overtop 2nd Street even during low flow events. The estimated level of service is a 2-year event.

5.11.5.3 Enclosed System at Eisenhower and 17th Street Intersection

The small system at Eisenhower and 17th Street intersection (NCL405-NCL403) is not adequate to carry flows from a 10-year event. The system consists of a 24-inch concrete pipe with two 36-inch pipes at the downstream end of the enclosed system. Structures along this branch are generally curb inlets that are surcharging under these conditions. This may cause water to back up onto the street and pond at this intersection during storms greater than 10-year event.

5.12 WEST 13TH STREET WATERSHED

5.12.1 Location

West 13th Street Watershed is a small watershed with a drainage area of 48 acres. The boundaries of the basin are 13th Street on the north, a ridge just west of Eisenhower Road on the west, Redbud Street on the east, and Willow Lane on the south (see **Exhibit A.1**).

5.12.2 Land Use

Approximately 63% of the watershed is currently developed. Development includes residential homes with some commercial buildings. Undeveloped area is generally pastureland. The City's Future Land Use Plan anticipates that this watershed will primarily be residential homes when fully developed.

5.12.3 Existing Drainage System

The existing system is a combination of enclosed systems and open channels. At the upstream end, an enclosed system consisting of 48-inch concrete pipe flows into a natural channel that parallels Eisenhower Road. This channel combines with a 42-inch concrete pipe which is preceded by a 36-inch concrete pipe. These pipes carry runoff from the area north of 13th Street.

A separate system conveys drainage from the residential homes located south of 13th Street. This system is a series of concrete pipes that are 15 inches to 24 inches in diameter. These pipes discharge into a 60-inch x 32-inch elliptical CMP that is beneath Eisenhower Road. At the outlet, the natural channel carrying flows from the southern portion of the basin is combined with flows from the elliptical CMP.

5.12.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.12.5 Problems Identified by Modeling

Modeling results showed no problem areas in this watershed.

5.13 PIN OAK WATERSHED

5.13.1 Location

Pin Oak Watershed is located on the southwest side of the City of Ottawa (see **Exhibit A.1**). Approximately 350 acres of contributing drainage area make up the basin. The watershed is bounded on the north by a private farm road, on the west by Eisenhower Road, on the east by Maple Street and on the south by 19th Street.

5.13.2 Land Use

Pin Oak watershed is 64% developed and 36% undeveloped. Development within the watershed is characterized by residential homes, commercial buildings, and schools. The undeveloped area consists of agricultural lands, a reservoir, parks and open spaces, vacant residential and commercial land, and trees. The majority of undeveloped land is located at the northern part of the watershed. It is anticipated that undeveloped portion of this watershed will become residential homes or multifamily residential homes in the future.

5.13.3 Existing Drainage System

At the headwaters of the watershed, the existing drainage system consists of several enclosed systems with pipe sizes ranging from 15 to 36 inches. These systems are combined in a natural channel that flows north and combines with a secondary tributary.

The main channel continues northwest through a series of culverts located at Lakeside Estates, 15th Street, Pin Oak Circle, and Pine Court. Heading north, the natural channel travels through two 10-foot x 3-foot RCB's at 13th Street. Just downstream, the main channel combines with a secondary system that conveys flows from a residential area located on the east side of the watershed. After the secondary system is combined with main flows, the natural channel continues on in a northwesterly direction to combine with the Sugar Creek drainage system.

5.13.4 Problems Identified by City

5.13.4.1 Lakeside Estates Detention

The detention area located north of 17th Street and adjacent to Lakeside Estates is dry under current conditions because the embankment has been breached. However with future development anticipated south of 17th Street, the City is concerned about downstream impacts.

5.13.4.2 Osage Drive Channel Improvements

At 17th Street and Osage Drive intersection, a small enclosed system carries runoff from south of 17th Street to an open channel. This channel generally runs parallel to Osage Drive. City staff has reported issues with the condition and capacity of the channel.

5.13.5 Problems Identified by Modeling

It may be noted that the open channel conveyance system of this watershed was modeled in HEC-RAS as a tributary to the Nugent Creek watershed system. However, the Franklin County Flood Study did not break out flows along this reach. Therefore, the 100-year floodplain mapping for this watershed used flows obtained from the hydrologic analysis completed for this study.

5.13.5.1 Willow Street and 17th Street Intersection

The 36-inch concrete pipe downstream of structures POMC18 and POMC17 may be undersized for the 10-year event; causing these curb inlets to surcharge. Because the Willow Street and 17th Street intersection is the low point in the roadway profile, ponding and possible overtopping would likely occur at this location. Further downstream, north on Willow Street, POL502 is also undersized and may cause ponding on Willow Street at this grate inlet.

5.13.5.2 System South of 17th Street

The enclosed system south of the reservoir conveys flows from the agricultural lands south of 17th Street into the reservoir. This system is not sized to convey 10-year flows. Area inlet POL405 and curb inlet POL404 surcharge under these conditions which may cause ponding on 17th Street.

5.13.5.3 Open Channel System between Lakeside Estates and Pine Court

There are a number of culverts located in the reach between Lakeside Estates and Pine Court. The first set of culverts is two 2-foot CMP's (POMC13) located beneath Lakeside Estates. According to the hydraulic analysis, this embankment is overtopped during the 2-year and greater events. The structure POMC11 at 15th Street is adequately sized and conveys flows for the 100-year event.

Immediately downstream from 15th Street, three 4.5-foot x 3-foot concrete ellipses under Pin Oak Circle carry flows for the 2-, 5-, and 10-year events. Modeling suggest that overtopping of the roadway occurs during the 25-year event and greater. A similar level of service is also provided for the three 4.5-foot x 3-foot concrete ellipses beneath Pine Court roadway.

5.13.5.4 System Paralleling Osage Drive

At the upstream end of the system paralleling Osage Drive, there are a series of 24-inch diameter concrete pipes (POL306-POL304) that discharge into a natural channel. The purpose of these 3 pipes is to convey agricultural runoff across 17th Street. The two upstream pipes appear to be adequate to convey the 10-year event; however, the third 24-inch pipe may not. Surcharging at structure POL304 is the result and may cause water to pond on the street.

The 15-inch concrete pipe at the downstream end of this secondary system also may not be adequately sized to convey a 10-year storm event. According to modeling results, curb inlet POL301 may surcharge and cause ponding on 15th Street in this vicinity.

5.13.5.5 Open Channel Paralleling Eisenhower Road

A natural channel parallels Eisenhower Road at the downstream end of this watershed. HEC-RAS results show the Eisenhower roadway being overtopped during the 25-year event and greater events.

5.14 SUGAR CREEK WATERSHED

5.14.1 Location

Sugar Creek Watershed is generally located within City limits and is directly north of the Pin Oak Watershed and east of the Nugent Creek Watershed. The limits of the basin are on the north 7th Street, on the west Eisenhower Road, on the east Willow Street, and 11th Street on the south. Approximately 150 acres drain to the outfall of this watershed (see **Exhibit A.1**).

5.14.2 Land Use

Developed land comprises 70% of this watershed. It consists mostly of residential areas with some commercial buildings and is located on the east side of the basin. The undeveloped region is mostly on the west side and is pasture and crop land. Significant changes between existing and future land use conditions are not anticipated.

5.14.3 Existing Drainage System

Drainage from the residential area located in the southern part of the watershed is conveyed through an enclosed system. The system is made up of several circular and elliptical concrete pipes of varying sizes. The enclosed system discharges into a natural channel, which parallels Pine Street.

The channel then carries these flows until it combines with the system conveying drainage from the northern part of the watershed. This main line from the north is generally an open channel system consisting of swales and culverts.

At the confluence, flows from the north and from the south are combined and then directed to the west through a natural channel until reaching Eisenhower Road. At Eisenhower Road the channel changes direction to the south and is merged with flows from the Pin Oak Watershed.

At this location, flows from both the Sugar Creek and the Pin Oak Watersheds are conveyed beneath Eisenhower Road through two 7-foot x 7-foot RCB's and from there are conveyed west to the confluence with Nugent Creek.

5.14.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.14.5 Problems Identified by Modeling

5.14.5.1 Enclosed System at Ash Street/10th Street and Olive Street/9th Street

The enclosed system (SRMC20-SRMC07) in the southern part of the watershed is approximately located between the intersection of Ash Street/10th Street and the intersection of Olive Street/9th Street.

The pipes located along Ash Street and upstream for the most part are not sized to meet the 10-year flood event; however, structures are not surcharging along this stretch except SCMC20.

At structure SCMC14 and all structures located downstream, surcharging is occurring during 10-year event due to undersized pipes in the system. This could cause ponding of flow at the structures and modeling indicates may also cause overtopping of roadway. This is of concern since this system is located in a residential area. However, modeling results are not corroborated with observation.

5.14.5.2 Pine Street System

The drainage system that conveys runoff from the northern residential area is located along Pine Street. Runoff is conveyed through ditches and 24-inch corrugated metal culverts under driveways. These culverts do not adequately convey the 10-year flow event and could cause flooding of the surrounding houses and roadway.

Downstream, a secondary system conveys flows from Olive Street west. Curb inlets (SCL1A04 and SCL1A03) along Olive Street may surcharge for events greater than 10 years. This could result in ponding and possible overtopping of Olive Street at this location.

5.15 WILLOW STREET WATERSHED

5.15.1 Location

As shown on **Exhibit A.1**, Willow Street Watershed is located directly south of the Marais Des Cygnes River and has a contributing drainage area of approximately 300 acres. Approximate boundaries for this basin are the Marais Des Cygnes River on the north, Walnut Street on the east, 6th Street on the south, and Eisenhower Road on the west.

5.15.2 Land Use

Currently, approximately 74% of Willow Street Watershed is considered developed. Development includes a school system, commercial and industrial buildings, but generally is residential homes. The area within the watershed that is undeveloped is located in the northwest corner of the basin and is considered park and open spaces with some trees.

There are no changes predicted between existing land use and future land use conditions.

5.15.3 Existing Drainage System

The existing drainage system has both enclosed and open channel systems. In the southwest part of the basin the existing system is a series of concrete pipes ranging in diameter from 18 inches to 30 inches. At the intersection of Kansas Highway 68 and Beech Street, the enclosed system empties into a natural channel.

The main channel from this point is an open channel with culverts and bridges to convey flow beneath roadways. The channel travels east beneath Kansas Highway 68 through a 6-foot x 3-foot RCB and continues on northeasterly through the Missouri Pacific Railroad bridge. Downstream of the bridge a tributary system combines with the main channel. This tributary system collects runoff from the residential area and is considered partially enclosed and partially open channel with a series of culverts and concrete channels.

Below the confluence, the main channel continues through a 48-inch CMP beneath Willow Street and continues north to the levee. A confluence at the levee combines the channel flows with an enclosed system coming in from the east. These flows are then passed beneath the levee through a 6-foot concrete pipe which empties to the Marais Des Cygnes River.

5.15.4 Problems Identified by City

5.15.4.1 Ditches South of U.S. Highway 68

South of U.S. Highway 68, between Beech and Willow Street, there are two roadside ditches. The City reported that the ditches tend to fill up with trash and sediment which results in water ponding at these locations.

5.15.4.2 Ash and Willow Street System

One of the tributary systems conveying residential flows in the vicinity of Ash and Willow Street is partially enclosed and partially open channel. At the headwaters, the system is an enclosed system consisting of 24-inch pipes that eventually empties into an open channel system. The open channel system is a series of ditches and culverts. City staff has stated that this is an older line and is a source of flooding.

5.15.5 Problems Identified by Modeling

5.15.5.1 Enclosed System at Upstream End

According to modeling results, the enclosed system (WLMC18-WLMC14) south of the Kansas Highway 68 and Beech Street intersection does not meet the desired level of service. All pipes along this reach are undersized and structures are surcharging. Some flooding of structures and ponding on roadways may be a problem in this vicinity.

5.15.5.2 24-Inch Concrete Pipe

The 24-inch concrete pipe (WLL501) located near the intersection of Kansas Highway 68 and Beech Street intersection does not carry the 25-year event flow rates. This roadway is shown to overtop for events exceeding the 10-year return period.

5.15.5.3 Ash and Willow Street System

Residential runoff from the south is carried through a secondary system located between Ash Street and Willow Street. The system is considered enclosed and open channel. The enclosed system at the upstream end (WLL318 to WLL313) does not convey flows for the 10-year event. Pipes are not sized properly to meet this criteria and surcharging is occurring at the structures according to modeling results obtained from XP-SWMM.

WLL312 through WLL306 is concrete trapezoidal channels with culverts along the line to carry flow beneath driveways. These culverts, which are a 30-inch concrete pipe and two 24-inch CMP's, do not

convey 25-year flows. Modeling suggests that undersized culverts and limited conveyance area in the concrete channel could result in flooding of the nearby structures.

5.15.5.4 Culverts at Willow Street

The 48-inch CMP (WLMC06) under Willow Street along the main channel is not adequately sized. Results show the roadway being overtopped during the 25-year event.

5.15.5.5 Enclosed System East of Kansas Highway 68

An enclosed system (WLL109-WLL101) located in the northeast part of the watershed and east of Kansas Highway 68 carries commercial and residential flows. Modeling suggests that some pipes along the main branch of this system are undersized.

The secondary branches to this system are also undersized, but surcharging is taking place at structures. These structures include WLL1A02, WLL1A01, and WWL1B01. Since these structures are located in a developed area, flooding of surrounding residential and commercial buildings is a concern.

5.16 SKUNK RUN WATERSHED

5.16.1 Location

As shown on **Exhibit A.1**, Skunk Run Watershed is generally bounded on the north by the Marais Des Cygnes River, on the west by Willow Street, on the south by 17th Street, and on the east by Cedar Street and Mulberry Street. The total contributing drainage area for this basin is approximately 770 acres.

5.16.2 Land Use

A majority of this watershed is urbanized with schools, commercial and industrial buildings, and residential land uses. Parks and open spaces, vacant residential area, and a limited amount of agricultural land at the north end characterize the undeveloped portion of the watershed. Because this watershed is located in the center of the city, significant future development is not predicted by the City's Future Land Use Plan (see **Exhibit A.2**).

5.16.3 Existing Drainage System

The main branch of the existing drainage system is generally an open channel conveyance system with several secondary branches connecting to the system at varying locations. The main open channel is a concrete lined trapezoidal channel throughout the majority of the basin except at the headwaters of the watershed and towards the outfall of the drainage system.

At the headwaters of the Skunk Run watershed, a 5-foot x 3-foot RCB conveys residential, commercial, and industrial flows beneath 15th Street and carries them downstream through an open channel. At SRMC40, a 24-inch CMP conveys flows beneath a small embankment and the channel continues beneath 11th Street through two 5-foot x 4-foot RCB's that outfall into a concrete trapezoidal channel.

This engineered channel is routed north through the 10th Street culverts, which are two 5.5-foot x 4-foot RCB's, and then continues north to 9th Street. At 9th Street, the concrete channel empties into an 11-foot x 4-foot box culvert and then travels through two 6-foot x 3.5-foot reinforced box culverts.

Immediately east of Locust Street, the concrete trapezoidal channel continues in a northeasterly direction. Flow is conveyed beneath Pecan Street by two 14-foot x 4-foot box culverts and the concrete channel then continues to Walnut Street where two 8-foot x 6-foot reinforced box culverts are located.

The channel then continues through three 6-foot x 6-foot box culverts that daylight immediately east of Main Street. At Hickory Street, a series of box culverts convey flow across a residential area. The main system then continues as a concrete channel and travels through a 10.5-foot x 5-foot box culvert beneath Cedar Street.

A 9-foot x 5.33-foot box culvert followed by two 7.5-foot x 6.5-foot box culverts are located at the intersection of Oak Street and 5th Street. The channel continues north to the 4th Street culverts, two 8.5-foot x 6.5-foot box culverts, and then travels through two 9-foot x 6.5-foot reinforced box culverts beneath the Poplar Street and 3rd Street intersection.

At this point, the concrete channel ends and the main channel is still a trapezoidal engineered channel, but is not lined. The channel travels to the north and the east until the levee is encountered at which point a 10-foot x 10-foot box culvert conveys flow beneath the levee to the Marais Des Cygnes River.

5.16.4 System Performance

The system performance for this study is based on obtaining a 10-year level of service for the enclosed system and 25-year level of service for culverts/bridges along the open channel system. In addition in Skunk Run, the desired level of service is a 50-year flood event for the concrete channel that carries the vast majority of drainage.

5.16.5 Problems Identified by City

5.16.5.1 Skunk Run Outfall

In 1958, the U.S. Army Corps of Engineers began construction of a levee to protect the City of Ottawa from a flood event on the Marais Des Cygnes River. As part of that project, a pumping plant was necessary where Skunk Run crosses the levee system. The Operation and Maintenance Manual[8] for the project refers to this location as the Southeast Pumping Plant. In conjunction with the pumping plant, a ponding area was reserved near the toe of the levee to store stormwater runoff until it could be pumped to the Marais Des Cygnes River.

Information received from the City indicates the pumping capacity and/or the storage capacity of the ponding may no longer be adequate. As the watershed has become urbanized, the peak flow rates into the ponding area have increased, while the pump sizes have remained the same. Model results indicate that the level of service provided by the ponding area has decreased. According to the City, the ponding area fills to capacity more frequently and to a stage that threatens flooding of nearby homes. The City has also reported that additional pumps have been needed during recent storm events to supplement the existing pumping capacity.

5.16.5.2 S. Oak and Poplar Street System

The enclosed system between Oak Street and Poplar Street is a tributary line that conveys residential flows north to the main system. City staff has reported that pipe capacities along this reach are not adequate to convey the necessary flows. In addition, the sewer may not have sufficient cover. At some locations, the top of pipe may have less than 1 foot of cover.

5.16.6 Problems Identified by Modeling

5.16.6.1 24-inch CMP

According to modeling results, the 24-inch CMP (link SRMC40) located beneath a small embankment may be undersized. Modeling suggests that the embankment will overtop for events having return periods greater than 25 years. According to the modeling results and the available topography, it does not appear that the overtopping of this embankment would cause flooding of nearby structures or roadways.

[8] Department of the Army, Kansas City District, Corps of Engineers. 1980. *Operation and Maintenance Manual, Flood Protection Project, Marais Des Cygnes River, Ottawa, Kansas.*

5.16.6.2 Elm Street and 9th Street System

At the intersection of Elm Street and 9th Street, the main channel is routed through an 11-foot x 4-foot RCB (SRMC31) and then two 6-foot x 3.5-foot RCB's (SRMC30 and SRMC29). These sections of pipe appear to be undersized to convey runoff events having return periods greater than 10 years.

5.16.6.3 Concrete Open Channel along Main System

According to the City, the desired level of service for the concrete channel running through Skunk Run is to convey a 50-year event. According to modeled water surface elevations and surveyed contours, the concrete channel generally does not convey the 50-year event within its banks. Two stretches of channel that appeared to convey the majority of the 50-year discharge were between SRMC11/SRMC10 and SRMC09/SRMC08. SRMC09 is out of bank at the upstream end of this reach, but no structures are located in this vicinity.

5.16.6.4 Secondary Enclosed Systems

Because the Skunk Run watershed contains several secondary enclosed systems, **Table 5.1** summarizes those pipes within these enclosed systems that are not adequately conveying the 10-year event. In addition, this table states whether or not the upstream structure is surcharging. Surcharging of a structure can cause surrounding structures and roadways to be flooded and should be noted.

Table 5.1
Skunk Run Enclosed System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	10-Year Qmax/Qfull	Structure Surcharging
SRL2103	SRL2102	24" RCP	1.72	YES
SRL2102	SRL2101	24" RCP	1.72	YES
SRL2101	SRMC43	24" RCP	1.28	NO
SRL2003	SRL2002	24" RCP	1.45	YES
SRL2002	SRL2001	32"x28" CMA	1.08	YES
SRL1902	SRL1901	24" RCP	3.14	YES
SRL1809	SRL1808	19"x30" RCE	1.07	YES
SRL1808	SRL1807	30" RCP	2.15	YES
SRL1807	SRL1806	30" RCP	1.95	YES
SRL1806	SRL1805	30" RCP	1.07	NO
SRL1805	SRL1804	30" RCP	1.99	YES
SRL18A03	SRL18A02	24" RCP	1.71	YES
SRL18A02	SRL18A01	24" RCP	0.84	YES
SRL18A01	SRL1803	24" RCP	1.74	YES
SRL18A02	SRL18A01	2-24" CMP	1.01	NO
SRL1705	SRL1704	24" RCP	1.10	YES
SRL1704	SRL1703	24" RCP	0.97	YES

Table 5.1
Skunk Run Enclosed System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	10-Year Qmax/Qfull	Structure Surcharging
SRL1703	SRL1702	24" RCP	1.27	YES
SRL1702	SRL1701	24" RCP	0.94	YES
SRL1701	SRMC35	24" RCP	1.07	YES
SRL1602	SRL1601	12" RCP	1.19	YES
SRL1601	SRMC33	24" RCP	1.01	NO
SRL01503	SRL01502	30" RCP	1.67	YES
SRL01502	SRL01501	30" RCP	0.93	YES
SRL01501	SRMC30	30" RCP	1.07	YES
SRL01403	SRL01402	24" RCP	3.84	YES
SRL01402	SRL01401	30" RCP	1.07	YES
SRL01401	SRMC29	30" RCP	1.07	YES
SRL1110	SRL1109	15" RCP	1.07	NO
SRL1109	SRL1108	15" RCP	1.11	NO
SRL1103	SRL1102	30" RCP	1.20	YES
SRL1102	SRL1101	30" RCP	1.07	YES
SRL1101	SRMC24	30" RCP	1.55	YES
SRL1004	SRL1003	15" RCP	1.16	YES
SRL1003	SRL1002	15" RCP	1.57	YES
SRL1002	SRL1001	15" RCP	1.68	NO
SRL09A03	SRL09A02	24" RCP	1.30	YES
SRL0903	SRL0902	12" RCP	1.18	NO
SRL0803	SRL0802	24" RCP	1.77	YES
SRL0801	SRMC22	24" RCP	2.49	YES
SRL0707	SRL0706	24" RCP	1.46	YES
SRL0706	SRL0705	24" RCP	0.97	YES
SRL0705	SRL0704	24" RCP	1.38	YES
SRL0704	SRL0703	24" RCP	1.33	YES
SRL0703	SRL0702	24" RCP	1.19	YES
SRL0702	SRL0701	30" RCP	1.14	YES
SRL0701	SRMC20	30" RCP	1.03	YES
SRL0607	SRL0606	15" RCP	1.09	YES
SRL0606	SRL0605	15" RCP	1.60	YES
SRL0605	SRL0604	15" RCP	2.00	YES
SRL0604	SRL0603	21" RCP	1.07	YES
SRL0603	SRL0602	21" RCP	1.04	YES
SRL0602	SRL0601	30" RCP	1.44	YES
SRL0601	SRMC19	30" RCP	1.63	YES
SRL0408	SRL0407	24" RCP	0.94	YES
SRL0407	SRL0406	24" RCP	1.27	YES
SRL0406	SRL0405	24" RCP	5.34	YES
SRL0405	SRL0404	30" RCP	1.13	YES
SRL0404	SRL0403	24" RCP	1.00	YES

Table 5.1
Skunk Run Enclosed System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	10-Year Qmax/Qfull	Structure Surcharging
SRL0403	SRL0402	24" RCP	1.36	YES
SRL0402	SRL0401	24" RCP	2.51	YES
SRL0401	SRMC11	24" RCP	1.24	YES
SRL0307	SRL0306	24" RCP	0.96	YES
SRL0306	SRL0305	24" RCP	0.85	YES
SRL0305	SRL0304	24" RCP	2.26	YES
SRL0304	SRL0303	24" RCP	1.71	YES
SRL0303	SRL0302	24" RCP	1.87	YES
SRL0302	SRL0301	30" RCP	1.61	YES
SRL0301	SRMC07	30" RCP	5.42	YES
SRL0204	SRL0203	24" RCP	2.30	YES
SRL0203	SRL0202	24" RCP	3.31	YES
SRL0121	SRL0120	15" RCP	2.96	YES
SRL0120	SRL0119	24" RCP	1.98	YES
SRL0119	SRL0118	24" RCP	1.05	YES
SRL0118	SRL0117	30" RCP	7.47	YES
SRL0107	SRL0106	54" RCP	1.55	NO
SRL0106	SRL0105	54" RCP	2.08	NO
SRL0105	SRL0104	54" RCP	2.55	NO
SRL0104	SRL0103	54" RCP	1.63	NO

5.17 ROCK CREEK WATERSHED

5.17.1 Location

Rock Creek Watershed is considered the largest watershed with approximately 10,100 acres of contributing drainage area. As shown on **Exhibit A.1**, it is located on the south and east part of the overall study area. The approximate limits of this watershed are 7th Street on the north, Montana Road on the east, Old Highway 50 on the west, and Haskell Road on the south.

5.17.2 Land Use

A large majority of this watershed is undeveloped. Development comprises only 12% of the total watershed area. These developed areas are typically located in the north part of the watershed inside the City limits of Ottawa. Development is characterized by residential homes, commercial buildings, schools, some industry, and the municipal airport.

The area south of Interstate 35 is generally undeveloped. Land uses in this area include pastures, crops, trees, and reservoirs. Undeveloped areas within City limits are typically parks, open spaces, and trees.

According to the City's Future Land Use Plan, development is expected within the Rock Creek watershed in the near future. Areas to be developed south of Interstate 35 are characterized as residential, commercial, industrial, and long term development.

5.17.3 Existing Drainage System

South of Interstate 35, the watershed is considered part of the non-detailed analysis with limited survey information. The existing drainage system was modeled as a series of natural channels from the headwaters of the basin to Interstate 35. This was a reasonable assumption since the main channel within the detailed part of the study area is considered open channel flow with culverts and bridges located along Rock Creek to convey flow beneath embankments.

The detailed study area begins immediately south of Interstate 35. The main channel travels through the Interstate 35 bridge and then directly downstream and continues through three 14-foot x 10-foot RCB's beneath 23rd Street. Further downstream, Rock Creek combines with a secondary system that is both enclosed and open channel. This secondary system conveys runoff from the industrial area located to the west of the main channel in the vicinity of Princeton Road and Princeton Circle.

The main channel then travels north through a 94-inch concrete pipe and a 102-inch concrete pipe located at a gravel road embankment which crosses Rock Creek. The main channel meanders north to two 8-foot concrete pipes beneath a local roadway and combines with a small secondary system carrying residential and commercial flows. Another small embankment crosses the main creek downstream of this secondary system and conveys flow by two 6-foot x 6-foot reinforced concrete boxes.

At the 15th Street Bridge, the channel continues north and northwest. Several secondary systems conveying residential runoff flow into the main channel along this reach. Directly upstream of Lincoln Street, the channel travels through three 6-foot x 3-foot box culverts. Rock Creek goes under the Lincoln Street Bridge and then continues downstream to the limits of the overall study area.

5.17.4 Problems Identified by City

No problems were identified by the City for this watershed.

5.17.5 Problems Identified by Modeling

5.17.5.1 Interstate 35 Bridge and 23rd Street Culverts

It should be noted that to ensure the entire roadway embankments for both Interstate 35 and 23rd Street were reflected in the HEC-RAS model, the USGS Quadrangle Map was used to go beyond the limits of the 2-foot contours.

Overtopping of the roadway embankment during the 25-year event for both of these structures is located at points beyond the detailed survey information. This should be considered in addition to City input when stating if these structures are problem areas or not.

5.17.5.2 Culverts along Rock Creek

Located at RCMC23 beneath a gravel embankment, the 94-inch and 102-inch concrete pipes are not sized adequately to convey the 25-year event flows. In addition to overtopping the gravel roadway running west and east, the roadway adjacent to the structures running north and south is also overtopped during this storm event.

Further downstream, the roadway adjacent to structure RCMC23 is overtopped again during the 25-year event at structure RCMC19 where two 8-foot concrete pipes are located.

The two 6-foot x 6-foot box culverts located at RCMC16 are also undersized for the 25-year event and the embankment is overtopped. RCMC23 does not appear to be a roadway crossing. It may be an abandoned agricultural crossing and does not appear to convey traffic. It is not recommended that this structure be improved.

5.17.5.3 Culverts Upstream of Lincoln Street

The three 6-foot x 3-foot RCB's upstream from the Lincoln Street bridge may overtop the embankment for events that exceed the 25-year return period. Overtopping of the embankment itself would not be an issue since the surrounding area is undeveloped. Flooding becomes an issue when the backwater from this structure results in 11th Street and Burrough Street being flooded.

5.17.5.4 Secondary Enclosed Systems

Rock Creek has several secondary systems within the watershed. These secondary systems are both enclosed and open channel systems. Those pipes within the enclosed systems that are not sized to convey the 10-year desired level of service and culverts within the open channel systems not sized to convey the 25-year desired level of service are summarized below in **Table 5.2.**

Table 5.2
Rock Creek Secondary System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	Qmax/Qfull	Structure Surcharging
RCL0815	RCL0816	36” RCP	1.78 / 10-year	NO
RCL0816	RCL0814	36” RCP	1.73 / 10-year	NO
RCL0815	RCL0814	36” RCP	1.69 / 10-year	NO

Table 5.2
Rock Creek Secondary System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	Qmax/Qfull	Structure Surcharging
RCL08D05	RCL08D04	24” RCP	1.40 / 10-year	YES
RCL08D04	RCL08D03	24” RCP	2.90 / 10-year	YES
RCL08D03	RCL08D02	24” RCP	1.19 / 10-year	YES
RCL08D02	RCL08D01	24” RCP	1.85 / 10-year	YES
RCL08D01	RCL0813	50”x42” RCE	1.43 / 10-year	NO
RCL08C02	RCL08C01	30”x48” RCE	1.21 / 10-year	NO
RCL08B01	RCL0805	24” RCP	2.17 / 10-year	YES
RCL0812	RCL0811	6’x3.5’ RCB	1.07 / 25-Year	NO
RCL0810	RCL0819	6’x3.5’ RCB	1.32 / 25-Year	NO
RCL0808	RCL0807	8’x3’ RCB	1.40 / 25-Year	NO
RCL0805	RCL0804	8’x3’ RCB	6.34 / 25-Year	NO
RCL0803	RCL0802	8’x3’ RCB	1.36 / 25-Year	NO
RCL08A03	RCL08A02	48”x24” RCE	1.06/ 10-year	YES
RCL0702	RCL0701	24” RCP	0.79 / 25-Year	YES
RCL0603	RCL0602	24” RCP	0.53 / 10-year	YES
RCL0602	RCL0601	24” RCP	0.79 / 10-year	YES
RCL0505	RCL0504	24” RCP	6.62 / 10-year	YES
RCL0504	RCL0503	24” RCP	1.19 / 10-year	YES
RCL0402	RCL0401	3-24” RCP	1.23 / 25-year	YES
RCL0305	RCL0304	24” RCP	1.34 / 10-year	YES
RCL0304	RCL0303	24” RCP	1.10 / 10-year	YES
RCL0303	RCL0302	24” RCP	1.08 / 10-year	YES
RCL0302	RCL0301	24” RCP	2.98 / 10-year	YES
RCL02D03	RCL02D02	24” RCP	1.40 / 10-year	NO
RCL02A01	RCL0202	24” RCP	1.35 / 10-year	NO
RCL0211	RCL0210	18” RCP	1.09 / 10-year	NO
RCL0210	RCL0209	24” RCP	1.53 / 10-year	NO
RCL0209	RCL0208	24” RCP	1.59 / 10-year	NO
RCL0208	RCL0207	30” RCP	1.19 / 10-year	YES
RCL0207	RCL0206	30” RCP	2.40 / 10-year	YES
RCL0206	RCL0205	30” RCP	0.92 / 10-year	YES
RCL0205	RCL0204	30” RCP	1.47 / 10-year	YES
RCL0204	RCL0203	30” RCP	1.04 / 10-year	YES
RCL01A12	RCL01A11	24” RCP	0.59 / 10-year	YES
RCL01A11	RCL01A10	24” RCP	0.62 / 10-year	YES
RCL01A10	RCL01A09	24” RCP	2.80 / 10-year	YES
RCL01A09	RCL01A08	24” RCP	3.99/ 10-year	YES
RCL01A08	RCL01A07	24” RCP	4.21 / 10-year	YES
RCL01A06	RCL01A05	24” RCP	5.61 / 25-year	NO
RCL01A04	RCL01A03	36” RCP	4.33 / 10-year	NO

Table 5.2
Rock Creek Secondary System Problem Areas

Upstream Structure	Downstream Structure	Pipe Description	Qmax/Qfull	Structure Surcharging
RCL01A03	RCL01A02	36” RCP	1.36 / 10-year	NO
RCL01A02	RCL01A01	36” RCP	1.82 / 10-year	NO
RCL0113	RCL0112	24” RCP	1.34 / 10-year	YES
RCL0112	RCL0111	24” RCP	0.99 / 10-year	YES
RCL0111	RCL0110	24” RCP	1.17 / 10-year	YES
RCL0110	RCL0109	30” RCP	0.85 / 10-year	YES
RCL0109	RCL0108	18” RCP	1.29 / 10-year	YES
RCL0108	RCL0107	30” RCP	0.98 / 10-year	YES
RCL0107	RCL0106	30” RCP	1.02 / 10-year	YES
RCL0106	RCL0105	30” RCP	0.90 / 10-year	YES
RCL0105	RCL0104	30” RCP	1.65 / 10-year	YES
RCL01B01	RCL0109	18” RCP	1.24 / 10-year	NO
RCL0102	RCL0101	48” CMP	1.23 / 25-year	NO

Section 6
Recommended Improvements

6.0 RECOMMENDED IMPROVEMENTS

6.1 INTRODUCTION

The location of capital improvements projects recommended by this study to correct deficiencies in the existing drainage system are indicated on **Exhibit A.8**. **Figures 6.3** through **6.17**, located at the end of this section, provide a detailed depiction of the improvements recommended by this report.

Although all existing major drainage system components were included in the analysis, not all elements that failed to meet the proposed hydraulic criteria are included in the recommendations. Locations where deficiencies are indicated by the analysis, but where there are no apparent or adverse effects are not recommended for improvement.

6.2 PROJECT 1: INDUSTRIAL PARK IMPROVEMENTS

6.2.1 Description

As shown on **Figure 6.3**, The Industrial Park area generally runs along North Street. The channel generally flows from east to west and makes several road and railroad crossings. Results of the study indicate that several houses at the intersection of North Street and Mulberry Street are prone to flooding. However, modeling results are not substantiated with actual observation of flooding. To lessen the potential of localized flooding, the 100-year water surface elevation could be reduced to approximately 902 feet. Modeling suggests that two existing structures contribute excessive backwater elevations at the intersection of North Street and Mulberry Street. The first of these is the two culverts under the BNSF Railway. Modeling indicates that these culverts are slightly undersized, but also that the flow through them is fairly shallow. The second problem occurs where the channel flows under Midland Railway line. This bridge may be too small to convey the necessary flows and excessive backwater is created. This backwater migrates upstream to a culvert under the BNSF railroad and reduces its capacity. **Figure 6.1** shows the backwater created by the culverts and bridges in vicintiy of Project 1.

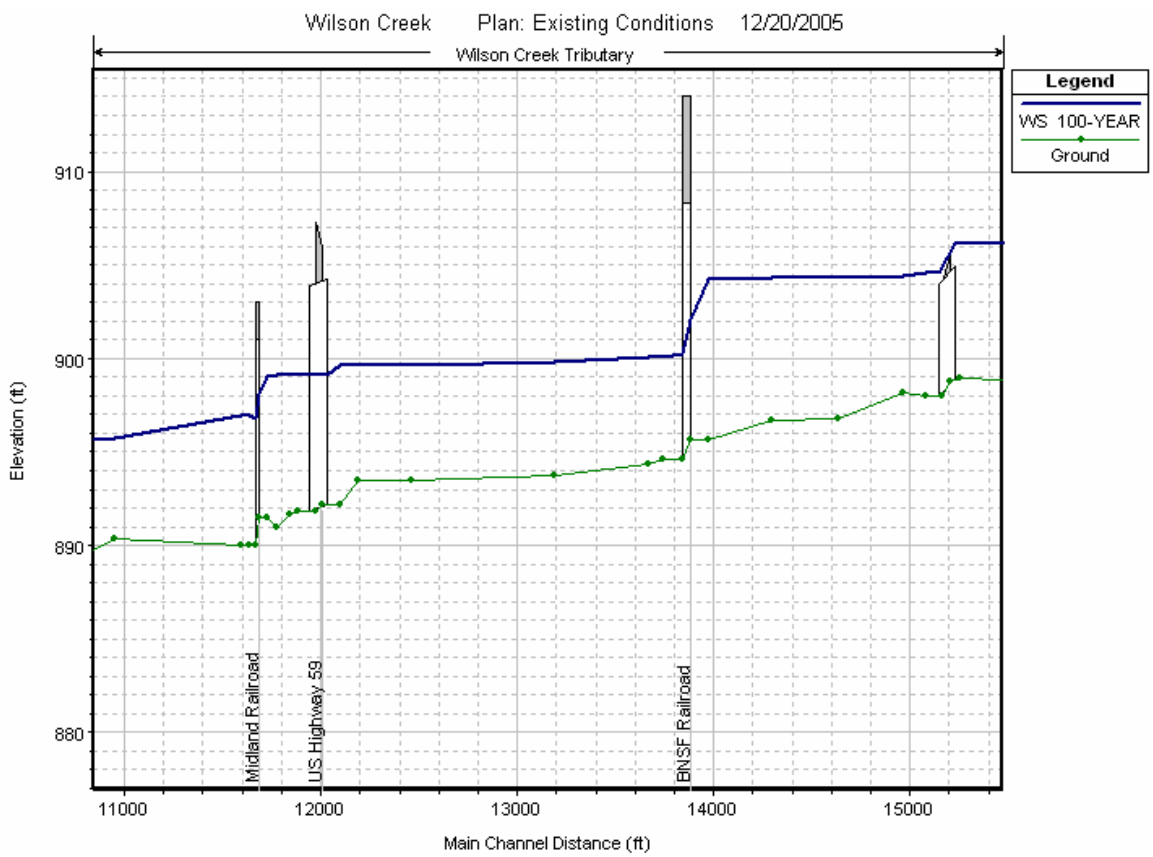


Figure 6.1
100-Year Water Surface Profile for Project 1

6.2.2 Alternatives

6.2.2.1 Replace Midland Railroad Bridge

One improvement to alleviating flooding would be to widen the bridge under the Midland Railroad (see **Figure 6.3**). Modeling predicts 4 feet of head loss through this bridge. By widening it by 40 feet, these head losses can be reduced to about 1.5 feet; thus reducing the backwater effects upstream.

6.2.2.2 Replace BNSF Culvert

Modeling suggests that the culverts under the BNSF Railway are undersized and create excessive flood stages upstream of the railroad. While the culverts are sufficiently tall, the overall width could be increased to reduce the amount of head loss. The existing culverts could be replaced with four 14-foot x 7-foot RCB's.

6.2.2.3 Supplement BNSF Culverts

The set of BNSF Railroad tracks is a main line. It is not likely that the railroad will allow the tracks to be taken out of service to construct new culverts. Therefore, one option would be to add capacity tunneling or jacking new culverts through the railroad embankment. This construction method would not interrupt train traffic, but does limit the size of pipe that can be installed. For the purposes of this study, a 60-inch diameter pipe was considered the largest size that could be installed by jacking.

A hydraulic model was developed for a series of new 60-inch pipes under the BNSF Railroad. Pipes were added to the model until the 100-year flood stage at the intersection of Mulberry and North Streets was equal to or less than 902.00. The following table summarizes the results.

Table 6.1
Results of Pipe Jacking under BNSF Railroad

No. of 60-inch Pipes	Flood Stage at Intersection (ft)
0	904.36
2	903.00
4	902.14
5	902.01
6	901.87
8	901.81
10	901.81
10	901.81
14	901.82

The results show that in order to reduce flood stages to 902.00 or less, at least five (5) 60-inch RCP's would need to be added below the BNSF tracks.

6.2.2.4 Channel Improvements

Channel improvements were considered between the Midland and BNSF railroads. The existing channel is deep and narrow in several places and may not have capacity to convey even small runoff events. Modeling predicts frequent, out of bank flooding for this reach. One solution would be to widen the channel.

Modeling showed that channel improvements in this reach did little to alleviate the flooding problems upstream of the BNSF Railroad. For a 100-year storm event, stages in the channel are controlled by the local culverts and bridges.

6.2.2.5 Detention

Another way to alleviate flooding at the Mulberry and North Street intersection would be stormwater detention. This approach would reduce the peak flows through the BNSF Railroad culverts; thereby reducing flood stages upstream. The potential detention area shown on **Figure 6.3** provides the greatest opportunity for detention, but also eliminates land suitable for development.

6.2.3 Recommended Improvements

The opinion of cost for this project is based on adding five 60-inch RCP's beneath the BNSF Railway. Modeling results indication that this improvement is the minimum necessary to alleviate flooding at the intersection of Mulberry and North Streets.

6.2.4 Opinion of Cost

Table 6.2
Opinion of Cost for Project 1

Description	Quan.	Unit	Unit Price	Cost
Pipe Jacking	570	LF	$640.00	$364,800
Prepare Jacking Pits	6	EA	$3,375.00	$20,250
60-inch RCP	570	LF	$216.00	$123,120
Seeding	0.28	AC	$2,500.00	$700
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$510,870**
Utility Relocation	1%			$5,109
Mobilization	4%			$20,435
Traffic Control / Flagman	5%			$25,544
Subtotal				**$561,957**
Contingency	30%			$168,587
Construction Cost Opinion				**$730,544**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$219,163
TOTAL PROJECT COST OPINION				**$949,700**

6.2.5 Priority

Project 1 has been ranked as the number one priority for the City. It is anticipated that by addressing flooding issues within this watershed more extensive development would be feasible. As shown in the future land use map, it is desired to have the eastern portion of this watershed be residential and long term development. By taking a proactive approach to stormwater problems, the City will be encouraging development within this region.

6.3 PROJECT 2: N. OAK AND DUNDEE STREET IMPROVEMENTS

6.3.1 Description

Kalmar Industries is located north of the N. Oak and Dundee Street intersection. The City maintains a small enclosed drainage system along Dundee Street that empties into an open channel just north of the intersection. The outlet channel runs north to the Kalmar Industries building and parking lot. The channel ends just south of the parking lot, and flow becomes undefined as it passes through the property.

6.3.2 Recommended Improvements

There are two approaches available to route stormwater runoff through the site without creating problems. One approach would be to maintain an overland flow route across the site. This would require the construction of a channel along the west face of the building, through the existing parking lot, and across the undeveloped pieces of land to the north of the facility. The disadvantage to this approach is that an open channel would require extensive rework of the existing parking lot and could render portions of the lot unusable. This approach may merit additional consideration, but further cooperation from Kalmar Industries and more detailed topographic information would be required.

The second approach, which was used to develop the opinion of cost for this project, assumes that a new ditch / enclosed storm sewer system will be constructed from Dundee Street to the south edge of the Kalmar Industries parking lot (see **Figure 6.4**). The project calls for the realignment of the existing channel from Dundee Street to the Kalmar Industries parking lot. Modeling suggests that this channel would need to have an 8-foot bottom width with 4:1 side slopes. A new inlet would collect surface drainage and convey it to a new enclosed storm sewer below the parking lot. An inlet would be added along the northeast side of the lot to collect surface flow and to allow for a directional change in the sewer. The enclosed system would consist of approximately 520 feet of 30-inch RCP. Once beyond the limits of the parking lot, the enclosed system would discharge into the existing ditch which would need to be improved to a 4-foot flat bottom ditch with 4:1 side slopes. To obtain the necessary channel and pipe

slopes, a portion of the railroad ditch would also need to be improved. A constant grade between the sewer outfall and the railroad culvert may be required.

Modeling also suggests that the backwater created by the downstream railroad structure may affect the performance of the new system.

It may be noted that as indicated by the City, Kalmar Industries is currently undergoing improvements to their facilities that may conflict with the above recommendations. However, Kalmar Industries will likely propose a solution that will still address the storm water issues, but that may be more tailored to their expansion.

6.3.3 Opinion of Cost

Table 6.3
Opinion of Cost for Project 2

Description	Quan.	Unit	Unit Price	Cost
Excavation	2,000	CY	$12.00	$24,000
Trench Excavation	804	CY	$6.40	$5,146
Trench Bedding	40	CY	$30.00	$1,200
Trench Backfill & Compaction	700	CY	$4.74	$3,318
Material to be Hauled Off Site	2,156	CY	$10.00	$21,560
Replace Asphalt Pavement	4,030	SF	$34.00	$137,020
30-inch RCP	517	LF	$40.00	$20,680
Type 1 5'X3' Curb Inlet (H=4'-5')	2	EA	$1,800.00	$3,600
Seeding	2	AC	$2,500.00	$3,750
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$222,274**
Utility Relocation	20%			$44,455
Mobilization	4%			$8,891
Traffic Control	1%			$2,223
Subtotal				**$277,842**
Contingency	30%			$83,353
Construction Cost Opinion				**$361,195**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$108,358
TOTAL PROJECT COST OPINION				**$470,000**

6.3.4 Priority

The priority of this project has been ranked low by the City since Kalmar Industries is currently addressing the above mentioned stormwater problems themselves as they proceed with plans for expansion to their facility.

Initial plans do somewhat conflict with the recommendations of this report according to the City, but Kalmar Industries will likely develop alternative improvements that still address the stormwater issues and work well with their expansion. Since this would then be considered a private project, the project was ranked as the lowest priority project.

6.4 PROJECT 3: N. HICKORY AND POPLAR STREET SYSTEM IMPROVEMENTS

6.4.1 Description

As discussed in **Section 5**, the enclosed system starting at Poplar /Massasoit Street intersection downstream to the Powhattan/Cedar Street intersection is undersized and will need to be redesigned to adequately convey the 10-year flood (see **Figure 6.5.**) It is also necessary for realignment of the system

further downstream at structure PRL204. The existing 7-foot x 3-foot reinforced concrete ellipse is located beneath a structure.

6.4.2 Alternatives

6.4.2.1 System Improvements

While it was beyond the scope of this study to model the system north of Massasoit Street because pipe sizes were less than 24 inches, this portion of the system would likely need to be improved along with the rest of the system. Because no study was performed, the associated opinion of cost assumes that each of these pipes will be increased to 24 inches in diameter.

Proposed improvements from the headwaters of the system modeled (PRL218) to structure PRL207 include an increase in pipe size and depth to ensure a minimum of 0.5% slope and 2 feet of cover over the enlarged system. At PRL205 to PRL203, the existing open channel system would be converted into an enclosed system and realigned to avoid any existing structures. This new realignment would begin at PRL205 and follow the alley between Hickory and Cedar south beneath Logan. The enclosed system will then discharge into a 10-foot bottom width open channel with 3:1 side slopes and eventually outfall into the small ponding area north of Keokuk. This will remove the system from underneath houses and allow new inlets to tie in. The existing culvert beyond PRL202 has the capacity to convey the 50-year flood event according to modeling results and would not need to be replaced.

Table 6.4
N. Hickory and Poplar Street System Replacement

Upstream Structure	Downstream Structure	Existing Link	Proposed Link
PRL218	PRL217	24" RCP	48" RCP
PRL217	PRL216	24" RCP	48" RCP
PRL216	PRL215	24" RCP	48" RCP
PRL2A01	PRL215	15" RCP	48" RCP
PRL215	PRL214	24" RCP	48" RCP
PRL214	PRL213	24" RCP	48" RCP
PRL213	PRL212	24" RCP	48"RCAP
PRL212	PRL211	Assumed 24" RCP	48" RCAP
PRL211	PRL208	Assumed 24" RCP	5’x4’ RCB
PRL208	PRL207	4’x4’ RCB	5’x5’ RCB
PRL207	PRL206	Channel	7’x6’ RCB
PRL206	PRL204	Bridge	7’x6’ RCB
PRL204	PRL203	7’x7’ RCB	7’x6’ RCB

6.4.3 Opinion of Cost

Table 6.5
Opinion of Cost for Project 3

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	1.5	AC	$2,000.00	$3,000
Excavation	13,700	CY	$12.00	$164,400
Replace Asphalt Pavement	9,220	SF	$34.00	$313,480
Bedding	3,875	CY	$30.00	$116,250
Backfill	765	CY	$4.74	$3,626
Soil Spoil	3,495	CY	$10.00	$34,950
24" RCP	1,675	LF	$25.00	$41,875
48" RCP	1,110	LF	$126.00	$139,860
5'x4' RCB	255	LF	$246.00	$62,730
5'x5' RCB	165	LF	$286.00	$47,190
7'x6' RCB	430	LF	$308.00	$132,440
Type 1 5'X3' Curb Inlet (H=4'-5')	6	EA	$1,800.00	$10,800
Type 1 5'X3' Curb Inlet (H=7'-8')	16	EA	$2,250.00	$36,000
12' Sump Curb Inlet (H=9'-12')	2	EA	$5,000.00	$10,000
4' Diam. Manhole, 6ft deep	7	EA	$1,500.00	$10,500
6' Diam. Manhole, 8ft deep	5	EA	$2,500.00	$12,500
10'x10' Junction Box, 10' deep	2	EA	$4,000.00	$8,000
Seeding	1.5	AC	$2,500.00	$3,750
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$1,153,351**
Utility Relocation	20%			$230,670
Mobilization	4%			$46,134
Traffic Control	1%			$11,534
Subtotal				**$1,441,689**
Contingency	30%			$432,507
Construction Cost Opinion				**$1,874,196**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$562,259
TOTAL PROJECT COST OPINION				**$2,436,000**

6.4.3.1 Property Buy-Outs

One option would be for the City to buy out three to four properties on east side of North Hickory Street north of E. Logan Street. The area between Hickory and Cedar north of Logan Streets is a large sump where water has the inherent tendency to collect and pond. The existing channel travels through this area and one house was built directly over the channel. The surrounding houses may have been constructed

within the sump area. As an alternative to realigning the channel, the City may want to consider purchasing these properties and demolishing the structures. Improvements could then be made to convert the area into a detention facility to store and attenuate stormwater flows. Even with extensive capital improvements to the existing system, the sump area will still be prone to flooding and general drainage problems will still exist.

6.4.4 Recommended Improvements

The recommended improvement for this project is to remove and replace the existing, enclosed sewer system. While the purchase and demolition of affected houses may solve the flooding problems, this course of action would not address the problems associated with the aging system noted by the City staff.

6.4.5 Priority

Project 3 has been prioritized as a high priority project for the City. Specifically, this project has been ranked 5th out of 15 projects. The proposed improvements would allow the enclosed system to achieve the necessary 10-year level of service and would alleviate maintenance and other issues associated with the existing older system. In addition, the realignment of the storm sewer to avoid existing structures would allow the City easier access to the system in case problems do arise.

6.5 PROJECT 4: CONCRETE LINED CHANNEL (K-68, BEECH TO WILLOW)

6.5.1 Description

The City maintains two roadside ditches on the south of U.S. Highway 68 between Beech and Willow Street (see **Figure 6.6**.) While modeling does not suggest capacity problems with either ditch, City Staff reported difficulties maintaining these ditches. Specifically, the ditches fill with trash and sediment, and ponded water often exists at these locations.

The City also identified the pumping station at Willow Street as having insufficient capacity. When capacity is exceeded, the drainage system backs up into the ditch and silt and debris is deposited. This was not confirmed by modeling because the existing 6-foot RCP's were analyzed at the outfall, but detailed pump capacity was not. Modeling indicates that the existing 6-foot RCP's do convey both the 10-year and the 25-year events. City Staff suggested that the issue could be resolved by elevating the swag in 2nd Street, increasing the ponding area downstream by acquiring private properties on the north side of the road bed, or increasing pumping capacity at the Willow Street pump station.

6.5.2 Recommended Improvements

Upon the recommendation of City staff, the ditches should be lined with concrete to facilitate positive drainage, reduce ponded water, and promote ease of clean up.

The opinion of cost associated with this improvement is based on the following assumptions:

- Flow rate in ditch is 180 cfs, which is the 10-year peak discharge taken from the SWMM model.
- Slope of the ditch is 1 percent
- Bottom width of new ditch is 4 feet
- Side slopes of new ditch are 5:1
- Roughness coefficient for concrete is 0.015

Using Manning's equation, the normal depth of flow in the new ditch would be 1.6 feet. To accommodate flow in the channel and the effects of backwater from downstream culverts, the depth of the concrete lining was assumed to be 4 feet. The depth of the existing ditch is approximately 6 feet.

The opinion of cost also assumes that the total length of ditch lining is 1,120 feet and the thickness of the concrete lining is 6 inches.

6.5.3 Opinion of Cost

Table 6.6
Opinion of Cost for Project 4

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	0.5	AC	$2,000.00	$1,000
Excavation	650	LS	$12.00	$7,800
Backfill and Compaction	650	CY	$19.00	$12,350
Reinforced Concrete Channel	930	CY	$250.00	$232,500
Seeding	0.5	AC	$2,500.00	$1,250
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$256,900**
Utility Relocation	0%			$0
Mobilization	4%			$10,276
Traffic Control	0%			$0
Subtotal				**$267,176**
Contingency	30%			$80,153
Construction Cost Opinion				**$347,329**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$104,199

Table 6.6
Opinion of Cost for Project 4

Description	Quan.	Unit	Unit Price	Cost
TOTAL PROJECT COST OPINION				**$452,000**

6.5.4 Priority

This project has been ranked as a low priority. The project was developed more to address maintenance issues with the existing channels than to address stormwater problems. Benefits of the concrete channel, however, do include alleviating ponding water, minimizing maintenance problems, aiding with vermin/vector control, and enhancing the appearance of the highway.

6.6 PROJECT 5: ASH AND WILLOW STREET SYSTEM REPLACEMENT

6.6.1 Description

The existing system generally running in an alley between Ash and Willow Street was determined to be undersized during the system performance analysis (see **Figure 6.7**). The City stated that this was an older system and concurred with modeling results that this was an area prone to flooding.

6.6.2 Recommended Improvements

Currently, drainage is conveyed through a series of 24-inch reinforced concrete pipes at the upstream end and then discharged into an open channel system consisting of ditches and culverts beneath approaches. From aerial topography and contours, there did not appear to be sufficient space for the replacement of open channels and culverts. Therefore, it was concluded that in order to convey the desired level of service the existing system would have to be converted completely to an enclosed system with increased pipe sizes.

Table 6.7 summarizes the existing system components and the replacement components as proposed for this capital improvement.

Table 6.7
Ash and Willow Street System Replacement

Upstream Structure	Downstream Structure	Existing Link	Proposed Link
WLL318	WLL317	24" RCP	48" RCAP
WLL317	WLL316	24" RCP	48" RCAP
WLL316	WLL315	24" RCP	48" RCAP
WLL315	WLL314	24" RCP	48" RCAP
WLL314	WLL313	24" RCP	48" RCAP

Table 6.7
Ash and Willow Street System Replacement

Upstream Structure	Downstream Structure	Existing Link	Proposed Link
WLL313	WLL312	24" RCP	48" RCAP
WLL312	WLL311	Channel	4'x5' RCB
WLL311	WLL310	30" RCP	N/A
WLL310	WLL309	Channel	N/A
WLL309	WLL308	24" CMP	N/A
WLL308	WLL307	Channel	4'x5' RCB
WLL307	WLL306	24" CMP	N/A
WLL306	WLL305	Channel	N/A
WLL305	WLL304	7' RCE	4'x6' RCB
WLL304	WLL303	7' RCE	4'x6' RCB
WLL303	WLL302	Channel	Deepen Channel Invert

At the outfall (WLL303) of the enclosed system, it may also be necessary to lower the channel invert approximately 4 feet so that the proposed improvements could tie into the existing downstream system. This would allow upstream components a minimum cover of 2 feet and sufficient slopes on pipes to allow the conveyance of 10-year flows.

An alternative routing could also be considered for this project. Consideration should be given to routing the new system along Ash Street from Fourth Street to Second Street. This alternative would collect gutter flow along Ash Street and might alleviate street flooding between Second and Third Streets. With this option, improvements would still need to be made to the existing alley system.

6.6.3 Opinion of Cost

Table 6.8
Opinion of Cost for Project 5

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	0.5	AC	$2,000.00	$1,000
Excavation	3112	CY	$12.00	$37,344
Material to be Hauled Off Site	47	CY	$10.00	$470
Backfill and Compaction	866	CY	$19.00	$16,454
Replace Asphalt Pavement	1335	SF	$34.00	$45,390
Reinforced Concrete Channel	197.5	CY	$250.00	$49,375
48-inch RCAP	704	LF	$141.00	$99,264
4x5 RCB	241	LF	$286.00	$68,926
4x6 RCB	101.5	LF	$358.00	$36,337

Table 6.8
Opinion of Cost for Project 5

Description	Quan.	Unit	Unit Price	Cost
Seeding	0.5	AC	$2,500.00	$1,250
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$357,810**
Utility Relocation	20%			$71,562
Mobilization	4%			$14,312
Traffic Control	1%			$3,578
Subtotal				**$447,263**
Contingency	30%			$134,179
Construction Cost Opinion				**$581,441**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$174,432
TOTAL PROJECT COST OPINION				**$756,000**

6.6.4 Priority

Project 5 is a considered a high priority project and was ranked number 7 by the City. Benefits of this project would include upgrading the existing system to a 10-year level of service, alleviating maintenance issues that are associated with an older system, and resolve long-standing flooding issues.

6.7 PROJECT 6: SKUNK RUN OUTFALL IMPROVEMENTS

6.7.1 Description

During low stage events in the Marais Des Cygne River, runoff from Skunk Run is conveyed by gravity to the river through a 10-foot x 10-foot reinforced concrete box culvert. When the stages in the Marais Des Cygnes exceed an elevation of 885.00 feet, runoff is stored in a detention area which is emptied by pumping. Urbanization of the Skunk Run Watershed may have caused a decrease in the level of service afforded by the existing outfall system. The capacity of the detention area and/or the capacity of the pumps may no longer be sufficient to adequately convey flows over the levee.

6.7.2 Recommended Improvements

Figure 6.8 depicts the ponding area near the Skunk Run Outfall. Project recommendations are based on a maximum ponding elevation of 885.00 feet. This is to ensure that the surrounding houses are not inundated by the water stored in the ponding area. To accomplish this goal, additional storage and/or additional pumping capacity may need to be added to the system. Another option available to the City, but not examined in detail under this study, is the buyout of effected properties.

There is potentially 29 acre-feet (2.23 acres) of additional storage located north of 2nd Street and between Mulberry and Sycamore Street (see **Figure 6.8**) that could be incorporated into the system. **Table 6.9** shows the available storage area for existing and proposed conditions.

Table 6.9
Stage – Surface Area – Volume Characteristics for Skunk Run Detention Area

Existing Conditions			Proposed Conditions		
Stage (ft)	**Surface Area (acres)**	**Storage (acre-ft)**	**Stage (ft)**	**Surface Area (acres)**	**Storage (acre-ft)**
871.2	0	0	0	0	0
872.0	0.13	0.11	0.85	0.13	0.11
874.0	1.42	4.05	2.85	1.42	4.05
876.0	2.80	13.58	4.85	4.37	21.19
878.0	4.12	28.22	6.85	5.86	40.14
880.0	5.26	46.55	8.85	7.16	63.37
882.0	6.77	73.45	10.85	8.84	95.91
884.0	8.98	115.39	12.85	11.21	144.05

In addition, the analysis suggests that the existing pumping capacity needs to be increased from 75 cfs (two existing pumps) to 262 cfs. Modeling shows that with the added storage and increased pumping capacity, a maximum water surface elevation of 885.5 feet could be achieved for a 25-year storm event.

The assumptions made for modeling improvements are as follows:

- Tailwater elevation of the Marais Des Cygnes River = 885.00 feet.
- Level of service desired = 25-year return period.
- Area of additional storage = 29 acre-ft
- Depth of additional storage = 10 feet.
- A new pump station will be required.

6.7.3 Opinion of Cost

Table 6.10
Opinion of Cost for Project 6

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	2.23	AC	$2,000.00	$4,460
Excavation	36,000	CY	$12.00	$432,000
Riprap	3,500	SY	$50.00	$175,000
Material to be Hauled Off Site	36,000	CY	$10.00	$360,000
Pump Station	1	LS	$2,000,000	$2,000,000
Seeding	2.23	AC	$2,500.00	$5,575
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$2,979,000**
Utility Relocation	0%			$0
Mobilization	4%			$119,000
Traffic Control	0%			$0
Subtotal				**$3,098,000**
Contingency	30%			$929,400
Construction Cost Opinion				**$4,027,000**
Design Engineering, Geotechnical, Permitting & Construction Management	10%			$403,000
TOTAL PROJECT COST OPINION				**$4,430,000**

6.7.4 Priority

Skunk Run outfall improvements have been ranked as the 6th highest priority project within the proposed stormwater projects. The City commented that it may be feasible to expand the existing pump capacity, but additional storage would be more desirable. However, in order to approximately meet the desired water surface elevation of 885.0 feet for the 25-year level of service, both additional storage and expansion of the pump capacity would be necessary.

6.8 PROJECT 7: COUNTRY CLUB LAKE PRINCIPAL SPILLWAY

6.8.1 Description

As flows exceed the storage capacity of the Country Club Lake, overflow is carried through the emergency spillway to a grate inlet located between the lake and Kansas Highway 68. Flows are collected and then conveyed through a 10.5-foot x 10.5-foot reinforced concrete box culvert located beneath Logan Street (see **Figure 6.9**).

The City has reported trash and debris collecting at this grate inlet which results in ponding at this location and possible overtopping of Kansas Highway 68.

6.8.2 Recommended Improvements

Currently, no principal spillway exists on the lake to control the discharge from small storm events. One solution to the problem would be to add a principal spillway to better regulate discharges. As shown in **Figure 6.2**, the principal spillway would consist of a riser pipe and trash rack. The principal spillway would connect to the existing grate inlet south of the embankment. Normal discharges from the lake would be conveyed directly from the lake to the 10.5-foot x 10.5-foot RCB under Highway 68. Trash and debris would be collected in the lake rather than in the roadside ditch.

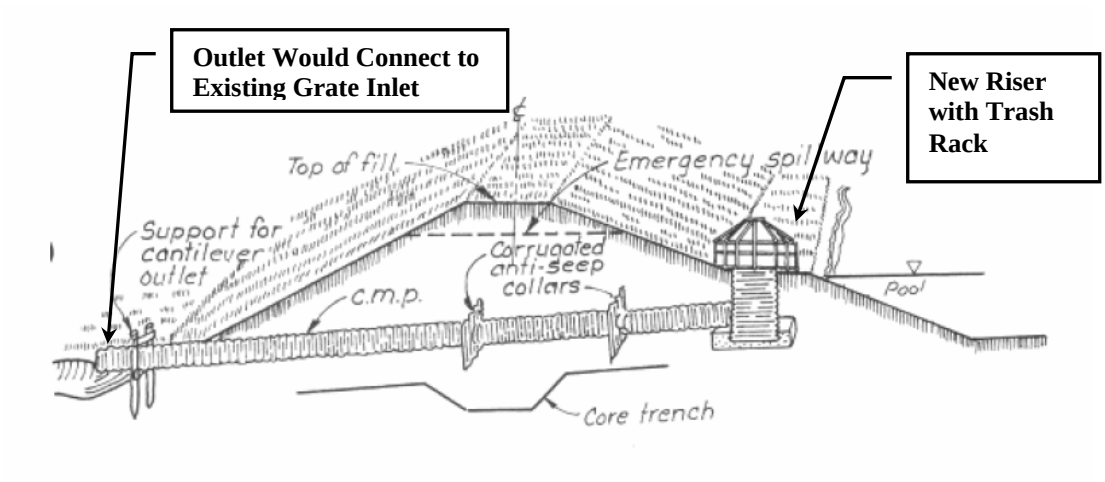


Figure 6.2
Principal Detention Basin Outlet

It was assumed that the proposed principal spillway would be designed to convey a 25-year storm event for future conditions. Modeling suggests that the spillway would consist of two 60-inch risers and two 48-inch outlet pipes.

Assumptions for this preliminary design were as follows:

- Existing emergency spillway weir length of 25 feet.
- Existing emergency spillway weir elevation at 904 feet.
- Top of dam elevation at 906.5 feet.
- Bottom elevation at 900 feet.

6.8.3 Opinion of Cost

Table 6.11
Opinion of Cost for Project 7

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	1	AC	$2,000.00	$2,000
Excavation	225	CY	$12.00	$2,700
Material to be Hauled Off Site	35	CY	$10.00	$350
Backfill and Compaction	190	CY	$19.00	$3,610
42-inch RCP	100	LF	$106.00	$10,600
60-inch Riser	8	LF	$130.00	$1,040
Reinforced Concrete Block	5	CY	$500.00	$2,500
Grate Inlet	27	CY	$500.00	$13,500
Trash Rack for Grate Inlet	1	LS	$2,500.00	$2,500
Seeding	1	AC	$2,500.00	$2,500
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$43,300**
Utility Relocation	20%			$8,660
Mobilization	4%			$1,732
Traffic Control	1%			$433
Subtotal				**$54,125**
Contingency	30%			$16,238
Construction Cost Opinion				**$70,363**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$21,109
TOTAL PROJECT COST OPINION				**$91,471**

6.8.4 Priority

The City has ranked this project as number 10 out of 15 projects. City Staff indicated that this project was mostly dependant upon the response and participation of the Ottawa Country Club.

6.9 PROJECT 8: EXPANDING DETENTION FOR VISITOR CENTER

6.9.1 Description

According to the City's Comprehensive Plan 2003, it is anticipated that the Visitor Center Watershed north of Kansas Highway 68 will see growth in commercial, industrial and residential developments. Left unregulated, development would likely increase peak runoff rates. Over time, the existing infrastructure would provide a lower level of service than originally designed and an increase of downstream flooding occurrences could be realized.

6.9.2 Recommended Improvements

Stormwater detention is considered an ideal Best Management Practice in developing watersheds. As shown on **Figure 6.10**, the Visitor Center Watershed has four locations where detention currently exists. Existing basins appear to be used for agriculture purposes, and some work may need to be performed to improve embankments or increase storage capacity. Construction of detention facilities can be undertaken by the City or can be the responsibility of the developer as part of his approach to on-site stormwater management.

City staff has also noted potential plans for new park land in the Visitor Center Watershed. These two proposed regional detention basins would provide an excellent opportunity for a park with water features. The proposed basins could be designed for wet detention and could provide both stormwater management and recreational uses.

In addition to the recommendation for capital improvements, it is also the recommendation of this report to reserve the space need for detention (and park land) in the immediate future. This might be accomplished by revising the City's Comprehensive Plan. The areas to be reserved are currently with "Industrial" land uses. They could be changed to "Park/Open Space" as a reminder to City planners.

The opinion of cost associated with this project assumes that the two most northern detention areas will be reserved for regional detention.

6.9.3 Opinion of Cost

Table 6.12
Opinion of Cost for Project 8

Description	Quan.	Unit	Unit Price	Cost
WEST POND				
Clear and Grub	3.9	AC	$2,000.00	$7,800
Excavation	7245	CY	$12.00	$86,940
Material to be Hauled Off Site	2415	CY	$10.00	$24,150
Backfill and Compaction	4830	CY	$19.00	$91,770
36-inch RCP	120	LF	$85.50	$10,260
54-inch Riser	8	LF	$125.00	$1,000
Reinforced Concrete Block	4	CY	$500.00	$2,000
Seeding	3.9	AC	$2,500.00	$9,750
Erosion Control	4	AC	$1,500.00	$6,000
Subtotal Pond One				$239,670
EAST POND				
Clear and Grub	3.1	AC	$2,000.00	$6,200

Table 6.12
Opinion of Cost for Project 8

Description	Quan.	Unit	Unit Price	Cost
Excavation	7433	CY	$12.00	$89,190
Material to be Hauled Off Site	2478	CY	$10.00	$24,775
Backfill and Compaction	4955	CY	$19.00	$94,145
36-inch RCP	120	LF	$85.50	$10,260
48-inch Riser	8	LF	$120.00	$960
Reinforced Concrete Block	3	CY	$500.00	$1,500
Seeding	3.1	AC	$2,500.00	$7,750
Erosion Control	3.1	AC	$1,500.00	$4,650
Subtotal Pond Two				$239,430
Subtotal Both Ponds				**$479,100**
Utility Relocation	0%			$0
Mobilization	4%			$19,164
Traffic Control	0%			$0
Subtotal				**$498,264**
Contingency	30%			$149,479
Construction Cost Opinion				**$647,743**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$194,323
Subtotal				**$842,066**
Land Acquisition - West Pond	3.9	AC	$10,000.00	$39,000
Land Acquisition - East Pond	3.1	AC	$10,000.00	$31,000
TOTAL PROJECT COST OPINION				**$912,000**

6.9.4 Priority

This project has been prioritized as low by the City because this project is more related to area development. As expansion occurs and development arises within the area, the City could undertake the construction of the proposed detention facilities themselves or it could be the responsibility of the developer. Because this is more of a development issue than on on-going stormwater issue, the project was ranked number 11.

6.10 PROJECT 9: KANSAS HIGHWAY 68 CULVERTS

6.10.1 Description

As described above in Project 8, future development is expected in the northern portion of the Visitor Center Watershed. The purpose of Project 9 was to analyze the two existing 6.8-foot x 4-foot reinforced

box culverts located at Kansas Highway 68 to determine if the culvert capacity is adequate to convey future flows (see **Figure 6.11.**)

6.10.2 Recommended Improvements

Modeling predicts that future development of the watershed will have a significant impact on the level of service provided by the existing culverts. For existing conditions, the culverts have the capacity to convey the 25-year event without overtopping the roadway. As the watershed develops, peak discharges will tend to increase and a 25-year event may overtop the roadway by 15 cfs or by approximately 0.15 feet.

Because the roadway is a state highway, a 50-year level of service may be desired of the culverts. For future conditions, 67 cfs of overtopping is predicted when the watershed is developed. To improve the level of service to meet future needs, the existing culverts could be replaced with two 9-foot x 4-foot reinforced box culverts. However, replacement of these existing culverts may not be necessary. There is manageable increase in peak flow rates for future conditions. If development is regulated correctly, then stormwater runoff under future conditions could be equal to or even less than currently observed. If Project 8 is undertaken, it is probable that the predicted overtopping of the roadway could be eliminated by attenuating flows upstream.

6.10.3 Opinion of Cost

Table 6.13
Opinion of Cost for Project 9

Description	Quan.	Unit	Unit Price	Cost
Excavation	1,315	CY	$12.00	$15,780
Bedding	170	CY	$30.00	$5,100
Material to be Hauled Off Site	890	CY	$10.00	$8,900
Backfill and Compaction	430	CY	$19.00	$8,170
Pavement Removal/Replacement	410	SF	$43.00	$17,630
Reinforced Concrete Box Culvert	310	CY	$500.00	$155,000
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$212,580**
Utility Relocation	20%			$42,516
Mobilization	4%			$8,503
Traffic Control	1%			$2,126
Subtotal				**$265,725**
Contingency	30%			$79,718
Construction Cost Opinion				**$345,443**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$103,633
TOTAL PROJECT COST OPINION				**$449,000**

6.10.4 Priority

This project may be unnecessary if Project 8 is implemented and future peak flows are controlled by detention facilities upstream of Highway 68. As a result, this project is ranked 11th out of 15 projects because it could possibly be eliminated as a result of other proposed measures.

6.11 PROJECT 10: S. OAK AND POPLAR STREET SYSTEM REPLACEMENT

6.11.1 Description

Modeling results corroborate observations of City staff that the current pipe capacities between Oak Street and Poplar Street are not adequate to convey the 10-year event. In addition, portions of the existing sewer may not have sufficient cover. At some locations, the crown of the pipe is exposed.

6.11.2 Recommended Improvements

Proposed improvements include an increase in pipe capacity from structure SRL0408 at the upstream end to structure SRMC11 at the downstream end (see **Figure 6.12**). In addition to the increased pipe sizes, the proposed modifications would ensure a minimum slope of 0.5% and 2 feet of cover over the new system.

South of 9th Street and upstream of SRL0408, the system was not modeled because pipe sizes were less than 24 inches, which was beyond the scope of this analysis. However, it is likely that this portion of the system will also have to be replaced. It is assumed that each of these pipes would be increased to 24 inches in diameter.

Table 6.14
S. Oak and Poplar Street System Replacement

Upstream Structure	Downstream Structure	Existing Link	Proposed Link
SRL0408	SRL0407	24" RCP	48" RCP
SRL0407	SRL0406	Assumed 24" RCP	48" RCP
SRL0406	SRL0405	Assumed 24" RCP	4’x4’ RCB
SRL0405	SRL0404	24" RCP	4’x4’ RCB
SRL0404	SRL0403	30" RCP	5’x4’ RCB
SRL0403	SRL0402	30" RCP	6’x5’ RCB
SRL0402	SRL0401	30" RCP	6’x5’ RCB
SRL0401	SRMC11	30" RCP	6’x5’ RCB

6.11.3 Opinion of Cost

Table 6.15
Opinion of Cost for Project 10

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	2	AC	$2,000.00	$4,000
Excavation	16,675	CY	$12.00	$200,100
Pavement Removal/Replacement	900	SF	$43.00	$38,700
Bedding	6440	CY	$30.00	$193,200
Backfill	3675	CY	$4.74	$17,420
Soil Spoil	11,180	CY	$10.00	$111,800
24" RCP	2050	LF	$25.00	$51,250
48" RCP	800	LF	$126.00	$100,800
4'x4' RCB	670	LF	$246.00	$164,820
4'x5' RCB	520	LF	$286.00	$148,720
5'x6' RCB	720	CY	$500.00	$360,000
Type 1 5'X3' Curb Inlet (H=4'-5')	10	EA	$1,800.00	$18,000.00
Type 1 5'X3' Curb Inlet (H=7'-8')	5	EA	$2,250.00	$11,250
Type 1 5'X3' Curb Inlet (H=8'-9')	6	EA	$2,375.00	$14,250
Seeding	2	AC	$2,500.00	$5,000
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$1,441,310**
Utility Relocation	20%			$288,262
Mobilization	4%			$57,652
Traffic Control	1%			$14,413
Subtotal				**$1,801,637**
Contingency	30%			$540,491
Construction Cost Opinion				**$2,342,128**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$702,638
TOTAL PROJECT COST OPINION				**$3,045,000**

6.11.4 Priority

Project 10 has been ranked as the 4th highest priority by the City. Proposed project improvements would allow the system between S. Oak and Poplar Street to meet the desired 10-year level of service. In addition, it would provide the minimum desired cover over the storm sewer. With the proposed improvements, pipe capacity and cover depth would both be increased. This project is prioritized as high priority because it would resolve long-standing issues.

6.12 PROJECT 11: OSAGE DRIVE CHANNEL IMPROVEMENTS

6.12.1 Description

Runoff originating south of 17th Street is conveyed in a natural channel along Osage Drive to 15th Street and from there conveyed through pipes to an open channel (see **Figure 6.13**). The City has reported problems with condition and capacity of this reach. Problems associated with this channel and downstream pipes are likely to worsen as development occurs south of 17th Street.

6.12.2 Recommended Improvements

Channel improvements and increasing pipe capacity at the downstream end are recommended for this reach. Channel improvements include increasing channel capacity and lining the channel for maintenance purposes. Assumptions made for the proposed project are as follows:

- Flow rate in ditch is 40 cfs, which is the 10-year peak discharge taken from the SWMM model for future conditions.
- Slope of the ditch is 1.25 percent
- Bottom width of new ditch is 10 feet
- Side slopes of new ditch are 12:1
- Roughness coefficient for concrete is 0.015

Using Manning's equation, the normal depth of flow in the new ditch would be 0.5 feet. To accommodate flow in the channel and the effects of backwater, the depth of the concrete lining is assumed to be 3 feet. The depth of the existing ditch is approximately 2 feet.

The opinion of cost also assumes that the total length of ditch lining is 1,276 feet and the thickness of the concrete lining is 6 inches.

In addition to channel improvements, pipe capacity would have to be increased at the downstream end to convey flows beneath Osage Drive and 15th Street. As indicated by modeling, these pipes are undersized even under existing conditions. As development upstream continues, conditions will worsen. Proposed improvements include three 24-inch reinforced concrete arch pipes beneath Osage Drive and 15th Street to convey the 10-year peak discharge and to maintain a minimum of 2 feet of cover.

6.12.3 Opinion of Cost

Table 6.16
Opinion of Cost for Project 11

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	0.6	AC	$2,000.00	$1,200
Excavation	6600	CY	$12.00	$79,200
Soil Spoil	6100	CY	$10.00	$61,000
Backfill and Compaction	500	CY	$19.00	$9,500
Bedding	81	CY	$30.00	$2,430
Replace Asphalt Pavement	292	SY	$500.00	$146,000
24" RCAP	321	LF	$60.00	$19,260
Reinforced Concrete Channel	1950	CY	$250.00	$487,500
Seeding	0.6	AC	$2,500.00	$1,500
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$809,590**
Utility Relocation	20%			$161,918
Mobilization	4%			$32,384
Traffic Control	10%			$8,096
Subtotal				**$1,011,988**
Contingency	30%			$303,596
Construction Cost Opinion				**$1,315,584**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$394,676
TOTAL PROJECT COST OPINION				**$1,710,000**

6.12.4 Priority

This project is ranked 9 out of 15 projects. This project is still considered by the City to be categorized as a high priority project because problems have already been reported and will likely continue to worsen as development occurs south of 17th Street. The recognized limited capacity of the system will pose a greater, more serious problem as the upstream watershed develops.

6.13 PROJECT 12: EISENHOWER ROAD IMPROVEMENTS

6.13.1 Description

Overtopping of Eisenhower Road north of 23rd Street has been reported by City Staff. Water on the road was observed in June 2005 after heavy rainfall. City Staff believes that the overtopping flows were not caused by an event on Nugent Creek. Rather, runoff originating from the adjacent fields west of Eisenhower collects in the road side ditch on the west side of Eisenhower, which does not have sufficient capacity. Elevation data developed by City Staff suggests that the average available slope in the road side ditches is less than 0.5 percent. The elevation data also suggests that given the nearly flat slope, the ditches do not always maintain a uniform, downward slope.

City Staff also reported runoff from the area southwest of the intersection of 23rd Street and Eisenhower as a significant issue. This stormwater is not being sufficiently conveyed across 23rd Street to the west side of Eisenhower. City Staff indicated that the existing enclosed system may be undersized and is resulting in a substantial volume of surface water flowing north along the west side of the 23rd Street and Eisenhower intersection.

6.13.2 Recommended Improvements

During the course of this study, the City has graded the ditches to increase conveyance capacity. In addition to grading, one culvert serving a private access road was also improved. The existing culvert was removed and reset to accommodate new grading, and a second culvert of equal size was added to increase capacity. It was believed that the private drive culvert was causing an obstruction that forced water onto the road. It was the intent that the above improvements would address the overtopping of Eisenhower north of 23rd Street. The City reported that these improvements did in fact have positive results, but did not entirely alleviate the problem.

The City plans to make the modifications discussed above as a maintenance project. If roadway overtopping still persists, the City will consider the need for additional work. Options that could be considered are listed below:

- The existing ditches are not maintained. Regular mowing would likely increase conveyance and alleviate the frequency of overtopping. However, it is not the City's practice to maintain road side ditches.
- Eisenhower Street could be raised in elevation by means of an overlay.
- An enclosed system could be constructed to convey some of the flows to Nugent Creek.
- The existing ditches could be lined with concrete to improve conveyance.
- The 23rd Street and Eisenhower Street intersection could be raised in elevation and the necessary conveyance provided beneath the intersection.

Recommended improvements are not suggested for the stormwater runoff southwest of the intersection of 23rd Street and Eisenhower. Maintenance efforts were made by the City during the course of this study to improve drainage along Eisenhower Street. These efforts included improvements to the roadside ditches, mowing, and improvements to private drives.

Future improvements in stormwater conveyance should be done in conjunction with the major roadway improvements planned for the area. As described by City, 23rd Street may be improved in the near future

and future intersection improvements at 23rd Street and Eisenhower Street may be completed. Roadway improvements should consider improvements to the stormwater system. Such considerations could include raising the intersection of 23rd and Eisenhower, raising 23rd Street with an overlay, improving private driveway culverts, and improving roadside ditches.

6.13.3 Opinion of Cost

The City is treating the initial improvements as a maintenance issue. Therefore, there are no capital costs estimated for this project.

6.13.4 Priority

Project 12 has been ranked as the 3rd highest priority. During the completion period of this report, City Staff reported that plans to grade the ditches to increase conveyance did in fact help prevent overtopping of Eisenhower north of 23rd Street, but that additional stormwater measures may still be necessary.

6.14 PROJECT 13: 23RD STREET CULVERTS

6.14.1 Description

The City's Comprehensive Plan shows the area south of 23rd Street and between Eisenhower Road and Kansas Highway 50 as planned "Commercial/Industrial" development. Three drainage swales currently traverse the site dividing the land into four separate areas. It is anticipated by the City that development on this property will lead to the consolidation of the drainage patterns into a single crossing of West 23rd Street (see **Figure 6.15**). This consolidation might result from the desire of a developer to restructure the existing drainage system to better facilitate the layout of a development.

6.14.2 Recommended Improvements

The purpose of this project is to ascertain the size and approximate cost of constructing a single culvert under West 23rd Street to accommodate future development. It should be noted that these culverts were beyond the limits of detailed study for this project and a detailed analysis of the culverts was not performed. The level of service afforded by these structures was not identified by this study. The recommendation for this project is based on a possible future need rather than an identified conveyance problem. City Staff has also the questioned the feasibility of constructing the channels needed to relocate the existing culverts. The nearly flat channel slopes may not provide adequate drainage and could create problems with mosquitoes. These issues should be address when the site is developed or when 23rd Street is improved.

For this analysis, a preliminary structure size of four 6-foot x 3-foot reinforced concrete boxes was determined and the opinion of cost was developed for the culvert construction only. The following Opinion of Cost does not include channel relocation costs or costs for removing existing culverts.

6.14.3 Opinion of Cost

Table 6.17
Opinion of Cost for Project 13

Description	Quan.	Unit	Unit Price	Cost
Excavation	250	CY	$12.00	$3,000
Bedding	31	CY	$30.00	$930
Material to be Hauled Off Site	245	CY	$10.00	$2,450
Backfill and Compaction	5	CY	$19.00	$95
Pavement Removal/Replacement	125	SF	$43.00	$5,375
Reinforced Concrete Box Culvert	30	CY	$500.00	$15,000
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$28,850**
Utility Relocation	20%			$5,770
Mobilization	4%			$1,154
Traffic Control	1%			$289
Subtotal				**$36,063**
Contingency	30%			$10,819
Construction Cost Opinion				**$46,882**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$14,065
TOTAL PROJECT COST OPINION				**$61,000**

6.14.4 Priority

The City has prioritized Project 13 as a high priority project. Development south of 23rd Street between Eisenhower Road and Kansas Highway 50 is on the verge of occurring. As development takes place, stormwater and drainage issues will have to be addressed promptly which results in Project 13 being ranked as the 2nd highest priority for the City.

6.15 PROJECT 14: LAKESIDE ESTATES DETENTION

6.15.1 Description

At the time when topography was developed for the City, a lake existed between Osage Drive and Willow Street north of 17th Street (see **Figure 6.16**). At the time of this study, the embankment of the lake had been intentionally breeched and the basin no longer retains water.

6.15.2 Recommended Improvements

The City's Comprehensive Plan shows that the undeveloped area south of 17th Street will develop as a residential area in the near future. Prior to development occurring, it is recommended that the embankment and spillways be reconstructed to detain runoff from the developing area.

The detention basin could act as a best management practice while the upstream watershed develops. Construction runoff could be routed to the basin where suspended sediments would be removed from runoff. After development activities cease, the sediment trapped in the basin would need to be removed to re-establish the original amount of detention storage.

The second benefit of this basin would be stormwater detention. The reconstruction of the basin would help attenuate the increased peak flows and protect the Pin Oak Subdivision from the effects of future development.

It may be the desire of the City that private developers be responsible for the reconstruction of this basin. Typically, the City requires developers to address detention issues within proposed developments. If this were the case, this project would no longer be a City project, but a private project. However, once reconstructed it is recommended that the City obtain the property or an easement for the detention area. This would afford the City better control of the detention within the storage area.

6.15.3 Opinion of Cost

Table 6.18
Opinion of Cost for Project 14

Description	Quan.	Unit	Unit Price	Cost
Clear and Grub	1	AC	$2,000.00	$2,000
Excavation	250	CY	$12.00	$3,000
Backfill and Compaction	250	CY	$19.00	$4,750
30-inch RCP	100	LF	$65.00	$6,500
42-inch Riser	4	LF	$106.00	$424
Reinforced Concrete Block	1.2	CY	$500.00	$600
Riprap for Emergency Spillway	300	SY	$50.00	$15,000
Seeding	1	AC	$2,500.00	$2,500
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				$36,744
Utility Relocation	2%			$735.48
Mobilization	4%			$1,470.96
Traffic Control	1%			$367.74
Subtotal				$39,348.18

Table 6.18
Opinion of Cost for Project 14

Description	Quan.	Unit	Unit Price	Cost
Contingency	30%			$11,804.45
Construction Cost Opinion				$51,152.63
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$15,345.79
Subtotal				$66,498.42
Land Acquisition	2.96	AC	$10,000.00	$29,600.00
TOTAL PROJECT COST OPINION				**$96,100**

6.15.4 Priority

As discussed above, the City may decide to have private developers be responsible for the reconstruction of the detention basin in which case this would no longer be a City implemented project. With this in mind, the City has ranked Project 14 as a low priority.

6.16 PROJECT 15: KANSAS HIGHWAY 68 AND MAIN STREET CULVERT REPLACEMENT

6.16.1 Description

In 1967, a Kansas Department of Transportation Project made improvements to the intersection of Main and Keokuk Streets (Kansas Highway 68). At the time of the project, a 190-foot culvert existed under Main Street. The existing culvert was constructed of laid up brick, rock and other miscellaneous material. The existing culvert was left in place and incorporated into the new design. Approximately 150 feet of new 6-foot x 4-foot RCB was added to the upstream end of the existing culvert (see **Figure 6.17**).

Flooding was not sited as a problem at this location, but the structural integrity of the older section of the culvert is questionable. City staff reports that the walls and floor of the culvert are deteriorating.

6.16.2 Recommended Improvements

The older section of the culvert should be replaced due to the structural inadequacies. Modeling results suggest that the box culvert should be increased to a 9-foot x 4-foot reinforced concrete box in order to ensure the conveyance of the 50-year event under future conditions. Because the newer section of the culvert is still structurally sound, it is not a recommendation to remove and replace it.

If the existing 6-foot x 4-foot RCB is not replaced, then the older, downstream portion of the culvert should be removed and replaced with a culvert of identical size.

6.16.3 Opinion of Cost

Table 6.19
Opinion of Cost for Project 15

Description	Quan.	Unit	Unit Price	Cost
Excavation	1,870	CY	$12.00	$22,440
Bedding	885	CY	$30.00	$26,550
Material to be Hauled Off Site	1,585	CY	$10.00	$15,850
Backfill and Compaction	245	CY	$19.00	$4,655
Pavement Removal/Replacement	585	SF	$43.00	$25,155
Reinforced Concrete Box Culvert	245	CY	$500.00	$122,500
Erosion Control	1	LS	$2,000.00	$2,000
Subtotal				**$219,150**
Utility Relocation	20%			$43,830
Mobilization	4%			$8,766
Traffic Control	1%			$2,192
Subtotal				**$273,938**
Contingency	30%			$82,181
Construction Cost Opinion				**$356,119**
Design Engineering, Geotechnical, Permitting & Construction Management	30%			$106,836
TOTAL PROJECT COST OPINION				**$463,000**

6.16.4 Priority

Although not one of the highest priority projects with a ranking of 8th, the replacement of the Kansas Highway 68 and Main Street Culvert has still been prioritized as high. City Staff has indicated that this project may be completed by Kansas Department of Transportation as part of the US 59 Turn-back.

* * * NOTE TO REPROGRAPHICS * * *

Insert Figures 6.3 thru 6.17
11” x 17” color plot

Section 7
Glossary of Terms

7.0 GLOSSARY OF TERMS

7.1 INTRODUCTION

The purpose of this section is to provide a description of the terms and acronyms used in this report.

7.2 DEFINITIONS

Best Management Practice (BMP) – Common name for controls addressing non-point source pollution control and erosion control.

Bio-Engineering – Structural improvements to streams and surrounding features using geotextile fabrics and natural upland and wetland plants to control erosion.

Combined Sewer Outfall (CSO) – Refers to a sewer system that carries both storm and sanitary flows. Flow is usually routed to a wastewater treatment facility for treatment. However, during a rainfall event, some of the flow is allowed to bypass the treatment and is discharged directly into the receiving watercourse.

Depression Storage - The fraction of precipitation that is trapped in depressions on the surface of the ground.

Design Criteria - Guidelines upon which planning and engineering decisions and judgments are based.

Design Standards - Detailed engineering drawings and/or specifications promulgated by public or private organizations that leave little choice to design engineers and technicians (e.g., manhole, catch basin, and inlet standards).

Design Storm - A precipitation event that, statistically, has a specified probability of occurring in any given year (expressed either in years or as a percentage).

Detention Facility - Any structure, device or combination thereof, that functions to accept inflow from surface runoff and discharge it at a controlled rate less than the peak inflow rate.

Developer - Any person or corporation engaged in the process of changing, modifying or altering the use of land.

Development - Any activity that alters the surface of the land that generally creates additional impervious surfaces including, but not limited to, pavement, buildings and structures.

Digital Mapping – The computer data files containing the maps of the watershed.

Drainage - Interception, collection and removal of excess stormwater from an area into another area or into a receiving water body.

Enclosed Drainage System - A drainage system consisting of essentially continuous pipes and/or box culverts below the ground surface.

Erosion - The removal of soil particles by the action of flowing water.

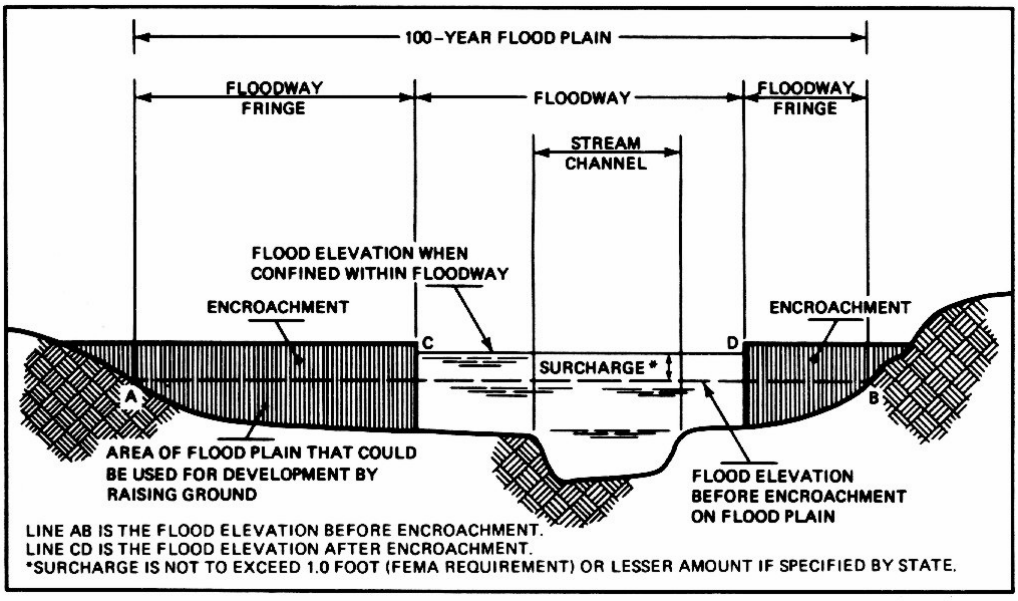
Excess Runoff - Direct surface runoff that cannot be accommodated satisfactorily by the existing or planned drainage system.

Flood Control - Preventing the entry of stormwater into an area from another area, or from a stream or other water body.

Flood Plain - The area surrounding a watercourse that is inundated with floodwater.

Flood Routing - An analytical technique used to compute the effects of system storage and system dynamics on the shape and movement of a flood wave.

Floodway - A tool or concept used by local communities for flood plan management. The area of the 100-year flood plain is divided into a floodway and floodway fringe. The floodway is the channel of the stream plus any adjacent flood plain areas that must be kept free of encroachments to that the 100-year flood can be carried without substantial increases in flood height. Minimum Federal standards limit such increases to 1.0 foot, provided hazardous velocities are not exceeded.



Freeboard - The vertical difference in elevation between the hydraulic gradient and a referenced point. Examples are the difference between the maximum water surface level behind a dam and the top of a dam, or the difference in elevation between the water surface at a culvert beneath the roadway and the surface of the roadway.

Head - The difference in depth of a liquid at two given points; a depth generally expressed in feet.

Hydraulic Gradient - The elevation of the surface of the water in the drainage system at any point.

Hydrograph - A graph of runoff rate, inflow rate or discharge rate, versus time.

Hydrologic Soil Groups - A soil characteristic classification system defined by the U.S. Soil Conservation Service in which a soil may be categorized into one of four soil groups (A, B, C, or D) based upon infiltration rate and other properties.

Impervious Surface - Any surface that does not readily permit water to infiltrate. Examples are roofs and concrete or asphalt-paved surfaces.

Improved Channel - Any channel whose characteristics are changed by either grading or construction of lining materials.

Interception - Rainfall that is caught by foliage, branches, leaves, and other aboveground objects.

Lag - The time interval from the center of mass of excess rainfall to the peak rate of runoff.

Level of Service - The return period for which a drainage system, or an individual element of that system, has adequate hydraulic capacity.

Master Planning - A "systems" approach to the planning of facilities, programs and management organizations for comprehensive control and use of stormwater within a defined geographical area.

Natural Channel - An existing channel that has not been appreciably altered by grading, lining or changing its course.

NPDES – National Pollutant Discharge Elimination System – a program administered by the EPA addressing the discharge of pollutants to waters of the United States.

Open System - A drainage system consisting of open channels, either natural or improved, with only comparatively short lengths enclosed by pipes or culverts.

Pervious Surfaces - Surfaces that absorb water such as undeveloped areas, fields, yards and other unpaved areas.

Reach - A specific length of the storm drainage system between two points. For example, a reach may consist of a single culvert or may consist of several connected pipes or channel sections. The term "line" may also be used synonymously within the report.

Receiving Waters - Streams, lakes, bays, etc., into which stormwaters are discharged.

Return Period - A statistical term for the average frequency that a given event may be expected to occur, although it does not imply that the event will occur regularly at even intervals. It can also be defined as the reciprocal of the probability of an event. For example, a storm having a 10-year return period statistically can be expected to occur once in a period of 10 years, an annual probability of occurrence of 0.10, or 10%. However, the event may occur at any time, and two such events may actually occur on successive days.

Sediment - Soil particles eroded by flowing water; either in suspension in that water or as deposited.

Storm Drainage System - Natural or constructed facilities and appurtenances, such as ditches, natural channels, pipes, culverts, bridges, improved channels, street gutters, inlets and detention facilities, that serve to collect and convey surface drainage.

Storm Sewers - Usually, enclosed conduits that transport excess stormwater runoff toward points of discharge (sometimes call "storm drains").

Stormwater Management - Encompasses both "control" and "developmental" activities in which there is physical interaction with stormwater (a broader interpretation includes activities of an institutional nature – financing, staffing, etc.).

Stormwater Storage - Temporary storage of excess runoff on, below, or above the surface of the earth for the purpose of attenuating excess runoff.

Time Of Concentration - The time period necessary for surface runoff to reach the outlet of a sub-basin from the hydraulically most remote point in the tributary drainage area.

Travel Time - The sum of the time intervals for overland flow, sewer or gutter flow, and pipe and channel flow from the hydraulically most remote point in the tributary to the discharge point of interest.

Watershed - All land draining to the storm drainage system at any given point. This term is used synonymously with the terms tributary area, drainage area, drainage basin, catchment area, subwatershed and subarea.

Water Surface Profile (Existing) - the "Existing" water surface profiles represent flooding conditions based on current land use conditions within the study area.

Water Surface Profile (Future) - the "Future" water surface profiles represent flooding conditions based on future land use conditions within the study area.

Zone A - FEMA Flood Insurance Zone - Special Flood Hazard Areas inundated by the 100-year flood, as determined by approximate methods; no base flood elevations are shown and no flood hazard factors are determined.

Zone AH - FEMA Flood Insurance Zone - Special Flood Hazard Areas inundated by types of 100-year shallow flooding where depths are between 1.0 and 3.0 feet; no base flood elevations are shown and no flood hazard factors are determined.

Zone A1, A3-A6, A8, A9, A14, A16 and A18 - FEMA Flood Insurance Zone – Special Flood Hazard Areas inundated by the 100-year flood, with base flood elevations shown and zones subdivided according to flood hazard factors.

Zone B - FEMA Flood Insurance Zone – Areas between the Special Flood Hazard Areas and the limits of the 500-year flood; areas are protected from the 100- and 500- year floods by dikes, levee or other water control structure; areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than one square mile.

Zone C - FEMA Flood Insurance Zone – Areas of minimal flooding.

7.3 ACRONYMS

AML - Arc Macro Language

APWA – American Public Works Association

BMP – Best Management Practice

CIP - Capital Improvements Program (or Plan)

CMPA - Corrugate Metal Pipe Arch

CSO – Combined Sewer Outfall

DTM - Digital Terrain Model

FEMA - Federal Emergency Management Agency

FIRM – Flood Insurance Rate Map

FIS - Flood Insurance Study

GIS - Geographic Information System

HEC – Hydrologic Engineering Center (U.S. Army Corps of Engineers)

KDOT – Kansas Department of Transportation

MSDIS - Missouri Spatial Data Information Service

NEID – Northeast Industrial District

NPDES – National Pollutant Discharge Elimination System

RCB - Reinforced Concrete Box

RCP - Reinforce Concrete Pipe

SMAC - Stormwater Management Advisory Committee

TIN - Triangulated Irregular Network

USACE - Unites States Army Corps of Engineers

Appendix A
Exhibits

* * * NOTE TO REPROGRAPHICS * * *

Insert eight (8) clear drawing envelops

Appendix B
SWWM Modeling Results

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
COUNTRY CLUB (CC)					
CCMC00	CCMC00	1	7.57	6.13	69
CCMC01	CCMC01	1	13.02	14.69	75
CCMC02	CCMC02	1	3.60	1.69	82
CCMC04	CCMC04	1	15.85	14.32	85
CCMC06	CCMC06	1	19.58	5.56	81
CCMC10	CCMC10	1	44.25	20.05	84
CCMC11	CCMC11	1	39.58	19.51	90
CCMC12	CCMC12	1	58.27	18.13	85
CCL101	CCL101	1	21.23	13.24	79
CCL103	CCL103	1	20.86	14.35	84
CCL107	CCL107	1	28.25	16.30	83
CCL112	CCL112	1	5.80	9.74	86
CCL113	CCL113	1	13.11	9.33	87
CCL204	CCL204	1	9.11	8.25	93
EAST 4TH STREET (E4)					
E4MC01	E4MC01	1	26.38	9.62	81
EAST 7TH STREET (E7)					
E7MC01	E7MC01	1	38.82	16.97	88
EISENHOWER / 23RD STREET (E23)					
E23MC01	E23MC01	1	226.24	55.28	85
E23MC02	E23MC02	1	229.22	46.03	85
E23MC03	E23MC03	1	97.42	35.22	88
E23MC04	E23MC04	1	147.45	46.72	88
E23MC05	E23MC05	1	68.54	44.59	91
E23L105	E23L105	1	2.87	4.91	89
E23L106	E23L106	1	2.08	2.66	89
E23L1A01	E23L1A01	1	8.42	7.97	86
FOREST PARK (FP)					
FPMC03	FPMC03	1	2.73	9.92	72
FPMC04	FPMC04	1	35.23	20.86	79
FPMC05	FPMC05	1	28.83	25.81	70
FPL102	FPL102	1	3.40	3.55	81
FPL104	FPL104	1	6.43	9.61	90
FPL203	FPL203	1	2.10	0.77	90
FPL206	FPL206	1	42.96	36.23	90
FPL301	FPL301	1	12.12	14.04	69
INDUSTRIAL PARK (IP)					
UWMC01	UWMC01	1	86.26	62.95	87
IPMC07	IPMC07	1	145.47	51.01	89
IPMC09	IPMC09	1	150.31	72.62	89
IPMC10	IPMC10	1	5.09	11.15	87
IPMC11	IPMC11	1	46.89	26.59	89
IPMC13	IPMC13	1	120.05	48.62	86
IPMC15	IPMC15	1	56.17	38.67	93
IPMC19	IPMC19	1	280.85	96.54	89
IPMC20	IPMC20	1	204.11	49.43	86
IPL201	IPL201	1	12.34	13.24	91
IPL202	IPL202	1	15.36	10.94	93
IPL206	IPL206	1	1.61	3.23	92
IPL2A01	IPL2A01	1	14.36	11.61	92
IPL2A02	IPL2A02	1	7.91	8.54	87
IPL2A05	IPL2A05	1	10.88	6.83	88

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
IPL411	IPL411	1	9.00	6.39	87
IPL502	IPL502	1	10.81	18.56	90
IPL601	IPL601	1	37.96	18.48	85
IPL605	IPL605	1	6.51	9.57	89
IPL6A01	IPL6A01	1	8.18	13.94	87
IPL6A03	IPL6A03	1	8.35	8.78	87
LOWER WILSON (LW)					
LWMC02	LWMC02	1	139.51	64.58	81
LWMC04	LWMC04	1	84.70	52.63	74
LWMC06	LWMC06	1	48.04	21.59	87
LWMC08	LWMC08	1	77.05	20.75	81
LWMC09	LWMC09	1	14.36	15.77	82
LWMC11	LWMC11	1	94.25	70.81	87
LWMC12	LWMC12	1	70.99	30.33	89
LWMC13	LWMC13	1	122.83	97.12	89
LWMC14	LWMC14	1	117.77	116.47	88
LWL101	LWL101	1	143.51	36.01	86
NUGENT CREEK (NC)					
NCMC01	NCMC01	1	133.69	84.16	82
NCMC02	NCMC02	1	154.02	100.40	84
NCMC04	NCMC04	1	166.46	95.55	87
NCMC05	NCMC05	1	33.53	31.36	87
NCMC06	NCMC06	1	181.82	76.30	86
NCMC08	NCMC08	1	161.30	67.48	86
NCMC09	NCMC09	1	84.85	41.13	87
NCMC10	NCMC10	1	103.54	46.97	87
NCMC11	NCMC11	1	159.57	45.57	83
NCMC12	NCMC12	1	146.11	37.18	89
NCL201	NCL201	1	25.06	19.22	88
NCL202	NCL202	1	11.43	9.39	86
NCL401	NCL401	1	97.26	38.92	85
NCL4A01	NCL4A01	1	17.99	18.01	91
NCL4B01	NCL4B01	1	10.31	14.06	90
NCL4D01	NCL4D01	1	6.46	5.41	90
NCL500	NCL500	1	103.54	46.97	87
NCL502	NCL502	1	137.35	24.11	74
NCL503	NCL503	1	121.20	31.64	72
PIN OAK (PO)					
POMC01	POMC01	1	88.38	33.79	86
POMC02	POMC02	1	34.51	19.10	91
POMC03	POMC03	1	58.08	29.21	87
POMC11	POMC11	1	30.13	15.25	86
POMC18	POMC18	1	41.98	16.82	89
POL102	POL102	1	11.22	12.92	87
POL105	POL105	1	5.22	11.45	87
POL110	POL110	1	4.82	16.35	87
POL301	POL301	1	25.53	14.61	92
POL306	POL306	1	10.01	8.82	89
POL405	POL405	1	14.34	11.76	89
POL502	POL502	1	20.96	14.05	87
POSSUM RUN (PR)					
PRMC05	PRMC05	1	5.31	9.09	79
PRMC07	PRMC07	1	9.87	13.47	91

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
PRMC09	PRMC09	1	8.20	9.21	94
PRMC15	PRMC15	1	13.20	7.05	90
PRMC16	PRMC16	1	18.58	21.18	83
PRMC19	PRMC19	1	17.02	8.58	93
PRMC21	PRMC21	1	9.00	6.95	90
PRL101	PRL101	1	3.16	6.20	84
PRL107	PRL107	1	5.00	10.15	88
PRL202	PRL202	1	19.15	11.53	87
PRL204	PRL204	1	9.07	7.96	86
PRL208	PRL208	1	7.80	6.81	84
PRL212	PRL212	1	17.47	9.96	84
PRL215	PRL215	1	5.24	7.39	84
PRL218	PRL218	1	24.68	12.45	85
PRL2A01	PRL2A01	1	8.59	13.05	86
PRL302	PRL302	1	10.27	9.49	88
PRL305	PRL305	1	24.15	15.02	88
PRL307	PRL307	1	2.23	5.97	88
PRL401	PRL401	1	2.22	9.32	90
ROCK CREEK (RC)					
RCMC01	RCMC01	1	108.36	30.88	83
RCMC02	RCMC02	1	8.53	11.41	68
RCMC03	RCMC03	1	35.29	20.66	77
RCMC06	RCMC06	1	30.76	10.30	78
RCMC07	RCMC07	1	5.44	4.84	78
RCMC08	RCMC08	1	81.30	59.07	78
RCMC09	RCMC09	1	4.66	4.35	76
RCMC14	RCMC14	1	11.58	5.94	77
RCMC17	RCMC17	1	76.55	27.12	85
RCMC19	RCMC19	1	100.58	32.15	83
RCMC23	RCMC23	1	133.93	37.41	89
RCMC24	RCMC24	1	49.51	19.37	85
RCMC25	RCMC25	1	17.33	10.07	72
RCMC27	RCMC27	1	44.01	34.24	88
RCMC31	RCMC31	1	232.73	78.77	90
RCMC32	RCMC32	1	115.23	29.84	84
RCMC34	RCMC34	1	223.79	62.78	86
RCMC36	RCMC36	1	158.63	62.37	89
RCMC37	RCMC37	1	259.98	63.44	83
RCMC38	RCMC38	1	197.35	88.32	84
RCMC39	RCMC39	1	228.58	76.07	84
RCMC40	RCMC40	1	76.97	28.83	87
RCMC41	RCMC41	1	136.06	109.60	78
RCMC42	RCMC42	1	224.49	85.45	84
RCMC43	RCMC43	1	217.78	104.77	86
RCMC44	RCMC44	1	128.78	48.66	85
RCMC45	RCMC45	1	184.82	61.58	85
RCMC46	RCMC46	1	168.94	149.79	85
RCMC47	RCMC47	1	117.80	75.85	85
RCMC48	RCMC48	1	211.92	59.64	86
RCMC49	RCMC49	1	188.98	68.45	82
RCMC50	RCMC50	1	155.77	65.77	83
RCMC51	RCMC51	1	125.43	60.85	85
RCMC52	RCMC52	1	207.23	63.83	85

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
RCMC53	RCMC53	1	124.22	50.85	82
RCMC54	RCMC54	1	152.98	37.25	83
RCMC55	RCMC55	1	202.39	53.22	80
RCMC56	RCMC56	1	204.43	42.33	81
RCMC57	RCMC57	1	157.92	65.12	82
RCMC58	RCMC58	1	179.47	43.79	87
RCL0102	RCL0102	1	7.94	6.81	87
RCL0103	RCL0103	1	10.69	8.83	87
RCL0105	RCL0105	1	22.29	12.40	86
RCL0113	RCL0113	1	11.26	5.95	92
RCL01A02	RCL01A02	1	10.46	6.75	84
RCL01A06	RCL01A06	1	11.77	10.73	85
RCL01A08	RCL01A08	1	4.54	3.18	86
RCL01A11	RCL01A11	1	17.30	6.91	87
RCL01A12	RCL01A12	1	6.08	6.22	86
RCL01B01	RCL01B01	1	12.03	6.29	89
RCL0201	RCL0201	1	9.57	5.05	72
RCL0203	RCL0203	1	4.69	5.68	81
RCL0206	RCL0206	1	11.40	5.80	79
RCL0211	RCL0211	1	14.23	9.94	86
RCL02A02	RCL02A02	1	5.87	3.51	79
RCL02B02	RCL02B02	1	1.93	2.41	81
RCL02D03	RCL02D03	1	5.09	7.61	91
RCL0300	RCL0300	1	1.92	3.60	73
RCL0303	RCL0303	1	5.30	3.45	75
RCL0305	RCL0305	1	21.30	12.57	90
RCL0402	RCL0402	1	12.65	7.68	82
RCL0403	RCL0403	1	38.60	17.17	90
RCL0408	RCL0408	1	6.38	5.87	85
RCL0501	RCL0501	1	10.62	11.19	85
RCL0502	RCL0502	1	11.79	11.53	86
RCL0504	RCL0504	1	3.33	6.31	88
RCL0505	RCL0505	1	27.29	16.94	90
RCL05A02	RCL05A02	1	10.16	9.46	87
RCL0603	RCL0603	1	6.42	4.57	87
RCL0702	RCL0702	1	11.40	6.75	91
RCL0704	RCL0704	1	4.54	6.16	92
RCL0707	RCL0707	1	5.06	9.53	94
RCL0800	RCL0800	1	49.51	19.37	85
RCL0802	RCL0802	1	19.84	9.85	85
RCL0805	RCL0805	1	4.47	6.82	93
RCL0806	RCL0806	1	4.62	5.14	94
RCL0808	RCL0808	1	3.02	4.80	95
RCL0812	RCL0812	1	4.82	12.60	93
RCL0815	RCL0815	1	71.07	68.78	89
RCL0818	RCL0818	1	0.88	2.32	95
RCL08A01	RCL08A01	1	50.25	32.30	88
RCL08A05	RCL08A05	1	13.44	11.54	93
RCL08A09	RCL08A09	1	9.29	8.96	91
RCL08B03	RCL08B03	1	1.42	4.26	95
RCL08C04	RCL08C04	1	13.38	22.10	92
RCL08D01	RCL08D01	1	1.01	5.09	93
RCL08D05	RCL08D05	1	21.11	31.89	92

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
RCL1001	RCL1001	1	136.86	44.75	86
RCL1101	RCL1101	1	106.44	24.10	81
RCL1201	RCL1201	1	179.78	134.24	86
RCL1202	RCL1202	1	267.48	376.54	88
RCL1203	RCL1203	1	216.68	68.80	91
RCL1300	RCL1300	1	224.49	84.45	84
RCL1301	RCL1301	1	164.04	40.44	79
RCL1302	RCL1302	1	82.58	22.30	76
RCL1303	RCL1303	1	197.67	21.93	74
RCL13A01	RCL13A01	1	158.22	27.60	77
RCL1400	RCL1400	1	217.78	104.77	86
RCL1401	RCL1401	1	64.80	38.20	87
RCL1402	RCL1402	1	184.23	22.73	81
RCL1501	RCL1501	1	145.26	43.26	90
RCL1601	RCL1601	1	229.49	84.94	87
RCL1602	RCL1602	1	177.96	74.51	89
RCL1603	RCL1603	1	148.78	59.38	88
RCL1604	RCL1604	1	147.24	56.58	88
RCL16A00	RCL16A00	1	190.90	71.79	86
RCL16A01	RCL16A01	1	119.46	41.78	87
RCL1701	RCL1701	1	182.24	86.52	85
RCL1702	RCL1702	1	185.82	108.00	87
RCL1703	RCL1703	1	117.47	26.39	81
RCL1801	RCL1801	1	166.20	61.92	86
RCL1901	RCL1901	1	182.58	30.26	85
RCL2001	RCL2001	1	165.43	34.09	85
RCL2002	RCL2002	1	184.16	40.56	84
RCL901	RCL901	1	151.21	44.47	89
SKUNK RUN (SR)					
SRMC03	SRMC03	1	1.75	23.57	74
SRMC04	SRMC04	1	25.46	10.87	80
SRMC05	SRMC05	1	49.18	13.93	86
SRMC08	SRMC08	1	26.95	14.74	85
SRMC13	SRMC13	1	30.55	22.67	88
SRMC19	SRMC19	1	19.68	11.92	91
SRMC23	SRMC23	1	3.65	4.98	91
SRMC24	SRMC24	1	6.04	9.73	86
SRMC27	SRMC27	1	6.34	8.83	87
SRMC31	SRMC31	1	27.17	13.81	87
SRMC34	SRMC34	1	24.16	12.75	87
SRMC36	SRMC36	1	15.05	13.59	85
SRMC40	SRMC40	1	12.70	10.95	85
SRMC41	SRMC41	1	15.42	10.94	85
SRMC44	SRMC44	1	28.87	11.20	92
SRL0101	SRL0101	1	1.38	4.13	88
SRL0103	SRL0103	1	2.83	11.07	88
SRL0105	SRL0105	1	25.09	63.85	91
SRL0108	SRL0108	1	10.63	11.51	86
SRL0112	SRL0112	1	8.47	8.76	90
SRL0116	SRL0116	1	8.14	9.70	93
SRL0121	SRL0121	1	10.26	17.24	94
SRL01401	SRL01401	1	2.06	4.95	87
SRL01403	SRL01403	1	4.85	8.97	87

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
SRL01503	SRL01503	1	22.84	19.80	87
SRL0201	SRL0201	1	4.76	5.85	86
SRL0204	SRL0204	1	17.93	26.03	90
SRL0304	SRL0304	1	9.41	7.30	92
SRL0307	SRL0307	1	21.15	13.66	95
SRL0402	SRL0402	1	21.02	11.21	80
SRL0403	SRL0403	1	13.13	11.10	83
SRL0404	SRL0404	1	10.24	6.53	88
SRL0406	SRL0406	1	16.39	7.46	87
SRL0408	SRL0408	1	29.17	13.46	90
SRL0601	SRL0601	1	3.04	2.54	86
SRL0602	SRL0602	1	8.34	13.10	89
SRL0607	SRL0607	1	12.48	10.00	91
SRL0701	SRL0701	1	3.45	6.33	91
SRL0705	SRL0705	1	2.52	6.65	90
SRL0707	SRL0707	1	16.34	23.75	89
SRL0801	SRL0801	1	2.57	3.99	90
SRL0803	SRL0803	1	17.60	11.76	88
SRL0804	SRL0804	1	10.49	13.12	87
SRL0904	SRL0904	1	1.06	2.15	94
SRL09A01	SRL09A01	1	11.14	13.01	90
SRL09A03	SRL09A03	1	8.15	9.17	87
SRL1001	SRL1001	1	0.86	6.90	88
SRL1004	SRL1004	1	3.27	4.93	87
SRL1103	SRL1103	1	9.85	10.30	89
SRL1106	SRL1106	1	7.56	10.68	88
SRL1110	SRL1110	1	2.70	44.81	87
SRL1202	SRL1202	1	5.36	4.42	87
SRL1602	SRL1602	1	5.72	8.96	88
SRL1703	SRL1703	1	7.74	9.40	88
SRL1705	SRL1705	1	12.74	17.33	88
SRL1802	SRL1802	1	10.97	7.14	87
SRL1804	SRL1804	1	11.56	21.89	92
SRL1806	SRL1806	1	4.43	5.75	92
SRL1809	SRL1809	1	12.68	12.96	93
SRL18A03	SRL18A03	1	10.33	10.77	88
SRL1903	SRL1903	1	5.65	13.00	91
SRL2003	SRL2003	1	16.51	7.05	87
SRL2103	SRL2103	1	12.24	13.80	88
SUGAR CREEK (SC)					
SCMC01	SCMC01	1	65.14	31.70	85
SCMC03	SCMC03	1	2.67	4.19	91
SCMC05	SCMC05	1	4.61	8.71	92
SCMC08	SCMC08	1	9.73	8.73	88
SCMC13	SCMC13	1	9.48	8.89	87
SCMC20	SCMC20	1	11.53	10.33	88
SCL103	SCL103	1	4.95	9.06	86
SCL116	SCL116	1	16.84	12.37	89
SCL1A04	SCL1A04	1	15.86	10.78	86
SCL201	SCL201	1	5.87	7.74	90
SCL301	SCL301	1	6.26	10.13	87

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
SYCAMORE STREET (SY)					
SYMC02	SYMC02	1	2.21	4.52	82
SYMC05	SYMC05	1	6.21	9.29	84
UPPER WILSON (UW)					
UWMC00	UWMC00	1	17.30	27.69	77
UWMC03	UWMC03	1	125.35	102.87	80
UWMC04	UWMC04	1	210.85	92.32	84
UWMC05	UWMC05	1	336.36	114.72	85
UWMC06	UWMC06	1	228.83	82.51	88
UWMC07	UWMC07	1	216.34	75.39	90
UWMC08	UWMC08	1	216.72	172.97	91
UWMC09	UWMC09	1	300.71	46.43	88
UWMC10	UWMC10	1	177.35	32.16	79
UWMC11	UWMC11	1	203.92	43.16	80
UWMC12	UWMC12	1	174.62	22.34	77
UWL101	UWL101	1	156.07	44.62	88
UWL201	UWL201	1	523.41	79.02	89
UWL301	UWL301	1	128.30	32.25	89
UWL302	UWL302	1	197.74	29.77	76
VISITOR CENTER (VC)					
VCMC01	VCMC01	1	178.23	75.70	78
VCMC02	VCMC02	1	83.31	33.65	81
VCMC03	VCMC03	1	123.74	30.89	82
VCMC04	VCMC04	1	30.29	17.84	90
VCMC06	VCMC06	1	44.30	13.76	86
VCMC07	VCMC07	1	37.93	15.89	90
VCMC08	VCMC08	1	32.10	12.49	86
VCL102	VCL102	1	111.36	39.30	84
VCL201	VCL201	1	37.12	15.27	84
WEST 13TH STREET (W13)					
NCL202	NCL202	1	11.43	9.39	86
W13MC04	W13MC04	1	17.04	12.18	90
W13L1B01	W13L1B01	1	9.14	9.74	86
W13L1C01	W13L1C01	1	2.50	6.59	87
W13L201	W13L201	1	2.10	4.92	88
W13L202	W13L202	1	3.56	3.09	84
W13L401	W13L401	1	1.96	3.27	86
WILLOW STREET (WL)					
WLMC04	WLMC04	1	22.92	19.56	86
WLMC06	WLMC06	1	21.18	35.28	83
WLMC09	WLMC09	1	51.15	47.21	85
WLMC11	WLMC11	1	2.54	10.65	93
WLMC18	WLMC18	1	17.06	23.64	87
WLL104	WLL104	1	2.48	3.11	87
WLL109	WLL109	1	4.75	3.08	95
WLL1A01	WLL1A01	1	10.59	8.29	89
WLL1A02	WLL1A02	1	8.78	13.79	87
WLL1B01	WLL1B01	1	26.25	33.35	92
WLL202	WLL202	1	8.59	9.98	90
WLL302	WLL302	1	4.88	4.67	91
WLL305	WLL305	1	6.00	4.94	87
WLL314	WLL314	1	6.26	6.08	87
WLL318	WLL318	1	40.95	17.33	87

Table B.1
Hydrologic Modeling - Runoff Parameters for Existing Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Existing CN
WLL3A02	WLL3A02	1	1.76	2.59	93
WLL3B05	WLL3B05	1	7.28	7.91	89
WLL401	WLL401	1	8.48	10.72	92
WLL501	WLL501	1	30.60	27.94	87
WLL601	WLL601	1	9.91	7.87	93
WLL701	WLL701	1	18.94	11.12	87

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
CCL101	2-year	21.23	79	13	33.7
	5-year				53.3
	10-year				65.5
	25-year				81.9
	50-year				94.3
	100-yer				110.8
CCL103	2-year	20.86	84	14	40.6
	5-year				61.2
	10-year				73.6
	25-year				90.3
	50-year				102.8
	100-yer				119.4
CCL107	2-year	28.25	83	16	51.9
	5-year				78.7
	10-year				95.0
	25-year				116.9
	50-year				133.3
	100-yer				155.1
CCL112	2-year	5.80	86	10	12.4
	5-year				18.3
	10-year				21.7
	25-year				26.4
	50-year				29.9
	100-yer				34.5
CCL113	2-year	13.11	87	9	28.8
	5-year				41.9
	10-year				49.7
	25-year				60.1
	50-year				67.9
	100-yer				78.2
CCL204	2-year	9.11	93	8	23.8
	5-year				32.8
	10-year				38.1
	25-year				45.1
	50-year				50.4
	100-yer				57.4
CCMC00	2-year	7.57	69	6	8.5
	5-year				15.0
	10-year				19.1
	25-year				24.9
	50-year				29.3
	100-yer				35.2
CCMC01	2-year	13.02	75	15	16.7
	5-year				28.0
	10-year				35.1
	25-year				44.9
	50-year				52.3
	100-yer				62.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
CCMC02	2-year	3.60	82	2	7.3
	5-year				10.9
	10-year				13.0
	25-year				15.9
	50-year				18.1
	100-yer				21.0
CCMC04	2-year	15.85	85	14	31.5
	5-year				47.2
	10-year				56.7
	25-year				69.4
	50-year				78.9
	100-yer				91.6
CCMC06	2-year	19.58	81	6	37.1
	5-year				56.1
	10-year				67.6
	25-year				83.1
	50-year				94.6
	100-yer				110.1
CCMC10	2-year	44.25	84	20	78.7
	5-year				119.2
	10-year				143.9
	25-year				176.9
	50-year				201.6
	100-yer				234.5
CCMC11	2-year	39.58	90	20	86.6
	5-year				123.7
	10-year				145.9
	25-year				175.3
	50-year				197.3
	100-yer				226.5
CCMC12	2-year	58.27	85	18	111.4
	5-year				165.7
	10-year				198.6
	25-year				242.4
	50-year				275.4
	100-yer				319.4
E23L105	2-year	2.87	89	5	6.8
	5-year				9.7
	10-year				11.4
	25-year				13.6
	50-year				15.3
	100-yer				17.5
E23L106	2-year	2.08	89	3	5.0
	5-year				7.0
	10-year				8.2
	25-year				9.9
	50-year				11.1
	100-yer				12.7

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
E23L1A01	2-year	8.42	86	8	18.6
	5-year				27.1
	10-year				32.1
	25-year				38.9
	50-year				43.9
	100-yer				50.6
E23MC01	2-year	226.24	85	55	254.1
	5-year				386.3
	10-year				466.8
	25-year				574.7
	50-year				656.0
	100-yer				764.6
E23MC02	2-year	229.22	85	46	288.8
	5-year				438.6
	10-year				529.8
	25-year				651.8
	50-year				743.4
	100-yer				865.4
E23MC03	2-year	97.42	88	35	162.7
	5-year				237.7
	10-year				282.7
	25-year				342.5
	50-year				387.3
	100-yer				446.7
E23MC04	2-year	147.45	88	47	207.4
	5-year				304.9
	10-year				363.7
	25-year				441.9
	50-year				500.5
	100-yer				578.3
E23MC05	2-year	68.54	91	45	109.5
	5-year				155.9
	10-year				183.6
	25-year				220.4
	50-year				248.0
	100-yer				284.7
E4MC01	2-year	26.38	81	10	49.3
	5-year				75.3
	10-year				91.2
	25-year				112.5
	50-year				128.5
	100-yer				149.9
E7MC01	2-year	38.82	88	17	82.0
	5-year				119.2
	10-year				141.5
	25-year				171.2
	50-year				193.3
	100-yer				222.8

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
FPL102	2-year	3.40	81	4	6.9
	5-year				10.4
	10-year				12.5
	25-year				15.3
	50-year				17.5
	100-yer				20.3
FPL104	2-year	6.43	90	10	15.9
	5-year				22.4
	10-year				26.2
	25-year				31.3
	50-year				35.1
	100-yer				40.2
FPL203	2-year	2.10	90	1	3.0
	5-year				4.2
	10-year				4.9
	25-year				5.9
	50-year				6.6
	100-yer				7.5
FPL206	2-year	42.96	90	36	75.5
	5-year				107.9
	10-year				127.4
	25-year				153.2
	50-year				172.4
	100-yer				198.0
FPL301	2-year	12.12	69	14	11.8
	5-year				21.6
	10-year				28.0
	25-year				36.9
	50-year				43.8
	100-yer				53.1
FPMC03	2-year	2.73	72	10	3.2
	5-year				5.6
	10-year				7.1
	25-year				9.1
	50-year				10.7
	100-yer				12.8
FPMC04	2-year	35.23	79	21	49.8
	5-year				80.0
	10-year				98.8
	25-year				124.3
	50-year				143.7
	100-yer				169.6
FPMC05	2-year	28.83	70	26	23.3
	5-year				43.0
	10-year				55.9
	25-year				73.8
	50-year				87.7
	100-yer				106.8

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPL201	2-year	12.34	91	13	29.9
	5-year				41.9
	10-year				49.1
	25-year				58.5
	50-year				65.6
	100-yer				75.0
IPL202	2-year	15.36	93	11	39.8
	5-year				55.0
	10-year				64.0
	25-year				75.9
	50-year				84.9
	100-yer				96.8
IPL206	2-year	1.61	92	3	4.2
	5-year				5.8
	10-year				6.7
	25-year				8.0
	50-year				8.9
	100-yer				10.1
IPL2A01	2-year	14.36	92	12	36.4
	5-year				50.6
	10-year				59.0
	25-year				70.1
	50-year				78.5
	100-yer				89.6
IPL2A02	2-year	7.91	87	9	17.8
	5-year				25.7
	10-year				30.4
	25-year				36.6
	50-year				41.3
	100-yer				47.5
IPL2A05	2-year	10.88	88	7	24.8
	5-year				35.6
	10-year				42.0
	25-year				50.6
	50-year				56.9
	100-yer				65.4
IPL411	2-year	9.00	87	6	20.3
	5-year				29.1
	10-year				34.4
	25-year				41.5
	50-year				46.7
	100-yer				53.7
IPL502	2-year	10.81	90	19	24.1
	5-year				34.2
	10-year				40.2
	25-year				48.2
	50-year				54.2
	100-yer				62.2

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPL601	2-year	37.96	85	18	71.4
	5-year				106.6
	10-year				127.9
	25-year				156.3
	50-year				177.6
	100-yer				206.0
IPL605	2-year	6.51	89	10	15.3
	5-year				21.9
	10-year				25.8
	25-year				31.0
	50-year				34.9
	100-yer				40.1
IPL6A01	2-year	8.18	87	14	18.0
	5-year				26.2
	10-year				31.1
	25-year				37.6
	50-year				42.5
	100-yer				49.0
IPL6A03	2-year	8.35	87	9	18.7
	5-year				27.1
	10-year				32.1
	25-year				38.7
	50-year				43.7
	100-yer				50.3
IPMC07	2-year	145.47	89	51	204.0
	5-year				295.6
	10-year				350.7
	25-year				424.0
	50-year				478.7
	100-yer				551.5
IPMC09	2-year	150.31	89	73	164.5
	5-year				239.7
	10-year				285.0
	25-year				345.3
	50-year				390.4
	100-yer				450.4
IPMC10	2-year	5.09	87	11	11.1
	5-year				16.0
	10-year				19.0
	25-year				23.0
	50-year				25.9
	100-yer				29.9
IPMC11	2-year	46.89	89	27	89.3
	5-year				129.5
	10-year				153.6
	25-year				185.7
	50-year				209.7
	100-yer				241.5

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPMC13	2-year	120.05	86	49	150.6
	5-year				227.4
	10-year				274.0
	25-year				336.4
	50-year				383.2
	100-yer				445.6
IPMC15	2-year	56.17	93	39	104.2
	5-year				145.2
	10-year				169.6
	25-year				202.0
	50-year				226.2
	100-yer				258.3
IPMC19	2-year	280.85	89	97	249.1
	5-year				364.2
	10-year				433.4
	25-year				525.6
	50-year				594.6
	100-yer				686.4
IPMC20	2-year	204.11	86	49	255.6
	5-year				384.7
	10-year				463.1
	25-year				568.1
	50-year				646.9
	100-yer				751.7
LWL101	2-year	143.51	86	36	218.3
	5-year				326.1
	10-year				391.3
	25-year				478.5
	50-year				543.7
	100-yer				630.5
LWMC02	2-year	139.51	81	65	121.8
	5-year				193.1
	10-year				237.3
	25-year				297.0
	50-year				342.1
	100-yer				402.5
LWMC04	2-year	84.70	74	53	57.0
	5-year				100.5
	10-year				128.5
	25-year				167.2
	50-year				197.2
	100-yer				237.7
LWMC06	2-year	48.04	87	22	94.0
	5-year				137.7
	10-year				164.0
	25-year				199.0
	50-year				225.2
	100-yer				259.9

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
LWMC08	2-year	77.05	81	21	118.4
	5-year				186.0
	10-year				227.9
	25-year				284.4
	50-year				326.9
	100-yer				383.8
LWMC09	2-year	14.36	82	16	25.0
	5-year				38.5
	10-year				46.8
	25-year				58.0
	50-year				66.4
	100-yer				77.5
LWMC11	2-year	94.25	87	71	96.4
	5-year				143.6
	10-year				172.4
	25-year				210.8
	50-year				239.6
	100-yer				277.9
LWMC12	2-year	70.99	89	30	130.4
	5-year				188.7
	10-year				223.8
	25-year				270.3
	50-year				305.1
	100-yer				351.3
LWMC13	2-year	122.83	89	97	111.0
	5-year				161.1
	10-year				191.2
	25-year				231.3
	50-year				261.2
	100-yer				301.0
LWMC14	2-year	117.77	88	116	89.3
	5-year				131.5
	10-year				156.9
	25-year				190.9
	50-year				216.3
	100-yer				250.1
NCL201	2-year	25.06	88	19	50.7
	5-year				74.0
	10-year				88.0
	25-year				106.7
	50-year				120.7
	100-yer				139.3
NCL202	2-year	11.43	86	9	24.4
	5-year				35.7
	10-year				42.5
	25-year				51.6
	50-year				58.4
	100-yer				67.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
NCL401	2-year	97.26	85	39	137.1
	5-year				207.3
	10-year				250.2
	25-year				307.5
	50-year				350.4
	100-yer				407.6
NCL4A01	2-year	17.99	91	18	41.0
	5-year				57.9
	10-year				68.1
	25-year				81.5
	50-year				91.5
	100-yer				104.9
NCL4B01	2-year	10.31	90	14	24.4
	5-year				34.8
	10-year				41.0
	25-year				49.2
	50-year				55.3
	100-yer				63.5
NCL4D01	2-year	6.46	90	5	15.6
	5-year				22.0
	10-year				25.8
	25-year				30.9
	50-year				34.6
	100-yer				39.6
NCL500	2-year	103.54	87	47	140.5
	5-year				208.6
	10-year				249.8
	25-year				304.7
	50-year				345.8
	100-yer				400.5
NCL502	2-year	137.35	74	24	143.9
	5-year				247.5
	10-year				314.5
	25-year				406.6
	50-year				477.2
	100-yer				572.5
NCL503	2-year	121.20	72	32	97.2
	5-year				175.6
	10-year				226.9
	25-year				298.0
	50-year				352.9
	100-yer				427.3
NCMC02	2-year	154.02	84	100	111.8
	5-year				171.3
	10-year				207.8
	25-year				256.8
	50-year				293.7
	100-yer				342.9

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
NCMC04	2-year	166.46	87	96	139.3
	5-year				207.3
	10-year				248.5
	25-year				303.6
	50-year				344.9
	100-yer				399.8
NCMC05	2-year	33.53	87	31	56.0
	5-year				82.9
	10-year				99.2
	25-year				121.0
	50-year				137.3
	100-yer				159.0
NCMC06	2-year	181.83	86	76	172.2
	5-year				258.5
	10-year				311.1
	25-year				381.6
	50-year				434.5
	100-yer				505.0
NCMC08	2-year	161.30	86	67	163.8
	5-year				247.0
	10-year				297.6
	25-year				365.5
	50-year				416.4
	100-yer				484.3
NCMC09	2-year	84.85	87	41	122.7
	5-year				182.5
	10-year				218.7
	25-year				267.1
	50-year				303.2
	100-yer				351.4
NCMC11	2-year	159.57	83	46	186.9
	5-year				290.5
	10-year				354.2
	25-year				439.7
	50-year				504.2
	100-yer				590.2
NCMC12	2-year	146.11	89	37	239.0
	5-year				348.1
	10-year				413.6
	25-year				500.8
	50-year				565.9
	100-yer				652.5
NCMC14	2-year	133.69	#N/A	84	99.8
	5-year				157.0
	10-year				192.4
	25-year				240.1
	50-year				276.2
	100-yer				324.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
POL102	2-year	11.22	87	13	24.1
	5-year				35.0
	10-year				41.6
	25-year				50.3
	50-year				56.8
	100-yer				65.5
POL105	2-year	5.22	87	11	11.4
	5-year				16.6
	10-year				19.7
	25-year				23.8
	50-year				26.9
	100-yer				31.0
POL110	2-year	4.82	87	16	10.0
	5-year				14.7
	10-year				17.5
	25-year				21.2
	50-year				24.0
	100-yer				27.7
POL301	2-year	25.54	92	15	62.7
	5-year				87.5
	10-year				102.4
	25-year				122.1
	50-year				136.8
	100-yer				156.3
POL306	2-year	10.01	89	9	23.9
	5-year				33.8
	10-year				39.8
	25-year				47.7
	50-year				53.5
	100-yer				61.3
POL405	2-year	14.34	89	12	33.0
	5-year				47.2
	10-year				55.6
	25-year				66.9
	50-year				75.3
	100-yer				86.4
POL502	2-year	20.96	87	14	45.9
	5-year				66.9
	10-year				79.6
	25-year				96.3
	50-year				108.9
	100-yer				125.6
POMC01	2-year	88.38	86	34	136.1
	5-year				204.2
	10-year				245.5
	25-year				300.6
	50-year				342.1
	100-yer				397.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
POMC02	2-year	34.51	91	19	78.1
	5-year				110.4
	10-year				129.7
	25-year				155.2
	50-year				174.3
	100-yer				199.6
POMC03	2-year	58.08	87	29	102.2
	5-year				150.6
	10-year				179.8
	25-year				218.6
	50-year				247.6
	100-yer				286.2
POMC11	2-year	30.13	86	15	60.3
	5-year				88.7
	10-year				105.8
	25-year				128.6
	50-year				145.6
	100-yer				168.2
POMC18	2-year	41.98	89	17	91.9
	5-year				132.1
	10-year				156.1
	25-year				187.9
	50-year				211.7
	100-yer				243.3
PRL101	2-year	3.16	84	6	6.6
	5-year				9.8
	10-year				11.7
	25-year				14.2
	50-year				16.1
	100-yer				18.7
PRL107	2-year	5.00	88	10	11.3
	5-year				16.2
	10-year				19.2
	25-year				23.1
	50-year				26.1
	100-yer				30.0
PRL202	2-year	19.15	87	12	42.1
	5-year				61.0
	10-year				72.4
	25-year				87.5
	50-year				98.7
	100-yer				113.7
PRL204	2-year	9.07	86	8	19.8
	5-year				29.0
	10-year				34.4
	25-year				41.7
	50-year				47.1
	100-yer				54.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
PRL208	2-year	7.80	84	7	15.8
	5-year				23.5
	10-year				28.2
	25-year				34.4
	50-year				39.0
	100-yer				45.2
PRL212	2-year	17.47	84	10	34.2
	5-year				51.2
	10-year				61.5
	25-year				75.2
	50-year				85.5
	100-yer				99.1
PRL215	2-year	5.24	84	7	10.6
	5-year				15.7
	10-year				18.8
	25-year				23.0
	50-year				26.1
	100-yer				30.2
PRL218	2-year	24.69	85	12	50.6
	5-year				74.9
	10-year				89.6
	25-year				109.2
	50-year				123.9
	100-yer				143.4
PRL2A01	2-year	8.59	86	13	18.0
	5-year				26.4
	10-year				31.5
	25-year				38.2
	50-year				43.3
	100-yer				49.9
PRL302	2-year	10.27	88	9	23.7
	5-year				33.9
	10-year				40.0
	25-year				48.1
	50-year				54.2
	100-yer				62.2
PRL305	2-year	24.15	88	15	51.2
	5-year				74.2
	10-year				88.0
	25-year				106.4
	50-year				120.1
	100-yer				138.3
PRL307	2-year	2.23	88	6	5.2
	5-year				7.3
	10-year				8.6
	25-year				10.4
	50-year				11.7
	100-yer				13.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
PRL401	2-year	2.22	90	9	5.3
	5-year				7.5
	10-year				8.8
	25-year				10.6
	50-year				11.9
	100-yer				13.6
PRMC05	2-year	5.31	79	9	9.1
	5-year				14.1
	10-year				17.3
	25-year				21.5
	50-year				24.7
	100-yer				28.9
PRMC07	2-year	9.87	91	13	23.5
	5-year				33.1
	10-year				38.8
	25-year				46.3
	50-year				52.0
	100-yer				59.5
PRMC09	2-year	8.21	94	9	21.8
	5-year				29.7
	10-year				34.5
	25-year				40.7
	50-year				45.4
	100-yer				51.7
PRMC15	2-year	13.20	90	7	32.6
	5-year				46.1
	10-year				54.1
	25-year				64.7
	50-year				72.7
	100-yer				83.2
PRMC16	2-year	18.58	83	21	31.6
	5-year				48.3
	10-year				58.4
	25-year				72.0
	50-year				82.3
	100-yer				95.9
PRMC19	2-year	17.02	93	9	44.1
	5-year				60.8
	10-year				70.7
	25-year				83.8
	50-year				93.6
	100-yer				106.7
PRMC21	2-year	9.00	90	7	22.2
	5-year				31.2
	10-year				36.6
	25-year				43.8
	50-year				49.1
	100-yer				56.2

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0102	2-year	7.94	87	7	17.9
	5-year				25.8
	10-year				30.5
	25-year				36.8
	50-year				41.5
	100-yer				47.7
RCL0103	2-year	10.69	87	9	23.5
	5-year				34.2
	10-year				40.6
	25-year				49.1
	50-year				55.5
	100-yer				63.9
RCL0105	2-year	22.29	86	12	47.1
	5-year				69.0
	10-year				82.2
	25-year				99.9
	50-year				113.0
	100-yer				130.5
RCL0113	2-year	11.26	92	6	28.3
	5-year				39.3
	10-year				45.8
	25-year				54.5
	50-year				61.0
	100-yer				69.6
RCL01A02	2-year	10.46	84	7	21.4
	5-year				31.7
	10-year				37.9
	25-year				46.1
	50-year				52.3
	100-yer				60.5
RCL01A06	2-year	11.77	85	11	24.5
	5-year				36.2
	10-year				43.1
	25-year				52.4
	50-year				59.4
	100-yer				68.6
RCL01A08	2-year	4.54	86	3	10.2
	5-year				14.7
	10-year				17.4
	25-year				21.1
	50-year				23.7
	100-yer				27.3
RCL01A11	2-year	17.30	87	7	38.8
	5-year				56.0
	10-year				66.3
	25-year				80.0
	50-year				90.2
	100-yer				103.8

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL01A12	2-year	6.08	86	6	13.8
	5-year				19.9
	10-year				23.6
	25-year				28.5
	50-year				32.1
	100-yer				37.0
RCL01B01	2-year	12.03	89	6	28.8
	5-year				40.8
	10-year				48.0
	25-year				57.5
	50-year				64.6
	100-yer				74.0
RCL0201	2-year	9.57	72	5	12.2
	5-year				20.5
	10-year				25.7
	25-year				32.9
	50-year				38.4
	100-yer				45.7
RCL0203	2-year	4.69	81	6	8.8
	5-year				13.3
	10-year				16.1
	25-year				19.9
	50-year				22.7
	100-yer				26.4
RCL0206	2-year	11.40	79	6	20.4
	5-year				31.6
	10-year				38.4
	25-year				47.5
	50-year				54.4
	100-yer				63.5
RCL0211	2-year	14.23	86	10	30.6
	5-year				44.5
	10-year				52.9
	25-year				64.1
	50-year				72.4
	100-yer				83.4
RCL02A02	2-year	5.87	79	4	11.1
	5-year				17.0
	10-year				20.7
	25-year				25.6
	50-year				29.2
	100-yer				34.1
RCL02B02	2-year	1.93	81	2	3.7
	5-year				5.6
	10-year				6.8
	25-year				8.3
	50-year				9.5
	100-yer				11.1

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL02D03	2-year	5.09	91	8	12.3
	5-year				17.2
	10-year				20.1
	25-year				24.0
	50-year				26.8
	100-yer				30.7
RCL0300	2-year	1.92	73	4	2.8
	5-year				4.6
	10-year				5.7
	25-year				7.3
	50-year				8.5
	100-yer				10.0
RCL0303	2-year	5.31	75	3	8.2
	5-year				13.2
	10-year				16.3
	25-year				20.5
	50-year				23.7
	100-yer				27.9
RCL0305	2-year	21.30	90	13	50.8
	5-year				71.9
	10-year				84.5
	25-year				101.2
	50-year				113.6
	100-yer				130.2
RCL0402	2-year	12.65	82	8	23.6
	5-year				35.7
	10-year				43.1
	25-year				53.0
	50-year				60.3
	100-yer				70.2
RCL0403	2-year	38.60	90	17	85.8
	5-year				122.5
	10-year				144.5
	25-year				173.6
	50-year				195.4
	100-yer				224.3
RCL0408	2-year	6.39	85	6	13.8
	5-year				20.1
	10-year				23.9
	25-year				29.0
	50-year				32.8
	100-yer				37.8
RCL0501	2-year	10.62	85	11	21.6
	5-year				32.0
	10-year				38.2
	25-year				46.5
	50-year				52.7
	100-yer				61.0

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0502	2-year	11.79	86	12	24.6
	5-year				36.2
	10-year				43.2
	25-year				52.5
	50-year				59.5
	100-yer				68.8
RCL0504	2-year	3.33	88	6	7.6
	5-year				10.9
	10-year				12.8
	25-year				15.4
	50-year				17.4
	100-yer				20.0
RCL0505	2-year	27.29	90	17	61.4
	5-year				87.5
	10-year				103.0
	25-year				123.7
	50-year				139.1
	100-yer				159.5
RCL05A02	2-year	10.16	87	9	22.5
	5-year				32.7
	10-year				38.7
	25-year				46.8
	50-year				52.8
	100-yer				60.8
RCL0603	2-year	6.42	87	5	14.6
	5-year				21.0
	10-year				24.8
	25-year				29.9
	50-year				33.7
	100-yer				38.7
RCL0702	2-year	11.40	91	7	28.0
	5-year				39.2
	10-year				45.9
	25-year				54.8
	50-year				61.4
	100-yer				70.2
RCL0704	2-year	4.55	92	6	11.7
	5-year				16.2
	10-year				18.9
	25-year				22.5
	50-year				25.1
	100-yer				28.6
RCL0707	2-year	5.06	94	10	13.5
	5-year				18.5
	10-year				21.4
	25-year				25.4
	50-year				28.3
	100-yer				32.2

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0800	2-year	49.51	85	19	93.0
	5-year				139.1
	10-year				166.9
	25-year				204.1
	50-year				232.0
	100-yer				269.1
RCL0802	2-year	19.85	85	10	41.2
	5-year				60.7
	10-year				72.5
	25-year				88.2
	50-year				99.9
	100-yer				115.5
RCL0805	2-year	4.47	93	7	11.7
	5-year				16.0
	10-year				18.6
	25-year				22.1
	50-year				24.6
	100-yer				28.1
RCL0806	2-year	4.62	94	5	11.9
	5-year				16.3
	10-year				18.9
	25-year				22.4
	50-year				25.0
	100-yer				28.4
RCL0808	2-year	3.02	95	5	8.4
	5-year				11.3
	10-year				13.1
	25-year				15.5
	50-year				17.2
	100-yer				19.6
RCL0812	2-year	4.82	93	13	12.5
	5-year				17.2
	10-year				20.0
	25-year				23.7
	50-year				26.4
	100-yer				30.1
RCL0815	2-year	71.07	89	69	82.3
	5-year				119.1
	10-year				141.2
	25-year				170.7
	50-year				192.7
	100-yer				221.9
RCL0818	2-year	0.88	95	2	2.3
	5-year				3.2
	10-year				3.7
	25-year				4.3
	50-year				4.8
	100-yer				5.5

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL08A01	2-year	50.25	88	32	86.7
	5-year				126.5
	10-year				150.6
	25-year				182.8
	50-year				206.8
	100-yer				238.7
RCL08A05	2-year	13.44	93	12	34.5
	5-year				47.6
	10-year				55.3
	25-year				65.7
	50-year				73.4
	100-yer				83.7
RCL08A09	2-year	9.29	91	9	22.7
	5-year				31.8
	10-year				37.2
	25-year				44.4
	50-year				49.8
	100-yer				57.0
RCL08B03	2-year	1.42	95	4	3.8
	5-year				5.1
	10-year				5.9
	25-year				7.0
	50-year				7.8
	100-yer				8.8
RCL08C04	2-year	13.38	92	22	29.7
	5-year				41.8
	10-year				49.0
	25-year				58.5
	50-year				65.7
	100-yer				75.2
RCL08D01	2-year	1.01	93	5	2.6
	5-year				3.5
	10-year				4.1
	25-year				4.9
	50-year				5.4
	100-yer				6.2
RCL08D05	2-year	21.11	92	32	41.5
	5-year				58.4
	10-year				68.4
	25-year				81.8
	50-year				91.8
	100-yer				105.0
RCL1001	2-year	136.86	86	45	184.7
	5-year				276.1
	10-year				331.4
	25-year				405.3
	50-year				460.7
	100-yer				534.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL1101	2-year	106.44	81	24	156.8
	5-year				246.8
	10-year				302.3
	25-year				377.0
	50-year				433.3
	100-yer				508.5
RCL1201	2-year	179.78	86	134	114.7
	5-year				172.1
	10-year				206.9
	25-year				253.6
	50-year				288.6
	100-yer				335.2
RCL1202	2-year	267.48	88	377	83.4
	5-year				123.0
	10-year				147.0
	25-year				179.1
	50-year				203.1
	100-yer				235.2
RCL1203	2-year	216.68	91	69	262.7
	5-year				375.1
	10-year				442.3
	25-year				531.6
	50-year				598.3
	100-yer				686.9
RCL1300	2-year	224.49	84	85	178.8
	5-year				275.8
	10-year				335.2
	25-year				415.1
	50-year				475.3
	100-yer				555.7
RCL1301	2-year	164.04	79	40	168.9
	5-year				275.9
	10-year				342.8
	25-year				433.9
	50-year				503.6
	100-yer				597.4
RCL1302	2-year	82.58	76	22	99.0
	5-year				165.3
	10-year				207.1
	25-year				264.0
	50-year				307.3
	100-yer				365.8
RCL1303	2-year	197.67	74	22	213.0
	5-year				367.9
	10-year				467.1
	25-year				603.7
	50-year				708.2
	100-yer				849.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL13A01	2-year	158.22	77	28	181.2
	5-year				300.5
	10-year				375.5
	25-year				478.8
	50-year				557.5
	100-yer				663.5
RCL1400	2-year	217.78	86	105	166.0
	5-year				249.1
	10-year				299.6
	25-year				367.2
	50-year				417.9
	100-yer				485.4
RCL1401	2-year	64.80	87	38	100.2
	5-year				147.9
	10-year				176.7
	25-year				215.1
	50-year				243.8
	100-yer				281.9
RCL1402	2-year	184.23	81	23	275.1
	5-year				433.1
	10-year				530.4
	25-year				661.9
	50-year				761.4
	100-yer				894.8
RCL1501	2-year	145.26	90	43	234.6
	5-year				335.8
	10-year				396.3
	25-year				476.7
	50-year				536.9
	100-yer				616.9
RCL1601	2-year	229.49	87	85	212.0
	5-year				314.2
	10-year				376.0
	25-year				458.5
	50-year				520.3
	100-yer				602.5
RCL1602	2-year	177.96	89	75	190.3
	5-year				277.6
	10-year				330.1
	25-year				400.1
	50-year				452.4
	100-yer				521.9
RCL1603	2-year	148.78	88	59	180.9
	5-year				265.2
	10-year				316.0
	25-year				383.8
	50-year				434.6
	100-yer				502.1

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL1604	2-year	147.24	88	57	182.6
	5-year				268.7
	10-year				320.7
	25-year				390.3
	50-year				442.3
	100-yer				511.5
RCL16A00	2-year	190.90	86	72	190.0
	5-year				284.5
	10-year				342.1
	25-year				419.4
	50-year				477.3
	100-yer				554.5
RCL16A01	2-year	119.46	87	42	173.2
	5-year				256.9
	10-year				307.5
	25-year				375.0
	50-year				425.5
	100-yer				492.7
RCL1701	2-year	182.24	85	87	153.2
	5-year				232.4
	10-year				280.7
	25-year				345.3
	50-year				393.8
	100-yer				458.5
RCL1702	2-year	185.82	87	108	143.0
	5-year				212.7
	10-year				255.0
	25-year				311.5
	50-year				353.9
	100-yer				410.3
RCL1703	2-year	117.47	81	26	169.1
	5-year				265.6
	10-year				325.3
	25-year				405.8
	50-year				466.4
	100-yer				547.5
RCL1801	2-year	166.20	86	62	185.0
	5-year				276.5
	10-year				331.9
	25-year				405.9
	50-year				461.4
	100-yer				535.2
RCL1901	2-year	182.58	85	30	292.4
	5-year				438.9
	10-year				527.9
	25-year				647.2
	50-year				736.7
	100-yer				855.7

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL2001	2-year	165.43	85	34	246.7
	5-year				373.7
	10-year				450.9
	25-year				554.1
	50-year				631.6
	100-yer				734.7
RCL2002	2-year	184.16	84	41	240.9
	5-year				368.3
	10-year				446.9
	25-year				552.4
	50-year				631.6
	100-yer				737.3
RCL901	2-year	151.21	89	44	229.5
	5-year				332.0
	10-year				393.5
	25-year				475.2
	50-year				536.3
	100-yer				617.9
RCMC01	2-year	108.36	83	31	159.4
	5-year				245.0
	10-year				297.3
	25-year				367.5
	50-year				420.5
	100-yer				491.4
RCMC02	2-year	8.53	68	11	8.0
	5-year				14.7
	10-year				19.2
	25-year				25.3
	50-year				30.1
	100-yer				36.6
RCMC03	2-year	35.29	77	21	46.3
	5-year				75.8
	10-year				94.4
	25-year				119.7
	50-year				138.9
	100-yer				164.7
RCMC06	2-year	30.76	78	10	49.8
	5-year				78.9
	10-year				96.9
	25-year				121.2
	50-year				139.5
	100-yer				164.0
RCMC07	2-year	5.44	78	5	9.5
	5-year				14.8
	10-year				18.0
	25-year				22.4
	50-year				25.7
	100-yer				30.1

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC08	2-year	81.31	78	59	64.3
	5-year				106.3
	10-year				132.7
	25-year				168.8
	50-year				196.2
	100-yer				233.1
RCMC09	2-year	4.66	76	4	7.2
	5-year				11.6
	10-year				14.3
	25-year				18.0
	50-year				20.8
	100-yer				24.5
RCMC14	2-year	11.58	77	6	18.5
	5-year				29.3
	10-year				36.1
	25-year				45.1
	50-year				51.9
	100-yer				61.1
RCMC17	2-year	76.55	85	27	126.8
	5-year				191.4
	10-year				230.5
	25-year				282.8
	50-year				322.1
	100-yer				374.3
RCMC19	2-year	100.58	83	32	142.3
	5-year				219.8
	10-year				267.3
	25-year				331.1
	50-year				379.0
	100-yer				443.4
RCMC23	2-year	133.93	89	37	226.1
	5-year				326.6
	10-year				386.9
	25-year				467.0
	50-year				526.8
	100-yer				606.2
RCMC25	2-year	17.33	72	10	20.8
	5-year				35.8
	10-year				45.3
	25-year				58.4
	50-year				68.4
	100-yer				81.9
RCMC27	2-year	44.01	88	34	73.1
	5-year				107.2
	10-year				127.7
	25-year				155.0
	50-year				175.5
	100-yer				202.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC31	2-year	232.73	90	79	255.4
	5-year				365.8
	10-year				431.9
	25-year				519.6
	50-year				585.2
	100-yer				672.3
RCMC32	2-year	115.23	84	30	177.9
	5-year				269.8
	10-year				326.2
	25-year				401.6
	50-year				458.3
	100-yer				533.7
RCMC34	2-year	223.79	86	63	238.9
	5-year				360.5
	10-year				434.5
	25-year				533.4
	50-year				607.6
	100-yer				706.4
RCMC36	2-year	158.63	89	62	190.8
	5-year				278.4
	10-year				331.0
	25-year				401.3
	50-year				453.8
	100-yer				523.5
RCMC37	2-year	259.98	83	63	251.1
	5-year				388.7
	10-year				473.0
	25-year				586.6
	50-year				672.2
	100-yer				786.3
RCMC38	2-year	197.35	84	88	156.6
	5-year				240.4
	10-year				291.6
	25-year				360.5
	50-year				412.2
	100-yer				481.2
RCMC39	2-year	228.58	84	76	201.5
	5-year				308.7
	10-year				374.4
	25-year				462.8
	50-year				529.5
	100-yer				618.3
RCMC40	2-year	76.97	87	29	133.3
	5-year				197.9
	10-year				237.0
	25-year				289.1
	50-year				328.2
	100-yer				380.1

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC41	2-year	136.06	78	110	69.4
	5-year				114.9
	10-year				143.5
	25-year				182.6
	50-year				212.5
	100-yer				252.9
RCMC44	2-year	128.78	85	49	160.9
	5-year				243.1
	10-year				293.1
	25-year				360.0
	50-year				410.2
	100-yer				477.0
RCMC45	2-year	184.82	85	62	196.0
	5-year				297.3
	10-year				359.0
	25-year				441.7
	50-year				503.7
	100-yer				586.4
RCMC46	2-year	168.94	85	150	95.1
	5-year				144.5
	10-year				174.6
	25-year				214.9
	50-year				245.3
	100-yer				285.7
RCMC47	2-year	117.80	85	76	106.6
	5-year				162.3
	10-year				196.3
	25-year				242.0
	50-year				276.5
	100-yer				322.4
RCMC48	2-year	211.92	86	60	235.1
	5-year				353.4
	10-year				425.3
	25-year				521.4
	50-year				593.7
	100-yer				690.0
RCMC49	2-year	188.98	82	68	160.6
	5-year				253.6
	10-year				311.1
	25-year				388.8
	50-year				447.6
	100-yer				526.4
RCMC50	2-year	155.77	83	66	144.4
	5-year				224.6
	10-year				273.9
	25-year				340.2
	50-year				390.2
	100-yer				457.0

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC51	2-year	125.43	85	61	131.3
	5-year				200.1
	10-year				242.1
	25-year				298.3
	50-year				340.6
	100-yer				397.0
RCMC52	2-year	207.23	85	64	208.5
	5-year				318.8
	10-year				386.1
	25-year				476.4
	50-year				544.2
	100-yer				634.6
RCMC53	2-year	124.22	82	51	129.7
	5-year				204.1
	10-year				250.1
	25-year				312.1
	50-year				358.9
	100-yer				421.4
RCMC54	2-year	152.98	83	37	200.9
	5-year				311.5
	10-year				379.7
	25-year				471.3
	50-year				540.3
	100-yer				632.3
RCMC55	2-year	202.39	80	53	188.6
	5-year				303.6
	10-year				375.4
	25-year				472.7
	50-year				546.3
	100-yer				645.0
RCMC56	2-year	204.43	81	42	225.4
	5-year				359.3
	10-year				442.3
	25-year				554.9
	50-year				640.5
	100-yer				755.0
RCMC57	2-year	157.92	82	65	142.5
	5-year				223.7
	10-year				273.7
	25-year				341.1
	50-year				392.0
	100-yer				460.1
RCMC58	2-year	179.47	87	44	254.2
	5-year				377.0
	10-year				451.2
	25-year				550.0
	50-year				624.1
	100-yer				722.5

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SCL103	2-year	4.95	86	9	10.8
	5-year				15.7
	10-year				18.7
	25-year				22.6
	50-year				25.6
	100-yer				29.5
SCL116	2-year	16.84	89	12	38.6
	5-year				55.2
	10-year				65.1
	25-year				78.2
	50-year				88.1
	100-yer				101.1
SCL1A04	2-year	15.86	86	11	34.1
	5-year				49.7
	10-year				59.1
	25-year				71.6
	50-year				80.9
	100-yer				93.3
SCL201	2-year	5.87	90	8	14.1
	5-year				19.9
	10-year				23.3
	25-year				27.9
	50-year				31.3
	100-yer				35.8
SCL301	2-year	6.26	87	10	13.6
	5-year				19.8
	10-year				23.6
	25-year				28.5
	50-year				32.2
	100-yer				37.1
SCMC01	2-year	65.14	85	32	99.0
	5-year				150.0
	10-year				181.0
	25-year				222.6
	50-year				254.0
	100-yer				295.7
SCMC03	2-year	2.67	91	4	6.7
	5-year				9.4
	10-year				11.0
	25-year				13.1
	50-year				14.7
	100-yer				16.7
SCMC05	2-year	4.61	92	9	11.8
	5-year				16.4
	10-year				19.1
	25-year				22.7
	50-year				25.4
	100-yer				29.0

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SCMC08	2-year	9.73	88	9	22.3
	5-year				32.1
	10-year				37.9
	25-year				45.7
	50-year				51.5
	100-yer				59.2
SCMC13	2-year	9.48	87	9	21.0
	5-year				30.4
	10-year				36.0
	25-year				43.5
	50-year				49.1
	100-yer				56.5
SCMC20	2-year	11.53	88	10	26.2
	5-year				37.6
	10-year				44.5
	25-year				53.5
	50-year				60.3
	100-yer				69.3
SRL0101	2-year	1.38	88	4	3.3
	5-year				4.7
	10-year				5.6
	25-year				6.7
	50-year				7.5
	100-yer				8.6
SRL0103	2-year	2.83	88	11	6.4
	5-year				9.1
	10-year				10.8
	25-year				13.0
	50-year				14.7
	100-yer				16.9
SRL0105	2-year	25.09	91	64	32.4
	5-year				46.1
	10-year				54.2
	25-year				65.1
	50-year				73.2
	100-yer				83.9
SRL0108	2-year	10.63	86	12	22.5
	5-year				33.0
	10-year				39.3
	25-year				47.8
	50-year				54.0
	100-yer				62.4
SRL0112	2-year	8.47	90	9	20.4
	5-year				28.9
	10-year				34.0
	25-year				40.7
	50-year				45.7
	100-yer				52.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0116	2-year	8.14	93	10	21.5
	5-year				29.5
	10-year				34.3
	25-year				40.7
	50-year				45.4
	100-yer				51.7
SRL0121	2-year	10.27	94	17	25.4
	5-year				35.0
	10-year				40.7
	25-year				48.3
	50-year				54.0
	100-yer				61.5
SRL01401	2-year	2.06	87	5	4.6
	5-year				6.6
	10-year				7.9
	25-year				9.5
	50-year				10.7
	100-yer				12.3
SRL01403	2-year	4.85	87	9	10.7
	5-year				15.5
	10-year				18.3
	25-year				22.2
	50-year				25.0
	100-yer				28.8
SRL01503	2-year	22.84	87	20	45.3
	5-year				66.4
	10-year				79.0
	25-year				95.9
	50-year				108.5
	100-yer				125.2
SRL0201	2-year	4.76	86	6	10.5
	5-year				15.2
	10-year				18.1
	25-year				21.8
	50-year				24.7
	100-yer				28.4
SRL0204	2-year	17.93	90	26	35.6
	5-year				51.2
	10-year				60.4
	25-year				72.8
	50-year				82.0
	100-yer				94.2
SRL0304	2-year	9.41	92	7	24.2
	5-year				33.6
	10-year				39.1
	25-year				46.5
	50-year				52.1
	100-yer				59.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0307	2-year	21.15	95	14	55.6
	5-year				75.8
	10-year				87.9
	25-year				103.9
	50-year				115.9
	100-yer				131.8
SRL0402	2-year	21.02	80	11	35.1
	5-year				54.9
	10-year				67.1
	25-year				83.4
	50-year				95.8
	100-yer				112.3
SRL0403	2-year	13.13	83	11	25.1
	5-year				37.8
	10-year				45.5
	25-year				55.8
	50-year				63.5
	100-yer				73.8
SRL0404	2-year	10.24	88	7	23.7
	5-year				33.8
	10-year				39.9
	25-year				47.9
	50-year				53.9
	100-yer				61.8
SRL0406	2-year	16.39	87	7	35.7
	5-year				51.8
	10-year				61.4
	25-year				74.2
	50-year				83.7
	100-yer				96.4
SRL0408	2-year	29.17	90	13	68.6
	5-year				96.9
	10-year				113.8
	25-year				136.3
	50-year				153.0
	100-yer				175.3
SRL0601	2-year	3.04	86	3	6.7
	5-year				9.6
	10-year				11.3
	25-year				13.6
	50-year				15.4
	100-yer				17.7
SRL0602	2-year	8.34	89	13	18.8
	5-year				27.0
	10-year				31.9
	25-year				38.4
	50-year				43.2
	100-yer				49.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0607	2-year	12.48	91	10	30.1
	5-year				42.3
	10-year				49.5
	25-year				59.1
	50-year				66.3
	100-yer				75.9
SRL0701	2-year	3.45	91	6	8.5
	5-year				11.9
	10-year				13.9
	25-year				16.6
	50-year				18.6
	100-yer				21.2
SRL0705	2-year	2.52	90	7	6.1
	5-year				8.6
	10-year				10.1
	25-year				12.1
	50-year				13.5
	100-yer				15.5
SRL0707	2-year	16.34	89	24	32.4
	5-year				47.0
	10-year				55.8
	25-year				67.4
	50-year				76.1
	100-yer				87.7
SRL0801	2-year	2.57	90	4	6.3
	5-year				8.9
	10-year				10.4
	25-year				12.5
	50-year				14.0
	100-yer				16.0
SRL0803	2-year	17.60	88	12	39.3
	5-year				56.7
	10-year				67.1
	25-year				81.0
	50-year				91.3
	100-yer				105.1
SRL0804	2-year	10.49	87	13	22.7
	5-year				32.9
	10-year				39.1
	25-year				47.3
	50-year				53.4
	100-yer				61.5
SRL0904	2-year	1.06	94	2	2.7
	5-year				3.7
	10-year				4.3
	25-year				5.1
	50-year				5.7
	100-yer				6.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL09A01	2-year	11.14	90	13	25.9
	5-year				36.8
	10-year				43.4
	25-year				52.1
	50-year				58.5
	100-yer				67.1
SRL09A03	2-year	8.15	87	9	18.4
	5-year				26.5
	10-year				31.4
	25-year				37.9
	50-year				42.7
	100-yer				49.1
SRL1001	2-year	0.86	88	7	2.0
	5-year				2.8
	10-year				3.3
	25-year				4.0
	50-year				4.5
	100-yer				5.2
SRL1004	2-year	3.27	87	5	7.4
	5-year				10.7
	10-year				12.6
	25-year				15.2
	50-year				17.1
	100-yer				19.6
SRL1103	2-year	9.85	89	10	22.8
	5-year				32.6
	10-year				38.4
	25-year				46.2
	50-year				52.0
	100-yer				59.7
SRL1106	2-year	7.56	88	11	17.1
	5-year				24.6
	10-year				29.0
	25-year				35.0
	50-year				39.4
	100-yer				45.3
SRL1110	2-year	2.70	87	45	3.7
	5-year				5.6
	10-year				6.6
	25-year				8.1
	50-year				9.2
	100-yer				10.6
SRL1202	2-year	5.36	87	4	12.2
	5-year				17.5
	10-year				20.7
	25-year				24.9
	50-year				28.1
	100-yer				32.3

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL1602	2-year	5.72	88	9	12.9
	5-year				18.6
	10-year				21.9
	25-year				26.4
	50-year				29.8
	100-yer				34.2
SRL1703	2-year	7.74	88	9	17.5
	5-year				25.1
	10-year				29.7
	25-year				35.8
	50-year				40.4
	100-yer				46.5
SRL1705	2-year	12.74	88	17	26.5
	5-year				38.6
	10-year				45.9
	25-year				55.6
	50-year				62.8
	100-yer				72.4
SRL1802	2-year	10.97	87	7	25.3
	5-year				36.5
	10-year				43.2
	25-year				52.2
	50-year				58.9
	100-yer				67.8
SRL1804	2-year	11.56	92	22	26.1
	5-year				36.7
	10-year				42.9
	25-year				51.3
	50-year				57.5
	100-yer				65.7
SRL1806	2-year	4.43	92	6	11.4
	5-year				15.8
	10-year				18.4
	25-year				21.9
	50-year				24.5
	100-yer				28.0
SRL1809	2-year	12.68	93	13	31.7
	5-year				44.0
	10-year				51.3
	25-year				60.9
	50-year				68.1
	100-yer				77.7
SRL18A03	2-year	10.33	88	11	23.0
	5-year				33.2
	10-year				39.3
	25-year				47.4
	50-year				53.5
	100-yer				61.5

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL1903	2-year	5.65	91	13	13.7
	5-year				19.2
	10-year				22.5
	25-year				26.9
	50-year				30.2
	100-yer				34.5
SRL2003	2-year	16.52	87	7	38.4
	5-year				55.3
	10-year				65.3
	25-year				78.8
	50-year				88.8
	100-yer				102.1
SRL2103	2-year	12.24	88	14	27.0
	5-year				39.0
	10-year				46.2
	25-year				55.9
	50-year				63.1
	100-yer				72.7
SRMC04	2-year	25.46	80	11	44.4
	5-year				69.1
	10-year				84.2
	25-year				104.5
	50-year				119.8
	100-yer				140.2
SRMC05	2-year	49.18	86	14	105.0
	5-year				154.1
	10-year				183.7
	25-year				223.0
	50-year				252.4
	100-yer				291.6
SRMC08	2-year	26.95	85	15	53.6
	5-year				79.6
	10-year				95.4
	25-year				116.3
	50-year				132.0
	100-yer				152.8
SRMC13	2-year	30.55	88	23	60.4
	5-year				88.0
	10-year				104.6
	25-year				126.8
	50-year				143.3
	100-yer				165.2
SRMC19	2-year	19.68	91	12	47.6
	5-year				66.9
	10-year				78.4
	25-year				93.6
	50-year				105.0
	100-yer				120.1

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRMC23	2-year	3.65	91	5	9.0
	5-year				12.6
	10-year				14.7
	25-year				17.5
	50-year				19.6
	100-yer				22.3
SRMC24	2-year	6.04	86	10	13.2
	5-year				19.3
	10-year				22.9
	25-year				27.8
	50-year				31.4
	100-yer				36.2
SRMC27	2-year	6.34	87	9	14.1
	5-year				20.5
	10-year				24.3
	25-year				29.3
	50-year				33.0
	100-yer				38.0
SRMC31	2-year	27.17	87	14	58.3
	5-year				85.0
	10-year				101.1
	25-year				122.5
	50-year				138.5
	100-yer				159.8
SRMC34	2-year	24.16	87	13	51.9
	5-year				75.6
	10-year				89.9
	25-year				108.9
	50-year				123.1
	100-yer				142.0
SRMC36	2-year	15.05	85	14	29.3
	5-year				43.9
	10-year				52.7
	25-year				64.4
	50-year				73.2
	100-yer				84.9
SRMC40	2-year	12.70	85	11	26.7
	5-year				39.4
	10-year				47.0
	25-year				57.1
	50-year				64.7
	100-yer				74.8
SRMC41	2-year	15.42	85	11	32.2
	5-year				47.6
	10-year				56.8
	25-year				69.1
	50-year				78.4
	100-yer				90.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRMC44	2-year	28.87	92	11	71.3
	5-year				99.4
	10-year				116.2
	25-year				138.4
	50-year				154.9
	100-yer				177.0
SYMC02	2-year	2.21	82	5	4.4
	5-year				6.6
	10-year				8.0
	25-year				9.7
	50-year				11.1
	100-yer				12.8
SYMC05	2-year	6.21	84	9	12.7
	5-year				18.9
	10-year				22.6
	25-year				27.6
	50-year				31.3
	100-yer				36.2
UWL101	2-year	156.07	88	45	223.6
	5-year				328.7
	10-year				392.0
	25-year				476.4
	50-year				539.5
	100-yer				623.3
UWL201	2-year	523.41	89	79	540.7
	5-year				787.4
	10-year				935.9
	25-year				1133.5
	50-year				1281.2
	100-yer				1477.5
UWL301	2-year	128.30	89	32	230.2
	5-year				332.6
	10-year				394.2
	25-year				476.2
	50-year				537.4
	100-yer				618.7
UWL302	2-year	197.75	76	30	209.2
	5-year				352.4
	10-year				443.0
	25-year				566.8
	50-year				661.1
	100-yer				788.9
UWMC00	2-year	17.30	77	28	20.3
	5-year				33.5
	10-year				41.7
	25-year				53.1
	50-year				61.8
	100-yer				73.4

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
UWMC01	2-year	86.27	87	63	95.7
	5-year				142.8
	10-year				171.3
	25-year				209.3
	50-year				237.8
	100-yer				275.7
UWMC03	2-year	125.35	80	103	75.2
	5-year				120.7
	10-year				149.0
	25-year				187.6
	50-year				216.8
	100-yer				256.1
UWMC04	2-year	210.85	84	92	157.9
	5-year				243.8
	10-year				296.5
	25-year				367.6
	50-year				421.2
	100-yer				492.6
UWMC05	2-year	336.36	85	115	225.4
	5-year				343.8
	10-year				416.5
	25-year				514.2
	50-year				587.7
	100-yer				685.7
UWMC06	2-year	228.83	88	83	224.1
	5-year				328.5
	10-year				391.4
	25-year				475.2
	50-year				537.9
	100-yer				621.2
UWMC07	2-year	216.34	90	75	242.5
	5-year				348.0
	10-year				411.2
	25-year				495.2
	50-year				558.0
	100-yer				641.4
UWMC08	2-year	216.72	91	173	137.8
	5-year				196.2
	10-year				231.2
	25-year				277.7
	50-year				312.5
	100-yer				358.8
UWMC09	2-year	300.71	88	46	424.1
	5-year				623.4
	10-year				743.5
	25-year				903.3
	50-year				1022.9
	100-yer				1181.8

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
UWMC10	2-year	177.35	79	32	212.5
	5-year				344.2
	10-year				426.3
	25-year				537.6
	50-year				621.9
	100-yer				734.8
UWMC11	2-year	203.92	80	43	218.9
	5-year				350.8
	10-year				432.7
	25-year				543.7
	50-year				627.9
	100-yer				740.7
UWMC12	2-year	174.62	77	22	216.0
	5-year				357.5
	10-year				446.2
	25-year				567.1
	50-year				658.9
	100-yer				783.0
VCL102	2-year	111.36	84	39	146.8
	5-year				225.4
	10-year				273.8
	25-year				338.8
	50-year				387.7
	100-yer				452.8
VCL201	2-year	37.12	84	15	68.6
	5-year				103.1
	10-year				124.2
	25-year				152.2
	50-year				173.3
	100-yer				201.3
VCMC01	2-year	178.23	78	76	120.4
	5-year				198.3
	10-year				247.4
	25-year				314.2
	50-year				365.1
	100-yer				433.5
VCMC02	2-year	83.31	81	34	104.6
	5-year				166.1
	10-year				204.1
	25-year				255.5
	50-year				294.3
	100-yer				346.1
VCMC03	2-year	123.74	82	31	175.0
	5-year				272.0
	10-year				331.5
	25-year				411.5
	50-year				471.7
	100-yer				552.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
VCMC04	2-year	30.29	90	18	66.8
	5-year				95.4
	10-year				112.5
	25-year				135.3
	50-year				152.3
	100-yer				174.9
VCMC06	2-year	44.30	86	14	92.6
	5-year				135.9
	10-year				162.0
	25-year				196.7
	50-year				222.7
	100-yer				257.2
VCMC07	2-year	37.93	90	16	88.1
	5-year				125.1
	10-year				147.1
	25-year				176.3
	50-year				198.2
	100-yer				227.1
VCMC08	2-year	32.10	86	12	68.0
	5-year				99.8
	10-year				119.0
	25-year				144.5
	50-year				163.6
	100-yer				188.9
W13L1B01	2-year	9.14	86	10	19.7
	5-year				28.8
	10-year				34.3
	25-year				41.7
	50-year				47.1
	100-yer				54.4
W13L1C01	2-year	2.50	87	7	5.5
	5-year				8.0
	10-year				9.5
	25-year				11.4
	50-year				12.9
	100-yer				14.9
W13L201	2-year	2.10	88	5	4.9
	5-year				7.0
	10-year				8.2
	25-year				9.9
	50-year				11.1
	100-yer				12.7
W13L202	2-year	3.56	84	3	7.3
	5-year				10.8
	10-year				12.9
	25-year				15.7
	50-year				17.8
	100-yer				20.5

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
W13L401	2-year	1.96	86	3	4.4
	5-year				6.4
	10-year				7.6
	25-year				9.1
	50-year				10.3
	100-yer				11.8
W13MC04	2-year	17.04	90	12	40.6
	5-year				57.6
	10-year				67.7
	25-year				81.1
	50-year				91.1
	100-yer				104.4
WLL104	2-year	2.48	87	3	5.7
	5-year				8.1
	10-year				9.6
	25-year				11.6
	50-year				13.0
	100-yer				15.0
WLL109	2-year	4.75	95	3	12.6
	5-year				17.2
	10-year				19.8
	25-year				23.4
	50-year				26.1
	100-yer				29.7
WLL1A01	2-year	10.59	89	8	25.0
	5-year				35.7
	10-year				42.1
	25-year				50.5
	50-year				56.8
	100-yer				65.2
WLL1A02	2-year	8.78	87	14	18.9
	5-year				27.5
	10-year				32.7
	25-year				39.6
	50-year				44.8
	100-yer				51.7
WLL1B01	2-year	26.25	92	33	50.6
	5-year				71.3
	10-year				83.6
	25-year				99.9
	50-year				112.2
	100-yer				128.4
WLL202	2-year	8.59	90	10	20.2
	5-year				28.6
	10-year				33.6
	25-year				40.2
	50-year				45.2
	100-yer				51.7

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
WLL302	2-year	4.88	91	5	12.7
	5-year				17.6
	10-year				20.6
	25-year				24.5
	50-year				27.4
	100-yer				31.3
WLL305	2-year	6.00	87	5	13.5
	5-year				19.4
	10-year				22.9
	25-year				27.6
	50-year				31.1
	100-yer				35.8
WLL314	2-year	6.26	87	6	14.3
	5-year				20.6
	10-year				24.3
	25-year				29.3
	50-year				33.0
	100-yer				38.0
WLL318	2-year	40.95	87	17	85.1
	5-year				124.0
	10-year				147.4
	25-year				178.6
	50-year				201.9
	100-yer				232.9
WLL3A02	2-year	1.76	93	3	4.5
	5-year				6.1
	10-year				7.1
	25-year				8.4
	50-year				9.4
	100-yer				10.7
WLL3B05	2-year	7.28	89	8	17.2
	5-year				24.4
	10-year				28.7
	25-year				34.5
	50-year				38.7
	100-yer				44.4
WLL401	2-year	8.48	92	11	21.3
	5-year				29.6
	10-year				34.6
	25-year				41.1
	50-year				46.0
	100-yer				52.6
WLL501	2-year	30.60	87	28	54.0
	5-year				79.6
	10-year				95.1
	25-year				115.7
	50-year				131.1
	100-yer				151.6

Table B.2
Hydrologic Modeling - Runoff Results for Existing Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
WLL601	2-year	9.91	93	8	25.9
	5-year				35.6
	10-year				41.5
	25-year				49.2
	50-year				54.9
	100-yer				62.6
WLL701	2-year	18.94	87	11	40.6
	5-year				59.1
	10-year				70.3
	25-year				85.1
	50-year				96.1
	100-yer				110.8
WLMC04	2-year	22.92	86	20	44.8
	5-year				66.1
	10-year				78.9
	25-year				96.0
	50-year				108.8
	100-yer				125.9
WLMC06	2-year	21.18	83	35	28.7
	5-year				44.5
	10-year				54.2
	25-year				67.2
	50-year				76.9
	100-yer				90.0
WLMC09	2-year	51.15	85	47	63.2
	5-year				96.2
	10-year				116.4
	25-year				143.4
	50-year				163.6
	100-yer				190.6
WLMC11	2-year	2.54	93	11	6.6
	5-year				9.0
	10-year				10.5
	25-year				12.5
	50-year				14.0
	100-yer				15.9
WLMC18	2-year	17.06	87	24	32.0
	5-year				47.1
	10-year				56.2
	25-year				68.3
	50-year				77.3
	100-yer				89.4

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL101	2-year	898.00	880.37	883.32	14.68
	5-year			883.94	14.06
	10-year			884.30	13.70
	25-year			884.72	13.28
	50-year			884.99	13.01
	100-yer			885.34	12.66
CCL102	2-year	904.00	896.75	898.37	5.63
	5-year			898.64	5.36
	10-year			898.96	5.04
	25-year			899.34	4.66
	50-year			899.51	4.49
	100-yer			899.70	4.30
CCL103	2-year	907.42	897.42	898.78	8.64
	5-year			899.14	8.28
	10-year			899.48	7.94
	25-year			900.01	7.41
	50-year			900.28	7.14
	100-yer			900.58	6.84
CCL104	2-year	908.08	898.08	898.80	9.28
	5-year			899.14	8.94
	10-year			899.48	8.60
	25-year			900.00	8.08
	50-year			900.27	7.81
	100-yer			900.57	7.51
CCL105	2-year	909.28	899.28	901.63	7.65
	5-year			902.92	6.36
	10-year			903.22	6.06
	25-year			903.44	5.84
	50-year			903.57	5.71
	100-yer			903.72	5.56
CCL106	2-year	918.00	908.00	908.56	9.44
	5-year			908.75	9.25
	10-year			908.84	9.16
	25-year			908.93	9.07
	50-year			908.99	9.01
	100-yer			909.06	8.94
CCL107	2-year	914.17	908.17	909.42	4.76
	5-year			909.71	4.46
	10-year			909.87	4.30
	25-year			910.07	4.10
	50-year			910.17	4.00
	100-yer			910.30	3.87
CCL108	2-year	915.74	909.74	909.92	5.82
	5-year			910.05	5.69
	10-year			910.11	5.63
	25-year			910.17	5.57
	50-year			910.20	5.54
	100-yer			910.32	5.42

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL109	2-year	919.85	909.85	911.88	7.97
	5-year			912.24	7.61
	10-year			912.34	7.51
	25-year			912.44	7.41
	50-year			912.50	7.35
	100-yer			912.58	7.27
CCL110	2-year	925.87	915.87	916.09	9.78
	5-year			916.15	9.72
	10-year			916.18	9.69
	25-year			916.22	9.65
	50-year			916.24	9.63
	100-yer			916.27	9.60
CCL111	2-year	922.76	917.18	921.98	0.78
	5-year			922.07	0.69
	10-year			922.11	0.65
	25-year			922.16	0.60
	50-year			922.20	0.56
	100-yer			922.24	0.52
CCL112	2-year	922.80	918.38	922.14	0.66
	5-year			922.26	0.54
	10-year			922.32	0.48
	25-year			922.40	0.40
	50-year			922.45	0.35
	100-yer			922.52	0.28
CCL113	2-year	924.64	920.06	923.77	0.87
	5-year			923.85	0.79
	10-year			923.90	0.74
	25-year			923.95	0.69
	50-year			923.98	0.66
	100-yer			924.02	0.62
CCL201	2-year	910.68	901.16	901.28	9.40
	5-year			901.30	9.38
	10-year			901.32	9.36
	25-year			901.33	9.35
	50-year			901.35	9.33
	100-yer			901.36	9.32
CCL202	2-year	910.74	905.74	906.90	3.84
	5-year			907.11	3.63
	10-year			907.22	3.52
	25-year			907.36	3.38
	50-year			907.47	3.27
	100-yer			907.61	3.13
CCL203	2-year	911.72	906.97	908.20	3.52
	5-year			908.47	3.25
	10-year			908.62	3.10
	25-year			908.83	2.89
	50-year			909.00	2.72
	100-yer			909.26	2.46

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL204	2-year	914.18	909.18	910.28	3.90
	5-year			910.54	3.64
	10-year			910.71	3.47
	25-year			911.31	2.87
	50-year			912.36	1.82
	100-yer			913.21	0.97
CCMC00	2-year	876.00	863.18	866.50	9.50
	5-year			867.12	8.88
	10-year			867.47	8.53
	25-year			867.87	8.13
	50-year			868.13	7.87
	100-yer			868.47	7.53
CCMC01	2-year	898.00	879.96	883.29	14.71
	5-year			883.91	14.09
	10-year			884.26	13.74
	25-year			884.66	13.34
	50-year			884.92	13.09
	100-yer			885.25	12.75
CCMC02	2-year	906.00	880.68	884.34	21.66
	5-year			885.17	20.83
	10-year			885.57	20.43
	25-year			886.06	19.94
	50-year			886.37	19.63
	100-yer			886.78	19.22
CCMC03	2-year	907.00	891.70	892.82	14.18
	5-year			893.04	13.96
	10-year			893.15	13.85
	25-year			893.31	13.69
	50-year			893.40	13.60
	100-yer			893.51	13.49
CCMC04	2-year	907.00	891.74	893.82	13.18
	5-year			894.45	12.55
	10-year			894.78	12.22
	25-year			895.21	11.79
	50-year			895.49	11.51
	100-yer			895.85	11.15
CCMC05	2-year	909.00	901.74	906.12	2.88
	5-year			906.69	2.31
	10-year			906.98	2.02
	25-year			907.32	1.68
	50-year			907.54	1.46
	100-yer			907.82	1.18
CCMC06	2-year	908.00	901.74	906.12	1.88
	5-year			906.69	1.31
	10-year			906.98	1.02
	25-year			907.32	0.68
	50-year			907.54	0.46
	100-yer			907.82	0.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCMC07	2-year	910.07	901.74	906.12	3.95
	5-year			906.69	3.37
	10-year			906.98	3.09
	25-year			907.32	2.75
	50-year			907.54	2.53
	100-yer			907.82	2.25
CCMC08	2-year	910.10	901.88	906.52	3.58
	5-year			907.62	2.48
	10-year			907.98	2.12
	25-year			908.33	1.77
	50-year			908.57	1.53
	100-yer			908.87	1.23
CCMC09	2-year	913.00	904.82	906.51	6.49
	5-year			907.62	5.38
	10-year			907.97	5.03
	25-year			908.33	4.67
	50-year			908.57	4.43
	100-yer			908.87	4.13
CCMC10	2-year	920.17	904.83	907.46	12.71
	5-year			907.87	12.30
	10-year			908.10	12.07
	25-year			908.40	11.77
	50-year			908.64	11.53
	100-yer			908.94	11.23
CCMC11	2-year	928.89	914.89	916.25	12.64
	5-year			916.55	12.34
	10-year			916.70	12.19
	25-year			916.88	12.01
	50-year			917.00	11.89
	100-yer			917.15	11.74
CCMC12	2-year	934.95	928.25	929.23	5.72
	5-year			929.39	5.56
	10-year			929.47	5.48
	25-year			929.57	5.38
	50-year			929.64	5.31
	100-yer			929.72	5.23
CCMC13	2-year	935.00	928.53	929.23	5.77
	5-year			929.39	5.61
	10-year			929.48	5.52
	25-year			929.57	5.43
	50-year			929.64	5.36
	100-yer			929.72	5.28
E23L101	2-year	936.53	929.53	930.27	6.26
	5-year			930.38	6.15
	10-year			930.44	6.09
	25-year			930.52	6.01
	50-year			930.58	5.95
	100-yer			930.65	5.88

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
E23L102	2-year	935.00	930.00	934.08	0.92
	5-year			934.17	0.83
	10-year			934.20	0.80
	25-year			934.25	0.75
	50-year			934.28	0.72
	100-yer			934.32	0.68
E23L103	2-year	935.14	930.14	934.37	0.77
	5-year			934.48	0.66
	10-year			934.53	0.61
	25-year			934.60	0.54
	50-year			934.64	0.50
	100-yer			934.70	0.44
E23L104	2-year	936.09	931.42	935.20	0.89
	5-year			935.29	0.80
	10-year			935.33	0.76
	25-year			935.38	0.71
	50-year			935.41	0.68
	100-yer			935.45	0.64
E23L105	2-year	936.24	931.66	935.46	0.78
	5-year			935.56	0.68
	10-year			935.61	0.63
	25-year			935.68	0.56
	50-year			935.72	0.52
	100-yer			935.77	0.47
E23L106	2-year	941.65	937.40	938.12	3.53
	5-year			938.32	3.33
	10-year			938.49	3.16
	25-year			940.69	0.96
	50-year			940.70	0.95
	100-yer			940.72	0.93
E23L1A01	2-year	938.00	934.86	936.41	1.59
	5-year			937.07	0.93
	10-year			937.11	0.89
	25-year			937.16	0.84
	50-year			937.18	0.82
	100-yer			937.22	0.78
E23MC01	2-year	915.00	907.40	908.92	6.08
	5-year			909.44	5.56
	10-year			909.65	5.35
	25-year			910.02	4.98
	50-year			910.33	4.67
	100-yer			910.74	4.26
E23MC02	2-year	918.00	910.00	913.54	4.46
	5-year			913.87	4.13
	10-year			914.08	3.92
	25-year			914.28	3.72
	50-year			914.40	3.60
	100-yer			914.54	3.46

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
E23MC03	2-year	919.00	911.41	913.90	5.10
	5-year			914.21	4.79
	10-year			914.36	4.64
	25-year			914.54	4.46
	50-year			914.68	4.32
	100-yer			914.84	4.16
E23MC04	2-year	922.56	916.56	919.44	3.12
	5-year			919.74	2.82
	10-year			919.87	2.69
	25-year			919.92	2.64
	50-year			920.00	2.56
	100-yer			920.09	2.47
E23MC05	2-year	927.58	923.58	926.23	1.35
	5-year			926.27	1.31
	10-year			926.28	1.30
	25-year			926.41	1.17
	50-year			926.46	1.12
	100-yer			926.52	1.06
E4MC00	2-year	901.00	871.31	872.31	28.69
	5-year			872.55	28.45
	10-year			872.67	28.33
	25-year			872.82	28.18
	50-year			872.93	28.07
	100-yer			873.06	27.94
E4MC01	2-year	901.00	879.59	880.59	20.41
	5-year			880.83	20.17
	10-year			880.96	20.04
	25-year			881.11	19.89
	50-year			881.21	19.79
	100-yer			881.35	19.65
E7MC00	2-year	900.00	879.23	880.63	19.37
	5-year			880.92	19.08
	10-year			881.09	18.91
	25-year			881.29	18.71
	50-year			881.43	18.57
	100-yer			881.62	18.38
E7MC01	2-year	900.00	885.46	886.86	13.14
	5-year			887.16	12.84
	10-year			887.32	12.68
	25-year			887.52	12.48
	50-year			887.67	12.33
	100-yer			887.85	12.15
FPL101	2-year	894.02	886.42	887.35	6.67
	5-year			887.43	6.59
	10-year			887.64	6.38
	25-year			887.79	6.23
	50-year			887.89	6.13
	100-yer			888.01	6.01

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
FPL102	2-year	894.15	886.65	888.33	5.82
	5-year			888.59	5.56
	10-year			889.71	4.44
	25-year			890.49	3.66
	50-year			891.05	3.10
	100-yer			891.85	2.30
FPL103	2-year	896.03	886.95	888.57	7.46
	5-year			893.00	3.03
	10-year			893.26	2.77
	25-year			893.32	2.71
	50-year			893.36	2.67
	100-yer			893.40	2.63
FPL104	2-year	894.09	888.09	891.35	2.74
	5-year			893.00	1.09
	10-year			893.26	0.83
	25-year			893.32	0.77
	50-year			893.36	0.73
	100-yer			893.40	0.69
FPL201	2-year	893.94	884.11	887.49	6.45
	5-year			892.18	1.76
	10-year			892.29	1.65
	25-year			892.41	1.53
	50-year			892.49	1.45
	100-yer			892.59	1.35
FPL202	2-year	894.14	888.14	892.51	1.63
	5-year			892.88	1.26
	10-year			892.97	1.17
	25-year			893.09	1.05
	50-year			893.16	0.98
	100-yer			893.26	0.88
FPL203	2-year	894.66	888.41	892.61	2.05
	5-year			892.97	1.69
	10-year			893.07	1.59
	25-year			893.19	1.47
	50-year			893.28	1.38
	100-yer			893.39	1.27
FPL204	2-year	894.39	888.89	892.63	1.76
	5-year			892.98	1.41
	10-year			893.09	1.30
	25-year			893.22	1.17
	50-year			893.31	1.08
	100-yer			893.43	0.96
FPL205	2-year	896.71	890.46	894.04	2.67
	5-year			894.13	2.58
	10-year			894.18	2.53
	25-year			894.24	2.47
	50-year			894.28	2.43
	100-yer			894.33	2.38

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
FPL206	2-year	895.09	890.84	894.63	0.46
	5-year			894.77	0.32
	10-year			894.85	0.24
	25-year			894.94	0.15
	50-year			895.01	0.08
	100-yer			895.09	0.00
FPL301	2-year	889.00	878.80	879.90	9.10
	5-year			882.14	6.86
	10-year			885.64	3.36
	25-year			887.17	1.83
	50-year			887.33	1.67
	100-yer			887.47	1.53
FPMC00	2-year	909.00	871.48	873.69	35.31
	5-year			874.49	34.51
	10-year			874.88	34.12
	25-year			875.43	33.57
	50-year			875.82	33.18
	100-yer			876.41	32.59
FPMC01	2-year	908.97	873.07	875.29	33.68
	5-year			876.08	32.89
	10-year			876.48	32.49
	25-year			877.03	31.94
	50-year			877.41	31.56
	100-yer			878.01	30.96
FPMC02	2-year	909.00	873.48	875.72	33.28
	5-year			876.52	32.48
	10-year			876.91	32.09
	25-year			877.46	31.54
	50-year			877.84	31.16
	100-yer			878.45	30.55
FPMC03	2-year	910.08	874.72	876.94	33.14
	5-year			877.73	32.35
	10-year			878.13	31.95
	25-year			878.69	31.39
	50-year			879.07	31.01
	100-yer			879.68	30.40
FPMC04	2-year	892.42	886.42	888.38	4.03
	5-year			888.79	3.62
	10-year			889.00	3.42
	25-year			889.34	3.07
	50-year			889.65	2.77
	100-yer			890.07	2.35
FPMC05	2-year	893.00	887.00	888.59	4.41
	5-year			889.13	3.87
	10-year			889.40	3.60
	25-year			889.76	3.24
	50-year			890.04	2.96
	100-yer			890.42	2.58

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL201	2-year	912.00	902.67	905.19	6.81
	5-year			905.46	6.54
	10-year			905.58	6.42
	25-year			905.69	6.31
	50-year			905.77	6.23
	100-yer			905.88	6.12
IPL202	2-year	914.00	909.87	911.44	2.56
	5-year			911.71	2.29
	10-year			911.91	2.09
	25-year			912.24	1.76
	50-year			912.36	1.64
	100-yer			912.47	1.53
IPL203	2-year	928.00	923.00	923.30	4.70
	5-year			923.36	4.64
	10-year			923.39	4.61
	25-year			923.42	4.58
	50-year			923.45	4.55
	100-yer			923.48	4.52
IPL204	2-year	931.54	923.54	924.38	7.16
	5-year			924.52	7.02
	10-year			924.60	6.94
	25-year			924.68	6.86
	50-year			924.76	6.78
	100-yer			924.84	6.70
IPL205	2-year	932.29	925.04	925.50	6.79
	5-year			925.59	6.70
	10-year			925.63	6.66
	25-year			925.68	6.61
	50-year			925.72	6.57
	100-yer			925.77	6.52
IPL206	2-year	933.10	928.85	929.65	3.45
	5-year			929.88	3.22
	10-year			930.94	2.16
	25-year			932.11	0.99
	50-year			932.14	0.96
	100-yer			932.15	0.95
IPL2A01	2-year	907.91	903.91	905.21	2.70
	5-year			905.50	2.41
	10-year			905.61	2.30
	25-year			905.74	2.17
	50-year			905.83	2.08
	100-yer			905.94	1.97
IPL2A02	2-year	921.83	916.83	917.38	4.45
	5-year			917.47	4.36
	10-year			917.51	4.32
	25-year			917.57	4.26
	50-year			917.61	4.22
	100-yer			917.65	4.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL2A03	2-year	923.12	917.54	919.46	3.66
	5-year			920.52	2.60
	10-year			921.88	1.24
	25-year			922.22	0.90
	50-year			922.26	0.86
	100-yer			922.31	0.81
IPL2A04	2-year	924.24	917.99	920.03	4.21
	5-year			921.74	2.50
	10-year			922.38	1.86
	25-year			922.45	1.79
	50-year			922.47	1.77
	100-yer			922.50	1.74
IPL2A05	2-year	923.52	918.27	921.60	1.92
	5-year			921.89	1.63
	10-year			922.39	1.13
	25-year			922.46	1.06
	50-year			922.49	1.03
	100-yer			922.52	1.00
IPL401	2-year	908.00	901.03	902.18	5.82
	5-year			902.38	5.62
	10-year			902.44	5.56
	25-year			902.52	5.48
	50-year			902.64	5.36
	100-yer			902.90	5.10
IPL402	2-year	908.00	901.98	903.05	4.95
	5-year			903.33	4.67
	10-year			903.41	4.59
	25-year			903.57	4.43
	50-year			903.80	4.20
	100-yer			903.90	4.10
IPL403	2-year	908.81	903.61	904.66	4.15
	5-year			904.84	3.97
	10-year			904.89	3.92
	25-year			904.98	3.83
	50-year			905.10	3.71
	100-yer			905.14	3.67
IPL404	2-year	909.69	903.86	905.23	4.46
	5-year			905.48	4.21
	10-year			905.56	4.13
	25-year			905.73	3.96
	50-year			905.98	3.71
	100-yer			906.08	3.61
IPL405	2-year	912.60	906.93	907.62	4.98
	5-year			907.76	4.84
	10-year			907.79	4.81
	25-year			907.88	4.72
	50-year			907.96	4.64
	100-yer			908.00	4.60

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL406	2-year	916.60	910.27	911.50	5.10
	5-year			911.78	4.82
	10-year			911.85	4.75
	25-year			912.05	4.55
	50-year			912.29	4.31
	100-yer			912.43	4.17
IPL407	2-year	919.55	912.80	914.01	5.54
	5-year			914.41	5.14
	10-year			914.55	5.00
	25-year			915.77	3.78
	50-year			917.78	1.77
	100-yer			918.51	1.04
IPL408	2-year	925.93	919.35	920.63	5.30
	5-year			921.07	4.86
	10-year			921.64	4.29
	25-year			924.98	0.95
	50-year			925.07	0.86
	100-yer			925.10	0.83
IPL409	2-year	926.56	919.39	921.31	5.25
	5-year			922.17	4.39
	10-year			922.91	3.65
	25-year			924.94	1.62
	50-year			925.02	1.54
	100-yer			925.05	1.51
IPL410	2-year	926.69	919.61	921.93	4.76
	5-year			923.53	3.16
	10-year			924.48	2.21
	25-year			924.93	1.76
	50-year			924.98	1.71
	100-yer			925.01	1.68
IPL411	2-year	926.90	922.40	923.97	2.93
	5-year			925.07	1.83
	10-year			925.15	1.75
	25-year			925.22	1.68
	50-year			925.25	1.65
	100-yer			925.28	1.62
IPL501	2-year	906.00	900.00	901.20	4.80
	5-year			901.81	4.19
	10-year			902.14	3.86
	25-year			902.55	3.45
	50-year			902.83	3.17
	100-yer			903.13	2.87
IPL502	2-year	906.00	901.84	903.38	2.62
	5-year			903.68	2.32
	10-year			903.82	2.18
	25-year			903.96	2.04
	50-year			904.04	1.96
	100-yer			904.12	1.88

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL601	2-year	907.59	901.37	902.11	5.48
	5-year			902.94	4.65
	10-year			903.38	4.21
	25-year			903.92	3.67
	50-year			904.30	3.29
	100-yer			904.83	2.76
IPL602	2-year	907.66	901.77	903.52	4.14
	5-year			904.29	3.37
	10-year			904.66	3.00
	25-year			905.03	2.63
	50-year			905.23	2.43
	100-yer			905.44	2.22
IPL603	2-year	913.00	904.50	904.98	8.02
	5-year			905.10	7.90
	10-year			905.16	7.84
	25-year			905.22	7.78
	50-year			905.27	7.73
	100-yer			905.45	7.55
IPL604	2-year	914.72	905.30	906.41	8.31
	5-year			906.61	8.11
	10-year			906.71	8.01
	25-year			906.85	7.87
	50-year			906.94	7.78
	100-yer			907.05	7.67
IPL605	2-year	916.55	911.63	912.64	3.91
	5-year			912.89	3.66
	10-year			913.07	3.48
	25-year			913.45	3.10
	50-year			915.34	1.21
	100-yer			915.62	0.93
IPL6A01	2-year	914.43	906.85	911.82	2.61
	5-year			912.62	1.81
	10-year			912.68	1.75
	25-year			912.75	1.68
	50-year			912.80	1.63
	100-yer			912.86	1.57
IPL6A02	2-year	914.66	907.39	912.77	1.89
	5-year			913.04	1.62
	10-year			913.10	1.56
	25-year			913.16	1.50
	50-year			913.20	1.46
	100-yer			913.26	1.40
IPL6A03	2-year	914.34	908.01	912.77	1.57
	5-year			913.04	1.30
	10-year			913.10	1.24
	25-year			913.16	1.18
	50-year			913.20	1.14
	100-yer			913.26	1.08

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC02	2-year	898.50	887.24	892.55	5.95
	5-year			893.50	5.00
	10-year			893.98	4.52
	25-year			894.44	4.06
	50-year			894.79	3.71
	100-yer			895.24	3.26
IPMC03	2-year	898.50	887.40	892.55	5.95
	5-year			893.50	5.00
	10-year			894.00	4.50
	25-year			894.51	3.99
	50-year			894.87	3.63
	100-yer			895.33	3.17
IPMC04	2-year	903.00	891.21	895.63	7.37
	5-year			895.97	7.03
	10-year			896.13	6.87
	25-year			896.31	6.69
	50-year			896.42	6.58
	100-yer			896.55	6.45
IPMC05	2-year	903.00	891.75	895.90	7.10
	5-year			896.46	6.54
	10-year			896.74	6.26
	25-year			897.07	5.93
	50-year			897.29	5.71
	100-yer			897.52	5.48
IPMC06	2-year	909.00	892.00	896.11	12.89
	5-year			896.68	12.32
	10-year			896.96	12.04
	25-year			897.30	11.70
	50-year			897.51	11.49
	100-yer			897.75	11.25
IPMC07	2-year	909.00	892.50	896.11	12.89
	5-year			896.70	12.30
	10-year			897.00	12.00
	25-year			897.35	11.65
	50-year			897.59	11.41
	100-yer			897.85	11.15
IPMC08	2-year	913.00	896.15	900.01	12.99
	5-year			900.21	12.79
	10-year			900.30	12.70
	25-year			900.41	12.59
	50-year			900.50	12.50
	100-yer			900.60	12.40
IPMC09	2-year	913.00	896.30	900.69	12.31
	5-year			901.21	11.79
	10-year			901.53	11.47
	25-year			901.94	11.06
	50-year			902.23	10.77
	100-yer			902.54	10.46

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC10	2-year	912.00	896.50	900.93	11.07
	5-year			901.54	10.46
	10-year			901.88	10.12
	25-year			902.30	9.70
	50-year			902.59	9.41
	100-yer			902.90	9.10
IPMC11	2-year	912.00	897.01	900.93	11.07
	5-year			901.54	10.46
	10-year			901.88	10.12
	25-year			902.29	9.71
	50-year			902.58	9.42
	100-yer			902.90	9.10
IPMC12	2-year	906.00	897.98	901.20	4.80
	5-year			901.81	4.19
	10-year			902.14	3.86
	25-year			902.55	3.45
	50-year			902.83	3.17
	100-yer			903.13	2.87
IPMC13	2-year	908.00	899.05	902.10	5.90
	5-year			902.94	5.06
	10-year			903.38	4.62
	25-year			903.92	4.08
	50-year			904.30	3.70
	100-yer			904.83	3.17
IPMC14	2-year	911.00	901.49	906.35	4.65
	5-year			907.16	3.84
	10-year			907.56	3.44
	25-year			908.08	2.92
	50-year			908.41	2.59
	100-yer			908.82	2.18
IPMC15	2-year	911.00	902.00	906.34	4.66
	5-year			907.22	3.78
	10-year			907.68	3.32
	25-year			908.22	2.78
	50-year			908.54	2.46
	100-yer			908.95	2.05
IPMC16	2-year	912.00	903.73	907.26	4.74
	5-year			908.07	3.93
	10-year			908.49	3.51
	25-year			909.00	3.00
	50-year			909.32	2.68
	100-yer			909.73	2.27
IPMC17	2-year	912.00	903.90	907.33	4.67
	5-year			908.16	3.84
	10-year			908.62	3.38
	25-year			909.16	2.84
	50-year			909.48	2.52
	100-yer			909.90	2.10

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC18	2-year	913.00	904.00	907.69	5.31
	5-year			908.47	4.53
	10-year			908.90	4.10
	25-year			909.42	3.58
	50-year			909.74	3.26
	100-yer			910.15	2.85
IPMC19	2-year	913.00	904.08	907.73	5.27
	5-year			908.55	4.45
	10-year			909.09	3.91
	25-year			909.65	3.35
	50-year			909.99	3.01
	100-yer			910.44	2.56
IPMC20	2-year	913.52	906.02	907.88	5.64
	5-year			908.66	4.86
	10-year			909.16	4.36
	25-year			909.72	3.80
	50-year			910.06	3.46
	100-yer			910.50	3.02
LWL101	2-year	930.00	910.43	911.89	18.11
	5-year			912.14	17.86
	10-year			912.28	17.72
	25-year			912.42	17.58
	50-year			912.52	17.48
	100-yer			912.65	17.35
LWMC01	2-year	890.00	862.03	866.32	23.68
	5-year			867.66	22.34
	10-year			868.54	21.46
	25-year			869.53	20.47
	50-year			870.06	19.94
	100-yer			870.85	19.15
LWMC02	2-year	890.00	866.22	871.95	18.05
	5-year			873.45	16.55
	10-year			874.41	15.59
	25-year			875.48	14.52
	50-year			876.03	13.97
	100-yer			876.87	13.13
LWMC03	2-year	890.00	868.75	872.04	17.96
	5-year			873.53	16.47
	10-year			874.48	15.52
	25-year			875.55	14.45
	50-year			876.10	13.90
	100-yer			876.95	13.05
LWMC04	2-year	891.00	874.60	881.81	9.19
	5-year			882.88	8.12
	10-year			883.41	7.59
	25-year			884.19	6.81
	50-year			884.55	6.45
	100-yer			884.94	6.06

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
LWMC05	2-year	896.10	878.13	884.42	11.68
	5-year			886.40	9.70
	10-year			887.59	8.51
	25-year			889.58	6.52
	50-year			890.46	5.64
	100-yer			891.24	4.86
LWMC06	2-year	896.10	878.42	884.70	11.40
	5-year			886.65	9.46
	10-year			887.84	8.26
	25-year			889.77	6.33
	50-year			890.64	5.46
	100-yer			891.45	4.65
LWMC07	2-year	907.00	879.11	886.28	20.72
	5-year			887.87	19.13
	10-year			888.96	18.05
	25-year			890.80	16.20
	50-year			892.03	14.97
	100-yer			892.93	14.07
LWMC08	2-year	907.00	879.55	886.56	20.44
	5-year			888.26	18.74
	10-year			889.41	17.59
	25-year			891.24	15.76
	50-year			892.43	14.57
	100-yer			893.39	13.61
LWMC09	2-year	898.30	884.30	891.80	6.50
	5-year			893.04	5.26
	10-year			893.52	4.78
	25-year			893.94	4.36
	50-year			894.15	4.15
	100-yer			894.68	3.62
LWMC10	2-year	902.00	887.16	891.47	10.53
	5-year			892.60	9.40
	10-year			893.06	8.94
	25-year			893.38	8.62
	50-year			893.54	8.46
	100-yer			893.73	8.27
LWMC11	2-year	902.00	887.47	891.57	10.43
	5-year			892.65	9.35
	10-year			893.12	8.88
	25-year			893.45	8.55
	50-year			893.63	8.37
	100-yer			893.84	8.16
LWMC12	2-year	920.00	898.29	900.36	19.64
	5-year			900.83	19.17
	10-year			901.04	18.96
	25-year			901.30	18.70
	50-year			901.44	18.56
	100-yer			901.62	18.38

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
LWMC13	2-year	930.00	905.80	906.72	23.28
	5-year			906.87	23.13
	10-year			906.95	23.05
	25-year			907.05	22.95
	50-year			907.12	22.88
	100-yer			907.21	22.79
LWMC14	2-year	930.00	911.74	912.25	17.75
	5-year			912.33	17.67
	10-year			912.37	17.63
	25-year			912.42	17.58
	50-year			912.45	17.55
	100-yer			912.49	17.51
NCL101	2-year	896.70	886.70	892.26	4.44
	5-year			892.62	4.08
	10-year			892.80	3.90
	25-year			892.98	3.72
	50-year			893.07	3.63
	100-yer			893.25	3.45
NCL201	2-year	898.00	890.35	891.37	6.63
	5-year			891.56	6.44
	10-year			891.65	6.35
	25-year			891.77	6.23
	50-year			891.84	6.16
	100-yer			891.93	6.07
NCL202	2-year	909.00	901.00	901.69	7.31
	5-year			901.82	7.18
	10-year			901.88	7.12
	25-year			901.95	7.05
	50-year			902.00	7.00
	100-yer			902.07	6.93
NCL401	2-year	908.00	898.00	898.98	9.02
	5-year			899.18	8.82
	10-year			899.27	8.73
	25-year			899.39	8.61
	50-year			899.47	8.53
	100-yer			899.57	8.43
NCL402	2-year	927.70	919.70	920.21	7.49
	5-year			920.29	7.41
	10-year			920.33	7.37
	25-year			920.38	7.32
	50-year			920.41	7.29
	100-yer			920.45	7.25
NCL403	2-year	926.00	920.34	924.33	1.67
	5-year			924.58	1.42
	10-year			924.69	1.31
	25-year			924.82	1.18
	50-year			924.90	1.10
	100-yer			925.01	0.99

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCL404	2-year	926.10	920.77	924.34	1.76
	5-year			924.59	1.51
	10-year			924.70	1.40
	25-year			924.82	1.28
	50-year			924.91	1.19
	100-yer			925.02	1.08
NCL405	2-year	927.42	922.50	925.40	2.02
	5-year			926.45	0.97
	10-year			926.50	0.92
	25-year			926.54	0.88
	50-year			926.57	0.85
	100-yer			926.60	0.82
NCL4A01	2-year	926.01	921.46	924.44	1.57
	5-year			924.63	1.38
	10-year			924.73	1.28
	25-year			924.86	1.15
	50-year			924.94	1.07
	100-yer			925.05	0.96
NCL4B01	2-year	927.75	923.75	925.84	1.91
	5-year			925.90	1.85
	10-year			925.93	1.82
	25-year			925.96	1.79
	50-year			925.99	1.76
	100-yer			926.02	1.73
NCL4C01	2-year	926.46	921.46	924.34	2.12
	5-year			924.59	1.87
	10-year			924.70	1.76
	25-year			924.82	1.64
	50-year			924.91	1.55
	100-yer			925.02	1.44
NCL4D01	2-year	927.56	922.56	925.63	1.93
	5-year			926.70	0.86
	10-year			926.74	0.82
	25-year			926.79	0.77
	50-year			926.82	0.74
	100-yer			926.85	0.71
NCL500	2-year	916.12	906.12	908.65	7.47
	5-year			908.83	7.29
	10-year			908.94	7.18
	25-year			909.04	7.08
	50-year			909.11	7.01
	100-yer			909.19	6.93
NCL501	2-year	935.91	922.00	924.41	11.50
	5-year			924.61	11.30
	10-year			924.70	11.21
	25-year			924.80	11.11
	50-year			924.87	11.04
	100-yer			924.95	10.96

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCL502	2-year	934.00	924.00	924.79	9.21
	5-year			925.18	8.82
	10-year			925.43	8.57
	25-year			925.74	8.26
	50-year			925.96	8.04
	100-yer			926.25	7.75
NCL503	2-year	972.00	961.73	962.14	9.86
	5-year			962.32	9.68
	10-year			962.42	9.58
	25-year			962.54	9.46
	50-year			962.62	9.38
	100-yer			962.72	9.28
NCMC01	2-year	890.00	868.00	874.95	15.05
	5-year			876.47	13.53
	10-year			876.96	13.04
	25-year			878.18	11.82
	50-year			878.94	11.06
	100-yer			879.78	10.22
NCMC02	2-year	899.08	877.70	884.70	14.38
	5-year			886.24	12.84
	10-year			886.75	12.33
	25-year			888.04	11.04
	50-year			888.89	10.19
	100-yer			889.88	9.20
NCMC03	2-year	907.00	882.76	887.49	19.51
	5-year			888.46	18.54
	10-year			888.82	18.18
	25-year			890.01	16.99
	50-year			890.97	16.03
	100-yer			891.79	15.21
NCMC04	2-year	907.00	882.89	887.56	19.44
	5-year			888.55	18.45
	10-year			888.91	18.09
	25-year			890.09	16.91
	50-year			891.05	15.95
	100-yer			891.87	15.13
NCMC05	2-year	904.93	886.36	892.78	12.15
	5-year			893.47	11.46
	10-year			893.70	11.23
	25-year			894.13	10.80
	50-year			894.32	10.61
	100-yer			894.45	10.48
NCMC06	2-year	901.88	889.88	895.50	6.38
	5-year			895.94	5.94
	10-year			896.08	5.80
	25-year			896.42	5.46
	50-year			896.63	5.25
	100-yer			896.88	5.00

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCMC07	2-year	904.69	894.60	898.35	6.34
	5-year			898.46	6.23
	10-year			899.22	5.47
	25-year			899.54	5.15
	50-year			899.74	4.95
	100-yer			900.00	4.69
NCMC08	2-year	907.00	894.65	898.99	8.01
	5-year			899.82	7.18
	10-year			900.55	6.45
	25-year			901.31	5.69
	50-year			901.85	5.15
	100-yer			902.45	4.55
NCMC09	2-year	910.00	897.35	903.28	6.72
	5-year			903.77	6.23
	10-year			903.98	6.02
	25-year			904.15	5.85
	50-year			904.28	5.72
	100-yer			904.43	5.57
NCMC10	2-year	910.00	899.37	903.72	6.28
	5-year			904.44	5.56
	10-year			904.76	5.24
	25-year			905.11	4.89
	50-year			905.35	4.65
	100-yer			905.63	4.37
NCMC11	2-year	910.00	900.82	904.95	5.05
	5-year			905.39	4.61
	10-year			905.61	4.39
	25-year			905.86	4.14
	50-year			906.04	3.96
	100-yer			906.27	3.73
NCMC12	2-year	913.00	903.48	907.36	5.64
	5-year			907.76	5.24
	10-year			907.91	5.09
	25-year			908.09	4.91
	50-year			908.22	4.78
	100-yer			908.39	4.61
NCMC13	2-year	915.00	906.50	910.39	4.61
	5-year			910.56	4.44
	10-year			910.62	4.38
	25-year			910.74	4.26
	50-year			910.87	4.13
	100-yer			911.04	3.96
NCMC14	2-year	891.93	873.93	881.59	10.34
	5-year			883.14	8.79
	10-year			883.65	8.28
	25-year			884.87	7.06
	50-year			885.64	6.29
	100-yer			886.48	5.45

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCMC15	2-year	896.33	874.00	888.28	8.05
	5-year			889.27	7.06
	10-year			889.60	6.73
	25-year			890.48	5.85
	50-year			891.06	5.27
	100-yer			891.72	4.61
POL102	2-year	925.09	919.01	919.39	5.70
	5-year			919.48	5.61
	10-year			919.52	5.57
	25-year			919.58	5.51
	50-year			919.62	5.47
	100-yer			919.67	5.42
POL103	2-year	926.32	920.49	921.73	4.59
	5-year			922.00	4.32
	10-year			922.11	4.21
	25-year			922.32	4.00
	50-year			922.49	3.83
	100-yer			922.75	3.57
POL104	2-year	927.00	921.92	922.83	4.17
	5-year			923.04	3.96
	10-year			923.13	3.87
	25-year			923.28	3.72
	50-year			923.43	3.57
	100-yer			923.68	3.32
POL105	2-year	932.05	927.30	928.58	3.47
	5-year			928.92	3.13
	10-year			929.07	2.98
	25-year			929.39	2.66
	50-year			930.20	1.85
	100-yer			931.09	0.96
POL106	2-year	932.55	928.38	929.02	3.53
	5-year			929.17	3.38
	10-year			929.29	3.26
	25-year			929.56	2.99
	50-year			930.09	2.46
	100-yer			931.29	1.26
POL107	2-year	934.28	930.49	931.59	2.69
	5-year			931.87	2.41
	10-year			931.99	2.29
	25-year			932.18	2.10
	50-year			932.30	1.98
	100-yer			932.46	1.82
POL108	2-year	934.57	931.07	932.73	1.84
	5-year			933.53	1.04
	10-year			933.66	0.91
	25-year			933.76	0.81
	50-year			933.81	0.76
	100-yer			933.89	0.68

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL109	2-year	935.52	931.69	932.82	2.70
	5-year			933.81	1.71
	10-year			934.11	1.41
	25-year			934.38	1.14
	50-year			934.55	0.97
	100-yer			934.60	0.92
POL110	2-year	935.55	932.35	933.15	2.40
	5-year			933.82	1.73
	10-year			934.23	1.32
	25-year			934.65	0.90
	50-year			934.74	0.81
	100-yer			934.79	0.76
POL201	2-year	910.50	906.08	906.91	3.59
	5-year			907.04	3.46
	10-year			907.15	3.35
	25-year			907.41	3.09
	50-year			907.58	2.92
	100-yer			907.85	2.65
POL301	2-year	919.05	913.80	917.77	1.28
	5-year			917.93	1.12
	10-year			918.01	1.04
	25-year			918.11	0.94
	50-year			918.17	0.88
	100-yer			918.26	0.79
POL302	2-year	919.77	914.77	915.80	3.98
	5-year			916.19	3.58
	10-year			916.43	3.34
	25-year			916.74	3.03
	50-year			916.95	2.82
	100-yer			917.24	2.53
POL303	2-year	940.00	931.00	931.22	8.78
	5-year			931.27	8.73
	10-year			931.30	8.70
	25-year			931.33	8.67
	50-year			931.35	8.65
	100-yer			931.38	8.62
POL304	2-year	937.24	931.41	935.18	2.06
	5-year			936.41	0.83
	10-year			936.49	0.75
	25-year			936.56	0.68
	50-year			936.61	0.63
	100-yer			936.67	0.57
POL305	2-year	939.94	934.27	935.94	4.00
	5-year			938.12	1.82
	10-year			938.63	1.31
	25-year			938.99	0.95
	50-year			939.03	0.91
	100-yer			939.06	0.88

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL306	2-year	942.07	939.07	939.80	2.27
	5-year			940.04	2.03
	10-year			940.24	1.83
	25-year			940.62	1.45
	50-year			940.84	1.23
	100-yer			941.12	0.95
POL401	2-year	935.00	927.31	928.20	6.80
	5-year			928.42	6.58
	10-year			928.53	6.47
	25-year			928.69	6.31
	50-year			928.80	6.20
	100-yer			928.95	6.05
POL402	2-year	935.53	927.31	928.20	7.33
	5-year			928.42	7.11
	10-year			928.53	7.00
	25-year			928.69	6.84
	50-year			928.80	6.73
	100-yer			928.95	6.58
POL403	2-year	936.12	930.70	932.06	4.06
	5-year			932.59	3.53
	10-year			934.39	1.73
	25-year			935.20	0.92
	50-year			935.25	0.87
	100-yer			935.29	0.83
POL404	2-year	937.42	932.17	933.56	3.86
	5-year			934.37	3.05
	10-year			936.49	0.93
	25-year			936.58	0.84
	50-year			936.61	0.81
	100-yer			936.65	0.77
POL405	2-year	938.15	933.15	934.57	3.58
	5-year			935.80	2.35
	10-year			937.30	0.85
	25-year			937.35	0.80
	50-year			937.38	0.77
	100-yer			937.41	0.74
POL406	2-year	930.00	927.31	928.20	1.80
	5-year			928.42	1.58
	10-year			928.53	1.47
	25-year			928.69	1.31
	50-year			928.80	1.20
	100-yer			928.95	1.05
POL501	2-year	930.20	925.70	926.74	3.46
	5-year			926.99	3.21
	10-year			927.12	3.08
	25-year			927.28	2.92
	50-year			927.39	2.81
	100-yer			927.52	2.68

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL502	2-year	932.00	926.08	930.13	1.87
	5-year			930.21	1.79
	10-year			930.25	1.75
	25-year			930.31	1.69
	50-year			930.34	1.66
	100-yer			930.39	1.61
POL503	2-year	932.80	927.97	930.13	2.67
	5-year			930.21	2.59
	10-year			930.25	2.55
	25-year			930.31	2.49
	50-year			930.34	2.46
	100-yer			930.39	2.41
POL601	2-year	936.08	930.75	932.64	3.44
	5-year			933.55	2.53
	10-year			933.71	2.37
	25-year			933.89	2.19
	50-year			934.01	2.07
	100-yer			934.13	1.95
POMC01	2-year	898.30	888.30	891.34	6.96
	5-year			891.86	6.44
	10-year			892.16	6.14
	25-year			892.67	5.63
	50-year			892.98	5.32
	100-yer			893.30	5.00
POMC02	2-year	909.87	899.87	902.19	7.68
	5-year			902.60	7.27
	10-year			902.79	7.08
	25-year			902.98	6.89
	50-year			903.10	6.77
	100-yer			903.22	6.65
POMC03	2-year	912.40	902.40	906.41	5.99
	5-year			906.90	5.50
	10-year			907.05	5.35
	25-year			907.23	5.17
	50-year			907.34	5.06
	100-yer			907.52	4.88
POMC04	2-year	910.90	902.90	906.45	4.45
	5-year			906.95	3.95
	10-year			907.13	3.77
	25-year			907.39	3.51
	50-year			907.56	3.34
	100-yer			907.83	3.07
POMC05	2-year	914.00	906.00	906.91	7.09
	5-year			907.04	6.96
	10-year			907.14	6.86
	25-year			907.41	6.59
	50-year			907.58	6.42
	100-yer			907.85	6.15

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POMC06	2-year	915.00	908.31	909.88	5.12
	5-year			910.11	4.89
	10-year			910.24	4.76
	25-year			910.49	4.51
	50-year			910.61	4.39
	100-yer			910.76	4.24
POMC07	2-year	918.60	908.60	910.36	8.24
	5-year			910.69	7.91
	10-year			910.91	7.69
	25-year			911.70	6.90
	50-year			912.19	6.41
	100-yer			912.96	5.64
POMC08	2-year	919.60	909.60	911.23	8.37
	5-year			911.50	8.10
	10-year			911.69	7.91
	25-year			912.18	7.42
	50-year			912.50	7.10
	100-yer			913.10	6.50
POMC09	2-year	916.47	910.30	912.28	4.19
	5-year			912.78	3.69
	10-year			913.10	3.37
	25-year			914.13	2.34
	50-year			914.77	1.70
	100-yer			915.20	1.27
POMC10	2-year	919.00	911.46	913.16	5.84
	5-year			913.39	5.61
	10-year			913.52	5.48
	25-year			914.22	4.78
	50-year			914.81	4.19
	100-yer			915.24	3.76
POMC11	2-year	919.60	911.60	913.20	6.40
	5-year			913.44	6.16
	10-year			913.61	5.99
	25-year			914.32	5.28
	50-year			914.97	4.63
	100-yer			915.53	4.07
POMC12	2-year	920.00	912.00	913.26	6.74
	5-year			913.57	6.43
	10-year			913.91	6.09
	25-year			914.51	5.49
	50-year			915.09	4.91
	100-yer			915.61	4.39
POMC13	2-year	922.14	912.14	915.49	6.65
	5-year			916.46	5.68
	10-year			916.75	5.39
	25-year			917.06	5.08
	50-year			917.24	4.90
	100-yer			917.47	4.67

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POMC14	2-year	935.00	921.14	921.60	13.40
	5-year			921.72	13.28
	10-year			921.78	13.22
	25-year			921.86	13.14
	50-year			921.91	13.09
	100-yer			921.98	13.02
POMC15	2-year	930.00	925.20	926.51	3.49
	5-year			926.71	3.29
	10-year			926.81	3.19
	25-year			926.93	3.07
	50-year			927.01	2.99
	100-yer			927.11	2.89
POMC16	2-year	934.14	926.50	927.44	6.70
	5-year			927.63	6.51
	10-year			927.72	6.42
	25-year			927.84	6.30
	50-year			927.92	6.22
	100-yer			928.01	6.13
POMC17	2-year	934.22	930.22	932.64	1.58
	5-year			933.55	0.67
	10-year			933.71	0.51
	25-year			933.89	0.33
	50-year			934.00	0.22
	100-yer			934.13	0.09
POMC18	2-year	936.94	930.58	935.47	1.47
	5-year			936.17	0.77
	10-year			936.25	0.69
	25-year			936.34	0.60
	50-year			936.40	0.54
	100-yer			936.47	0.47
POMC19	2-year	937.00	931.42	935.47	1.53
	5-year			936.18	0.82
	10-year			936.25	0.75
	25-year			936.34	0.66
	50-year			936.40	0.60
	100-yer			936.47	0.53
PRL101	2-year	890.00	878.04	878.45	11.55
	5-year			878.77	11.23
	10-year			879.12	10.88
	25-year			879.55	10.45
	50-year			879.79	10.21
	100-yer			880.16	9.84
PRL102	2-year	891.00	878.67	880.44	10.56
	5-year			881.04	9.96
	10-year			881.40	9.60
	25-year			882.13	8.87
	50-year			883.38	7.62
	100-yer			890.01	0.99

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL103	2-year	891.08	879.50	880.52	10.56
	5-year			881.04	10.04
	10-year			881.40	9.68
	25-year			882.17	8.91
	50-year			883.43	7.65
	100-yer			890.17	0.91
PRL104	2-year	893.48	883.91	884.80	8.68
	5-year			885.01	8.47
	10-year			885.12	8.36
	25-year			885.26	8.22
	50-year			885.37	8.11
	100-yer			891.31	2.17
PRL105	2-year	893.51	884.74	885.60	7.91
	5-year			885.80	7.71
	10-year			885.91	7.60
	25-year			886.04	7.47
	50-year			886.15	7.36
	100-yer			891.50	2.01
PRL106	2-year	893.65	886.82	887.77	5.88
	5-year			888.00	5.65
	10-year			888.14	5.51
	25-year			888.34	5.31
	50-year			888.52	5.13
	100-yer			892.73	0.92
PRL107	2-year	893.71	887.31	888.41	5.30
	5-year			888.68	5.03
	10-year			888.84	4.87
	25-year			889.09	4.62
	50-year			889.41	4.30
	100-yer			892.96	0.75
PRL201	2-year	889.00	877.77	879.45	9.55
	5-year			879.81	9.19
	10-year			880.00	9.00
	25-year			880.22	8.78
	50-year			880.37	8.63
	100-yer			880.55	8.45
PRL202	2-year	889.00	879.90	882.08	6.92
	5-year			882.79	6.21
	10-year			883.17	5.83
	25-year			883.65	5.35
	50-year			883.98	5.02
	100-yer			884.40	4.60
PRL203	2-year	894.00	881.77	884.14	9.86
	5-year			884.63	9.37
	10-year			884.81	9.19
	25-year			885.03	8.97
	50-year			885.28	8.72
	100-yer			885.55	8.45

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL204	2-year	894.00	888.86	890.30	3.70
	5-year			890.60	3.40
	10-year			890.75	3.25
	25-year			890.93	3.07
	50-year			891.10	2.90
	100-yer			891.28	2.72
PRL205	2-year	894.29	889.04	890.50	3.79
	5-year			890.79	3.50
	10-year			890.94	3.35
	25-year			891.11	3.18
	50-year			891.25	3.04
	100-yer			891.42	2.87
PRL206	2-year	895.21	889.96	891.32	3.89
	5-year			891.70	3.51
	10-year			891.90	3.31
	25-year			892.16	3.05
	50-year			892.34	2.87
	100-yer			892.56	2.65
PRL207	2-year	897.00	891.00	892.60	4.40
	5-year			892.88	4.12
	10-year			893.03	3.97
	25-year			893.20	3.80
	50-year			893.33	3.67
	100-yer			893.48	3.52
PRL208	2-year	900.83	893.42	895.84	4.99
	5-year			896.70	4.13
	10-year			897.58	3.25
	25-year			899.08	1.75
	50-year			899.20	1.63
	100-yer			899.33	1.50
PRL209	2-year	900.89	893.97	899.47	1.42
	5-year			899.76	1.13
	10-year			899.93	0.96
	25-year			900.15	0.74
	50-year			900.26	0.63
	100-yer			900.41	0.48
PRL210	2-year	902.78	895.57	901.25	1.53
	5-year			901.42	1.36
	10-year			901.50	1.28
	25-year			901.61	1.17
	50-year			901.69	1.09
	100-yer			901.78	1.00
PRL211	2-year	902.83	895.58	901.55	1.28
	5-year			901.78	1.05
	10-year			901.91	0.92
	25-year			902.06	0.77
	50-year			902.17	0.66
	100-yer			902.32	0.51

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL212	2-year	904.26	897.68	902.76	1.50
	5-year			902.92	1.34
	10-year			903.01	1.25
	25-year			903.12	1.14
	50-year			903.20	1.06
	100-yer			903.29	0.97
PRL213	2-year	904.62	898.20	902.98	1.64
	5-year			903.13	1.49
	10-year			903.22	1.40
	25-year			903.33	1.29
	50-year			903.40	1.22
	100-yer			903.50	1.12
PRL214	2-year	911.73	906.73	911.01	0.72
	5-year			911.12	0.61
	10-year			911.18	0.55
	25-year			911.26	0.47
	50-year			911.31	0.42
	100-yer			911.37	0.36
PRL215	2-year	913.56	907.39	911.89	1.67
	5-year			912.02	1.54
	10-year			912.09	1.47
	25-year			912.17	1.39
	50-year			912.23	1.33
	100-yer			912.30	1.26
PRL216	2-year	913.69	907.69	912.24	1.45
	5-year			912.40	1.30
	10-year			912.48	1.21
	25-year			912.58	1.11
	50-year			912.65	1.04
	100-yer			912.74	0.95
PRL217	2-year	916.99	909.24	915.17	1.82
	5-year			915.26	1.73
	10-year			915.31	1.68
	25-year			915.37	1.62
	50-year			915.41	1.58
	100-yer			915.46	1.53
PRL218	2-year	917.39	910.72	916.48	0.91
	5-year			916.57	0.82
	10-year			916.61	0.78
	25-year			916.66	0.73
	50-year			916.70	0.69
	100-yer			916.74	0.65
PRL2A01	2-year	912.97	909.14	912.12	0.85
	5-year			912.19	0.78
	10-year			912.22	0.75
	25-year			912.27	0.70
	50-year			912.30	0.67
	100-yer			912.34	0.63

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL301	2-year	907.00	901.92	905.29	1.71
	5-year			905.67	1.33
	10-year			905.82	1.18
	25-year			906.00	1.00
	50-year			906.12	0.88
	100-yer			906.26	0.74
PRL302	2-year	907.29	902.29	905.65	1.64
	5-year			905.86	1.43
	10-year			905.98	1.31
	25-year			906.13	1.16
	50-year			906.23	1.06
	100-yer			906.35	0.94
PRL303	2-year	912.12	904.79	907.99	4.13
	5-year			910.20	1.92
	10-year			910.30	1.82
	25-year			910.39	1.73
	50-year			910.45	1.67
	100-yer			910.51	1.61
PRL304	2-year	911.16	904.94	908.89	2.27
	5-year			910.65	0.51
	10-year			910.74	0.42
	25-year			910.84	0.32
	50-year			910.91	0.25
	100-yer			911.00	0.16
PRL305	2-year	912.93	907.35	909.12	3.81
	5-year			911.82	1.11
	10-year			912.05	0.88
	25-year			912.16	0.77
	50-year			912.23	0.70
	100-yer			912.30	0.63
PRL306	2-year	913.29	908.21	908.71	4.58
	5-year			908.81	4.48
	10-year			908.86	4.43
	25-year			908.93	4.36
	50-year			908.97	4.32
	100-yer			909.04	4.25
PRL307	2-year	918.11	913.61	914.12	3.99
	5-year			914.22	3.89
	10-year			914.28	3.83
	25-year			914.35	3.76
	50-year			914.40	3.71
	100-yer			914.46	3.65
PRL401	2-year	927.67	923.25	923.81	3.86
	5-year			923.92	3.75
	10-year			923.98	3.69
	25-year			924.05	3.62
	50-year			924.10	3.57
	100-yer			924.17	3.50

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC00	2-year	874.00	861.41	863.85	10.15
	5-year			864.45	9.55
	10-year			864.75	9.25
	25-year			865.06	8.94
	50-year			865.23	8.77
	100-yer			865.47	8.53
PRMC01	2-year	905.00	869.97	872.42	32.58
	5-year			873.03	31.97
	10-year			873.31	31.69
	25-year			873.63	31.37
	50-year			873.80	31.20
	100-yer			874.04	30.96
PRMC02	2-year	905.00	871.81	874.17	30.83
	5-year			875.01	29.99
	10-year			875.44	29.56
	25-year			875.92	29.08
	50-year			876.18	28.82
	100-yer			876.56	28.44
PRMC03	2-year	905.00	873.16	875.52	29.48
	5-year			876.38	28.62
	10-year			876.84	28.16
	25-year			877.35	27.65
	50-year			877.63	27.37
	100-yer			878.05	26.95
PRMC04	2-year	905.08	874.91	877.27	27.81
	5-year			878.13	26.95
	10-year			878.60	26.48
	25-year			879.13	25.95
	50-year			879.43	25.65
	100-yer			879.87	25.21
PRMC05	2-year	888.00	875.00	878.06	9.94
	5-year			878.76	9.24
	10-year			879.12	8.88
	25-year			879.54	8.46
	50-year			879.79	8.21
	100-yer			880.16	7.84
PRMC06	2-year	889.00	876.00	878.03	10.97
	5-year			878.72	10.28
	10-year			879.09	9.91
	25-year			879.51	9.49
	50-year			879.76	9.24
	100-yer			880.14	8.86
PRMC07	2-year	889.00	878.81	880.82	8.18
	5-year			881.18	7.82
	10-year			881.47	7.53
	25-year			881.61	7.39
	50-year			881.70	7.30
	100-yer			881.97	7.03

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC08	2-year	891.00	881.40	882.64	8.36
	5-year			882.90	8.10
	10-year			883.04	7.96
	25-year			883.10	7.90
	50-year			883.15	7.85
	100-yer			883.28	7.72
PRMC09	2-year	892.00	883.33	886.01	5.99
	5-year			886.78	5.22
	10-year			887.77	4.23
	25-year			889.15	2.85
	50-year			889.94	2.06
	100-yer			890.53	1.47
PRMC10	2-year	893.04	885.04	886.88	6.16
	5-year			887.55	5.49
	10-year			888.51	4.53
	25-year			890.23	2.81
	50-year			890.80	2.24
	100-yer			891.21	1.83
PRMC11	2-year	894.56	886.56	888.84	5.72
	5-year			889.20	5.36
	10-year			889.25	5.31
	25-year			890.31	4.25
	50-year			890.84	3.72
	100-yer			891.24	3.32
PRMC12	2-year	892.00	887.00	890.43	1.57
	5-year			890.83	1.17
	10-year			890.99	1.01
	25-year			891.24	0.76
	50-year			891.39	0.61
	100-yer			891.57	0.43
PRMC13	2-year	894.00	887.24	890.43	3.57
	5-year			890.83	3.17
	10-year			890.99	3.01
	25-year			891.24	2.76
	50-year			891.39	2.61
	100-yer			891.58	2.42
PRMC14	2-year	894.00	887.37	891.25	2.75
	5-year			891.91	2.09
	10-year			892.12	1.88
	25-year			892.58	1.42
	50-year			892.91	1.09
	100-yer			893.35	0.65
PRMC15	2-year	899.00	889.60	891.82	7.18
	5-year			892.33	6.67
	10-year			892.58	6.42
	25-year			892.95	6.05
	50-year			893.18	5.82
	100-yer			893.51	5.49

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC16	2-year	910.00	899.57	902.29	7.71
	5-year			902.88	7.12
	10-year			903.22	6.78
	25-year			903.63	6.37
	50-year			903.92	6.08
	100-yer			904.32	5.68
PRMC17	2-year	914.36	909.36	910.23	4.13
	5-year			910.37	3.99
	10-year			910.44	3.92
	25-year			910.53	3.83
	50-year			910.59	3.77
	100-yer			910.67	3.69
PRMC18	2-year	914.00	909.50	913.50	0.50
	5-year			913.65	0.35
	10-year			913.73	0.27
	25-year			913.83	0.17
	50-year			913.89	0.11
	100-yer			913.98	0.02
PRMC19	2-year	914.45	909.95	913.92	0.53
	5-year			914.04	0.41
	10-year			914.11	0.34
	25-year			914.20	0.25
	50-year			914.26	0.19
	100-yer			914.34	0.11
PRMC20	2-year	925.04	919.87	924.16	0.88
	5-year			924.22	0.82
	10-year			924.25	0.79
	25-year			924.29	0.75
	50-year			924.31	0.73
	100-yer			924.34	0.70
PRMC21	2-year	926.35	921.60	925.38	0.97
	5-year			925.47	0.88
	10-year			925.51	0.84
	25-year			925.55	0.80
	50-year			925.58	0.77
	100-yer			925.61	0.74
PRMC22	2-year	926.37	922.45	925.39	0.98
	5-year			925.47	0.90
	10-year			925.51	0.86
	25-year			925.55	0.82
	50-year			925.58	0.79
	100-yer			925.61	0.76
RCL0101	2-year	902.07	882.07	883.82	18.25
	5-year			885.76	16.31
	10-year			887.12	14.95
	25-year			888.83	13.24
	50-year			889.96	12.11
	100-yer			891.50	10.57

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0102	2-year	893.53	883.53	885.98	7.55
	5-year			886.59	6.94
	10-year			887.15	6.38
	25-year			888.84	4.69
	50-year			889.97	3.56
	100-yer			891.50	2.03
RCL0103	2-year	893.86	883.86	885.98	7.88
	5-year			886.59	7.27
	10-year			887.15	6.71
	25-year			888.84	5.02
	50-year			889.97	3.89
	100-yer			891.50	2.36
RCL0104	2-year	903.38	895.38	895.87	7.51
	5-year			895.98	7.40
	10-year			896.05	7.33
	25-year			896.12	7.26
	50-year			896.17	7.21
	100-yer			896.23	7.15
RCL0105	2-year	901.57	895.91	900.09	1.48
	5-year			900.31	1.26
	10-year			900.42	1.15
	25-year			900.56	1.01
	50-year			900.65	0.92
	100-yer			900.78	0.79
RCL0106	2-year	902.30	896.55	900.50	1.80
	5-year			900.62	1.68
	10-year			900.67	1.63
	25-year			900.74	1.56
	50-year			900.82	1.48
	100-yer			900.92	1.38
RCL0107	2-year	903.54	898.62	902.61	0.93
	5-year			902.73	0.81
	10-year			902.78	0.76
	25-year			902.84	0.70
	50-year			902.88	0.66
	100-yer			902.93	0.61
RCL0108	2-year	904.40	899.48	902.96	1.44
	5-year			903.12	1.28
	10-year			903.19	1.21
	25-year			903.29	1.11
	50-year			903.35	1.05
	100-yer			903.44	0.96
RCL0109	2-year	913.93	906.10	911.10	2.83
	5-year			911.16	2.77
	10-year			911.20	2.73
	25-year			911.23	2.70
	50-year			911.26	2.67
	100-yer			911.29	2.64

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0110	2-year	913.65	907.15	911.73	1.92
	5-year			911.81	1.84
	10-year			911.85	1.80
	25-year			911.90	1.75
	50-year			911.93	1.72
	100-yer			911.96	1.69
RCL0111	2-year	913.81	908.81	912.98	0.83
	5-year			913.07	0.74
	10-year			913.11	0.70
	25-year			913.16	0.65
	50-year			913.19	0.62
	100-yer			913.23	0.58
RCL0112	2-year	919.23	914.23	916.07	3.16
	5-year			918.28	0.95
	10-year			918.32	0.91
	25-year			918.36	0.87
	50-year			918.39	0.84
	100-yer			918.42	0.81
RCL0113	2-year	919.81	914.81	916.68	3.13
	5-year			918.93	0.88
	10-year			918.97	0.84
	25-year			919.01	0.80
	50-year			919.04	0.77
	100-yer			919.08	0.73
RCL01A01	2-year	900.00	890.65	890.99	9.01
	5-year			891.06	8.94
	10-year			891.10	8.90
	25-year			891.13	8.87
	50-year			891.14	8.86
	100-yer			891.51	8.49
RCL01A02	2-year	898.24	890.82	892.78	5.46
	5-year			893.17	5.07
	10-year			893.40	4.84
	25-year			893.85	4.39
	50-year			894.05	4.19
	100-yer			894.40	3.84
RCL01A03	2-year	898.90	890.98	892.98	5.92
	5-year			893.30	5.60
	10-year			893.47	5.43
	25-year			893.91	4.99
	50-year			894.11	4.79
	100-yer			894.54	4.36
RCL01A04	2-year	899.10	891.03	893.61	5.49
	5-year			894.14	4.96
	10-year			894.39	4.71
	25-year			894.70	4.40
	50-year			894.95	4.15
	100-yer			896.08	3.02

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL01A05	2-year	898.50	891.08	893.61	4.89
	5-year			894.14	4.36
	10-year			894.39	4.11
	25-year			894.70	3.80
	50-year			894.95	3.55
	100-yer			896.09	2.41
RCL01A06	2-year	902.18	891.18	894.65	7.53
	5-year			896.02	6.16
	10-year			896.70	5.48
	25-year			897.55	4.63
	50-year			898.13	4.05
	100-yer			898.50	3.68
RCL01A07	2-year	911.00	900.00	900.53	10.47
	5-year			900.66	10.34
	10-year			900.71	10.29
	25-year			900.78	10.22
	50-year			900.83	10.17
	100-yer			900.89	10.11
RCL01A08	2-year	904.78	900.09	904.17	0.61
	5-year			904.37	0.41
	10-year			904.46	0.32
	25-year			904.57	0.21
	50-year			904.65	0.13
	100-yer			904.75	0.03
RCL01A09	2-year	918.66	900.39	908.77	9.89
	5-year			908.88	9.78
	10-year			908.93	9.73
	25-year			908.98	9.68
	50-year			909.02	9.64
	100-yer			909.07	9.59
RCL01A10	2-year	916.30	900.72	909.05	7.25
	5-year			909.22	7.08
	10-year			909.31	6.99
	25-year			909.44	6.86
	50-year			909.52	6.78
	100-yer			909.63	6.67
RCL01A11	2-year	910.66	901.66	909.05	1.61
	5-year			909.21	1.45
	10-year			909.29	1.37
	25-year			909.41	1.25
	50-year			909.49	1.17
	100-yer			909.58	1.08
RCL01A12	2-year	911.88	904.88	909.05	2.83
	5-year			909.24	2.64
	10-year			909.37	2.51
	25-year			909.56	2.32
	50-year			909.68	2.20
	100-yer			909.82	2.06

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL01B01	2-year	912.36	906.86	911.20	1.16
	5-year			911.29	1.07
	10-year			911.33	1.03
	25-year			911.39	0.97
	50-year			911.43	0.93
	100-yer			911.48	0.88
RCL0201	2-year	895.83	881.83	884.62	11.21
	5-year			885.88	9.95
	10-year			886.39	9.44
	25-year			886.99	8.84
	50-year			887.40	8.43
	100-yer			887.97	7.86
RCL0202	2-year	899.34	892.34	893.32	6.02
	5-year			893.53	5.81
	10-year			893.71	5.63
	25-year			894.06	5.28
	50-year			894.21	5.13
	100-yer			894.41	4.93
RCL0203	2-year	901.26	894.76	895.96	5.30
	5-year			896.17	5.09
	10-year			896.43	4.83
	25-year			896.82	4.44
	50-year			897.01	4.25
	100-yer			897.25	4.01
RCL0204	2-year	912.50	907.00	911.60	0.90
	5-year			911.66	0.84
	10-year			911.74	0.76
	25-year			911.82	0.68
	50-year			911.87	0.63
	100-yer			911.93	0.57
RCL0205	2-year	912.90	907.51	912.13	0.77
	5-year			912.20	0.70
	10-year			912.31	0.59
	25-year			912.43	0.47
	50-year			912.49	0.41
	100-yer			912.57	0.33
RCL0206	2-year	912.93	908.35	912.33	0.60
	5-year			912.43	0.50
	10-year			912.56	0.37
	25-year			912.71	0.22
	50-year			912.79	0.14
	100-yer			912.89	0.04
RCL0207	2-year	914.77	908.61	913.43	1.34
	5-year			913.80	0.97
	10-year			913.95	0.82
	25-year			914.02	0.75
	50-year			914.06	0.71
	100-yer			914.11	0.66

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0208	2-year	927.98	916.73	919.35	8.63
	5-year			922.85	5.13
	10-year			925.12	2.86
	25-year			925.19	2.79
	50-year			925.23	2.75
	100-yer			925.28	2.70
RCL0209	2-year	926.46	919.13	923.48	2.98
	5-year			925.19	1.27
	10-year			925.42	1.04
	25-year			925.50	0.96
	50-year			925.55	0.91
	100-yer			925.62	0.84
RCL0210	2-year	926.25	919.50	923.68	2.57
	5-year			925.19	1.06
	10-year			925.43	0.83
	25-year			925.50	0.75
	50-year			925.56	0.69
	100-yer			925.62	0.63
RCL0211	2-year	926.00	921.00	923.70	2.30
	5-year			925.19	0.81
	10-year			925.43	0.57
	25-year			925.50	0.50
	50-year			925.56	0.44
	100-yer			925.62	0.38
RCL02A01	2-year	898.67	893.67	895.00	3.67
	5-year			895.66	3.01
	10-year			896.62	2.05
	25-year			897.57	1.10
	50-year			897.88	0.79
	100-yer			898.42	0.25
RCL02A02	2-year	901.09	896.09	896.79	4.30
	5-year			896.98	4.11
	10-year			897.40	3.69
	25-year			898.47	2.62
	50-year			899.05	2.04
	100-yer			899.99	1.10
RCL02B01	2-year	898.72	893.72	894.33	4.39
	5-year			894.48	4.24
	10-year			894.56	4.16
	25-year			894.67	4.05
	50-year			894.74	3.98
	100-yer			894.92	3.80
RCL02B02	2-year	898.90	894.65	895.30	3.60
	5-year			895.49	3.41
	10-year			895.62	3.28
	25-year			895.95	2.95
	50-year			896.32	2.58
	100-yer			896.94	1.96

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL02C01	2-year	914.35	909.35	913.43	0.92
	5-year			913.80	0.55
	10-year			913.95	0.40
	25-year			914.02	0.33
	50-year			914.06	0.29
	100-yer			914.11	0.24
RCL02C02	2-year	914.73	909.73	913.43	1.30
	5-year			913.80	0.93
	10-year			913.95	0.78
	25-year			914.02	0.71
	50-year			914.06	0.67
	100-yer			914.11	0.62
RCL02D01	2-year	926.20	921.20	921.86	4.34
	5-year			923.01	3.19
	10-year			925.35	0.85
	25-year			925.40	0.80
	50-year			925.43	0.77
	100-yer			925.47	0.73
RCL02D02	2-year	926.90	921.90	922.82	4.08
	5-year			923.02	3.88
	10-year			925.64	1.26
	25-year			925.82	1.08
	50-year			925.92	0.98
	100-yer			925.96	0.94
RCL02D03	2-year	927.04	922.04	923.18	3.86
	5-year			923.40	3.64
	10-year			925.91	1.13
	25-year			926.12	0.92
	50-year			926.17	0.87
	100-yer			926.21	0.83
RCL0300	2-year	906.05	890.05	890.94	15.11
	5-year			891.09	14.96
	10-year			891.17	14.88
	25-year			891.27	14.78
	50-year			891.34	14.71
	100-yer			891.40	14.65
RCL0301	2-year	907.82	903.38	904.39	3.43
	5-year			904.52	3.30
	10-year			904.58	3.24
	25-year			904.65	3.17
	50-year			904.71	3.11
	100-yer			904.79	3.03
RCL0302	2-year	907.86	903.61	907.16	0.70
	5-year			907.33	0.53
	10-year			907.42	0.44
	25-year			907.52	0.34
	50-year			907.59	0.27
	100-yer			907.68	0.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0303	2-year	908.07	904.24	907.39	0.68
	5-year			907.52	0.55
	10-year			907.59	0.48
	25-year			907.68	0.39
	50-year			907.74	0.33
	100-yer			907.83	0.24
RCL0304	2-year	916.29	911.12	915.45	0.84
	5-year			915.53	0.76
	10-year			915.57	0.72
	25-year			915.62	0.67
	50-year			915.66	0.63
	100-yer			915.70	0.59
RCL0305	2-year	916.56	911.56	915.82	0.74
	5-year			915.92	0.64
	10-year			915.98	0.58
	25-year			916.04	0.52
	50-year			916.08	0.48
	100-yer			916.14	0.42
RCL0401	2-year	911.42	891.42	892.36	19.06
	5-year			892.56	18.85
	10-year			892.68	18.73
	25-year			892.83	18.59
	50-year			892.93	18.49
	100-yer			893.04	18.37
RCL0402	2-year	903.68	893.68	895.37	8.31
	5-year			896.39	7.29
	10-year			896.55	7.13
	25-year			896.72	6.96
	50-year			896.84	6.84
	100-yer			896.99	6.69
RCL0403	2-year	925.74	915.74	917.17	8.57
	5-year			917.39	8.35
	10-year			917.49	8.25
	25-year			917.62	8.12
	50-year			917.72	8.02
	100-yer			917.82	7.92
RCL0404	2-year	925.91	920.74	921.67	4.24
	5-year			921.91	4.00
	10-year			922.05	3.86
	25-year			922.26	3.65
	50-year			922.60	3.31
	100-yer			924.18	1.73
RCL0405	2-year	926.99	921.99	922.88	4.11
	5-year			923.10	3.89
	10-year			923.23	3.76
	25-year			923.42	3.57
	50-year			923.66	3.33
	100-yer			925.54	1.45

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0406	2-year	926.78	922.78	923.55	3.23
	5-year			923.71	3.07
	10-year			923.80	2.98
	25-year			923.91	2.87
	50-year			924.04	2.74
	100-yer			925.49	1.29
RCL0407	2-year	928.69	924.69	925.11	3.58
	5-year			925.21	3.48
	10-year			925.27	3.42
	25-year			925.33	3.36
	50-year			925.38	3.31
	100-yer			925.48	3.21
RCL0408	2-year	931.00	927.85	928.83	2.17
	5-year			929.06	1.94
	10-year			929.19	1.81
	25-year			929.37	1.63
	50-year			929.53	1.47
	100-yer			930.03	0.97
RCL0501	2-year	920.92	898.15	899.32	21.60
	5-year			899.51	21.41
	10-year			899.62	21.30
	25-year			899.74	21.18
	50-year			899.83	21.09
	100-yer			899.93	20.99
RCL0502	2-year	911.00	901.23	903.09	7.91
	5-year			903.51	7.49
	10-year			903.73	7.27
	25-year			904.01	6.99
	50-year			904.22	6.78
	100-yer			904.46	6.54
RCL0503	2-year	916.65	909.98	911.89	4.76
	5-year			912.40	4.25
	10-year			912.72	3.93
	25-year			913.23	3.42
	50-year			914.38	2.27
	100-yer			915.79	0.86
RCL0504	2-year	922.57	917.49	921.71	0.86
	5-year			921.81	0.76
	10-year			921.87	0.70
	25-year			921.92	0.65
	50-year			921.97	0.60
	100-yer			922.02	0.55
RCL0505	2-year	923.75	917.58	923.22	0.53
	5-year			923.36	0.39
	10-year			923.43	0.32
	25-year			923.51	0.24
	50-year			923.57	0.18
	100-yer			923.65	0.10

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL05A01	2-year	919.82	913.40	914.57	5.25
	5-year			914.87	4.95
	10-year			915.12	4.70
	25-year			916.10	3.72
	50-year			918.09	1.73
	100-yer			918.94	0.88
RCL05A02	2-year	925.76	919.68	920.68	5.08
	5-year			920.92	4.84
	10-year			921.06	4.70
	25-year			921.23	4.53
	50-year			921.83	3.93
	100-yer			924.21	1.55
RCL05B01	2-year	923.86	918.86	923.22	0.64
	5-year			923.36	0.50
	10-year			923.43	0.43
	25-year			923.51	0.35
	50-year			923.57	0.29
	100-yer			923.65	0.21
RCL05C01	2-year	924.07	919.07	923.22	0.85
	5-year			923.36	0.71
	10-year			923.43	0.64
	25-year			923.51	0.56
	50-year			923.57	0.50
	100-yer			923.65	0.42
RCL0601	2-year	944.25	930.25	930.52	13.73
	5-year			930.58	13.67
	10-year			930.62	13.63
	25-year			930.67	13.58
	50-year			930.70	13.55
	100-yer			930.74	13.51
RCL0602	2-year	937.76	932.84	934.62	3.14
	5-year			936.87	0.89
	10-year			936.94	0.82
	25-year			937.00	0.76
	50-year			937.03	0.73
	100-yer			937.07	0.69
RCL0603	2-year	937.97	933.72	934.86	3.11
	5-year			937.06	0.91
	10-year			937.11	0.86
	25-year			937.15	0.82
	50-year			937.18	0.79
	100-yer			937.22	0.75
RCL0701	2-year	938.50	923.99	924.31	14.19
	5-year			924.40	14.10
	10-year			924.44	14.06
	25-year			924.50	14.00
	50-year			924.54	13.96
	100-yer			924.58	13.92

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0702	2-year	929.03	926.03	928.13	0.90
	5-year			928.19	0.84
	10-year			928.22	0.81
	25-year			928.25	0.78
	50-year			928.28	0.75
	100-yer			928.31	0.72
RCL0703	2-year	936.09	933.09	933.65	2.44
	5-year			933.74	2.35
	10-year			933.79	2.30
	25-year			933.85	2.24
	50-year			933.88	2.21
	100-yer			933.93	2.16
RCL0704	2-year	936.09	933.40	934.43	1.66
	5-year			934.59	1.50
	10-year			934.68	1.41
	25-year			934.79	1.30
	50-year			934.86	1.23
	100-yer			934.95	1.14
RCL0705	2-year	944.33	937.17	937.31	7.02
	5-year			937.33	7.00
	10-year			937.35	6.98
	25-year			937.37	6.96
	50-year			937.38	6.95
	100-yer			937.40	6.93
RCL0706	2-year	944.84	938.17	939.20	5.64
	5-year			939.36	5.48
	10-year			939.44	5.40
	25-year			939.55	5.30
	50-year			939.63	5.21
	100-yer			939.74	5.10
RCL0707	2-year	945.83	939.50	940.15	5.68
	5-year			940.25	5.58
	10-year			940.31	5.52
	25-year			940.37	5.46
	50-year			940.42	5.42
	100-yer			940.47	5.36
RCL0800	2-year	916.00	897.63	900.41	15.59
	5-year			900.88	15.12
	10-year			901.12	14.88
	25-year			901.39	14.61
	50-year			901.55	14.45
	100-yer			901.77	14.23
RCL0801	2-year	918.65	902.65	905.37	13.28
	5-year			905.80	12.85
	10-year			906.03	12.62
	25-year			906.28	12.37
	50-year			906.43	12.22
	100-yer			906.63	12.02

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0802	2-year	917.39	907.39	907.91	9.48
	5-year			908.03	9.36
	10-year			908.10	9.29
	25-year			908.18	9.21
	50-year			908.23	9.16
	100-yer			908.29	9.10
RCL0803	2-year	912.00	907.62	909.14	2.86
	5-year			909.45	2.55
	10-year			909.61	2.39
	25-year			909.81	2.19
	50-year			909.94	2.06
	100-yer			910.13	1.87
RCL0804	2-year	912.95	907.67	910.22	2.73
	5-year			910.57	2.38
	10-year			910.74	2.21
	25-year			910.95	2.00
	50-year			911.08	1.87
	100-yer			911.26	1.69
RCL0805	2-year	914.00	907.68	910.32	3.68
	5-year			910.81	3.19
	10-year			911.03	2.97
	25-year			911.26	2.74
	50-year			911.54	2.46
	100-yer			911.88	2.12
RCL0806	2-year	914.11	908.89	910.53	3.58
	5-year			911.12	2.99
	10-year			911.42	2.69
	25-year			911.98	2.13
	50-year			912.49	1.62
	100-yer			912.80	1.31
RCL0807	2-year	914.95	909.44	911.42	3.53
	5-year			911.75	3.20
	10-year			911.94	3.01
	25-year			912.30	2.65
	50-year			912.68	2.27
	100-yer			912.97	1.98
RCL0808	2-year	915.00	909.62	911.57	3.43
	5-year			911.95	3.05
	10-year			912.16	2.84
	25-year			912.63	2.37
	50-year			913.06	1.94
	100-yer			913.52	1.48
RCL0809	2-year	916.92	909.88	912.29	4.63
	5-year			912.63	4.29
	10-year			912.82	4.10
	25-year			913.10	3.82
	50-year			913.38	3.54
	100-yer			913.74	3.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0810	2-year	917.32	910.32	912.60	4.72
	5-year			913.07	4.25
	10-year			913.32	4.01
	25-year			913.80	3.52
	50-year			914.26	3.06
	100-yer			914.94	2.38
RCL0811	2-year	917.15	911.15	913.16	3.99
	5-year			913.55	3.60
	10-year			913.77	3.38
	25-year			914.11	3.04
	50-year			914.45	2.70
	100-yer			915.02	2.13
RCL0812	2-year	917.54	911.54	913.47	4.07
	5-year			913.93	3.61
	10-year			914.17	3.37
	25-year			914.53	3.01
	50-year			914.98	2.56
	100-yer			915.66	1.88
RCL0813	2-year	917.90	911.90	914.18	3.72
	5-year			914.52	3.38
	10-year			914.70	3.20
	25-year			914.93	2.97
	50-year			915.21	2.69
	100-yer			915.78	2.12
RCL0814	2-year	919.64	913.31	915.16	4.48
	5-year			915.48	4.16
	10-year			915.63	4.01
	25-year			915.82	3.82
	50-year			915.95	3.69
	100-yer			916.10	3.54
RCL0815	2-year	919.77	913.50	915.57	4.20
	5-year			916.02	3.75
	10-year			916.29	3.48
	25-year			916.68	3.09
	50-year			916.85	2.92
	100-yer			917.35	2.42
RCL0816	2-year	919.69	913.39	915.35	4.34
	5-year			915.72	3.97
	10-year			915.93	3.76
	25-year			916.19	3.50
	50-year			916.32	3.37
	100-yer			916.64	3.05
RCL0817	2-year	922.96	917.36	917.45	5.51
	5-year			917.47	5.49
	10-year			917.48	5.48
	25-year			917.49	5.47
	50-year			917.50	5.46
	100-yer			917.51	5.45

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0818	2-year	923.00	917.40	917.80	5.20
	5-year			917.85	5.15
	10-year			917.88	5.12
	25-year			917.91	5.09
	50-year			917.93	5.07
	100-yer			917.96	5.04
RCL08A01	2-year	914.90	903.90	905.11	9.79
	5-year			905.35	9.55
	10-year			905.44	9.46
	25-year			905.53	9.37
	50-year			905.59	9.31
	100-yer			905.67	9.23
RCL08A02	2-year	923.00	915.00	915.18	7.82
	5-year			915.20	7.80
	10-year			915.21	7.79
	25-year			915.24	7.76
	50-year			915.26	7.74
	100-yer			915.29	7.71
RCL08A03	2-year	922.76	915.76	917.86	4.90
	5-year			919.48	3.28
	10-year			919.96	2.80
	25-year			920.19	2.57
	50-year			920.31	2.45
	100-yer			920.46	2.30
RCL08A04	2-year	925.00	916.17	917.95	7.05
	5-year			919.68	5.32
	10-year			920.24	4.76
	25-year			920.62	4.38
	50-year			920.87	4.13
	100-yer			921.25	3.75
RCL08A05	2-year	923.42	916.42	918.09	5.33
	5-year			919.76	3.66
	10-year			920.36	3.06
	25-year			920.81	2.61
	50-year			921.11	2.31
	100-yer			921.60	1.82
RCL08A06	2-year	930.96	924.35	924.65	6.31
	5-year			924.71	6.26
	10-year			924.72	6.24
	25-year			924.74	6.22
	50-year			924.79	6.17
	100-yer			924.84	6.12
RCL08A07	2-year	931.00	924.60	926.49	4.51
	5-year			926.94	4.06
	10-year			927.34	3.66
	25-year			927.93	3.07
	50-year			928.20	2.80
	100-yer			928.30	2.70

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL08A08	2-year	930.94	926.00	926.48	4.46
	5-year			926.94	4.00
	10-year			927.34	3.60
	25-year			927.93	3.01
	50-year			928.21	2.73
	100-yer			928.30	2.64
RCL08A09	2-year	931.00	928.00	929.81	1.19
	5-year			930.07	0.93
	10-year			930.14	0.86
	25-year			930.21	0.79
	50-year			930.23	0.77
	100-yer			930.29	0.71
RCL08B01	2-year	913.19	907.71	910.33	2.86
	5-year			910.82	2.37
	10-year			911.04	2.15
	25-year			911.30	1.89
	50-year			911.55	1.64
	100-yer			911.90	1.29
RCL08B02	2-year	915.00	908.33	910.33	4.67
	5-year			910.83	4.17
	10-year			911.11	3.89
	25-year			911.48	3.52
	50-year			911.70	3.30
	100-yer			912.94	2.06
RCL08B03	2-year	916.70	911.45	911.91	4.79
	5-year			911.99	4.71
	10-year			912.03	4.67
	25-year			912.08	4.62
	50-year			912.12	4.58
	100-yer			912.24	4.46
RCL08C01	2-year	919.72	912.08	913.47	6.25
	5-year			913.94	5.78
	10-year			914.19	5.53
	25-year			914.53	5.19
	50-year			914.98	4.74
	100-yer			915.66	4.06
RCL08C02	2-year	917.38	912.38	914.32	3.06
	5-year			914.74	2.64
	10-year			915.00	2.38
	25-year			915.32	2.06
	50-year			915.60	1.78
	100-yer			916.27	1.11
RCL08C03	2-year	922.00	914.88	916.65	5.35
	5-year			917.13	4.87
	10-year			917.41	4.59
	25-year			917.79	4.21
	50-year			918.16	3.84
	100-yer			919.67	2.33

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL08C04	2-year	922.77	917.77	919.08	3.69
	5-year			919.36	3.41
	10-year			919.53	3.24
	25-year			919.77	3.00
	50-year			919.93	2.84
	100-yer			921.03	1.74
RCL08D01	2-year	918.09	912.34	914.33	3.76
	5-year			914.91	3.18
	10-year			915.44	2.65
	25-year			916.07	2.02
	50-year			916.68	1.41
	100-yer			917.24	0.85
RCL08D02	2-year	918.64	913.31	916.93	1.71
	5-year			917.82	0.82
	10-year			917.90	0.74
	25-year			917.99	0.65
	50-year			918.05	0.59
	100-yer			918.13	0.51
RCL08D03	2-year	918.86	914.03	917.92	0.94
	5-year			918.16	0.70
	10-year			918.21	0.65
	25-year			918.27	0.59
	50-year			918.31	0.55
	100-yer			918.36	0.50
RCL08D04	2-year	920.00	914.17	918.28	1.72
	5-year			918.42	1.58
	10-year			918.47	1.53
	25-year			918.54	1.46
	50-year			918.59	1.41
	100-yer			918.65	1.35
RCL08D05	2-year	920.18	915.51	918.78	1.40
	5-year			918.92	1.26
	10-year			918.99	1.19
	25-year			919.08	1.10
	50-year			919.14	1.04
	100-yer			919.22	0.96
RCL1001	2-year	926.00	915.58	916.14	9.86
	5-year			916.28	9.72
	10-year			916.35	9.65
	25-year			916.43	9.57
	50-year			916.48	9.52
	100-yer			916.55	9.45
RCL1101	2-year	950.00	938.00	938.45	11.55
	5-year			938.58	11.42
	10-year			938.66	11.34
	25-year			938.75	11.25
	50-year			938.81	11.19
	100-yer			938.88	11.12

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL1201	2-year	930.00	918.00	919.86	10.14
	5-year			920.38	9.62
	10-year			920.65	9.35
	25-year			921.00	9.00
	50-year			921.35	8.65
	100-yer			921.68	8.32
RCL1202	2-year	950.00	930.00	931.09	18.91
	5-year			931.36	18.64
	10-year			931.50	18.50
	25-year			931.67	18.33
	50-year			931.79	18.21
	100-yer			931.93	18.07
RCL1203	2-year	957.00	946.61	947.00	10.00
	5-year			947.10	9.90
	10-year			947.15	9.85
	25-year			947.21	9.79
	50-year			947.26	9.74
	100-yer			947.31	9.69
RCL1300	2-year	932.15	922.15	923.19	8.97
	5-year			923.64	8.51
	10-year			923.86	8.29
	25-year			924.13	8.02
	50-year			924.32	7.83
	100-yer			924.55	7.60
RCL1301	2-year	952.00	939.00	939.94	12.06
	5-year			940.32	11.68
	10-year			940.51	11.49
	25-year			940.76	11.24
	50-year			940.91	11.09
	100-yer			941.11	10.89
RCL1302	2-year	970.00	950.00	951.86	18.14
	5-year			952.40	17.60
	10-year			952.67	17.33
	25-year			952.98	17.02
	50-year			953.19	16.81
	100-yer			953.43	16.57
RCL1303	2-year	980.00	960.00	960.47	19.53
	5-year			960.65	19.35
	10-year			960.75	19.25
	25-year			960.87	19.13
	50-year			960.96	19.04
	100-yer			961.06	18.94
RCL13A01	2-year	970.00	950.00	951.40	18.60
	5-year			951.67	18.33
	10-year			951.80	18.20
	25-year			951.95	18.05
	50-year			952.04	17.96
	100-yer			952.14	17.86

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL1400	2-year	939.00	926.46	927.61	11.39
	5-year			927.84	11.16
	10-year			927.97	11.04
	25-year			928.11	10.89
	50-year			928.20	10.80
	100-yer			928.32	10.68
RCL1401	2-year	950.00	938.00	939.01	10.99
	5-year			939.22	10.78
	10-year			939.32	10.68
	25-year			939.45	10.55
	50-year			939.54	10.46
	100-yer			939.64	10.36
RCL1402	2-year	970.00	940.00	941.48	28.52
	5-year			941.80	28.20
	10-year			941.96	28.04
	25-year			942.14	27.86
	50-year			942.26	27.74
	100-yer			942.41	27.59
RCL1501	2-year	950.00	940.00	941.41	8.59
	5-year			941.74	8.26
	10-year			941.92	8.08
	25-year			942.13	7.87
	50-year			942.28	7.72
	100-yer			942.47	7.53
RCL1601	2-year	950.00	937.17	939.00	11.00
	5-year			939.30	10.70
	10-year			939.44	10.56
	25-year			939.59	10.41
	50-year			939.92	10.08
	100-yer			940.11	9.89
RCL1602	2-year	950.00	940.00	941.49	8.51
	5-year			941.78	8.22
	10-year			941.92	8.08
	25-year			942.10	7.90
	50-year			942.22	7.78
	100-yer			942.37	7.63
RCL1603	2-year	970.00	954.00	954.97	15.03
	5-year			955.16	14.84
	10-year			955.26	14.74
	25-year			955.36	14.64
	50-year			955.44	14.56
	100-yer			955.53	14.47
RCL1604	2-year	990.00	966.72	967.98	22.02
	5-year			968.26	21.74
	10-year			968.41	21.59
	25-year			968.58	21.42
	50-year			968.70	21.30
	100-yer			968.84	21.16

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL16A00	2-year	950.63	938.63	940.27	10.36
	5-year			940.57	10.06
	10-year			940.75	9.88
	25-year			940.97	9.66
	50-year			941.09	9.54
	100-yer			941.25	9.38
RCL16A01	2-year	980.00	960.00	960.79	19.21
	5-year			960.94	19.06
	10-year			961.02	18.98
	25-year			961.10	18.90
	50-year			961.16	18.84
	100-yer			961.23	18.77
RCL1701	2-year	970.00	950.00	951.25	18.75
	5-year			951.56	18.44
	10-year			951.69	18.31
	25-year			951.85	18.15
	50-year			951.96	18.05
	100-yer			952.08	17.92
RCL1702	2-year	980.00	956.00	956.95	23.05
	5-year			957.18	22.82
	10-year			957.30	22.70
	25-year			957.44	22.56
	50-year			957.53	22.47
	100-yer			957.64	22.36
RCL1703	2-year	980.00	960.69	961.33	18.67
	5-year			961.46	18.54
	10-year			961.54	18.46
	25-year			961.63	18.37
	50-year			961.70	18.30
	100-yer			961.77	18.23
RCL1801	2-year	969.33	954.00	954.35	14.98
	5-year			954.44	14.89
	10-year			954.50	14.84
	25-year			954.56	14.77
	50-year			954.60	14.73
	100-yer			954.66	14.67
RCL1901	2-year	995.00	974.66	975.84	19.16
	5-year			976.12	18.88
	10-year			976.27	18.73
	25-year			976.42	18.58
	50-year			976.52	18.48
	100-yer			976.66	18.34
RCL2001	2-year	1000.00	976.00	977.58	22.42
	5-year			977.86	22.14
	10-year			977.98	22.02
	25-year			978.25	21.75
	50-year			978.38	21.62
	100-yer			978.54	21.46

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL2002	2-year	1010.00	990.00	991.47	18.53
	5-year			991.87	18.13
	10-year			992.14	17.86
	25-year			992.42	17.58
	50-year			992.62	17.38
	100-yer			992.87	17.13
RCL901	2-year	932.00	912.00	912.69	19.31
	5-year			912.84	19.16
	10-year			912.91	19.09
	25-year			913.00	19.00
	50-year			913.06	18.94
	100-yer			913.13	18.87
RCMC00	2-year	891.75	871.75	877.49	14.26
	5-year			879.45	12.30
	10-year			880.21	11.54
	25-year			881.05	10.70
	50-year			881.57	10.18
	100-yer			882.25	9.50
RCMC01	2-year	893.76	873.76	882.90	10.86
	5-year			884.69	9.07
	10-year			885.53	8.23
	25-year			887.29	6.47
	50-year			887.83	5.93
	100-yer			888.51	5.25
RCMC02	2-year	896.84	873.80	883.02	13.82
	5-year			884.86	11.98
	10-year			885.74	11.10
	25-year			887.49	9.35
	50-year			888.07	8.77
	100-yer			888.81	8.03
RCMC03	2-year	896.84	873.84	883.16	13.68
	5-year			885.76	11.08
	10-year			887.12	9.72
	25-year			888.83	8.01
	50-year			889.96	6.88
	100-yer			891.50	5.34
RCMC04	2-year	895.00	874.54	883.68	11.32
	5-year			886.02	8.98
	10-year			886.78	8.22
	25-year			887.46	7.54
	50-year			887.93	7.07
	100-yer			888.58	6.42
RCMC05	2-year	895.00	874.70	883.69	11.31
	5-year			886.02	8.98
	10-year			886.79	8.21
	25-year			887.48	7.52
	50-year			887.96	7.04
	100-yer			888.63	6.37

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC06	2-year	893.37	877.37	884.62	8.75
	5-year			885.88	7.49
	10-year			886.39	6.98
	25-year			886.99	6.38
	50-year			887.40	5.97
	100-yer			887.97	5.40
RCMC07	2-year	898.62	878.62	885.80	12.82
	5-year			887.91	10.71
	10-year			888.83	9.79
	25-year			889.73	8.89
	50-year			890.30	8.32
	100-yer			891.05	7.57
RCMC08	2-year	895.00	878.97	886.46	8.54
	5-year			887.67	7.33
	10-year			888.17	6.83
	25-year			888.69	6.31
	50-year			889.04	5.96
	100-yer			889.53	5.47
RCMC09	2-year	902.54	880.54	888.50	14.04
	5-year			889.52	13.02
	10-year			890.05	12.49
	25-year			890.69	11.85
	50-year			891.14	11.40
	100-yer			891.76	10.78
RCMC10	2-year	902.95	882.37	889.24	13.71
	5-year			890.41	12.54
	10-year			891.04	11.91
	25-year			891.79	11.16
	50-year			892.30	10.65
	100-yer			893.01	9.94
RCMC13	2-year	903.00	882.77	889.79	13.21
	5-year			891.38	11.62
	10-year			892.20	10.80
	25-year			893.17	9.83
	50-year			893.81	9.19
	100-yer			894.71	8.29
RCMC14	2-year	913.93	883.93	891.26	22.67
	5-year			892.50	21.43
	10-year			893.17	20.76
	25-year			893.98	19.95
	50-year			894.53	19.40
	100-yer			895.30	18.63
RCMC15	2-year	916.67	885.75	894.27	22.40
	5-year			896.08	20.59
	10-year			896.96	19.71
	25-year			897.95	18.72
	50-year			898.55	18.12
	100-yer			899.38	17.29

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC16	2-year	916.72	885.80	894.27	22.44
	5-year			896.08	20.63
	10-year			896.96	19.75
	25-year			897.95	18.77
	50-year			898.55	18.16
	100-yer			899.38	17.34
RCMC17	2-year	918.00	887.50	895.30	22.70
	5-year			897.21	20.79
	10-year			898.13	19.87
	25-year			899.15	18.85
	50-year			899.78	18.22
	100-yer			900.65	17.35
RCMC18	2-year	908.00	890.00	897.50	10.50
	5-year			899.18	8.82
	10-year			900.10	7.90
	25-year			901.18	6.82
	50-year			901.89	6.11
	100-yer			902.87	5.13
RCMC19	2-year	909.33	890.33	898.62	10.71
	5-year			900.88	8.45
	10-year			902.05	7.28
	25-year			903.37	5.96
	50-year			904.25	5.08
	100-yer			905.48	3.85
RCMC20	2-year	912.22	893.50	901.40	10.82
	5-year			902.99	9.23
	10-year			903.95	8.27
	25-year			905.10	7.12
	50-year			905.89	6.33
	100-yer			907.04	5.18
RCMC23	2-year	912.29	893.59	902.21	10.08
	5-year			904.05	8.24
	10-year			905.15	7.14
	25-year			906.41	5.88
	50-year			907.27	5.02
	100-yer			908.49	3.80
RCMC24	2-year	915.30	895.30	903.01	12.29
	5-year			904.88	10.42
	10-year			906.01	9.29
	25-year			907.32	7.98
	50-year			908.13	7.17
	100-yer			909.26	6.04
RCMC25	2-year	910.44	895.94	902.69	7.75
	5-year			903.75	6.69
	10-year			904.29	6.15
	25-year			904.93	5.51
	50-year			905.36	5.08
	100-yer			905.94	4.50

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC26	2-year	921.98	900.75	905.73	16.25
	5-year			906.54	15.44
	10-year			906.96	15.02
	25-year			907.42	14.56
	50-year			907.72	14.26
	100-yer			908.14	13.84
RCMC27	2-year	922.00	900.77	905.83	16.17
	5-year			906.70	15.30
	10-year			907.17	14.83
	25-year			907.71	14.29
	50-year			908.06	13.94
	100-yer			908.57	13.43
RCMC28	2-year	916.80	901.35	907.12	9.68
	5-year			907.98	8.82
	10-year			908.45	8.35
	25-year			908.99	7.81
	50-year			909.34	7.46
	100-yer			909.86	6.94
RCMC29	2-year	916.89	901.38	907.38	9.51
	5-year			908.40	8.49
	10-year			908.95	7.94
	25-year			909.61	7.28
	50-year			910.06	6.83
	100-yer			910.67	6.22
RCMC30	2-year	916.90	901.43	907.50	9.40
	5-year			908.59	8.31
	10-year			909.18	7.72
	25-year			909.88	7.02
	50-year			910.36	6.54
	100-yer			911.01	5.89
RCMC31	2-year	917.91	901.46	907.70	10.21
	5-year			908.87	9.04
	10-year			909.51	8.40
	25-year			910.26	7.65
	50-year			910.77	7.14
	100-yer			911.46	6.45
RCMC32	2-year	920.00	901.66	907.16	12.84
	5-year			908.01	11.99
	10-year			908.43	11.57
	25-year			908.91	11.09
	50-year			909.22	10.78
	100-yer			909.63	10.37
RCMC34	2-year	922.00	903.60	907.00	15.00
	5-year			907.94	14.06
	10-year			908.41	13.59
	25-year			908.97	13.03
	50-year			909.33	12.67
	100-yer			909.84	12.17

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC35	2-year	933.50	904.72	908.35	25.15
	5-year			909.38	24.12
	10-year			909.91	23.59
	25-year			910.52	22.98
	50-year			910.92	22.58
	100-yer			911.48	22.02
RCMC36	2-year	930.00	905.00	907.98	22.02
	5-year			908.91	21.09
	10-year			909.39	20.61
	25-year			909.94	20.06
	50-year			910.31	19.69
	100-yer			910.82	19.18
RCMC37	2-year	930.00	907.50	910.66	19.34
	5-year			911.53	18.47
	10-year			911.98	18.02
	25-year			912.50	17.50
	50-year			912.84	17.16
	100-yer			913.32	16.68
RCMC38	2-year	940.00	909.00	912.36	27.64
	5-year			913.29	26.71
	10-year			913.76	26.24
	25-year			914.29	25.71
	50-year			914.65	25.35
	100-yer			915.14	24.86
RCMC39	2-year	940.00	913.00	915.53	24.47
	5-year			916.28	23.72
	10-year			916.68	23.32
	25-year			917.39	22.61
	50-year			917.68	22.32
	100-yer			918.09	21.91
RCMC40	2-year	940.00	915.00	916.80	23.20
	5-year			917.42	22.58
	10-year			917.74	22.26
	25-year			918.12	21.88
	50-year			918.37	21.63
	100-yer			918.72	21.28
RCMC41	2-year	932.00	916.50	923.46	8.54
	5-year			924.46	7.54
	10-year			924.94	7.06
	25-year			925.50	6.50
	50-year			925.86	6.14
	100-yer			926.37	5.63
RCMC42	2-year	931.00	918.00	920.59	10.41
	5-year			921.28	9.72
	10-year			921.64	9.36
	25-year			922.05	8.95
	50-year			922.31	8.69
	100-yer			922.70	8.30

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC43	2-year	940.00	921.00	923.90	16.10
	5-year			924.77	15.23
	10-year			925.21	14.79
	25-year			925.71	14.29
	50-year			926.03	13.97
	100-yer			926.47	13.53
RCMC44	2-year	940.00	923.53	927.36	12.64
	5-year			928.34	11.66
	10-year			928.84	11.16
	25-year			929.40	10.60
	50-year			929.75	10.25
	100-yer			930.25	9.75
RCMC45	2-year	950.00	925.44	927.90	22.10
	5-year			928.55	21.45
	10-year			928.87	21.13
	25-year			929.22	20.78
	50-year			929.44	20.56
	100-yer			929.76	20.24
RCMC46	2-year	950.00	928.00	930.69	19.31
	5-year			931.42	18.58
	10-year			931.79	18.21
	25-year			932.19	17.81
	50-year			932.44	17.56
	100-yer			932.80	17.20
RCMC47	2-year	960.00	932.00	934.14	25.86
	5-year			934.86	25.14
	10-year			935.21	24.79
	25-year			935.58	24.42
	50-year			935.81	24.19
	100-yer			936.16	23.84
RCMC48	2-year	960.00	938.00	942.19	17.82
	5-year			942.96	17.04
	10-year			943.34	16.66
	25-year			943.78	16.22
	50-year			944.05	15.95
	100-yer			944.38	15.62
RCMC49	2-year	970.00	940.00	942.62	27.38
	5-year			943.23	26.77
	10-year			943.54	26.46
	25-year			943.88	26.12
	50-year			944.11	25.89
	100-yer			944.41	25.59
RCMC50	2-year	970.00	946.00	948.21	21.79
	5-year			948.68	21.32
	10-year			948.91	21.09
	25-year			949.15	20.85
	50-year			949.31	20.69
	100-yer			949.53	20.47

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC51	2-year	970.00	948.00	952.09	17.91
	5-year			952.91	17.09
	10-year			953.31	16.69
	25-year			953.72	16.28
	50-year			954.01	15.99
	100-yer			954.41	15.59
RCMC52	2-year	970.00	952.00	955.00	15.00
	5-year			955.78	14.22
	10-year			956.15	13.85
	25-year			956.52	13.48
	50-year			956.80	13.20
	100-yer			957.15	12.85
RCMC53	2-year	990.00	960.93	963.22	26.78
	5-year			963.97	26.03
	10-year			964.33	25.67
	25-year			964.66	25.34
	50-year			965.25	24.75
	100-yer			965.62	24.39
RCMC54	2-year	990.00	971.06	973.30	16.70
	5-year			973.94	16.06
	10-year			974.23	15.77
	25-year			974.50	15.50
	50-year			974.74	15.26
	100-yer			975.03	14.97
RCMC55	2-year	1000.00	976.00	977.80	22.20
	5-year			978.18	21.82
	10-year			978.40	21.60
	25-year			978.64	21.36
	50-year			978.81	21.19
	100-yer			979.03	20.97
RCMC56	2-year	1000.00	979.00	981.37	18.63
	5-year			981.81	18.19
	10-year			982.06	17.94
	25-year			982.35	17.65
	50-year			982.55	17.45
	100-yer			982.80	17.20
RCMC57	2-year	1020.00	994.00	995.68	24.32
	5-year			995.98	24.02
	10-year			996.17	23.83
	25-year			996.42	23.58
	50-year			996.57	23.43
	100-yer			996.76	23.24
RCMC58	2-year	1030.00	1008.00	1009.05	20.95
	5-year			1009.35	20.65
	10-year			1009.47	20.53
	25-year			1009.62	20.38
	50-year			1009.72	20.28
	100-yer			1009.83	20.17

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL101	2-year	910.00	903.43	905.81	4.19
	5-year			906.12	3.88
	10-year			906.27	3.73
	25-year			906.48	3.52
	50-year			906.68	3.32
	100-yer			906.84	3.16
SCL102	2-year	908.41	903.91	905.82	2.59
	5-year			906.13	2.28
	10-year			906.28	2.13
	25-year			906.49	1.92
	50-year			906.68	1.73
	100-yer			906.85	1.56
SCL103	2-year	911.00	904.26	907.30	3.70
	5-year			908.72	2.28
	10-year			909.65	1.35
	25-year			910.12	0.88
	50-year			910.19	0.81
	100-yer			910.26	0.74
SCL104	2-year	913.00	908.17	909.19	3.81
	5-year			909.67	3.33
	10-year			910.41	2.59
	25-year			911.04	1.96
	50-year			911.40	1.60
	100-yer			911.90	1.10
SCL105	2-year	913.00	908.47	909.56	3.44
	5-year			909.91	3.09
	10-year			910.49	2.51
	25-year			911.09	1.91
	50-year			911.44	1.56
	100-yer			911.93	1.07
SCL106	2-year	913.00	908.74	912.23	0.77
	5-year			912.35	0.65
	10-year			912.43	0.57
	25-year			912.54	0.46
	50-year			912.61	0.39
	100-yer			912.69	0.31
SCL107	2-year	914.00	908.94	912.23	1.77
	5-year			912.35	1.65
	10-year			912.44	1.56
	25-year			912.54	1.46
	50-year			912.61	1.39
	100-yer			912.70	1.30
SCL108	2-year	914.00	909.11	912.40	1.60
	5-year			912.51	1.49
	10-year			912.57	1.43
	25-year			912.66	1.34
	50-year			912.72	1.28
	100-yer			912.80	1.20

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL109	2-year	914.00	909.30	912.41	1.59
	5-year			912.52	1.48
	10-year			912.58	1.42
	25-year			912.68	1.32
	50-year			912.74	1.26
	100-yer			912.83	1.17
SCL110	2-year	914.00	909.43	912.47	1.53
	5-year			912.59	1.41
	10-year			912.65	1.35
	25-year			912.74	1.26
	50-year			912.81	1.19
	100-yer			912.89	1.11
SCL111	2-year	914.00	909.50	912.47	1.53
	5-year			912.60	1.40
	10-year			912.66	1.34
	25-year			912.76	1.24
	50-year			912.82	1.18
	100-yer			912.91	1.09
SCL112	2-year	914.00	909.69	912.51	1.49
	5-year			912.64	1.36
	10-year			912.71	1.29
	25-year			912.80	1.20
	50-year			912.87	1.13
	100-yer			912.95	1.05
SCL113	2-year	914.00	909.77	912.52	1.48
	5-year			912.65	1.35
	10-year			912.72	1.28
	25-year			912.82	1.18
	50-year			912.88	1.12
	100-yer			912.97	1.03
SCL114	2-year	914.07	910.07	912.55	1.52
	5-year			912.68	1.39
	10-year			912.76	1.31
	25-year			912.85	1.22
	50-year			912.92	1.15
	100-yer			913.01	1.06
SCL115	2-year	914.95	910.76	912.58	2.37
	5-year			912.74	2.21
	10-year			912.83	2.12
	25-year			912.95	2.00
	50-year			913.03	1.92
	100-yer			913.14	1.81
SCL116	2-year	915.00	911.00	913.25	1.75
	5-year			913.40	1.60
	10-year			913.48	1.52
	25-year			913.56	1.44
	50-year			913.62	1.38
	100-yer			913.69	1.31

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL1A01	2-year	912.00	906.00	907.16	4.84
	5-year			907.43	4.57
	10-year			907.59	4.41
	25-year			907.96	4.04
	50-year			908.24	3.76
	100-yer			908.59	3.41
SCL1A02	2-year	912.89	906.89	907.87	5.02
	5-year			908.06	4.83
	10-year			908.16	4.73
	25-year			908.28	4.61
	50-year			908.49	4.40
	100-yer			908.74	4.15
SCL1A03	2-year	912.60	907.60	911.72	0.88
	5-year			911.80	0.80
	10-year			911.84	0.76
	25-year			911.89	0.71
	50-year			911.92	0.68
	100-yer			911.96	0.64
SCL1A04	2-year	912.90	907.90	912.04	0.86
	5-year			912.13	0.77
	10-year			912.17	0.73
	25-year			912.23	0.67
	50-year			912.26	0.64
	100-yer			912.31	0.59
SCL1B01	2-year	911.48	904.31	907.30	4.18
	5-year			908.72	2.76
	10-year			909.65	1.83
	25-year			910.12	1.36
	50-year			910.19	1.29
	100-yer			910.26	1.22
SCL201	2-year	913.85	907.85	911.72	2.13
	5-year			911.95	1.90
	10-year			911.98	1.87
	25-year			912.02	1.83
	50-year			912.05	1.80
	100-yer			912.08	1.77
SCL301	2-year	913.30	909.30	912.40	0.90
	5-year			912.50	0.80
	10-year			912.54	0.76
	25-year			912.59	0.71
	50-year			912.63	0.67
	100-yer			912.67	0.63
SCL401	2-year	920.11	914.36	915.78	4.33
	5-year			916.49	3.62
	10-year			916.89	3.22
	25-year			917.37	2.74
	50-year			918.04	2.07
	100-yer			919.13	0.98

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC01	2-year	895.03	887.03	892.29	2.74
	5-year			892.67	2.36
	10-year			892.90	2.13
	25-year			893.13	1.90
	50-year			893.26	1.77
	100-yer			893.59	1.44
SCMC02	2-year	899.66	891.66	892.68	6.98
	5-year			892.93	6.73
	10-year			893.06	6.60
	25-year			893.23	6.43
	50-year			893.34	6.32
	100-yer			893.47	6.19
SCMC03	2-year	907.36	902.36	902.99	4.37
	5-year			903.12	4.24
	10-year			903.19	4.17
	25-year			903.27	4.09
	50-year			903.32	4.04
	100-yer			903.39	3.97
SCMC04	2-year	909.00	903.36	904.49	4.51
	5-year			904.68	4.32
	10-year			904.78	4.22
	25-year			904.90	4.10
	50-year			904.97	4.03
	100-yer			905.06	3.94
SCMC05	2-year	911.85	903.85	905.84	6.01
	5-year			906.25	5.60
	10-year			906.47	5.38
	25-year			906.76	5.09
	50-year			906.95	4.90
	100-yer			907.21	4.64
SCMC06	2-year	912.60	904.60	905.85	6.75
	5-year			906.26	6.34
	10-year			906.48	6.12
	25-year			906.76	5.84
	50-year			906.95	5.65
	100-yer			907.21	5.39
SCMC07	2-year	912.70	905.45	911.10	1.60
	5-year			911.34	1.36
	10-year			911.44	1.26
	25-year			911.55	1.15
	50-year			911.63	1.07
	100-yer			911.74	0.96
SCMC08	2-year	914.56	906.06	911.91	2.65
	5-year			912.07	2.49
	10-year			912.14	2.42
	25-year			912.21	2.35
	50-year			912.26	2.30
	100-yer			912.34	2.22

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC09	2-year	912.83	906.66	912.04	0.79
	5-year			912.22	0.61
	10-year			912.29	0.54
	25-year			912.37	0.46
	50-year			912.42	0.41
	100-yer			912.50	0.33
SCMC10	2-year	915.25	907.68	913.81	1.44
	5-year			914.43	0.82
	10-year			914.49	0.76
	25-year			914.54	0.71
	50-year			914.58	0.67
	100-yer			914.64	0.61
SCMC11	2-year	917.54	908.02	914.40	3.14
	5-year			914.86	2.68
	10-year			914.93	2.61
	25-year			914.99	2.55
	50-year			915.04	2.50
	100-yer			915.11	2.43
SCMC12	2-year	916.18	908.76	914.83	1.35
	5-year			915.11	1.07
	10-year			915.19	0.99
	25-year			915.26	0.92
	50-year			915.33	0.85
	100-yer			915.42	0.76
SCMC13	2-year	917.25	908.86	915.36	1.89
	5-year			915.49	1.76
	10-year			915.53	1.72
	25-year			915.57	1.68
	50-year			915.61	1.64
	100-yer			915.66	1.59
SCMC14	2-year	916.16	908.91	915.36	0.80
	5-year			915.49	0.67
	10-year			915.53	0.63
	25-year			915.57	0.59
	50-year			915.61	0.55
	100-yer			915.66	0.50
SCMC15	2-year	919.49	913.74	915.64	3.85
	5-year			916.40	3.09
	10-year			916.83	2.66
	25-year			917.24	2.25
	50-year			917.68	1.81
	100-yer			918.22	1.27
SCMC16	2-year	919.37	913.95	915.87	3.50
	5-year			917.22	2.15
	10-year			917.98	1.39
	25-year			918.57	0.80
	50-year			918.70	0.67
	100-yer			918.81	0.56

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC17	2-year	921.46	916.38	917.18	4.28
	5-year			917.73	3.73
	10-year			918.88	2.58
	25-year			919.93	1.53
	50-year			920.25	1.21
	100-yer			920.49	0.97
SCMC18	2-year	921.44	916.52	917.56	3.88
	5-year			917.97	3.47
	10-year			919.12	2.32
	25-year			920.29	1.15
	50-year			920.57	0.87
	100-yer			920.69	0.75
SCMC19	2-year	923.25	916.67	918.05	5.20
	5-year			918.63	4.62
	10-year			920.05	3.20
	25-year			921.61	1.64
	50-year			922.26	0.99
	100-yer			922.94	0.31
SCMC20	2-year	923.27	916.75	918.28	4.99
	5-year			919.12	4.15
	10-year			920.48	2.79
	25-year			921.61	1.66
	50-year			922.27	1.00
	100-yer			922.94	0.33
SRL0101	2-year	894.12	875.33	876.98	17.14
	5-year			877.38	16.74
	10-year			877.82	16.30
	25-year			878.32	15.80
	50-year			878.69	15.43
	100-yer			879.04	15.08
SRL0102	2-year	889.00	877.75	880.49	8.51
	5-year			880.90	8.10
	10-year			880.98	8.02
	25-year			881.06	7.94
	50-year			881.16	7.84
	100-yer			881.38	7.62
SRL0103	2-year	890.00	879.08	881.47	8.53
	5-year			881.90	8.10
	10-year			882.01	7.99
	25-year			882.19	7.81
	50-year			882.30	7.70
	100-yer			882.49	7.51
SRL0104	2-year	892.01	879.68	883.12	8.89
	5-year			883.75	8.26
	10-year			883.98	8.03
	25-year			884.45	7.56
	50-year			884.64	7.37
	100-yer			884.93	7.08

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0105	2-year	891.47	879.89	883.95	7.52
	5-year			884.90	6.57
	10-year			885.25	6.22
	25-year			886.05	5.42
	50-year			886.44	5.03
	100-yer			886.92	4.55
SRL0106	2-year	889.76	880.17	884.64	5.12
	5-year			885.84	3.92
	10-year			886.27	3.49
	25-year			886.79	2.97
	50-year			887.14	2.62
	100-yer			887.57	2.19
SRL0107	2-year	889.95	880.42	885.00	4.95
	5-year			886.38	3.57
	10-year			886.83	3.12
	25-year			887.21	2.74
	50-year			887.49	2.46
	100-yer			887.89	2.06
SRL0108	2-year	890.00	882.98	884.86	5.14
	5-year			886.01	3.99
	10-year			886.68	3.32
	25-year			887.29	2.71
	50-year			887.61	2.39
	100-yer			888.02	1.98
SRL0109	2-year	890.91	883.01	885.12	5.79
	5-year			886.08	4.83
	10-year			886.71	4.20
	25-year			887.35	3.56
	50-year			887.63	3.28
	100-yer			888.03	2.88
SRL0110	2-year	891.00	883.52	885.62	5.38
	5-year			886.24	4.76
	10-year			886.80	4.20
	25-year			887.45	3.55
	50-year			887.75	3.25
	100-yer			888.13	2.87
SRL0111	2-year	891.00	884.00	886.26	4.74
	5-year			886.62	4.38
	10-year			886.97	4.03
	25-year			887.53	3.47
	50-year			887.82	3.18
	100-yer			888.20	2.80
SRL0112	2-year	891.00	884.10	886.69	4.31
	5-year			887.08	3.92
	10-year			887.30	3.70
	25-year			887.75	3.25
	50-year			888.01	2.99
	100-yer			888.44	2.56

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0113	2-year	892.80	884.20	887.06	5.74
	5-year			887.38	5.42
	10-year			887.54	5.26
	25-year			887.92	4.88
	50-year			888.17	4.63
	100-yer			888.67	4.13
SRL0114	2-year	893.00	885.20	887.32	5.68
	5-year			887.71	5.29
	10-year			887.87	5.13
	25-year			888.31	4.69
	50-year			888.63	4.37
	100-yer			889.44	3.56
SRL0115	2-year	892.91	885.83	887.98	4.93
	5-year			888.23	4.68
	10-year			888.32	4.59
	25-year			888.62	4.29
	50-year			888.86	4.05
	100-yer			889.55	3.36
SRL0116	2-year	893.00	886.58	889.14	3.86
	5-year			890.05	2.95
	10-year			890.47	2.53
	25-year			891.39	1.61
	50-year			892.04	0.96
	100-yer			892.42	0.58
SRL0117	2-year	893.25	887.25	889.20	4.05
	5-year			890.06	3.19
	10-year			890.48	2.77
	25-year			891.39	1.86
	50-year			892.04	1.21
	100-yer			892.42	0.83
SRL0118	2-year	893.89	887.31	890.71	3.18
	5-year			892.25	1.64
	10-year			892.97	0.92
	25-year			893.18	0.71
	50-year			893.27	0.62
	100-yer			893.35	0.54
SRL0119	2-year	900.90	893.82	895.57	5.33
	5-year			898.97	1.93
	10-year			899.02	1.88
	25-year			899.06	1.84
	50-year			899.08	1.82
	100-yer			899.11	1.79
SRL0120	2-year	900.87	894.02	896.03	4.84
	5-year			899.03	1.84
	10-year			899.06	1.81
	25-year			899.09	1.78
	50-year			899.11	1.76
	100-yer			899.13	1.74

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0121	2-year	900.95	894.48	899.23	1.72
	5-year			899.39	1.56
	10-year			899.43	1.52
	25-year			899.48	1.47
	50-year			899.52	1.43
	100-yer			899.56	1.39
SRL01401	2-year	910.92	904.16	908.09	2.83
	5-year			908.20	2.72
	10-year			908.25	2.67
	25-year			908.42	2.50
	50-year			908.49	2.43
	100-yer			908.79	2.13
SRL01402	2-year	911.05	904.32	907.18	3.87
	5-year			908.28	2.77
	10-year			908.35	2.70
	25-year			908.43	2.62
	50-year			908.52	2.53
	100-yer			908.79	2.26
SRL01403	2-year	911.00	904.33	907.25	3.75
	5-year			908.32	2.68
	10-year			908.42	2.58
	25-year			908.50	2.50
	50-year			908.58	2.42
	100-yer			908.79	2.21
SRL01501	2-year	914.00	904.95	910.09	3.91
	5-year			910.14	3.86
	10-year			910.18	3.82
	25-year			910.22	3.78
	50-year			910.25	3.75
	100-yer			910.29	3.71
SRL01502	2-year	919.00	909.83	914.03	4.97
	5-year			914.19	4.81
	10-year			914.26	4.74
	25-year			914.32	4.68
	50-year			914.36	4.64
	100-yer			914.42	4.58
SRL01503	2-year	916.02	910.00	914.26	1.77
	5-year			914.43	1.59
	10-year			914.51	1.52
	25-year			914.60	1.43
	50-year			914.66	1.37
	100-yer			914.74	1.29
SRL0201	2-year	888.28	884.28	886.02	2.26
	5-year			886.74	1.54
	10-year			887.16	1.12
	25-year			887.47	0.81
	50-year			887.56	0.72
	100-yer			887.65	0.63

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0202	2-year	890.00	885.30	887.00	3.00
	5-year			887.13	2.87
	10-year			887.26	2.74
	25-year			887.54	2.46
	50-year			887.63	2.37
	100-yer			887.74	2.26
SRL0203	2-year	891.93	885.68	888.84	3.09
	5-year			890.67	1.26
	10-year			891.01	0.92
	25-year			891.08	0.85
	50-year			891.12	0.81
	100-yer			891.16	0.77
SRL0204	2-year	892.94	885.86	889.70	3.24
	5-year			890.69	2.25
	10-year			891.02	1.92
	25-year			891.09	1.85
	50-year			891.13	1.81
	100-yer			891.17	1.77
SRL0301	2-year	889.64	880.64	885.96	3.68
	5-year			887.80	1.84
	10-year			888.70	0.94
	25-year			888.90	0.74
	50-year			888.99	0.65
	100-yer			889.09	0.55
SRL0302	2-year	892.32	882.82	890.59	1.73
	5-year			890.76	1.56
	10-year			890.84	1.48
	25-year			890.92	1.40
	50-year			890.97	1.35
	100-yer			891.03	1.29
SRL0303	2-year	892.85	883.52	891.12	1.73
	5-year			891.21	1.64
	10-year			891.25	1.60
	25-year			891.30	1.55
	50-year			891.34	1.51
	100-yer			891.38	1.47
SRL0304	2-year	894.02	885.02	892.35	1.67
	5-year			892.44	1.58
	10-year			892.49	1.53
	25-year			892.55	1.47
	50-year			892.60	1.42
	100-yer			892.65	1.37
SRL0305	2-year	895.05	885.63	893.36	1.69
	5-year			893.45	1.60
	10-year			893.49	1.56
	25-year			893.55	1.50
	50-year			893.59	1.46
	100-yer			893.64	1.41

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0306	2-year	897.88	890.88	896.14	1.74
	5-year			896.22	1.66
	10-year			896.26	1.62
	25-year			896.31	1.57
	50-year			896.35	1.53
	100-yer			896.39	1.49
SRL0307	2-year	897.55	891.55	896.09	1.46
	5-year			896.16	1.39
	10-year			896.20	1.35
	25-year			896.25	1.30
	50-year			896.29	1.26
	100-yer			896.34	1.21
SRL03A01	2-year	890.00	883.12	885.96	4.04
	5-year			887.80	2.20
	10-year			888.70	1.30
	25-year			888.90	1.10
	50-year			888.99	1.01
	100-yer			889.09	0.91
SRL03B01	2-year	892.00	885.85	890.59	1.41
	5-year			890.76	1.24
	10-year			890.84	1.16
	25-year			890.92	1.08
	50-year			890.97	1.03
	100-yer			891.03	0.97
SRL0401	2-year	898.53	890.03	894.99	3.54
	5-year			895.20	3.33
	10-year			895.31	3.22
	25-year			895.44	3.09
	50-year			895.53	3.00
	100-yer			895.64	2.89
SRL0402	2-year	898.82	890.32	896.21	2.61
	5-year			896.38	2.44
	10-year			896.46	2.36
	25-year			896.56	2.26
	50-year			896.63	2.19
	100-yer			896.72	2.10
SRL0403	2-year	900.50	893.56	898.79	1.71
	5-year			899.02	1.48
	10-year			899.15	1.35
	25-year			899.30	1.20
	50-year			899.40	1.10
	100-yer			899.54	0.96
SRL0404	2-year	907.10	900.60	905.52	1.58
	5-year			905.68	1.42
	10-year			905.76	1.34
	25-year			905.86	1.24
	50-year			905.93	1.17
	100-yer			906.02	1.08

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0405	2-year	914.51	905.59	910.95	3.56
	5-year			911.11	3.40
	10-year			911.20	3.31
	25-year			911.30	3.21
	50-year			911.37	3.14
	100-yer			911.46	3.05
SRL0406	2-year	913.55	905.63	911.22	2.33
	5-year			911.42	2.13
	10-year			911.52	2.03
	25-year			911.66	1.89
	50-year			911.75	1.80
	100-yer			911.87	1.68
SRL0407	2-year	915.55	906.72	912.81	2.74
	5-year			912.91	2.64
	10-year			912.96	2.59
	25-year			913.02	2.53
	50-year			913.06	2.49
	100-yer			913.11	2.44
SRL0408	2-year	921.46	916.21	920.75	0.71
	5-year			920.86	0.60
	10-year			920.91	0.55
	25-year			920.98	0.48
	50-year			921.02	0.44
	100-yer			921.08	0.38
SRL0501	2-year	899.11	891.11	893.35	5.76
	5-year			893.85	5.26
	10-year			894.23	4.88
	25-year			895.21	3.90
	50-year			895.67	3.44
	100-yer			896.82	2.29
SRL0601	2-year	900.58	894.08	899.30	1.28
	5-year			900.04	0.54
	10-year			900.17	0.41
	25-year			900.30	0.28
	50-year			900.39	0.19
	100-yer			900.49	0.09
SRL0602	2-year	902.58	895.08	900.77	1.81
	5-year			900.92	1.66
	10-year			900.98	1.60
	25-year			901.04	1.54
	50-year			901.09	1.49
	100-yer			901.15	1.43
SRL0603	2-year	904.04	896.62	902.12	1.92
	5-year			902.18	1.86
	10-year			902.21	1.83
	25-year			902.24	1.80
	50-year			902.26	1.78
	100-yer			902.29	1.75

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0604	2-year	907.08	898.83	905.20	1.88
	5-year			905.25	1.83
	10-year			905.28	1.80
	25-year			905.31	1.77
	50-year			905.34	1.74
	100-yer			905.37	1.71
SRL0605	2-year	907.74	900.07	905.89	1.85
	5-year			905.93	1.81
	10-year			905.95	1.79
	25-year			905.98	1.76
	50-year			906.00	1.74
	100-yer			906.03	1.71
SRL0606	2-year	908.34	901.59	906.51	1.83
	5-year			906.56	1.78
	10-year			906.59	1.75
	25-year			906.62	1.72
	50-year			906.64	1.70
	100-yer			906.67	1.67
SRL0607	2-year	908.35	903.02	906.53	1.82
	5-year			906.57	1.78
	10-year			906.60	1.75
	25-year			906.63	1.72
	50-year			906.65	1.70
	100-yer			906.68	1.67
SRL0701	2-year	905.65	898.32	900.51	5.14
	5-year			902.75	2.90
	10-year			903.74	1.91
	25-year			903.93	1.72
	50-year			904.01	1.64
	100-yer			904.09	1.56
SRL0702	2-year	910.89	901.89	903.45	7.44
	5-year			906.34	4.55
	10-year			907.95	2.94
	25-year			908.06	2.83
	50-year			908.10	2.79
	100-yer			908.14	2.75
SRL0703	2-year	915.52	907.52	909.08	6.44
	5-year			913.60	1.92
	10-year			913.67	1.85
	25-year			913.72	1.80
	50-year			913.75	1.77
	100-yer			913.79	1.74
SRL0704	2-year	920.38	912.46	916.44	3.94
	5-year			918.54	1.84
	10-year			918.59	1.79
	25-year			918.64	1.74
	50-year			918.67	1.71
	100-yer			918.71	1.67

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0705	2-year	921.22	914.05	919.27	1.95
	5-year			919.45	1.77
	10-year			919.49	1.73
	25-year			919.54	1.68
	50-year			919.57	1.65
	100-yer			919.61	1.61
SRL0706	2-year	924.23	917.90	922.37	1.86
	5-year			922.48	1.75
	10-year			922.52	1.71
	25-year			922.58	1.65
	50-year			922.62	1.61
	100-yer			922.67	1.56
SRL0707	2-year	924.88	919.80	924.18	0.70
	5-year			924.32	0.56
	10-year			924.38	0.50
	25-year			924.46	0.42
	50-year			924.51	0.37
	100-yer			924.58	0.30
SRL0801	2-year	913.04	898.04	900.79	12.25
	5-year			902.78	10.26
	10-year			903.34	9.70
	25-year			903.59	9.45
	50-year			903.71	9.33
	100-yer			903.85	9.19
SRL0802	2-year	908.96	900.00	902.37	6.59
	5-year			902.90	6.06
	10-year			903.42	5.54
	25-year			903.70	5.26
	50-year			903.83	5.13
	100-yer			903.97	4.99
SRL0803	2-year	909.00	900.56	903.91	5.09
	5-year			904.39	4.61
	10-year			904.55	4.45
	25-year			904.71	4.29
	50-year			904.80	4.20
	100-yer			904.90	4.10
SRL0804	2-year	911.00	905.73	906.89	4.11
	5-year			907.05	3.95
	10-year			907.12	3.88
	25-year			907.19	3.81
	50-year			907.23	3.77
	100-yer			907.29	3.71
SRL0901	2-year	907.05	899.70	900.38	6.67
	5-year			900.94	6.11
	10-year			901.22	5.83
	25-year			901.53	5.52
	50-year			901.61	5.44
	100-yer			901.95	5.10

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0902	2-year	907.10	901.05	901.62	5.48
	5-year			901.74	5.36
	10-year			901.82	5.28
	25-year			902.16	4.94
	50-year			902.66	4.44
	100-yer			903.18	3.92
SRL0903	2-year	907.30	902.30	902.98	4.32
	5-year			903.24	4.06
	10-year			903.82	3.48
	25-year			904.38	2.92
	50-year			905.32	1.98
	100-yer			906.01	1.29
SRL0904	2-year	907.98	903.98	904.49	3.49
	5-year			904.60	3.38
	10-year			904.86	3.12
	25-year			905.87	2.11
	50-year			906.99	0.99
	100-yer			907.02	0.96
SRL09A01	2-year	909.00	899.65	901.36	7.64
	5-year			902.05	6.95
	10-year			902.53	6.47
	25-year			903.16	5.84
	50-year			903.56	5.44
	100-yer			904.08	4.92
SRL09A02	2-year	921.00	916.18	916.92	4.08
	5-year			917.05	3.95
	10-year			917.13	3.87
	25-year			917.21	3.79
	50-year			917.27	3.73
	100-yer			917.34	3.66
SRL09A03	2-year	921.00	917.18	918.81	2.19
	5-year			920.06	0.94
	10-year			920.17	0.83
	25-year			920.26	0.74
	50-year			920.31	0.69
	100-yer			920.36	0.64
SRL09B01	2-year	904.05	901.05	901.05	3.00
	5-year			901.05	3.00
	10-year			901.22	2.83
	25-year			901.53	2.52
	50-year			901.62	2.43
	100-yer			901.95	2.10
SRL1001	2-year	908.13	899.92	900.69	7.44
	5-year			900.84	7.29
	10-year			900.90	7.23
	25-year			901.05	7.08
	50-year			901.13	7.00
	100-yer			901.23	6.90

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1002	2-year	908.17	900.50	901.55	6.62
	5-year			902.21	5.96
	10-year			902.50	5.67
	25-year			903.50	4.67
	50-year			904.25	3.92
	100-yer			905.50	2.67
SRL1003	2-year	908.36	902.11	903.17	5.19
	5-year			905.45	2.91
	10-year			906.39	1.97
	25-year			906.52	1.84
	50-year			906.57	1.79
	100-yer			906.63	1.73
SRL1004	2-year	908.57	903.32	904.22	4.35
	5-year			906.62	1.95
	10-year			906.66	1.91
	25-year			906.68	1.89
	50-year			906.70	1.87
	100-yer			906.71	1.86
SRL1101	2-year	910.24	899.25	903.00	7.24
	5-year			904.72	5.52
	10-year			906.33	3.91
	25-year			906.55	3.69
	50-year			906.76	3.48
	100-yer			906.92	3.32
SRL1102	2-year	912.64	902.72	905.57	7.07
	5-year			908.38	4.26
	10-year			908.84	3.80
	25-year			908.89	3.75
	50-year			908.98	3.66
	100-yer			909.05	3.59
SRL1103	2-year	913.04	904.87	907.07	5.97
	5-year			911.04	2.00
	10-year			911.16	1.88
	25-year			911.20	1.84
	50-year			911.28	1.76
	100-yer			911.34	1.70
SRL1104	2-year	915.52	907.85	908.92	6.60
	5-year			912.54	2.98
	10-year			912.70	2.82
	25-year			913.31	2.21
	50-year			913.63	1.89
	100-yer			913.66	1.86
SRL1105	2-year	919.94	912.61	913.75	6.19
	5-year			915.48	4.46
	10-year			915.82	4.12
	25-year			917.97	1.97
	50-year			918.05	1.89
	100-yer			918.08	1.86

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1106	2-year	922.46	915.38	916.80	5.66
	5-year			919.59	2.87
	10-year			920.19	2.27
	25-year			920.59	1.87
	50-year			920.62	1.84
	100-yer			920.65	1.81
SRL1107	2-year	923.53	918.03	918.65	4.88
	5-year			918.81	4.72
	10-year			918.90	4.63
	25-year			919.03	4.50
	50-year			919.13	4.40
	100-yer			919.29	4.24
SRL1108	2-year	922.90	918.40	919.05	3.85
	5-year			919.21	3.69
	10-year			919.31	3.59
	25-year			919.43	3.47
	50-year			919.54	3.36
	100-yer			919.71	3.19
SRL1109	2-year	925.00	919.99	920.74	4.26
	5-year			920.99	4.01
	10-year			921.37	3.63
	25-year			922.25	2.75
	50-year			922.97	2.03
	100-yer			924.48	0.52
SRL1110	2-year	926.00	920.49	921.19	4.81
	5-year			921.43	4.57
	10-year			921.89	4.11
	25-year			923.07	2.93
	50-year			924.02	1.98
	100-yer			925.87	0.13
SRL11A01	2-year	910.00	904.14	905.57	4.43
	5-year			908.38	1.62
	10-year			908.84	1.16
	25-year			908.89	1.11
	50-year			908.98	1.02
	100-yer			909.05	0.95
SRL11A02	2-year	911.00	904.65	905.57	5.43
	5-year			908.38	2.62
	10-year			908.84	2.16
	25-year			908.89	2.11
	50-year			908.98	2.02
	100-yer			909.05	1.95
SRL11B01	2-year	912.00	907.47	907.47	4.53
	5-year			911.04	0.96
	10-year			911.16	0.84
	25-year			911.20	0.80
	50-year			911.28	0.72
	100-yer			911.34	0.66

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL11C01	2-year	914.00	909.82	909.82	4.18
	5-year			912.54	1.46
	10-year			912.70	1.30
	25-year			913.32	0.68
	50-year			913.63	0.37
	100-yer			913.66	0.34
SRL11C02	2-year	915.00	910.25	910.25	4.75
	5-year			912.55	2.45
	10-year			912.70	2.30
	25-year			913.32	1.68
	50-year			913.63	1.37
	100-yer			913.66	1.34
SRL11D01	2-year	919.00	913.98	913.98	5.02
	5-year			915.48	3.52
	10-year			915.82	3.18
	25-year			917.97	1.03
	50-year			918.05	0.95
	100-yer			918.09	0.91
SRL11E01	2-year	919.00	913.35	913.75	5.25
	5-year			915.48	3.52
	10-year			915.82	3.18
	25-year			917.97	1.03
	50-year			918.05	0.95
	100-yer			918.09	0.91
SRL11F01	2-year	921.00	916.54	916.80	4.20
	5-year			919.59	1.41
	10-year			920.19	0.81
	25-year			920.59	0.41
	50-year			920.62	0.38
	100-yer			920.65	0.35
SRL11F02	2-year	920.72	917.47	917.47	3.25
	5-year			919.59	1.13
	10-year			920.19	0.53
	25-year			920.59	0.13
	50-year			920.62	0.10
	100-yer			920.65	0.07
SRL1201	2-year	906.00	899.29	900.36	5.64
	5-year			902.62	3.38
	10-year			902.94	3.06
	25-year			903.24	2.76
	50-year			903.34	2.66
	100-yer			903.72	2.28
SRL1202	2-year	906.03	899.55	901.55	4.48
	5-year			902.62	3.41
	10-year			902.94	3.09
	25-year			903.24	2.79
	50-year			903.34	2.69
	100-yer			903.72	2.31

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1601	2-year	914.97	910.07	911.19	3.78
	5-year			912.29	2.68
	10-year			913.07	1.90
	25-year			913.63	1.34
	50-year			914.13	0.84
	100-yer			914.32	0.65
SRL1602	2-year	921.21	916.46	919.29	1.92
	5-year			919.33	1.88
	10-year			919.35	1.86
	25-year			919.37	1.84
	50-year			919.38	1.83
	100-yer			919.40	1.81
SRL1701	2-year	919.39	910.56	915.69	3.70
	5-year			915.94	3.45
	10-year			916.02	3.37
	25-year			916.11	3.28
	50-year			916.18	3.21
	100-yer			916.26	3.13
SRL1702	2-year	925.42	916.09	919.30	6.12
	5-year			920.55	4.87
	10-year			920.59	4.83
	25-year			920.63	4.79
	50-year			920.66	4.76
	100-yer			920.70	4.72
SRL1703	2-year	923.53	917.45	921.25	2.28
	5-year			921.72	1.81
	10-year			921.76	1.77
	25-year			921.81	1.72
	50-year			921.84	1.69
	100-yer			921.88	1.65
SRL1704	2-year	930.15	924.48	926.03	4.12
	5-year			928.22	1.93
	10-year			928.27	1.88
	25-year			928.31	1.84
	50-year			928.34	1.81
	100-yer			928.37	1.78
SRL1705	2-year	930.16	925.58	927.13	3.03
	5-year			928.36	1.80
	10-year			928.39	1.77
	25-year			928.43	1.73
	50-year			928.46	1.70
	100-yer			928.49	1.67
SRL17A01	2-year	921.00	916.81	919.30	1.70
	5-year			920.55	0.45
	10-year			920.59	0.41
	25-year			920.63	0.37
	50-year			920.66	0.34
	100-yer			920.70	0.30

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL17B01	2-year	922.00	918.18	921.25	0.75
	5-year			921.72	0.28
	10-year			921.76	0.24
	25-year			921.81	0.19
	50-year			921.84	0.16
	100-yer			921.88	0.13
SRL1801	2-year	929.93	916.74	917.80	12.12
	5-year			918.00	11.93
	10-year			918.11	11.82
	25-year			918.22	11.70
	50-year			918.31	11.62
	100-yer			918.39	11.54
SRL1802	2-year	929.00	918.60	920.85	8.15
	5-year			921.37	7.63
	10-year			921.83	7.17
	25-year			923.49	5.51
	50-year			924.55	4.45
	100-yer			925.73	3.27
SRL1803	2-year	933.00	924.00	925.87	7.13
	5-year			926.16	6.84
	10-year			926.33	6.67
	25-year			926.55	6.45
	50-year			926.68	6.32
	100-yer			926.83	6.17
SRL1804	2-year	932.68	924.20	926.10	6.58
	5-year			926.44	6.25
	10-year			926.62	6.06
	25-year			926.87	5.82
	50-year			927.01	5.67
	100-yer			927.19	5.50
SRL1805	2-year	935.00	925.00	929.05	5.95
	5-year			929.36	5.64
	10-year			929.48	5.52
	25-year			929.65	5.35
	50-year			929.73	5.27
	100-yer			929.82	5.18
SRL1806	2-year	940.59	930.09	931.89	8.70
	5-year			933.47	7.12
	10-year			935.16	5.43
	25-year			935.70	4.89
	50-year			935.74	4.85
	100-yer			935.79	4.80
SRL1807	2-year	937.02	930.70	933.12	3.90
	5-year			935.12	1.90
	10-year			935.42	1.60
	25-year			935.74	1.28
	50-year			935.78	1.24
	100-yer			935.83	1.19

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1808	2-year	938.41	930.91	933.49	4.92
	5-year			935.81	2.60
	10-year			936.35	2.06
	25-year			936.51	1.90
	50-year			936.54	1.87
	100-yer			936.57	1.84
SRL1809	2-year	937.57	932.40	934.86	2.71
	5-year			935.97	1.60
	10-year			936.36	1.21
	25-year			936.52	1.05
	50-year			936.55	1.02
	100-yer			936.59	0.98
SRL18A01	2-year	933.26	926.26	930.04	3.22
	5-year			932.40	0.86
	10-year			932.58	0.68
	25-year			932.72	0.54
	50-year			932.80	0.46
	100-yer			932.88	0.38
SRL18A02	2-year	935.66	927.66	930.59	5.07
	5-year			932.76	2.90
	10-year			932.81	2.85
	25-year			932.85	2.81
	50-year			932.88	2.78
	100-yer			932.91	2.75
SRL18A03	2-year	933.85	927.85	931.09	2.76
	5-year			932.76	1.09
	10-year			932.81	1.04
	25-year			932.85	1.00
	50-year			932.88	0.97
	100-yer			932.91	0.94
SRL1901	2-year	928.02	925.02	925.49	2.53
	5-year			925.58	2.44
	10-year			925.63	2.39
	25-year			925.70	2.32
	50-year			925.74	2.28
	100-yer			925.80	2.22
SRL1902	2-year	931.50	925.17	929.01	2.49
	5-year			929.57	1.93
	10-year			929.60	1.90
	25-year			929.63	1.87
	50-year			929.65	1.85
	100-yer			929.67	1.83
SRL1903	2-year	933.00	927.67	929.08	3.92
	5-year			930.09	2.91
	10-year			930.28	2.72
	25-year			930.60	2.40
	50-year			930.88	2.12
	100-yer			931.04	1.96

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL2001	2-year	932.00	922.92	923.54	8.46
	5-year			923.68	8.32
	10-year			923.75	8.25
	25-year			923.83	8.17
	50-year			923.89	8.11
	100-yer			923.96	8.04
SRL2002	2-year	934.58	926.16	931.77	2.81
	5-year			931.94	2.64
	10-year			932.02	2.56
	25-year			932.11	2.47
	50-year			932.18	2.40
	100-yer			932.25	2.33
SRL2003	2-year	933.65	926.92	932.03	1.61
	5-year			932.17	1.48
	10-year			932.23	1.41
	25-year			932.31	1.33
	50-year			932.37	1.28
	100-yer			932.44	1.21
SRL2101	2-year	946.74	934.45	935.74	11.00
	5-year			938.34	8.40
	10-year			941.59	5.15
	25-year			942.99	3.75
	50-year			943.11	3.63
	100-yer			943.23	3.52
SRL2102	2-year	946.86	935.90	938.07	8.79
	5-year			942.16	4.70
	10-year			943.24	3.62
	25-year			943.42	3.44
	50-year			943.47	3.39
	100-yer			943.54	3.32
SRL2103	2-year	945.94	936.72	939.29	6.65
	5-year			943.23	2.71
	10-year			943.42	2.52
	25-year			943.54	2.40
	50-year			943.59	2.35
	100-yer			943.66	2.28
SRL3C01	2-year	893.00	887.03	892.35	0.65
	5-year			892.44	0.56
	10-year			892.49	0.51
	25-year			892.55	0.45
	50-year			892.60	0.40
	100-yer			892.65	0.35
SRMC00	2-year	903.00	860.95	863.23	39.77
	5-year			863.59	39.41
	10-year			863.79	39.21
	25-year			864.01	38.99
	50-year			864.17	38.83
	100-yer			864.37	38.63

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC01	2-year	902.85	866.00	868.29	34.56
	5-year			868.65	34.20
	10-year			868.84	34.01
	25-year			869.07	33.78
	50-year			869.22	33.63
	100-yer			869.42	33.43
SRMC04	2-year	894.26	871.15	875.31	18.95
	5-year			876.26	18.00
	10-year			876.75	17.51
	25-year			877.38	16.88
	50-year			877.81	16.45
	100-yer			878.37	15.89
SRMC05	2-year	888.00	871.87	875.44	12.56
	5-year			876.34	11.66
	10-year			876.82	11.18
	25-year			877.44	10.56
	50-year			877.86	10.14
	100-yer			878.42	9.58
SRMC06	2-year	888.00	879.65	884.79	3.21
	5-year			885.27	2.73
	10-year			885.48	2.52
	25-year			885.71	2.29
	50-year			885.86	2.14
	100-yer			886.02	1.98
SRMC07	2-year	889.35	880.54	884.86	4.49
	5-year			885.55	3.80
	10-year			885.88	3.47
	25-year			886.20	3.15
	50-year			886.42	2.93
	100-yer			886.74	2.61
SRMC08	2-year	888.38	880.90	884.93	3.45
	5-year			885.68	2.70
	10-year			886.04	2.34
	25-year			886.37	2.01
	50-year			886.61	1.77
	100-yer			886.99	1.39
SRMC09	2-year	890.89	882.68	886.40	4.49
	5-year			887.05	3.84
	10-year			887.32	3.57
	25-year			887.68	3.21
	50-year			887.87	3.02
	100-yer			888.19	2.70
SRMC10	2-year	891.69	883.69	887.04	4.65
	5-year			887.77	3.92
	10-year			888.07	3.62
	25-year			888.48	3.21
	50-year			888.72	2.97
	100-yer			889.08	2.61

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC11	2-year	895.00	884.43	887.79	7.21
	5-year			888.47	6.53
	10-year			888.81	6.19
	25-year			889.27	5.73
	50-year			889.53	5.47
	100-yer			889.85	5.15
SRMC12	2-year	895.60	885.10	889.09	6.51
	5-year			889.85	5.75
	10-year			890.24	5.36
	25-year			890.78	4.82
	50-year			891.30	4.30
	100-yer			892.06	3.54
SRMC13	2-year	896.04	889.71	891.01	5.03
	5-year			891.24	4.80
	10-year			891.38	4.66
	25-year			891.71	4.33
	50-year			892.12	3.92
	100-yer			893.19	2.85
SRMC14	2-year	896.73	890.00	892.61	4.12
	5-year			892.81	3.92
	10-year			893.00	3.73
	25-year			893.51	3.22
	50-year			893.81	2.92
	100-yer			894.27	2.46
SRMC15	2-year	897.00	890.15	893.36	3.64
	5-year			893.72	3.28
	10-year			893.94	3.06
	25-year			894.37	2.63
	50-year			894.85	2.15
	100-yer			895.66	1.34
SRMC16	2-year	898.94	891.05	893.73	5.21
	5-year			894.23	4.71
	10-year			894.53	4.41
	25-year			895.78	3.16
	50-year			896.10	2.84
	100-yer			896.38	2.56
SRMC18	2-year	899.00	891.24	893.96	5.04
	5-year			894.47	4.53
	10-year			894.80	4.20
	25-year			895.93	3.07
	50-year			896.37	2.63
	100-yer			896.82	2.18
SRMC19	2-year	901.84	891.84	894.48	7.36
	5-year			895.02	6.82
	10-year			895.42	6.43
	25-year			896.33	5.51
	50-year			896.93	4.91
	100-yer			897.80	4.04

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC20	2-year	905.00	893.82	898.22	6.78
	5-year			898.67	6.33
	10-year			899.09	5.91
	25-year			899.51	5.49
	50-year			899.55	5.45
	100-yer			899.58	5.42
SRMC22	2-year	913.00	896.70	899.22	13.78
	5-year			899.97	13.03
	10-year			900.56	12.44
	25-year			901.32	11.68
	50-year			901.59	11.42
	100-yer			902.13	10.87
SRMC23	2-year	909.00	896.81	900.37	8.63
	5-year			900.91	8.09
	10-year			901.21	7.79
	25-year			901.52	7.48
	50-year			901.60	7.40
	100-yer			901.95	7.05
SRMC24	2-year	909.00	897.00	900.53	8.47
	5-year			901.15	7.85
	10-year			901.53	7.47
	25-year			901.91	7.09
	50-year			902.01	6.99
	100-yer			902.48	6.52
SRMC25	2-year	910.00	897.45	902.03	7.97
	5-year			902.64	7.36
	10-year			902.94	7.06
	25-year			903.24	6.76
	50-year			903.34	6.66
	100-yer			903.71	6.29
SRMC26	2-year	907.59	899.89	904.33	3.26
	5-year			905.04	2.55
	10-year			905.26	2.33
	25-year			905.47	2.12
	50-year			905.53	2.06
	100-yer			905.79	1.80
SRMC27	2-year	907.69	900.69	904.30	3.39
	5-year			905.26	2.43
	10-year			905.61	2.08
	25-year			905.88	1.81
	50-year			905.97	1.72
	100-yer			906.43	1.26
SRMC28	2-year	911.00	904.00	907.43	3.57
	5-year			907.70	3.30
	10-year			907.88	3.12
	25-year			908.06	2.94
	50-year			908.11	2.89
	100-yer			908.36	2.64

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC29	2-year	913.00	904.11	907.65	5.35
	5-year			908.02	4.98
	10-year			908.21	4.79
	25-year			908.42	4.58
	50-year			908.48	4.52
	100-yer			908.79	4.21
SRMC30	2-year	911.00	904.51	908.25	2.75
	5-year			908.74	2.26
	10-year			909.09	1.91
	25-year			909.45	1.55
	50-year			909.57	1.43
	100-yer			910.04	0.96
SRMC31	2-year	917.43	905.43	908.76	8.67
	5-year			909.99	7.44
	10-year			910.39	7.04
	25-year			910.80	6.63
	50-year			910.97	6.46
	100-yer			911.37	6.06
SRMC32	2-year	920.00	908.00	910.10	9.90
	5-year			911.08	8.92
	10-year			911.41	8.59
	25-year			912.84	7.16
	50-year			913.38	6.62
	100-yer			913.71	6.29
SRMC33	2-year	914.81	908.44	910.51	4.30
	5-year			911.39	3.42
	10-year			911.75	3.06
	25-year			913.17	1.64
	50-year			913.81	1.00
	100-yer			914.18	0.63
SRMC34	2-year	916.87	909.00	911.01	5.86
	5-year			911.81	5.07
	10-year			912.18	4.70
	25-year			913.47	3.40
	50-year			914.18	2.69
	100-yer			914.60	2.27
SRMC35	2-year	919.27	909.33	912.69	6.58
	5-year			913.25	6.01
	10-year			913.55	5.72
	25-year			914.21	5.06
	50-year			914.77	4.50
	100-yer			915.19	4.08
SRMC36	2-year	918.00	911.95	913.29	4.71
	5-year			913.88	4.12
	10-year			914.53	3.47
	25-year			915.70	2.30
	50-year			917.00	1.00
	100-yer			917.82	0.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC37	2-year	920.00	912.78	914.91	5.09
	5-year			915.34	4.66
	10-year			915.89	4.11
	25-year			916.43	3.57
	50-year			916.70	3.30
	100-yer			916.96	3.04
SRMC38	2-year	924.00	915.47	916.06	7.94
	5-year			916.52	7.48
	10-year			916.87	7.13
	25-year			917.20	6.80
	50-year			917.37	6.63
	100-yer			917.54	6.46
SRMC39	2-year	926.89	915.91	916.91	9.98
	5-year			917.65	9.24
	10-year			918.14	8.75
	25-year			918.55	8.34
	50-year			918.75	8.14
	100-yer			918.96	7.93
SRMC40	2-year	931.00	918.64	925.52	5.48
	5-year			926.66	4.34
	10-year			927.03	3.97
	25-year			927.46	3.54
	50-year			927.75	3.25
	100-yer			928.16	2.84
SRMC41	2-year	934.00	921.32	922.55	11.45
	5-year			922.81	11.19
	10-year			922.93	11.07
	25-year			923.08	10.92
	50-year			923.19	10.81
	100-yer			923.33	10.67
SRMC42	2-year	943.39	927.46	929.57	13.82
	5-year			929.81	13.58
	10-year			929.93	13.46
	25-year			930.07	13.32
	50-year			930.18	13.21
	100-yer			930.31	13.08
SRMC43	2-year	945.50	927.61	930.12	15.38
	5-year			930.64	14.86
	10-year			930.92	14.58
	25-year			931.50	14.00
	50-year			931.97	13.53
	100-yer			932.85	12.65
SRMC44	2-year	942.54	927.67	930.20	12.34
	5-year			930.82	11.72
	10-year			931.10	11.44
	25-year			931.81	10.73
	50-year			932.36	10.18
	100-yer			933.35	9.19

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SYMC00	2-year	903.00	870.86	871.38	31.62
	5-year			871.49	31.51
	10-year			871.56	31.44
	25-year			871.63	31.37
	50-year			871.69	31.31
	100-yer			871.75	31.25
SYMC01	2-year	906.94	900.61	901.13	5.81
	5-year			901.25	5.69
	10-year			901.31	5.63
	25-year			901.38	5.56
	50-year			901.44	5.50
	100-yer			901.50	5.44
SYMC02	2-year	907.20	900.87	902.25	4.95
	5-year			902.55	4.65
	10-year			902.72	4.48
	25-year			902.97	4.23
	50-year			903.19	4.01
	100-yer			903.71	3.49
SYMC03	2-year	912.79	906.71	907.48	5.31
	5-year			907.67	5.13
	10-year			907.76	5.03
	25-year			907.89	4.90
	50-year			907.98	4.81
	100-yer			908.10	4.69
SYMC04	2-year	916.08	910.66	911.37	4.71
	5-year			911.52	4.56
	10-year			911.61	4.47
	25-year			911.71	4.37
	50-year			911.79	4.29
	100-yer			911.90	4.18
SYMC05	2-year	916.13	911.21	912.38	3.75
	5-year			912.68	3.45
	10-year			912.96	3.17
	25-year			913.70	2.43
	50-year			914.11	2.02
	100-yer			914.64	1.49
UWL101	2-year	913.00	902.91	903.87	9.13
	5-year			903.93	9.07
	10-year			904.00	9.00
	25-year			904.09	8.91
	50-year			904.14	8.86
	100-yer			904.20	8.80
UWL201	2-year	920.00	908.00	910.68	9.32
	5-year			910.96	9.04
	10-year			911.09	8.91
	25-year			911.23	8.77
	50-year			911.34	8.66
	100-yer			911.45	8.55

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
UWL301	2-year	931.00	915.78	916.58	14.42
	5-year			916.78	14.22
	10-year			916.90	14.10
	25-year			917.03	13.97
	50-year			917.11	13.89
	100-yer			917.22	13.78
UWL302	2-year	959.00	946.34	947.94	11.06
	5-year			948.33	10.67
	10-year			948.51	10.49
	25-year			948.74	10.26
	50-year			948.88	10.12
	100-yer			949.05	9.95
UWMC00	2-year	897.00	884.53	891.98	5.02
	5-year			893.12	3.88
	10-year			893.60	3.40
	25-year			894.03	2.97
	50-year			894.27	2.73
	100-yer			894.77	2.23
UWMC01	2-year	897.00	885.58	892.54	4.46
	5-year			893.49	3.51
	10-year			893.97	3.03
	25-year			894.43	2.57
	50-year			894.77	2.23
	100-yer			895.23	1.77
UWMC02	2-year	900.00	886.00	892.69	7.31
	5-year			893.59	6.41
	10-year			894.06	5.94
	25-year			894.51	5.49
	50-year			894.86	5.14
	100-yer			895.31	4.69
UWMC03	2-year	900.00	886.32	892.72	7.28
	5-year			893.80	6.20
	10-year			894.35	5.65
	25-year			894.98	5.02
	50-year			895.43	4.57
	100-yer			896.03	3.97
UWMC04	2-year	913.00	893.90	896.33	16.67
	5-year			896.92	16.08
	10-year			897.23	15.77
	25-year			897.61	15.39
	50-year			897.87	15.13
	100-yer			898.20	14.80
UWMC05	2-year	911.00	895.00	897.49	13.51
	5-year			898.07	12.93
	10-year			898.38	12.62
	25-year			898.75	12.25
	50-year			899.01	11.99
	100-yer			899.33	11.67

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
UWMC06	2-year	912.00	901.39	902.92	9.08
	5-year			903.29	8.71
	10-year			903.49	8.51
	25-year			903.73	8.27
	50-year			903.89	8.11
	100-yer			904.09	7.91
UWMC07	2-year	920.00	902.70	906.71	13.29
	5-year			907.40	12.60
	10-year			907.76	12.24
	25-year			908.19	11.81
	50-year			908.48	11.52
	100-yer			908.83	11.17
UWMC08	2-year	922.00	907.00	908.95	13.05
	5-year			909.38	12.62
	10-year			909.60	12.40
	25-year			909.88	12.12
	50-year			910.07	11.93
	100-yer			910.31	11.69
UWMC09	2-year	945.00	924.05	925.39	19.61
	5-year			925.74	19.26
	10-year			925.93	19.07
	25-year			926.15	18.85
	50-year			926.30	18.70
	100-yer			926.48	18.52
UWMC10	2-year	956.00	935.70	938.40	17.60
	5-year			939.03	16.97
	10-year			939.35	16.65
	25-year			939.74	16.26
	50-year			939.99	16.01
	100-yer			940.30	15.70
UWMC11	2-year	966.00	945.11	946.34	19.66
	5-year			946.71	19.29
	10-year			946.89	19.11
	25-year			947.10	18.90
	50-year			947.25	18.75
	100-yer			947.44	18.56
UWMC12	2-year	1002.00	984.56	986.98	15.02
	5-year			987.50	14.50
	10-year			987.74	14.26
	25-year			988.04	13.96
	50-year			988.23	13.77
	100-yer			988.46	13.54
VCL102	2-year	904.00	891.74	893.32	10.68
	5-year			893.71	10.29
	10-year			893.92	10.08
	25-year			894.16	9.84
	50-year			894.33	9.67
	100-yer			894.54	9.46

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
VCL201	2-year	936.00	926.49	927.29	8.71
	5-year			927.43	8.57
	10-year			927.50	8.50
	25-year			927.59	8.41
	50-year			927.65	8.35
	100-yer			927.72	8.28
VCMC01	2-year	890.00	860.79	863.66	26.34
	5-year			864.63	25.37
	10-year			865.12	24.88
	25-year			865.57	24.43
	50-year			865.78	24.22
	100-yer			866.03	23.97
VCMC02	2-year	890.00	873.67	877.46	12.54
	5-year			878.60	11.40
	10-year			879.19	10.81
	25-year			879.97	10.03
	50-year			880.38	9.62
	100-yer			880.83	9.17
VCMC03	2-year	910.00	882.12	884.97	25.03
	5-year			885.32	24.68
	10-year			885.50	24.50
	25-year			885.72	24.29
	50-year			885.85	24.15
	100-yer			886.05	23.95
VCMC04	2-year	926.00	908.57	910.73	15.27
	5-year			911.18	14.82
	10-year			911.40	14.60
	25-year			911.66	14.34
	50-year			911.84	14.16
	100-yer			912.05	13.95
VCMC05	2-year	933.00	925.16	926.64	6.36
	5-year			926.87	6.13
	10-year			926.98	6.02
	25-year			927.12	5.88
	50-year			927.21	5.79
	100-yer			927.32	5.68
VCMC06	2-year	933.00	926.96	928.47	4.53
	5-year			928.79	4.21
	10-year			928.95	4.05
	25-year			929.15	3.85
	50-year			929.29	3.71
	100-yer			929.46	3.54
VCMC07	2-year	940.00	933.88	935.15	4.85
	5-year			935.35	4.65
	10-year			935.44	4.56
	25-year			935.56	4.44
	50-year			935.64	4.36
	100-yer			935.73	4.27

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
VCMC08	2-year	952.00	939.98	940.91	11.09
	5-year			941.06	10.94
	10-year			941.13	10.87
	25-year			941.22	10.78
	50-year			941.28	10.72
	100-yer			941.35	10.65
W13L101	2-year	906.79	901.29	903.14	3.65
	5-year			903.52	3.27
	10-year			903.71	3.08
	25-year			904.13	2.66
	50-year			905.02	1.77
	100-yer			905.80	0.99
W13L102	2-year	910.74	903.74	905.11	5.63
	5-year			906.84	3.90
	10-year			908.18	2.56
	25-year			908.83	1.91
	50-year			908.89	1.85
	100-yer			908.94	1.80
W13L103	2-year	916.97	911.48	912.16	4.81
	5-year			912.47	4.50
	10-year			915.39	1.58
	25-year			916.01	0.96
	50-year			916.02	0.95
	100-yer			916.04	0.93
W13L1A01	2-year	906.21	902.63	903.14	3.07
	5-year			903.52	2.69
	10-year			903.71	2.50
	25-year			904.13	2.08
	50-year			905.02	1.19
	100-yer			905.80	0.41
W13L1B01	2-year	909.56	903.98	905.54	4.02
	5-year			907.56	2.00
	10-year			908.84	0.72
	25-year			909.03	0.53
	50-year			909.08	0.48
	100-yer			909.13	0.43
W13L1C01	2-year	916.48	911.97	912.59	3.89
	5-year			912.75	3.73
	10-year			915.45	1.03
	25-year			916.05	0.43
	50-year			916.07	0.41
	100-yer			916.09	0.39
W13L201	2-year	908.89	903.95	904.90	3.99
	5-year			905.10	3.79
	10-year			905.20	3.69
	25-year			905.33	3.56
	50-year			905.41	3.48
	100-yer			905.52	3.37

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
W13L202	2-year	909.00	904.00	905.17	3.83
	5-year			905.40	3.60
	10-year			905.52	3.48
	25-year			905.67	3.33
	50-year			905.78	3.22
	100-yer			905.91	3.09
W13L301	2-year	913.00	908.38	909.15	3.85
	5-year			909.48	3.52
	10-year			909.66	3.34
	25-year			909.89	3.11
	50-year			910.06	2.94
	100-yer			910.28	2.72
W13L401	2-year	918.00	915.34	915.76	2.24
	5-year			915.86	2.14
	10-year			915.91	2.09
	25-year			915.99	2.01
	50-year			916.05	1.95
	100-yer			916.14	1.86
W13MC01	2-year	909.00	903.31	904.12	4.88
	5-year			904.23	4.77
	10-year			904.29	4.71
	25-year			904.35	4.65
	50-year			904.40	4.60
	100-yer			904.45	4.55
W13MC02	2-year	915.00	907.00	907.37	7.63
	5-year			907.45	7.55
	10-year			907.50	7.50
	25-year			907.55	7.45
	50-year			907.59	7.41
	100-yer			907.64	7.36
W13MC03	2-year	915.08	907.25	909.15	5.93
	5-year			909.48	5.60
	10-year			909.66	5.42
	25-year			909.89	5.19
	50-year			910.06	5.02
	100-yer			910.28	4.80
W13MC04	2-year	919.00	913.59	914.95	4.05
	5-year			915.23	3.77
	10-year			915.39	3.61
	25-year			915.59	3.41
	50-year			915.73	3.27
	100-yer			915.92	3.08
WLL101	2-year	897.24	881.28	883.49	13.75
	5-year			884.01	13.23
	10-year			884.80	12.44
	25-year			886.87	10.37
	50-year			888.68	8.56
	100-yer			890.36	6.88

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL102	2-year	896.59	883.84	886.07	10.52
	5-year			886.58	10.01
	10-year			886.94	9.65
	25-year			888.83	7.76
	50-year			891.02	5.57
	100-yer			892.56	4.03
WLL103	2-year	895.77	885.94	888.16	7.61
	5-year			888.67	7.10
	10-year			889.01	6.76
	25-year			890.44	5.33
	50-year			892.89	2.88
	100-yer			894.54	1.23
WLL104	2-year	895.00	886.50	889.32	5.68
	5-year			889.91	5.09
	10-year			890.29	4.71
	25-year			891.57	3.43
	50-year			893.57	1.43
	100-yer			894.61	0.39
WLL105	2-year	896.68	887.10	889.21	7.47
	5-year			889.83	6.85
	10-year			890.23	6.45
	25-year			891.62	5.06
	50-year			893.73	2.95
	100-yer			894.81	1.87
WLL106	2-year	902.03	888.84	890.04	11.99
	5-year			890.42	11.61
	10-year			890.93	11.10
	25-year			892.57	9.46
	50-year			895.87	6.16
	100-yer			895.89	6.14
WLL107	2-year	898.17	889.17	890.37	7.80
	5-year			890.65	7.52
	10-year			891.05	7.12
	25-year			892.83	5.34
	50-year			895.97	2.20
	100-yer			896.18	1.99
WLL108	2-year	901.14	895.14	895.88	5.26
	5-year			896.02	5.12
	10-year			896.09	5.05
	25-year			896.20	4.94
	50-year			897.20	3.94
	100-yer			898.59	2.55
WLL109	2-year	901.27	895.31	896.97	4.30
	5-year			897.59	3.68
	10-year			898.17	3.10
	25-year			899.09	2.18
	50-year			899.49	1.78
	100-yer			900.41	0.86

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL1A01	2-year	897.84	892.17	896.03	1.81
	5-year			896.16	1.68
	10-year			896.23	1.61
	25-year			896.31	1.53
	50-year			896.38	1.46
	100-yer			896.45	1.39
WLL1A02	2-year	897.93	892.93	896.70	1.23
	5-year			897.11	0.82
	10-year			897.18	0.75
	25-year			897.26	0.67
	50-year			897.31	0.62
	100-yer			897.37	0.56
WLL1B01	2-year	899.00	893.42	898.15	0.85
	5-year			898.27	0.73
	10-year			898.32	0.68
	25-year			898.39	0.61
	50-year			898.45	0.55
	100-yer			898.51	0.49
WLL201	2-year	889.00	877.86	878.94	10.06
	5-year			879.92	9.08
	10-year			880.95	8.05
	25-year			883.29	5.71
	50-year			885.32	3.68
	100-yer			886.91	2.09
WLL202	2-year	890.34	883.34	884.09	6.25
	5-year			884.24	6.10
	10-year			884.31	6.03
	25-year			884.41	5.93
	50-year			886.43	3.91
	100-yer			886.92	3.42
WLL301	2-year	892.59	882.59	885.25	7.34
	5-year			886.38	6.21
	10-year			886.95	5.64
	25-year			889.89	2.70
	50-year			890.04	2.55
	100-yer			890.18	2.41
WLL302	2-year	915.00	886.75	888.00	27.00
	5-year			888.49	26.51
	10-year			888.72	26.28
	25-year			890.02	24.98
	50-year			890.42	24.58
	100-yer			890.92	24.08
WLL303	2-year	896.00	890.18	891.91	4.09
	5-year			892.20	3.80
	10-year			892.29	3.71
	25-year			892.49	3.51
	50-year			892.61	3.39
	100-yer			892.76	3.24

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL304	2-year	896.00	890.22	892.18	3.82
	5-year			892.59	3.41
	10-year			892.70	3.30
	25-year			892.93	3.07
	50-year			893.08	2.92
	100-yer			893.27	2.73
WLL305	2-year	896.08	890.36	892.52	3.56
	5-year			893.08	3.00
	10-year			893.17	2.91
	25-year			893.46	2.62
	50-year			893.65	2.43
	100-yer			893.92	2.16
WLL306	2-year	897.96	892.10	893.03	4.93
	5-year			893.52	4.44
	10-year			893.67	4.29
	25-year			894.02	3.94
	50-year			894.33	3.63
	100-yer			894.51	3.45
WLL307	2-year	898.74	893.74	896.63	2.11
	5-year			896.83	1.91
	10-year			896.93	1.81
	25-year			897.07	1.67
	50-year			897.18	1.56
	100-yer			897.30	1.44
WLL308	2-year	901.11	896.11	897.39	3.72
	5-year			897.86	3.25
	10-year			898.02	3.09
	25-year			898.31	2.80
	50-year			898.50	2.61
	100-yer			898.93	2.18
WLL309	2-year	901.41	896.41	899.59	1.82
	5-year			899.80	1.61
	10-year			899.92	1.49
	25-year			900.06	1.35
	50-year			900.16	1.25
	100-yer			900.30	1.11
WLL310	2-year	902.07	897.07	899.60	2.47
	5-year			899.79	2.28
	10-year			899.90	2.17
	25-year			900.12	1.95
	50-year			900.36	1.71
	100-yer			900.40	1.67
WLL311	2-year	902.36	897.36	900.38	1.98
	5-year			900.64	1.72
	10-year			900.76	1.60
	25-year			900.93	1.43
	50-year			901.05	1.31
	100-yer			901.18	1.18

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL312	2-year	903.00	897.52	900.39	2.61
	5-year			900.65	2.35
	10-year			900.77	2.23
	25-year			900.95	2.05
	50-year			901.07	1.93
	100-yer			901.19	1.81
WLL313	2-year	901.97	897.68	900.70	1.27
	5-year			900.92	1.05
	10-year			901.03	0.94
	25-year			901.17	0.80
	50-year			901.28	0.69
	100-yer			901.40	0.57
WLL314	2-year	905.58	897.73	900.92	4.66
	5-year			901.07	4.51
	10-year			901.18	4.40
	25-year			901.31	4.27
	50-year			901.40	4.18
	100-yer			901.52	4.06
WLL315	2-year	904.74	898.07	901.53	3.21
	5-year			901.73	3.01
	10-year			901.84	2.90
	25-year			901.97	2.77
	50-year			902.06	2.68
	100-yer			902.18	2.56
WLL316	2-year	909.69	901.44	906.04	3.65
	5-year			906.16	3.53
	10-year			906.23	3.46
	25-year			906.31	3.38
	50-year			906.36	3.33
	100-yer			906.43	3.26
WLL317	2-year	909.75	901.73	906.42	3.33
	5-year			906.61	3.14
	10-year			906.71	3.04
	25-year			906.83	2.92
	50-year			906.92	2.83
	100-yer			907.03	2.72
WLL318	2-year	909.81	901.99	906.55	3.26
	5-year			906.74	3.07
	10-year			906.85	2.96
	25-year			906.97	2.84
	50-year			907.06	2.75
	100-yer			907.17	2.64
WLL3A01	2-year	895.00	889.49	890.21	4.79
	5-year			890.30	4.70
	10-year			890.35	4.65
	25-year			890.41	4.59
	50-year			890.45	4.55
	100-yer			890.94	4.06

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL3A02	2-year	895.11	890.59	891.17	3.94
	5-year			891.27	3.84
	10-year			891.33	3.78
	25-year			891.39	3.72
	50-year			891.44	3.67
	100-yer			891.50	3.61
WLL3B01	2-year	895.63	890.50	892.18	3.45
	5-year			892.60	3.03
	10-year			892.74	2.89
	25-year			893.01	2.62
	50-year			893.19	2.44
	100-yer			893.45	2.18
WLL3B02	2-year	895.87	890.62	892.18	3.69
	5-year			892.60	3.27
	10-year			892.77	3.10
	25-year			893.04	2.83
	50-year			893.23	2.64
	100-yer			893.53	2.34
WLL3B03	2-year	896.19	890.76	892.19	4.00
	5-year			892.62	3.57
	10-year			892.79	3.40
	25-year			893.07	3.12
	50-year			893.28	2.91
	100-yer			893.61	2.58
WLL3B04	2-year	897.00	890.92	892.21	4.79
	5-year			892.64	4.36
	10-year			892.83	4.17
	25-year			893.11	3.89
	50-year			893.33	3.67
	100-yer			893.71	3.29
WLL3B05	2-year	897.04	891.04	892.26	4.78
	5-year			892.67	4.37
	10-year			892.86	4.18
	25-year			893.15	3.89
	50-year			893.37	3.67
	100-yer			893.77	3.27
WLL401	2-year	896.50	891.50	892.53	3.97
	5-year			892.77	3.73
	10-year			893.09	3.41
	25-year			895.48	1.02
	50-year			895.58	0.92
	100-yer			895.63	0.87
WLL501	2-year	896.11	887.97	890.57	5.54
	5-year			890.76	5.35
	10-year			890.86	5.25
	25-year			891.00	5.11
	50-year			891.27	4.84
	100-yer			891.86	4.25

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL601	2-year	899.89	887.95	894.12	5.77
	5-year			895.08	4.81
	10-year			895.17	4.72
	25-year			895.24	4.65
	50-year			895.28	4.61
	100-yer			895.34	4.55
WLL701	2-year	897.02	890.11	896.21	0.81
	5-year			896.50	0.52
	10-year			896.61	0.41
	25-year			896.72	0.30
	50-year			896.79	0.23
	100-yer			896.87	0.15
WLMC00	2-year	911.00	871.99	876.12	34.88
	5-year			877.29	33.71
	10-year			877.61	33.39
	25-year			877.99	33.01
	50-year			877.99	33.01
	100-yer			877.99	33.01
WLMC01	2-year	911.00	873.21	877.34	33.66
	5-year			878.51	32.49
	10-year			879.14	31.86
	25-year			880.32	30.68
	50-year			881.25	29.75
	100-yer			882.03	28.97
WLMC02	2-year	912.00	874.16	878.29	33.71
	5-year			879.46	32.54
	10-year			880.40	31.60
	25-year			882.13	29.87
	50-year			883.79	28.21
	100-yer			885.16	26.84
WLMC03	2-year	911.07	874.95	878.80	32.27
	5-year			879.90	31.17
	10-year			880.94	30.13
	25-year			883.29	27.78
	50-year			885.32	25.75
	100-yer			886.90	24.17
WLMC04	2-year	911.00	875.25	878.85	32.15
	5-year			879.92	31.08
	10-year			880.94	30.06
	25-year			883.29	27.71
	50-year			885.33	25.67
	100-yer			886.90	24.10
WLMC05	2-year	898.50	880.50	883.69	14.81
	5-year			883.98	14.52
	10-year			884.20	14.30
	25-year			884.68	13.82
	50-year			885.40	13.10
	100-yer			886.91	11.59

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLMC06	2-year	891.00	882.00	887.39	3.61
	5-year			889.43	1.57
	10-year			890.38	0.62
	25-year			891.06	-0.06
	50-year			891.26	-0.26
	100-yer			891.47	-0.47
WLMC07	2-year	894.00	882.28	887.39	6.61
	5-year			889.43	4.57
	10-year			890.38	3.62
	25-year			891.06	2.94
	50-year			891.26	2.74
	100-yer			891.47	2.53
WLMC08	2-year	898.98	882.76	886.00	12.99
	5-year			886.45	12.53
	10-year			886.66	12.32
	25-year			886.88	12.10
	50-year			887.00	11.98
	100-yer			887.15	11.83
WLMC09	2-year	899.00	882.84	886.03	12.97
	5-year			886.51	12.49
	10-year			886.73	12.27
	25-year			886.95	12.05
	50-year			887.08	11.92
	100-yer			887.23	11.77
WLMC10	2-year	894.87	884.21	887.28	7.59
	5-year			887.87	7.00
	10-year			888.12	6.75
	25-year			888.36	6.51
	50-year			888.49	6.38
	100-yer			888.63	6.24
WLMC11	2-year	895.00	884.94	887.59	7.41
	5-year			888.94	6.06
	10-year			889.71	5.29
	25-year			890.54	4.46
	50-year			891.10	3.90
	100-yer			891.80	3.20
WLMC12	2-year	893.32	885.32	887.72	5.60
	5-year			888.99	4.33
	10-year			889.74	3.58
	25-year			890.56	2.76
	50-year			891.12	2.20
	100-yer			891.81	1.51
WLMC13	2-year	896.00	886.55	889.12	6.88
	5-year			889.61	6.39
	10-year			889.98	6.02
	25-year			890.66	5.34
	50-year			891.18	4.83
	100-yer			891.84	4.16

Table B.3
Hydraulic Modeling - Node Results for Existing Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLMC14	2-year	899.87	887.33	893.32	6.55
	5-year			895.08	4.79
	10-year			895.17	4.70
	25-year			895.24	4.63
	50-year			895.28	4.59
	100-yer			895.34	4.53
WLMC15	2-year	899.00	888.58	896.21	2.79
	5-year			896.50	2.50
	10-year			896.61	2.39
	25-year			896.72	2.28
	50-year			896.78	2.22
	100-yer			896.87	2.13
WLMC16	2-year	901.75	894.42	898.76	2.99
	5-year			898.99	2.76
	10-year			899.03	2.72
	25-year			899.08	2.67
	50-year			899.11	2.64
	100-yer			899.15	2.60
WLMC17	2-year	913.12	906.62	910.51	2.61
	5-year			911.25	1.87
	10-year			911.29	1.83
	25-year			911.34	1.78
	50-year			911.37	1.75
	100-yer			911.41	1.71
WLMC18	2-year	913.89	908.89	911.60	2.29
	5-year			912.02	1.87
	10-year			912.06	1.83
	25-year			912.10	1.79
	50-year			912.12	1.77
	100-yer			912.15	1.74

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL101	LCCL101	2-year	Natural	14	0	7.9	880.37	879.96	5.183	98	6.0	8644	11.3
		5-year								135	5.9	8644	11.3
		10-year								155	5.8	8644	11.3
		25-year								216	5.8	8644	11.3
		50-year								265	6.2	8644	11.3
		100-year								328	6.5	8644	11.3
LCCL102	LCCL102	2-year	Natural	6	0	1292.8	896.75	880.37	1.267	86	2.3	5466	9.3
		5-year								122	2.2	5466	9.3
		10-year								157	2.1	5466	9.3
		25-year								231	2.0	5466	9.3
		50-year								281	1.9	5466	9.3
		100-year								342	1.8	5466	9.3
LCCL103	CCL103A	2-year	Rectangular	4	7	68.0	897.42	896.75	0.985	89	8.7	346	12.4
		5-year								130	10.4	346	12.4
		10-year								172	11.7	346	12.4
		25-year								255	14.4	346	12.4
		50-year								305	15.9	346	12.4
		100-year								366	17.3	346	12.4
LCCL103	CCL103B	2-year	Trapezoidal	1	30	68.0	904.00	903.00	1.471	0	0.0	370	12.3
		5-year								0	0.0	370	12.3
		10-year								0	0.0	370	12.3
		25-year								0	0.0	370	12.3
		50-year								0	0.0	370	12.3
		100-year								0	0.0	370	12.3
LCCL104	LCCL104	2-year	Natural	10	15	22.8	898.08	897.42	2.900	55	2.1	43137	18.6
		5-year								75	2.2	43137	18.6
		10-year								128	2.1	43137	18.6
		25-year								185	2.1	43137	18.6
		50-year								218	2.0	43137	18.6
		100-year								259	2.0	43137	18.6
LCCL105	CCL105A	2-year	Special	4.5	4.5	271.6	899.28	898.08	0.442	55	9.5	66	6.5
		5-year								71	10.5	66	6.5
		10-year								88	11.2	66	6.5
		25-year								105	11.5	66	6.5
		50-year								110	11.6	66	6.5
		100-year								112	11.6	66	6.5
LCCL105	CCL105B	2-year	Trapezoidal	2	30	271.6	902.78	902.00	0.287	0	0.0	498	8.3
		5-year								5	1.4	498	8.3
		10-year								39	3.2	498	8.3
		25-year								80	4.2	498	8.3
		50-year								108	4.7	498	8.3
		100-year								146	5.3	498	8.3
LCCL106	LCCL106	2-year	Natural	10	0	343.3	908.00	899.28	2.540	68	0.9	48400	21.2
		5-year								120	1.0	48400	21.2
		10-year								155	1.0	48400	21.2
		25-year								197	1.0	48400	21.2
		50-year								225	1.0	48400	21.2
		100-year								263	1.1	48400	21.2
LCCL107	CCL107A	2-year	Special	6	6	45.3	908.17	908.00	0.375	34	10.4	115	7.0
		5-year								60	12.9	115	7.0
		10-year								78	14.2	115	7.0
		25-year								99	15.8	115	7.0
		50-year								113	16.6	115	7.0
		100-year								132	17.6	115	7.0
LCCL107	CCL107B	2-year	Trapezoidal	1	30	45.3	912.00	911.95	0.100	0	0.0	101	3.4
		5-year								0	0.0	101	3.4
		10-year								0	0.0	101	3.4
		25-year								0	0.0	101	3.4
		50-year								0	0.0	101	3.4
		100-year								0	0.0	101	3.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL108	LCCL108	2-year	Natural	6	7	98.7	909.74	908.17	1.590	18	0.4	17504	12.4
		5-year								48	0.6	17504	12.4
		10-year								63	0.7	17504	12.4
		25-year								81	0.7	17504	12.4
		50-year								93	0.8	17504	12.4
		100-year								109	0.8	17504	12.4
LCCL109	CCL109A	2-year	Circular	2	0	71.1	909.85	909.74	0.155	9	5.1	5	1.5
		5-year								11	5.5	5	1.5
		10-year								11	5.7	5	1.5
		25-year								12	5.9	5	1.5
		50-year								12	6.0	5	1.5
		100-year								13	6.2	5	1.5
LCCL109	CCL109B	2-year	Trapezoidal	1	30	71.1	911.85	911.74	0.155	0	0.3	120	4.0
		5-year								27	2.6	120	4.0
		10-year								41	3.1	120	4.0
		25-year								58	3.6	120	4.0
		50-year								70	3.8	120	4.0
		100-year								84	4.1	120	4.0
LCCL110	LCCL110	2-year	Natural	10	0	350.7	915.87	909.85	1.717	40	0.5	57804	17.6
		5-year								59	0.5	57804	17.6
		10-year								70	0.6	57804	17.6
		25-year								86	0.6	57804	17.6
		50-year								97	0.6	57804	17.6
		100-year								112	0.6	57804	17.6
LCCL111	8669.1	2-year	Special	2.67	2.67	314.1	917.18	915.87	0.417	14	7.0	14	4.3
		5-year								14	7.2	14	4.3
		10-year								15	7.4	14	4.3
		25-year								15	7.5	14	4.3
		50-year								16	7.7	14	4.3
		100-year								16	7.8	14	4.3
LCCL111	8669.2	2-year	Trapezoidal	1	30	314.1	921.76	918.37	1.079	27	4.0	317	10.6
		5-year								45	4.9	317	10.6
		10-year								56	5.4	317	10.6
		25-year								70	5.9	317	10.6
		50-year								81	6.2	317	10.6
		100-year								96	6.6	317	10.6
LCCL112	8253.1	2-year	Circular	2	0	28.7	918.38	917.18	4.181	16	6.8	42	13.4
		5-year								17	6.7	42	13.4
		10-year								18	6.2	42	13.4
		25-year								19	6.0	42	13.4
		50-year								20	6.2	42	13.4
		100-year								21	6.5	42	13.4
LCCL112	8253.2	2-year	Trapezoidal	1	30	28.7	921.80	921.76	0.139	25	2.7	111	3.7
		5-year								42	3.3	111	3.7
		10-year								53	3.6	111	3.7
		25-year								67	3.9	111	3.7
		50-year								77	4.1	111	3.7
		100-year								92	4.4	111	3.7
LCCL113	8252.1	2-year	Circular	2	0	208.8	920.06	918.38	0.805	20	6.8	19	6.0
		5-year								20	6.8	19	6.0
		10-year								20	6.6	19	6.0
		25-year								20	6.6	19	6.0
		50-year								20	6.6	19	6.0
		100-year								20	6.7	19	6.0
LCCL113	8252.2	2-year	Trapezoidal	1	30	208.8	923.64	921.80	0.881	9	1.4	286	9.5
		5-year								23	2.3	286	9.5
		10-year								30	2.7	286	9.5
		25-year								41	3.1	286	9.5
		50-year								49	3.4	286	9.5
		100-year								59	3.7	286	9.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL201	LCCL201	2-year	Natural	8	0	237.1	901.16	880.68	8.637	24	0.5	47978	37.9
		5-year								33	0.4	47978	37.9
		10-year								38	0.3	47978	37.9
		25-year								45	0.3	47978	37.9
		50-year								50	0.3	47978	37.9
		100-year								57	0.3	47978	37.9
LCCL202	8283.1	2-year	Circular	3	0	62.7	905.74	901.16	7.309	24	16.6	167	23.7
		5-year								33	18.4	167	23.7
		10-year								38	19.3	167	23.7
		25-year								45	20.3	167	23.7
		50-year								50	21.0	167	23.7
		100-year								57	21.8	167	23.7
LCCL202	8283.2	2-year	Trapezoidal	1	30	62.7	909.74	909.68	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LCCL203	8284.1	2-year	Circular	2.5	0	72.2	906.97	905.74	1.703	24	10.2	50	10.1
		5-year								33	11.2	50	10.1
		10-year								38	11.7	50	10.1
		25-year								45	12.3	50	10.1
		50-year								50	12.7	50	10.1
		100-year								57	13.2	50	10.1
LCCL203	8284.2	2-year	Trapezoidal	1	30	72.2	910.72	909.74	1.357	0	0.0	355	11.8
		5-year								0	0.0	355	11.8
		10-year								0	0.0	355	11.8
		25-year								0	0.0	355	11.8
		50-year								0	0.0	355	11.8
		100-year								0	0.0	355	11.8
LCCL204	8285.1	2-year	Circular	2	0	80.4	909.18	906.97	2.748	12	6.3	20	6.5
		5-year								16	6.9	20	6.5
		10-year								19	7.1	20	6.5
		25-year								23	8.7	20	6.5
		50-year								25	8.0	20	6.5
		100-year								28	8.7	20	6.5
LCCL204	8285.2	2-year	Trapezoidal	1	30	80.4	913.18	910.72	3.059	0	0.0	533	17.8
		5-year								0	0.0	533	17.8
		10-year								0	0.0	533	17.8
		25-year								0	0.0	533	17.8
		50-year								0	0.0	533	17.8
		100-year								2	1.8	533	17.8
LCCMC01	LCCMC01	2-year	Natural	12	0	851.5	879.96	863.18	1.971	232	7.1	11935	18.3
		5-year								400	8.0	11935	18.3
		10-year								524	8.5	11935	18.3
		25-year								696	9.1	11935	18.3
		50-year								823	9.5	11935	18.3
		100-year								1010	10.0	11935	18.3
LCCMC02	LCCMC02	2-year	Natural	14.5	0	1521.5	880.68	879.96	0.047	174	1.7	4402	3.3
		5-year								303	2.1	4402	3.3
		10-year								382	2.3	4402	3.3
		25-year								496	2.5	4402	3.3
		50-year								578	2.7	4402	3.3
		100-year								695	2.9	4402	3.3
LCCMC03	LCCMC03	2-year	Natural	14	0	160.4	891.70	880.68	6.869	184	1.6	123213	43.6
		5-year								312	1.7	123213	43.6
		10-year								391	1.8	123213	43.6
		25-year								503	2.0	123213	43.6
		50-year								584	2.1	123213	43.6
		100-year								697	2.2	123213	43.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCMC04	CCMC04A	2-year	Rectangular	10.5	10.5	131.0	891.74	891.70	0.031	184	10.6	389	3.5
		5-year								312	14.2	389	3.5
		10-year								391	16.0	389	3.5
		25-year								503	18.2	389	3.5
		50-year								584	19.7	389	3.5
		100-year								697	21.6	389	3.5
LCCMC04	CCMC04B	2-year	Trapezoidal	1	30	131.0	906.00	905.87	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LCCMC05	LCCMC05	2-year	Trapezoidal	4	4	125.8	903.76	902.24	1.209	176	5.7	654	7.8
		5-year								299	6.6	654	7.8
		10-year								374	6.9	654	7.8
		25-year								480	7.4	654	7.8
		50-year								555	7.6	654	7.8
		100-year								662	8.1	654	7.8
LCCMC06	LCCMC06	2-year	Trapezoidal	6	100	10.0	901.74	901.74	0.000	176	0.4	8632	0.0
		5-year								299	0.6	8632	0.0
		10-year								374	0.7	8632	0.0
		25-year								480	0.9	8632	0.0
		50-year								555	1.0	8632	0.0
		100-year								662	1.1	8632	0.0
LCCMC07	LCCMC07	2-year	Trapezoidal	6	100	10.0	901.74	901.74	0.000	219	0.5	8632	0.0
		5-year								344	0.7	8632	0.0
		10-year								424	0.8	8632	0.0
		25-year								521	1.0	8632	0.0
		50-year								586	1.0	8632	0.0
		100-year								685	1.1	8632	0.0
LCCMC08	CCMC08A	2-year	Rectangular	3.75	4	16.0	901.88	901.74	0.875	220	13.6	106	7.1
		5-year								303	20.0	106	7.1
		10-year								316	21.0	106	7.1
		25-year								322	21.4	106	7.1
		50-year								324	21.6	106	7.1
		100-year								325	21.6	106	7.1
LCCMC08	CCMC08B	2-year	Trapezoidal	3	30	33.0	907.10	907.07	0.100	0	0.0	556	6.2
		5-year								51	3.5	556	6.2
		10-year								122	4.8	556	6.2
		25-year								214	5.9	556	6.2
		50-year								284	6.6	556	6.2
		100-year								381	7.3	556	6.2
LCCMC09	LCCMC09	2-year	Trapezoidal	8	45	153.6	904.82	901.88	1.914	235	0.9	25709	16.0
		5-year								354	0.8	25709	16.0
		10-year								435	0.8	25709	16.0
		25-year								534	0.8	25709	16.0
		50-year								598	0.8	25709	16.0
		100-year								692	0.8	25709	16.0
LCCMC10	CCMC10A	2-year	Circular	1.5	0	22.9	904.83	904.82	0.044	12	7.6	1	0.6
		5-year								13	7.5	1	0.6
		10-year								12	7.4	1	0.6
		25-year								12	7.2	1	0.6
		50-year								12	7.1	1	0.6
		100-year								12	6.9	1	0.6
LCCMC10	CCMC10B	2-year	Circular	1		22.9	904.83	904.82	0.044	5	6.2	0	0.4
		5-year								5	6.1	0	0.4
		10-year								5	6.0	0	0.4
		25-year								4	5.8	0	0.4
		50-year								4	5.6	0	0.4
		100-year								4	5.4	0	0.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCMC10	CCMC10C	2-year	Trapezoidal	3	30	22.9	906.17	906.15	0.100	229	6.1	508	5.6
		5-year								356	7.1	508	5.6
		10-year								435	7.6	508	5.6
		25-year								538	8.2	508	5.6
		50-year								603	8.5	508	5.6
		100-year								696	8.9	508	5.6
LCCMC11	LCCMC11	2-year	Natural	14	0	1001.7	914.89	904.83	1.004	175	2.2	49973	11.9
		5-year								259	2.6	49973	11.9
		10-year								312	2.7	49973	11.9
		25-year								382	2.9	49973	11.9
		50-year								433	3.0	49973	11.9
		100-year								503	3.1	49973	11.9
LCCMC12	LCCMC12	2-year	Natural	5.75	0	1276.3	928.25	914.89	1.047	107	2.2	10946	8.4
		5-year								160	2.3	10946	8.4
		10-year								193	2.4	10946	8.4
		25-year								236	2.5	10946	8.4
		50-year								269	2.5	10946	8.4
		100-year								312	2.6	10946	8.4
LCCMC13	CCMC13A	2-year	Circular	4	0	52.2	928.53	928.25	0.536	0	-0.1	98	7.8
		5-year								0	-0.1	98	7.8
		10-year								0	-0.1	98	7.8
		25-year								0	-0.1	98	7.8
		50-year								0	-0.1	98	7.8
		100-year								0	-0.1	98	7.8
LCCMC13	CCMC13B	2-year	Trapezoidal	1	30	52.2	934.00	933.95	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LE23L101	LE23L101	2-year	Natural	7	2	1873.3	929.53	910.00	1.043	22	0.2	26848	10.8
		5-year								31	0.2	26848	10.8
		10-year								36	0.2	26848	10.8
		25-year								44	0.2	26848	10.8
		50-year								49	0.2	26848	10.8
		100-year								56	0.3	26848	10.8
LE23L102	8203.1	2-year	Circular	2	0	121.6	930.00	929.53	0.387	24	11.1	13	4.2
		5-year								26	11.3	13	4.2
		10-year								27	11.4	13	4.2
		25-year								28	11.5	13	4.2
		50-year								29	11.5	13	4.2
		100-year								29	11.6	13	4.2
LE23L102	8203.2	2-year	Trapezoidal	1	30	121.6	934.00	932.53	1.209	5	2.2	335	11.2
		5-year								17	3.5	335	11.2
		10-year								25	4.0	335	11.2
		25-year								34	4.6	335	11.2
		50-year								42	4.9	335	11.2
		100-year								51	5.4	335	11.2
LE23L103	8204.1	2-year	Circular	2	0	53.4	930.14	930.00	0.262	23	7.2	11	3.4
		5-year								23	7.4	11	3.4
		10-year								24	7.6	11	3.4
		25-year								24	7.7	11	3.4
		50-year								25	7.8	11	3.4
		100-year								25	7.9	11	3.4
LE23L103	8204.2	2-year	Trapezoidal	1	30	53.4	934.14	934.00	0.262	14	2.2	156	5.2
		5-year								27	2.8	156	5.2
		10-year								35	3.1	156	5.2
		25-year								45	3.4	156	5.2
		50-year								53	3.6	156	5.2
		100-year								63	3.9	156	5.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LE23L104	8212.1	2-year	Circular	2	0	83.3	931.42	930.14	1.536	22	7.1	26	8.3
		5-year								23	7.2	26	8.3
		10-year								23	7.3	26	8.3
		25-year								24	7.5	26	8.3
		50-year								24	7.6	26	8.3
		100-year								24	7.7	26	8.3
LE23L104	8212.2	2-year	Trapezoidal	1	30	83.3	935.09	934.14	1.140	8	1.7	326	10.9
		5-year								22	2.9	326	10.9
		10-year								31	3.3	326	10.9
		25-year								41	3.8	326	10.9
		50-year								50	4.1	326	10.9
		100-year								60	4.5	326	10.9
LE23L105	8514.1	2-year	Circular	2	0	46.8	931.66	931.42	0.513	22	7.1	15	4.8
		5-year								23	7.2	15	4.8
		10-year								23	7.1	15	4.8
		25-year								23	7.2	15	4.8
		50-year								23	7.3	15	4.8
		100-year								23	7.3	15	4.8
LE23L105	8514.2	2-year	Trapezoidal	1	30	46.8	935.24	935.09	0.321	14	2.2	173	5.8
		5-year								27	2.9	173	5.8
		10-year								35	3.2	173	5.8
		25-year								45	3.5	173	5.8
		50-year								53	3.7	173	5.8
		100-year								63	4.0	173	5.8
LE23L106	8213.1	2-year	Circular	1.25	0	335.1	937.40	931.66	1.713	5	5.2	8	6.4
		5-year								7	6.4	8	6.4
		10-year								8	6.9	8	6.4
		25-year								8	7.0	8	6.4
		50-year								8	7.0	8	6.4
		100-year								8	7.0	8	6.4
LE23L106	8213.2	2-year	Trapezoidal	1	30	335.1	940.65	935.24	1.614	0	0.0	388	12.9
		5-year								0	0.0	388	12.9
		10-year								0	0.0	388	12.9
		25-year								2	0.4	388	12.9
		50-year								3	1.3	388	12.9
		100-year								5	0.7	388	12.9
LE23L1A01	8211.1	2-year	Circular	2	0	134.7	934.86	931.66	2.376	18	6.5	32	10.3
		5-year								22	7.0	32	10.3
		10-year								23	7.1	32	10.3
		25-year								23	7.1	32	10.3
		50-year								23	7.1	32	10.3
		100-year								23	7.2	32	10.3
LE23L1A01	8211.2	2-year	Trapezoidal	1	30	134.7	937.00	935.24	1.307	0	0.0	349	11.6
		5-year								4	0.8	349	11.6
		10-year								10	1.4	349	11.6
		25-year								16	1.9	349	11.6
		50-year								22	2.3	349	11.6
		100-year								28	2.6	349	11.6
LE23MC01	E23MC01A	2-year	Rectangular	4	8	41.5	907.40	906.50	2.170	202	9.8	606	18.9
		5-year								312	13.2	606	18.9
		10-year								360	14.5	606	18.9
		25-year								446	16.7	606	18.9
		50-year								520	18.3	606	18.9
		100-year								622	20.4	606	18.9
LE23MC01	E23MC01B	2-year	Trapezoidal	3	30	41.5	912.00	911.96	0.100	0	0.0	546	6.1
		5-year								0	0.0	546	6.1
		10-year								0	0.0	546	6.1
		25-year								0	0.0	546	6.1
		50-year								0	0.0	546	6.1
		100-year								0	0.0	546	6.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LE23MC02	LE23MC02	2-year	Natural	5.6	0	1605.8	910.00	907.40	0.162	582	2.3	6324	3.2
		5-year								894	2.5	6324	3.2
		10-year								1019	2.5	6324	3.2
		25-year								1288	2.5	6324	3.2
		50-year								1533	2.5	6324	3.2
		100-year								1884	2.6	6324	3.2
LE23MC03	LE23MC03	2-year	Natural	7.5	0	614.9	911.41	910.00	0.229	397	1.3	17315	5.1
		5-year								615	1.4	17315	5.1
		10-year								739	1.5	17315	5.1
		25-year								822	1.6	17315	5.1
		50-year								951	1.7	17315	5.1
		100-year								1119	1.7	17315	5.1
LE23MC04	LE23MC04	2-year	Natural	6	0	1102.0	916.56	911.41	0.467	298	3.7	7219	5.9
		5-year								459	3.7	7219	5.9
		10-year								556	3.6	7219	5.9
		25-year								621	3.6	7219	5.9
		50-year								718	3.6	7219	5.9
		100-year								836	3.6	7219	5.9
LE23MC05	LE23MC05	2-year	Natural	4	10	1172.6	923.58	916.56	0.599	136	3.2	1722	3.9
		5-year								199	3.2	1722	3.9
		10-year								234	3.2	1722	3.9
		25-year								235	3.2	1722	3.9
		50-year								241	3.3	1722	3.9
		100-year								278	3.3	1722	3.9
LE4MC01	LE4MC01	2-year	Circular	6	0	200.4	879.59	871.31	4.132	48	15.6	799	28.3
		5-year								75	17.7	799	28.3
		10-year								90	18.8	799	28.3
		25-year								112	19.9	799	28.3
		50-year								128	20.7	799	28.3
		100-year								149	21.7	799	28.3
LE7MC01	LE7MC01	2-year	Circular	5	0	158.2	885.46	879.23	3.937	82	18.3	480	24.4
		5-year								119	20.3	480	24.4
		10-year								141	21.3	480	24.4
		25-year								171	22.4	480	24.4
		50-year								193	23.1	480	24.4
		100-year								222	24.0	480	24.4
LFPL101	8250.1	2-year	Circular	3	0	378.3	886.42	874.72	3.093	23	8.9	109	15.4
		5-year								26	9.4	109	15.4
		10-year								38	9.6	109	15.4
		25-year								46	9.6	109	15.4
		50-year								52	10.3	109	15.4
		100-year								60	11.4	109	15.4
LFPL101	8250.2	2-year	Trapezoidal	1	30	378.3	893.02	891.39	0.431	0	0.0	200	6.7
		5-year								0	0.0	200	6.7
		10-year								0	0.0	200	6.7
		25-year								0	0.0	200	6.7
		50-year								0	0.0	200	6.7
		100-year								0	0.0	200	6.7
LFPL102	8454.1	2-year	Circular	2	0	46.3	886.65	886.42	0.496	23	10.3	15	4.7
		5-year								26	11.0	15	4.7
		10-year								38	14.4	15	4.7
		25-year								47	16.8	15	4.7
		50-year								52	18.4	15	4.7
		100-year								60	20.4	15	4.7
LFPL102	8454.2	2-year	Trapezoidal	1	30	46.3	893.15	893.02	0.281	0	0.0	162	5.4
		5-year								0	0.0	162	5.4
		10-year								0	0.0	162	5.4
		25-year								0	0.0	162	5.4
		50-year								0	0.0	162	5.4
		100-year								0	0.0	162	5.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPL103	8455.1	2-year	Circular	2	0	52.1	886.95	886.65	0.575	16	6.0	16	5.1
		5-year								17	6.2	16	5.1
		10-year								17	6.2	16	5.1
		25-year								17	6.2	16	5.1
		50-year								17	6.0	16	5.1
		100-year								17	6.0	16	5.1
LFPL103	8455.2	2-year	Trapezoidal	1	30	52.1	893.03	892.98	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								10	1.7	96	3.2
		25-year								15	2.0	96	3.2
		50-year								19	2.2	96	3.2
		100-year								24	2.5	96	3.2
LFPL104	8251.1	2-year	Circular	1	0	105.0	888.09	886.95	1.086	6	7.9	3	4.4
		5-year								6	7.9	3	4.4
		10-year								6	7.9	3	4.4
		25-year								6	7.9	3	4.4
		50-year								6	7.9	3	4.4
		100-year								6	7.9	3	4.4
LFPL104	8251.2	2-year	Trapezoidal	3	30	105.0	891.09	890.99	0.100	10	1.6	556	6.2
		5-year								19	1.9	556	6.2
		10-year								27	1.9	556	6.2
		25-year								31	1.8	556	6.2
		50-year								35	2.0	556	6.2
		100-year								40	2.1	556	6.2
LFPL201	8456.1	2-year	Circular	2	0	89.5	884.11	874.72	10.487	74	23.0	68	21.7
		5-year								87	27.2	68	21.7
		10-year								86	27.1	68	21.7
		25-year								86	27.1	68	21.7
		50-year								86	27.0	68	21.7
		100-year								86	27.0	68	21.7
LFPL201	8456.2	2-year	Trapezoidal	1	30	89.5	891.94	891.39	0.614	0	0.0	239	8.0
		5-year								23	3.2	239	8.0
		10-year								43	4.1	239	8.0
		25-year								70	5.0	239	8.0
		50-year								91	5.5	239	8.0
		100-year								118	6.1	239	8.0
LFPL202	8457.1	2-year	Circular	2	0	97.5	888.14	884.11	4.133	56	18.6	43	13.6
		5-year								56	18.6	43	13.6
		10-year								56	18.6	43	13.6
		25-year								56	18.6	43	13.6
		50-year								56	18.6	43	13.6
		100-year								56	18.6	43	13.6
LFPL202	8457.2	2-year	Trapezoidal	2	30	97.5	892.14	891.94	0.205	26	2.6	421	7.0
		5-year								90	4.3	421	7.0
		10-year								110	4.6	421	7.0
		25-year								136	5.0	421	7.0
		50-year								155	5.3	421	7.0
		100-year								181	5.6	421	7.0
LFPL203	8496.1	2-year	Circular	1.25	0	222.0	888.41	888.14	0.122	7	5.8	2	1.7
		5-year								7	5.8	2	1.7
		10-year								7	5.8	2	1.7
		25-year								7	5.8	2	1.7
		50-year								7	5.8	2	1.7
		100-year								7	5.8	2	1.7
LFPL203	8496.2	2-year	Trapezoidal	2	30	222.0	891.66	891.44	0.100	73	2.8	294	4.9
		5-year								107	2.8	294	4.9
		10-year								126	2.9	294	4.9
		25-year								152	3.2	294	4.9
		50-year								172	3.4	294	4.9
		100-year								198	3.7	294	4.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPL204	8499.1	2-year	Circular	1.25	0	102.8	888.89	888.41	0.467	4	3.6	4	3.3
		5-year								4	3.6	4	3.3
		10-year								4	3.6	4	3.3
		25-year								4	3.6	4	3.3
		50-year								4	3.6	4	3.3
		100-year								4	3.7	4	3.3
LFPL204	8499.2	2-year	Trapezoidal	3	30	102.8	891.39	891.29	0.100	70	1.9	557	6.2
		5-year								103	2.1	557	6.2
		10-year								123	2.4	557	6.2
		25-year								148	2.7	557	6.2
		50-year								168	2.9	557	6.2
		100-year								193	3.1	557	6.2
LFPL205	8497.1	2-year	Circular	1.25	0	124.2	890.46	888.89	1.265	8	6.1	7	5.5
		5-year								8	6.1	7	5.5
		10-year								8	6.1	7	5.5
		25-year								8	6.1	7	5.5
		50-year								8	6.1	7	5.5
		100-year								8	6.1	7	5.5
LFPL205	8497.2	2-year	Trapezoidal	3	30	124.2	893.71	891.39	1.869	68	3.1	2405	26.7
		5-year								102	3.6	2405	26.7
		10-year								121	4.0	2405	26.7
		25-year								147	4.4	2405	26.7
		50-year								167	4.7	2405	26.7
		100-year								193	5.1	2405	26.7
LFPL206	8498.1	2-year	Circular	1.25	0	95.3	890.84	890.46	0.399	6	5.2	4	3.1
		5-year								6	5.2	4	3.1
		10-year								6	5.1	4	3.1
		25-year								6	5.1	4	3.1
		50-year								6	5.1	4	3.1
		100-year								6	5.1	4	3.1
LFPL206	8498.2	2-year	Trapezoidal	1	30	95.3	894.09	893.71	0.399	70	4.3	193	6.4
		5-year								102	5.0	193	6.4
		10-year								122	5.4	193	6.4
		25-year								148	5.8	193	6.4
		50-year								167	6.1	193	6.4
		100-year								192	6.4	193	6.4
LFPL301	8458.1	2-year	Circular	2	0	451.2	878.80	874.72	0.904	12	4.9	20	6.4
		5-year								22	6.8	20	6.4
		10-year								28	8.8	20	6.4
		25-year								31	9.7	20	6.4
		50-year								31	9.8	20	6.4
		100-year								32	9.9	20	6.4
LFPL301	8458.2	2-year	Trapezoidal	1	30	451.2	887.00	886.55	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								3	0.9	96	3.2
		50-year								12	1.5	96	3.2
		100-year								22	2.0	96	3.2
LFPMC01	LFPMC01	2-year	Circular	6	0	107.8	873.07	871.48	1.475	139	14.7	478	16.9
		5-year								240	16.9	478	16.9
		10-year								294	17.8	478	16.9
		25-year								368	18.7	478	16.9
		50-year								416	19.1	478	16.9
		100-year								479	19.3	478	16.9
LFPMC02	FPMC02A	2-year	Circular	6	0	27.2	873.48	873.07	1.508	139	14.6	460	16.3
		5-year								239	16.8	460	16.3
		10-year								294	17.7	460	16.3
		25-year								368	18.6	460	16.3
		50-year								416	19.0	460	16.3
		100-year								479	19.3	460	16.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPMC02	FPMC02B	2-year	Trapezoidal	1	30	27.2	908.00	907.97	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LFPMC03	FPMC03A	2-year	Circular	6	0	84.2	874.72	873.48	1.473	139	14.5	477	16.9
		5-year								239	16.8	477	16.9
		10-year								294	17.7	477	16.9
		25-year								368	18.5	477	16.9
		50-year								416	18.9	477	16.9
		100-year								479	19.2	477	16.9
LFPMC03	FPMC03B	2-year	Trapezoidal	1	30	84.2	908.08	908.00	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LFPMC04	8459.1	2-year	Circular	2.5	0	385.7	886.42	874.72	3.033	37	8.7	39	7.9
		5-year								40	8.8	39	7.9
		10-year								40	8.8	39	7.9
		25-year								40	8.9	39	7.9
		50-year								40	8.9	39	7.9
		100-year								40	8.9	39	7.9
LFPMC04	8459.2	2-year	Trapezoidal	1	30	385.7	888.00	887.61	0.100	16	1.8	96	3.2
		5-year								62	3.1	96	3.2
		10-year								95	3.7	96	3.2
		25-year								129	4.6	96	3.2
		50-year								155	5.3	96	3.2
		100-year								187	6.2	96	3.2
LFPMC05	LFPMC05	2-year	Natural	6	14	1428.6	887.00	886.42	0.041	20	0.6	746	1.0
		5-year								39	0.9	746	1.0
		10-year								52	1.1	746	1.0
		25-year								69	1.2	746	1.0
		50-year								81	1.2	746	1.0
		100-year								97	1.2	746	1.0
LIPL201	LIPL201	2-year	Natural	9	10	484.0	902.67	896.50	1.275	94	3.8	28318	11.6
		5-year								155	2.3	28318	11.6
		10-year								184	1.8	28318	11.6
		25-year								225	1.8	28318	11.6
		50-year								256	1.7	28318	11.6
		100-year								299	2.8	28318	11.6
LIPL202	LIPL202	2-year	Natural	4	10	1173.1	909.87	902.67	0.614	42	2.3	848	3.7
		5-year								57	2.5	848	3.7
		10-year								63	2.6	848	3.7
		25-year								69	2.7	848	3.7
		50-year								80	2.8	848	3.7
		100-year								95	2.8	848	3.7
LIPL203	LIPL203	2-year	Natural	4	15	549.6	923.00	909.87	2.389	4	0.9	1388	8.4
		5-year								6	1.0	1388	8.4
		10-year								7	1.1	1388	8.4
		25-year								8	1.1	1388	8.4
		50-year								9	1.1	1388	8.4
		100-year								10	1.1	1388	8.4
LIPL204	8224.1	2-year	Circular	2	0	108.3	923.54	923.00	0.499	4	5.1	15	4.7
		5-year								6	5.7	15	4.7
		10-year								7	6.0	15	4.7
		25-year								8	6.3	15	4.7
		50-year								9	6.6	15	4.7
		100-year								10	6.9	15	4.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL204	8224.2	2-year	Trapezoidal	1	30	108.3	930.54	927.00	3.268	0	0.0	551	18.4
		5-year								0	0.0	551	18.4
		10-year								0	0.0	551	18.4
		25-year								0	0.0	551	18.4
		50-year								0	0.0	551	18.4
		100-year								0	0.0	551	18.4
LIPL205	8225.1	2-year	Circular	2	0	52.6	925.04	923.54	2.853	4	4.8	35	11.3
		5-year								6	5.4	35	11.3
		10-year								7	5.7	35	11.3
		25-year								8	6.0	35	11.3
		50-year								9	6.2	35	11.3
		100-year								10	7.7	35	11.3
LIPL205	8225.2	2-year	Trapezoidal	1	30	52.6	931.29	929.54	3.329	0	0.0	557	18.6
		5-year								0	0.0	557	18.6
		10-year								0	0.0	557	18.6
		25-year								0	0.0	557	18.6
		50-year								0	0.0	557	18.6
		100-year								0	0.0	557	18.6
LIPL206	8226.1	2-year	Circular	1.25	0	233.7	928.85	925.04	1.630	4	6.5	8	6.2
		5-year								6	7.0	8	6.2
		10-year								7	7.2	8	6.2
		25-year								8	8.0	8	6.2
		50-year								8	8.1	8	6.2
		100-year								8	8.2	8	6.2
LIPL206	8226.2	2-year	Trapezoidal	1	30	233.7	932.10	930.29	0.774	0	0.0	268	8.9
		5-year								0	0.0	268	8.9
		10-year								0	0.0	268	8.9
		25-year								0	0.4	268	8.9
		50-year								1	0.9	268	8.9
		100-year								2	1.2	268	8.9
LIPL2A01	LIPL2A01	2-year	Trapezoidal	4	24	168.0	903.91	902.67	0.738	46	1.1	1161	7.3
		5-year								77	1.2	1161	7.3
		10-year								93	1.2	1161	7.3
		25-year								117	1.5	1161	7.3
		50-year								133	1.6	1161	7.3
		100-year								154	1.7	1161	7.3
LIPL2A02	LIPL2A02	2-year	Natural	4	24	1114.6	916.83	903.91	1.159	40	1.7	7168	7.0
		5-year								58	1.8	7168	7.0
		10-year								68	1.8	7168	7.0
		25-year								84	1.8	7168	7.0
		50-year								96	1.8	7168	7.0
		100-year								111	1.8	7168	7.0
LIPL2A03	8229.1	2-year	Circular	2.5	0	127.5	917.54	916.83	0.557	24	9.3	28	5.8
		5-year								34	10.5	28	5.8
		10-year								41	12.7	28	5.8
		25-year								44	13.3	28	5.8
		50-year								44	13.5	28	5.8
		100-year								46	13.6	28	5.8
LIPL2A03	8229.2	2-year	Trapezoidal	1	30	127.5	922.12	920.83	1.012	0	0.0	307	10.2
		5-year								0	0.0	307	10.2
		10-year								0	0.0	307	10.2
		25-year								7	2.3	307	10.2
		50-year								12	2.9	307	10.2
		100-year								20	3.5	307	10.2
LIPL2A04	8228.1	2-year	Circular	2	0	46.5	917.99	917.54	0.969	24	7.6	21	6.6
		5-year								34	10.8	21	6.6
		10-year								36	11.5	21	6.6
		25-year								37	11.6	21	6.6
		50-year								37	11.7	21	6.6
		100-year								37	11.8	21	6.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL2A04	8228.2	2-year	Trapezoidal	2	30	46.5	922.24	921.12	2.411	0	0.0	1444	24.1
		5-year								0	0.0	1444	24.1
		10-year								19	2.8	1444	24.1
		25-year								36	3.0	1444	24.1
		50-year								43	3.0	1444	24.1
		100-year								52	3.3	1444	24.1
LIPL2A05	8227.1	2-year	Circular	2	0	134.3	918.27	917.99	0.208	23	7.4	10	3.1
		5-year								24	7.5	10	3.1
		10-year								24	7.6	10	3.1
		25-year								24	7.6	10	3.1
		50-year								24	7.6	10	3.1
		100-year								24	7.6	10	3.1
LIPL2A05	8227.2	2-year	Trapezoidal	2	30	134.3	921.52	921.24	0.208	1	0.7	425	7.1
		5-year								28	2.4	425	7.1
		10-year								40	2.5	425	7.1
		25-year								48	2.3	425	7.1
		50-year								55	2.4	425	7.1
		100-year								63	2.7	425	7.1
LIPL401	LIPL401	2-year	Natural	6	6	923.8	901.03	897.01	0.435	19	1.0	1554	3.6
		5-year								28	1.0	1554	3.6
		10-year								31	1.0	1554	3.6
		25-year								35	1.0	1554	3.6
		50-year								42	0.9	1554	3.6
		100-year								46	0.9	1554	3.6
LIPL402	IPL402A	2-year	Special	2.67	3.33	86.9	901.98	901.03	1.093	20	5.1	51	5.7
		5-year								28	5.8	51	5.7
		10-year								31	6.0	51	5.7
		25-year								36	6.3	51	5.7
		50-year								43	6.8	51	5.7
		100-year								46	7.0	51	5.7
LIPL402	IPL402B	2-year	Trapezoidal	1	30	86.9	907.00	906.91	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LIPL403	LIPL403	2-year	Natural	4.5	5	320.7	903.61	901.98	0.507	20	2.2	1927	3.9
		5-year								29	2.3	1927	3.9
		10-year								31	2.3	1927	3.9
		25-year								36	2.4	1927	3.9
		50-year								44	2.4	1927	3.9
		100-year								47	2.4	1927	3.9
LIPL404	IPL404A	2-year	Special	2.5	3.5	47.7	903.86	903.61	0.524	20	5.3	26	3.8
		5-year								29	6.4	26	3.8
		10-year								31	6.6	26	3.8
		25-year								36	7.2	26	3.8
		50-year								44	7.8	26	3.8
		100-year								47	8.1	26	3.8
LIPL404	IPL404B	2-year	Trapezoidal	1	30	47.7	908.69	907.81	1.844	0	0.0	414	13.8
		5-year								0	0.0	414	13.8
		10-year								0	0.0	414	13.8
		25-year								0	0.0	414	13.8
		50-year								0	0.0	414	13.8
		100-year								0	0.0	414	13.8
LIPL405	LIPL405	2-year	Natural	5	5	233.6	906.93	903.86	1.317	20	1.8	4157	6.7
		5-year								29	1.9	4157	6.7
		10-year								31	2.0	4157	6.7
		25-year								37	2.0	4157	6.7
		50-year								44	2.1	4157	6.7
		100-year								47	2.2	4157	6.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL406	8470.1	2-year	Circular	2.5	0	50.9	910.27	906.93	6.562	20	11.1	57	11.6
		5-year								29	12.3	57	11.6
		10-year								31	12.5	57	11.6
		25-year								37	13.2	57	11.6
		50-year								44	13.9	57	11.6
		100-year								47	14.0	57	11.6
LIPL406	8470.2	2-year	Trapezoidal	1	30	50.9	915.60	911.60	7.866	0	0.0	855	28.5
		5-year								0	0.0	855	28.5
		10-year								0	0.0	855	28.5
		25-year								0	0.0	855	28.5
		50-year								0	0.0	855	28.5
		100-year								0	0.0	855	28.5
LIPL407	8471.1	2-year	Circular	2	0	127.0	912.80	910.27	1.993	20	10.0	30	9.4
		5-year								29	10.9	30	9.4
		10-year								31	11.2	30	9.4
		25-year								37	12.1	30	9.4
		50-year								44	13.9	30	9.4
		100-year								47	14.6	30	9.4
LIPL407	8471.2	2-year	Trapezoidal	1	30	127.0	918.55	914.60	3.111	0	0.0	538	17.9
		5-year								0	0.0	538	17.9
		10-year								0	0.0	538	17.9
		25-year								0	0.0	538	17.9
		50-year								0	0.0	538	17.9
		100-year								0	0.0	538	17.9
LIPL408	8230.1	2-year	Circular	2	0	363.0	919.35	912.80	1.805	20	9.8	28	9.0
		5-year								29	10.3	28	9.0
		10-year								31	10.5	28	9.0
		25-year								35	10.9	28	9.0
		50-year								35	10.9	28	9.0
		100-year								35	11.0	28	9.0
LIPL408	8230.2	2-year	Trapezoidal	1	30	363.0	924.93	917.55	2.033	0	0.0	435	14.5
		5-year								0	0.0	435	14.5
		10-year								0	0.0	435	14.5
		25-year								3	2.1	435	14.5
		50-year								16	3.7	435	14.5
		100-year								25	3.8	435	14.5
LIPL409	8231.1	2-year	Circular	2	0	61.5	919.39	919.35	0.065	20	7.6	5	1.7
		5-year								29	9.5	5	1.7
		10-year								31	9.7	5	1.7
		25-year								33	10.3	5	1.7
		50-year								33	10.4	5	1.7
		100-year								33	10.4	5	1.7
LIPL409	8231.2	2-year	Trapezoidal	2	30	61.5	924.56	923.93	1.025	0	0.0	941	15.7
		5-year								0	0.0	941	15.7
		10-year								0	0.0	941	15.7
		25-year								44	3.1	941	15.7
		50-year								53	3.2	941	15.7
		100-year								60	3.1	941	15.7
LIPL410	8232.1	2-year	Circular	2	0	72.9	919.61	919.39	0.302	20	6.3	12	3.7
		5-year								29	9.1	12	3.7
		10-year								31	9.8	12	3.7
		25-year								31	9.9	12	3.7
		50-year								31	9.9	12	3.7
		100-year								32	10.0	12	3.7
LIPL410	8232.2	2-year	Trapezoidal	2	30	72.9	924.69	923.56	1.550	0	0.0	1158	19.3
		5-year								0	0.0	1158	19.3
		10-year								0	0.0	1158	19.3
		25-year								37	2.4	1158	19.3
		50-year								51	3.0	1158	19.3
		100-year								59	2.7	1158	19.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL411	8233.1	2-year	Circular	2	0	227.5	922.40	919.61	1.227	20	6.9	23	7.4
		5-year								23	7.2	23	7.4
		10-year								23	7.5	23	7.4
		25-year								22	7.0	23	7.4
		50-year								22	7.0	23	7.4
		100-year								22	7.0	23	7.4
LIPL411	8233.2	2-year	Trapezoidal	2	30	227.5	924.90	923.69	0.532	0	0.0	678	11.3
		5-year								11	2.3	678	11.3
		10-year								22	2.6	678	11.3
		25-year								34	2.8	678	11.3
		50-year								39	2.6	678	11.3
		100-year								46	3.1	678	11.3
LIPL501	LIPL501	2-year	Trapezoidal	6	20	67.6	900.00	897.98	2.986	24	0.9	5800	17.3
		5-year								34	1.0	5800	17.3
		10-year								40	1.0	5800	17.3
		25-year								48	1.0	5800	17.3
		50-year								53	1.0	5800	17.3
		100-year								61	1.0	5800	17.3
LIPL502	IPL502A	2-year	Circular	3.5	0	53.4	901.84	900.00	3.444	24	9.8	101	10.5
		5-year								34	11.0	101	10.5
		10-year								40	11.6	101	10.5
		25-year								48	12.2	101	10.5
		50-year								54	12.6	101	10.5
		100-year								62	13.0	101	10.5
LIPL502	IPL502B	2-year	Trapezoidal	1	30	53.4	905.00	904.95	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LIPL601	LIPL601	2-year	Natural	6.2	4	524.6	901.37	899.05	0.443	114	0.5	71892	14.7
		5-year								158	0.5	71892	14.7
		10-year								183	0.5	71892	14.7
		25-year								206	0.5	71892	14.7
		50-year								217	0.4	71892	14.7
		100-year								224	0.4	71892	14.7
LIPL602	IPL602A	2-year	Special	2	3.5	66.1	901.77	901.37	0.601	22	6.8	24	3.7
		5-year								33	7.7	24	3.7
		10-year								39	8.6	24	3.7
		25-year								47	9.4	24	3.7
		50-year								52	9.8	24	3.7
		100-year								57	10.1	24	3.7
LIPL602	IPL602B	2-year	Trapezoidal	1	30	66.1	906.66	906.59	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LIPL603	LIPL603	2-year	Natural	4	20	448.5	904.50	901.77	0.609	47	1.6	6596	10.3
		5-year								74	1.7	6596	10.3
		10-year								88	1.8	6596	10.3
		25-year								106	1.8	6596	10.3
		50-year								120	1.8	6596	10.3
		100-year								137	1.9	6596	10.3
LIPL604	8468.1	2-year	Circular	3	0	67.7	905.30	904.50	1.181	15	9.3	67	9.5
		5-year								22	10.5	67	9.5
		10-year								26	11.1	67	9.5
		25-year								31	11.8	67	9.5
		50-year								35	12.4	67	9.5
		100-year								40	12.9	67	9.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL604	8468.2	2-year	Trapezoidal	1	30	67.7	913.72	911.00	4.016	0	0.0	611	20.4
		5-year								0	0.0	611	20.4
		10-year								0	0.0	611	20.4
		25-year								0	0.0	611	20.4
		50-year								0	0.0	611	20.4
		100-year								0	0.0	611	20.4
LIPL605	8469.1	2-year	Circular	2	0	311.3	911.63	905.30	2.034	15	9.0	30	9.5
		5-year								22	10.2	30	9.5
		10-year								26	10.7	30	9.5
		25-year								31	11.0	30	9.5
		50-year								35	11.7	30	9.5
		100-year								36	11.9	30	9.5
LIPL605	8469.2	2-year	Trapezoidal	1	30	311.3	915.55	912.72	0.909	0	0.0	291	9.7
		5-year								0	0.0	291	9.7
		10-year								0	0.0	291	9.7
		25-year								0	0.0	291	9.7
		50-year								0	0.0	291	9.7
		100-year								4	1.8	291	9.7
LIPL6A01	8393.1	2-year	Circular	2	0	84.4	906.85	904.50	2.783	33	16.4	35	11.2
		5-year								38	18.0	35	11.2
		10-year								39	18.3	35	11.2
		25-year								41	18.7	35	11.2
		50-year								43	18.9	35	11.2
		100-year								46	19.2	35	11.2
LIPL6A01	8393.2	2-year	Trapezoidal	1	30	84.4	912.43	912.00	0.509	0	0.0	218	7.3
		5-year								14	2.5	218	7.3
		10-year								23	3.0	218	7.3
		25-year								34	3.5	218	7.3
		50-year								43	3.8	218	7.3
		100-year								55	4.2	218	7.3
LIPL6A02	8223.1	2-year	Circular	2	0	231.8	907.39	906.85	0.233	16	5.2	10	3.2
		5-year								17	5.5	10	3.2
		10-year								18	5.6	10	3.2
		25-year								18	5.6	10	3.2
		50-year								18	5.6	10	3.2
		100-year								18	5.6	10	3.2
LIPL6A02	8223.2	2-year	Trapezoidal	2	30	231.8	912.66	912.43	0.100	2	0.7	293	4.9
		5-year								18	1.9	293	4.9
		10-year								23	2.1	293	4.9
		25-year								30	2.3	293	4.9
		50-year								35	2.5	293	4.9
		100-year								41	2.6	293	4.9
LIPL6A03	8222.1	2-year	Circular	2	0	43.2	908.01	907.39	1.436	15	5.0	25	8.0
		5-year								17	5.5	25	8.0
		10-year								18	5.8	25	8.0
		25-year								18	5.7	25	8.0
		50-year								18	5.8	25	8.0
		100-year								18	5.8	25	8.0
LIPL6A03	8222.2	2-year	Trapezoidal	3	30	43.2	911.34	911.31	0.069	18	1.3	464	5.2
		5-year								26	1.4	464	5.2
		10-year								31	1.4	464	5.2
		25-year								38	1.4	464	5.2
		50-year								43	1.4	464	5.2
		100-year								49	1.5	464	5.2
LIPMC02	LIPMC02	2-year	Natural	11.2	0	824.4	887.24	885.58	0.201	816	2.7	19847	4.9
		5-year								1178	2.6	19847	4.9
		10-year								1319	2.6	19847	4.9
		25-year								1512	2.6	19847	4.9
		50-year								1649	2.6	19847	4.9
		100-year								1805	2.6	19847	4.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC03	IPMC03A	2-year	User Defined	0	0	41.6	887.40	887.24	0.384	798	9.5	0	11.4
		5-year								1167	13.0	0	11.4
		10-year								1329	14.3	0	11.4
		25-year								1551	15.9	0	11.4
		50-year								1709	16.9	0	11.4
		100-year								1890	18.0	0	11.4
LIPMC03	IPMC03B	2-year	Trapezoidal	2	30	41.6	894.50	894.46	0.100	0	0.0	288	4.8
		5-year								0	0.0	288	4.8
		10-year								0	0.0	288	4.8
		25-year								0	0.1	288	4.8
		50-year								23	2.3	288	4.8
		100-year								105	4.5	288	4.8
LIPMC04	LIPMC04	2-year	Natural	8.1	0	1846.0	891.21	887.40	0.206	796	2.1	8741	4.4
		5-year								1153	2.3	8741	4.4
		10-year								1349	2.4	8741	4.4
		25-year								1636	2.5	8741	4.4
		50-year								1847	2.6	8741	4.4
		100-year								2084	2.7	8741	4.4
LIPMC05	IPMC05A	2-year	User Defined	0	0	21.6	891.75	891.21	2.501	778	6.4	0	13.6
		5-year								1143	8.1	0	13.6
		10-year								1342	9.0	0	13.6
		25-year								1606	10.1	0	13.6
		50-year								1797	10.9	0	13.6
		100-year								2027	11.9	0	13.6
LIPMC05	IPMC05B	2-year	Trapezoidal	1	30	21.6	902.00	901.98	0.100	0	0.0	79	2.6
		5-year								0	0.0	79	2.6
		10-year								0	0.0	79	2.6
		25-year								0	0.0	79	2.6
		50-year								0	0.0	79	2.6
		100-year								0	0.0	79	2.6
LIPMC06	LIPMC06	2-year	Natural	8	0	247.5	892.00	891.75	0.101	777	2.1	6538	3.3
		5-year								1142	2.1	6538	3.3
		10-year								1342	2.0	6538	3.3
		25-year								1604	2.0	6538	3.3
		50-year								1796	2.0	6538	3.3
		100-year								2024	2.1	6538	3.3
LIPMC07	IPMC07A	2-year	Rectangular	12	12	95.2	892.50	892.00	0.525	259	5.6	2304	16.0
		5-year								381	7.2	2304	16.0
		10-year								447	7.9	2304	16.0
		25-year								535	8.8	2304	16.0
		50-year								598	9.4	2304	16.0
		100-year								674	10.2	2304	16.0
LIPMC07	IPMC07B	2-year	Trapezoidal	1	30	95.2	908.00	907.90	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LIPMC08	LIPMC08	2-year	Natural	10	0	1763.3	896.15	892.50	0.207	699	2.1	25036	5.1
		5-year								1025	2.2	25036	5.1
		10-year								1207	2.2	25036	5.1
		25-year								1441	2.3	25036	5.1
		50-year								1610	2.3	25036	5.1
		100-year								1799	2.3	25036	5.1
LIPMC09	IPMC09A	2-year	Rectangular	12	8	151.3	896.30	896.15	0.099	351	10.6	575	6.0
		5-year								514	14.2	575	6.0
		10-year								605	16.0	575	6.0
		25-year								724	18.0	575	6.0
		50-year								810	19.4	575	6.0
		100-year								906	20.9	575	6.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC09	IPMC09B	2-year	Trapezoidal	1	30	151.3	912.00	911.85	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LIPMC10	LIPMC10	2-year	Trapezoidal	10	6	20.5	896.50	896.30	0.978	575	6.8	3745	10.4
		5-year								843	8.1	3745	10.4
		10-year								992	8.5	3745	10.4
		25-year								1186	9.0	3745	10.4
		50-year								1329	9.2	3745	10.4
		100-year								1495	9.5	3745	10.4
LIPMC11	LIPMC11	2-year	Trapezoidal	8	6	26.3	897.01	896.50	1.937	541	1.3	20969	14.1
		5-year								791	1.5	20969	14.1
		10-year								940	1.5	20969	14.1
		25-year								1137	1.6	20969	14.1
		50-year								1275	1.6	20969	14.1
		100-year								1441	1.6	20969	14.1
LIPMC12	LIPMC12	2-year	Natural	6	22	1160.2	897.98	897.01	0.084	530	1.1	3599	2.5
		5-year								782	1.2	3599	2.5
		10-year								929	1.2	3599	2.5
		25-year								1120	1.2	3599	2.5
		50-year								1260	1.2	3599	2.5
		100-year								1408	1.2	3599	2.5
LIPMC13	IPMC13A	2-year	Rectangular	6	6	87.2	899.05	897.98	1.226	274	14.9	554	15.4
		5-year								401	17.5	554	15.4
		10-year								475	18.9	554	15.4
		25-year								573	20.5	554	15.4
		50-year								646	21.6	554	15.4
		100-year								715	22.5	554	15.4
LIPMC13	IPMC13B	2-year	Trapezoidal	1	30	87.2	905.00	904.91	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LIPMC14	LIPMC14	2-year	Trapezoidal	8	10	1301.8	901.49	899.05	0.187	459	4.2	1664	5.0
		5-year								682	4.7	1664	5.0
		10-year								813	4.9	1664	5.0
		25-year								1001	5.2	1664	5.0
		50-year								1137	5.4	1664	5.0
		100-year								1317	5.6	1664	5.0
LIPMC15	IPMC15A	2-year	Rectangular	5	6	35.8	902.00	901.49	1.424	234	8.5	467	15.6
		5-year								268	9.1	467	15.6
		10-year								274	9.2	467	15.6
		25-year								281	9.3	467	15.6
		50-year								284	9.4	467	15.6
		100-year								287	9.4	467	15.6
LIPMC15	IPMC15B	2-year	Trapezoidal	5	30	35.8	906.00	905.96	0.100	-10	-1.0	1284	8.6
		5-year								159	4.4	1284	8.6
		10-year								351	7.1	1284	8.6
		25-year								543	8.2	1284	8.6
		50-year								667	8.8	1284	8.6
		100-year								840	9.6	1284	8.6
LIPMC16	LIPMC16	2-year	Trapezoidal	7	10	337.3	903.73	902.00	0.513	409	4.3	1922	7.6
		5-year								609	4.7	1922	7.6
		10-year								728	4.8	1922	7.6
		25-year								892	5.0	1922	7.6
		50-year								1015	5.2	1922	7.6
		100-year								1177	5.4	1922	7.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC17	IPMC17A	2-year	Rectangular	5	8	44.7	903.90	903.73	0.381	204	7.4	349	8.7
		5-year								302	8.8	349	8.7
		10-year								334	9.0	349	8.7
		25-year								353	9.1	349	8.7
		50-year								369	9.1	349	8.7
		100-year								383	9.2	349	8.7
LIPMC17	IPMC17B	2-year	Trapezoidal	4	30	44.7	908.00	907.96	0.100	0	0.0	820	6.8
		5-year								5	1.2	820	6.8
		10-year								61	3.5	820	6.8
		25-year								186	5.6	820	6.8
		50-year								279	6.5	820	6.8
		100-year								417	7.5	820	6.8
LIPMC18	LIPMC18	2-year	Trapezoidal	7.5	22	580.4	904.00	903.90	0.017	409	1.8	1246	1.4
		5-year								608	1.8	1246	1.4
		10-year								727	1.9	1246	1.4
		25-year								892	1.9	1246	1.4
		50-year								1014	1.9	1246	1.4
		100-year								1175	2.0	1246	1.4
LIPMC19	IPMC19A	2-year	Rectangular	5	8	50.9	904.25	904.00	0.500	206	7.3	397	9.9
		5-year								306	8.8	397	9.9
		10-year								365	9.5	397	9.9
		25-year								416	10.1	397	9.9
		50-year								444	10.4	397	9.9
		100-year								470	11.1	397	9.9
LIPMC19	IPMC19B	2-year	Trapezoidal	4	30	50.9	909.00	908.95	0.100	0	0.0	860	7.2
		5-year								0	0.0	860	7.2
		10-year								1	0.7	860	7.2
		25-year								68	3.8	860	7.2
		50-year								142	5.0	860	7.2
		100-year								264	6.3	860	7.2
LIPMC20	LIPMC20	2-year	Trapezoidal	7.5	25	291.3	906.02	904.08	0.666	253	2.5	5085	9.4
		5-year								377	2.8	5085	9.4
		10-year								454	2.9	5085	9.4
		25-year								555	2.9	5085	9.4
		50-year								634	3.0	5085	9.4
		100-year								738	3.0	5085	9.4
LLWL101	LLWL101	2-year	Natural	15	0	2597.6	910.43	898.29	0.467	196	2.0	220813	9.2
		5-year								294	2.1	220813	9.2
		10-year								357	2.2	220813	9.2
		25-year								442	2.3	220813	9.2
		50-year								503	2.4	220813	9.2
		100-year								585	2.4	220813	9.2
LLWMC02	LLWMC02	2-year	Natural	12	0	791.5	866.22	862.03	0.529	1218	7.7	6650	11.2
		5-year								2019	8.9	6650	11.2
		10-year								2663	9.6	6650	11.2
		25-year								3510	10.3	6650	11.2
		50-year								4007	10.7	6650	11.2
		100-year								4842	11.2	6650	11.2
LLWMC03	LLWMC03	2-year	Trapezoidal	12	25	26.8	869.31	867.40	7.125	1208	12.4	45672	102.9
		5-year								2004	13.2	45672	102.9
		10-year								2644	14.1	45672	102.9
		25-year								3487	15.3	45672	102.9
		50-year								3980	16.0	45672	102.9
		100-year								4807	16.9	45672	102.9
LLWMC04	LLWMC04	2-year	Natural	16	0	1641.2	874.60	868.75	0.356	1208	5.8	22314	10.2
		5-year								2004	5.8	22314	10.2
		10-year								2644	6.3	22314	10.2
		25-year								3487	6.4	22314	10.2
		50-year								3981	6.5	22314	10.2
		100-year								4810	6.7	22314	10.2

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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LLWMC05	LLWMC05	2-year	Natural	14	0	2961.7	878.13	874.60	0.119	1204	3.5	9168	3.9
		5-year								1997	4.3	9168	3.9
		10-year								2635	4.8	9168	3.9
		25-year								3479	4.8	9168	3.9
		50-year								3972	4.8	9168	3.9
		100-year								4782	4.8	9168	3.9
LLWMC06	LWMC06A	2-year	User Defined	0	0	26.0	878.42	878.13	0.695	1206	6.3	0	10.9
		5-year								1999	6.9	0	10.9
		10-year								2637	7.5	0	10.9
		25-year								3538	7.9	0	10.9
		50-year								4034	8.2	0	10.9
		100-year								4797	8.6	0	10.9
LLWMC06	LWMC06B	2-year	Trapezoidal	1	30	41.7	895.10	895.06	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LLWMC07	LLWMC07	2-year	Natural	15.2	0	706.1	879.11	878.42	0.098	1203	4.4	6225	3.3
		5-year								1994	4.7	6225	3.3
		10-year								2632	5.0	6225	3.3
		25-year								3536	5.2	6225	3.3
		50-year								4040	5.2	6225	3.3
		100-year								4791	5.3	6225	3.3
LLWMC08	LWMC08A	2-year	User Defined	0	0	66.8	879.55	879.11	0.659	1203	5.4	0	13.0
		5-year								1994	7.0	0	13.0
		10-year								2633	8.1	0	13.0
		25-year								3543	9.1	0	13.0
		50-year								4062	9.6	0	13.0
		100-year								4795	10.0	0	13.0
LLWMC08	LWMC08B	2-year	Trapezoidal	1	30	66.8	906.00	905.93	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LLWMC09	LLWMC09	2-year	Natural	14	0	1607.1	884.30	879.55	0.296	1199	4.5	25013	6.7
		5-year								1996	4.5	25013	6.7
		10-year								2648	4.5	25013	6.7
		25-year								3623	4.5	25013	6.7
		50-year								4260	4.5	25013	6.7
		100-year								4910	4.5	25013	6.7
LLWMC10	LLWMC10	2-year	Natural	14	0	923.7	887.16	884.30	0.310	197	3.1	41376	7.4
		5-year								241	3.1	41376	7.4
		10-year								289	3.1	41376	7.4
		25-year								401	3.2	41376	7.4
		50-year								494	3.1	41376	7.4
		100-year								609	2.8	41376	7.4
LLWMC11	LWMC11A	2-year	Rectangular	3	6	37.4	887.47	887.16	0.829	98	5.5	174	9.7
		5-year								121	6.7	174	9.7
		10-year								125	6.9	174	9.7
		25-year								128	7.1	174	9.7
		50-year								130	7.2	174	9.7
		100-year								131	7.3	174	9.7
LLWMC11	LWMC11B	2-year	Trapezoidal	10	30	37.4	892.00	891.96	0.100	0	0.0	3438	11.5
		5-year								57	3.0	3438	11.5
		10-year								138	4.1	3438	11.5
		25-year								229	5.3	3438	11.5
		50-year								302	6.3	3438	11.5
		100-year								403	7.4	3438	11.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LLWMC12	LLWMC12	2-year	Natural	12.2	0	3695.9	898.29	887.47	0.293	204	1.7	45913	6.3
		5-year								293	1.6	45913	6.3
		10-year								355	1.6	45913	6.3
		25-year								439	1.5	45913	6.3
		50-year								511	1.5	45913	6.3
		100-year								604	1.4	45913	6.3
LLWMC13	LLWMC13	2-year	Natural	20	0	780.1	905.80	898.29	0.963	148	0.9	541338	17.4
		5-year								230	1.0	541338	17.4
		10-year								277	1.0	541338	17.4
		25-year								340	1.0	541338	17.4
		50-year								386	1.1	541338	17.4
		100-year								447	1.1	541338	17.4
LLWMC14	LLWMC14	2-year	Natural	12	0	2122.2	911.74	905.80	0.280	81	0.5	215804	8.3
		5-year								123	0.5	215804	8.3
		10-year								148	0.5	215804	8.3
		25-year								180	0.6	215804	8.3
		50-year								204	0.6	215804	8.3
		100-year								236	0.6	215804	8.3
LNCL101	LNCL101	2-year	Natural	10	3	291.5	886.70	886.36	0.117	409	3.2	9003	5.0
		5-year								582	3.0	9003	5.0
		10-year								705	2.8	9003	5.0
		25-year								858	2.5	9003	5.0
		50-year								938	2.3	9003	5.0
		100-year								1101	2.1	9003	5.0
LNCL201	LNCL201	2-year	Natural	7	0	280.3	890.35	889.88	0.168	119	0.4	15111	5.1
		5-year								183	0.5	15111	5.1
		10-year								222	0.5	15111	5.1
		25-year								275	0.5	15111	5.1
		50-year								315	0.5	15111	5.1
		100-year								368	0.6	15111	5.1
LNCL202	LNCL202	2-year	Natural	7	0	1537.1	901.00	890.35	0.693	94	1.7	30715	10.4
		5-year								140	1.9	30715	10.4
		10-year								169	2.0	30715	10.4
		25-year								207	2.0	30715	10.4
		50-year								235	2.1	30715	10.4
		100-year								272	2.2	30715	10.4
LNCL401	LNCL401	2-year	Natural	10	0	506.1	898.00	894.65	0.662	147	0.5	92791	11.0
		5-year								223	0.6	92791	11.0
		10-year								274	0.6	92791	11.0
		25-year								341	0.7	92791	11.0
		50-year								389	0.7	92791	11.0
		100-year								453	0.7	92791	11.0
LNCL402	LNCL402	2-year	Natural	8	0	2662.6	919.70	898.00	0.815	64	1.4	74997	11.9
		5-year								91	1.5	74997	11.9
		10-year								107	1.5	74997	11.9
		25-year								134	1.5	74997	11.9
		50-year								152	1.5	74997	11.9
		100-year								176	1.6	74997	11.9
LNCL403	8717.1	2-year	Circular	3	0	100.0	920.34	919.70	0.640	61	14.4	50	7.0
		5-year								65	15.1	50	7.0
		10-year								67	15.4	50	7.0
		25-year								70	15.7	50	7.0
		50-year								71	16.0	50	7.0
		100-year								73	16.3	50	7.0
LNCL403	8717.2	2-year	Trapezoidal	2	30	100.0	924.00	923.90	0.100	17	2.0	294	4.9
		5-year								47	3.1	294	4.9
		10-year								65	3.5	294	4.9
		25-year								89	4.0	294	4.9
		50-year								107	4.3	294	4.9
		100-year								131	4.7	294	4.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCL404	8718.1	2-year	Circular	3	0	67.3	920.77	920.34	0.639	15	3.0	50	7.0
		5-year								20	3.3	50	7.0
		10-year								22	3.3	50	7.0
		25-year								24	3.5	50	7.0
		50-year								24	3.5	50	7.0
		100-year								24	3.5	50	7.0
LNCL404	8718.2	2-year	Trapezoidal	2	30	67.3	924.10	924.00	0.149	6	0.7	359	6.0
		5-year								14	0.9	359	6.0
		10-year								19	1.0	359	6.0
		25-year								24	1.1	359	6.0
		50-year								28	1.2	359	6.0
		100-year								33	1.2	359	6.0
LNCL405	8210.1	2-year	Circular	2	0	192.8	922.50	920.77	0.897	16	5.9	20	6.3
		5-year								21	6.7	20	6.3
		10-year								23	7.2	20	6.3
		25-year								24	7.7	20	6.3
		50-year								25	7.8	20	6.3
		100-year								25	7.8	20	6.3
LNCL405	8210.2	2-year	Trapezoidal	1	30	192.8	926.42	924.10	1.203	0	0.0	335	11.2
		5-year								1	0.2	335	11.2
		10-year								5	0.6	335	11.2
		25-year								11	1.5	335	11.2
		50-year								15	2.3	335	11.2
		100-year								20	2.8	335	11.2
LNCL4A01	8715.1	2-year	Circular	2	0	10.5	921.46	920.34	10.707	27	8.6	24	7.5
		5-year								27	8.5	24	7.5
		10-year								27	8.5	24	7.5
		25-year								27	8.4	24	7.5
		50-year								27	8.3	24	7.5
		100-year								27	8.3	24	7.5
LNCL4A01	8715.2	2-year	Trapezoidal	2	30	10.5	924.01	924.00	0.100	33	2.9	170	2.8
		5-year								52	3.3	170	2.8
		10-year								63	3.3	170	2.8
		25-year								76	3.4	170	2.8
		50-year								87	3.5	170	2.8
		100-year								100	3.6	170	2.8
LNCL4B01	8716.1	2-year	Circular	2	0	87.0	923.75	920.34	3.921	19	6.4	24	7.7
		5-year								18	6.2	24	7.7
		10-year								18	6.0	24	7.7
		25-year								18	5.9	24	7.7
		50-year								18	5.8	24	7.7
		100-year								18	5.9	24	7.7
LNCL4B01	8716.2	2-year	Trapezoidal	2	30	87.0	925.75	924.00	2.012	8	1.9	1319	22.0
		5-year								19	2.2	1319	22.0
		10-year								26	2.2	1319	22.0
		25-year								34	2.4	1319	22.0
		50-year								41	2.6	1319	22.0
		100-year								50	2.8	1319	22.0
LNCL4C01	LNCL4C01	2-year	Circular	2	0	43.4	921.46	920.77	1.591	2	0.6	26	8.4
		5-year								3	0.8	26	8.4
		10-year								3	0.9	26	8.4
		25-year								2	0.6	26	8.4
		50-year								2	0.7	26	8.4
		100-year								-2	-0.5	26	8.4
LNCL4D01	8412.1	2-year	Circular	2	0	42.3	922.56	922.50	0.142	16	6.0	8	2.5
		5-year								21	6.6	8	2.5
		10-year								23	7.1	8	2.5
		25-year								24	7.7	8	2.5
		50-year								25	7.8	8	2.5
		100-year								25	7.9	8	2.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCL4D01	8412.2	2-year	Trapezoidal	1	30	42.3	926.56	926.42	0.331	0	0.0	176	5.9
		5-year								6	1.6	176	5.9
		10-year								10	2.0	176	5.9
		25-year								15	2.3	176	5.9
		50-year								19	2.5	176	5.9
		100-year								23	2.8	176	5.9
LNCL500	LNCL500	2-year	Natural	8	0	1000.0	906.12	899.37	0.675	238	4.4	84746	9.6
		5-year								440	3.6	84746	9.6
		10-year								602	3.2	84746	9.6
		25-year								800	2.9	84746	9.6
		50-year								954	2.9	84746	9.6
		100-year								1152	3.0	84746	9.6
LNCL501	LNCL501	2-year	Natural	8	0	2354.7	922.00	906.12	0.674	157	3.9	84708	9.6
		5-year								317	4.2	84708	9.6
		10-year								461	4.2	84708	9.6
		25-year								611	4.1	84708	9.6
		50-year								735	3.9	84708	9.6
		100-year								897	3.6	84708	9.6
LNCL502	NCL502A	2-year	Rectangular	4	6	29.7	924.00	922.00	6.739	95	10.8	743	30.9
		5-year								174	16.1	743	30.9
		10-year								221	18.5	743	30.9
		25-year								292	22.0	743	30.9
		50-year								346	24.4	743	30.9
		100-year								421	27.4	743	30.9
LNCL502	NCL502B	2-year	Trapezoidal	2	30	29.7	932.00	931.97	0.100	0	0.0	294	4.9
		5-year								0	0.0	294	4.9
		10-year								0	0.0	294	4.9
		25-year								0	0.0	294	4.9
		50-year								0	0.0	294	4.9
		100-year								0	0.0	294	4.9
LNCL503	LNCL503	2-year	Natural	5	0	2978.9	961.73	924.00	1.267	87	1.9	9824	11.9
		5-year								163	2.3	9824	11.9
		10-year								213	2.4	9824	11.9
		25-year								281	2.5	9824	11.9
		50-year								335	2.5	9824	11.9
		100-year								407	2.6	9824	11.9
LNCMC02	LNCMC02	2-year	Natural	20	0	3667.0	877.70	874.00	0.101	1161	2.3	17110	5.1
		5-year								1889	2.5	17110	5.1
		10-year								2169	2.6	17110	5.1
		25-year								2972	2.9	17110	5.1
		50-year								3569	3.1	17110	5.1
		100-year								4295	3.2	17110	5.1
LNCMC03	LNCMC03	2-year	Natural	14	0	2463.1	882.76	877.70	0.205	1157	3.4	15321	5.2
		5-year								1861	3.8	15321	5.2
		10-year								2127	3.8	15321	5.2
		25-year								2912	4.0	15321	5.2
		50-year								3545	4.1	15321	5.2
		100-year								4342	4.0	15321	5.2
LNCMC04	NCMC04A	2-year	User Defined	0	0	64.1	882.89	882.76	0.205	1153	2.2	0	6.7
		5-year								1863	2.8	0	6.7
		10-year								2132	3.0	0	6.7
		25-year								2945	3.4	0	6.7
		50-year								3592	3.6	0	6.7
		100-year								4372	3.8	0	6.7
LNCMC04	NCMC04B	2-year	Trapezoidal	1	30	64.1	906.00	905.94	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCMC05	LNCMC05	2-year	Natural	11.39	0	1690.7	886.36	882.89	0.205	1116	3.4	19366	6.5
		5-year								1805	3.4	19366	6.5
		10-year								2069	3.4	19366	6.5
		25-year								2931	3.4	19366	6.5
		50-year								3627	3.4	19366	6.5
		100-year								4328	3.4	19366	6.5
LNCMC06	LNCMC06	2-year	Natural	12	0	1715.8	889.88	886.36	0.205	1045	2.4	38410	7.7
		5-year								1638	2.5	38410	7.7
		10-year								1857	2.6	38410	7.7
		25-year								2537	2.6	38410	7.7
		50-year								2987	2.6	38410	7.7
		100-year								3626	2.6	38410	7.7
LNCMC07	LNCMC07	2-year	Natural	8	0	3334.2	894.60	889.88	0.141	1218	2.1	18665	4.6
		5-year								1713	2.0	18665	4.6
		10-year								1927	2.0	18665	4.6
		25-year								2559	2.0	18665	4.6
		50-year								2997	2.0	18665	4.6
		100-year								3593	2.1	18665	4.6
LNCMC08	NCMC08A	2-year	Rectangular	7	6	38.3	894.65	894.60	0.141	512	21.7	231	5.5
		5-year								816	29.8	231	5.5
		10-year								982	31.0	231	5.5
		25-year								1200	34.5	231	5.5
		50-year								1349	36.1	231	5.5
		100-year								1544	39.1	231	5.5
LNCMC08	NCMC08B	2-year	Trapezoidal	4	30	38.3	900.00	899.96	0.100	0	0.0	876	7.3
		5-year								0	0.0	876	7.3
		10-year								54	3.5	876	7.3
		25-year								234	6.1	876	7.3
		50-year								404	7.4	876	7.3
		100-year								625	8.6	876	7.3
LNCMC09	LNCMC09	2-year	Natural	12	0	1908.5	897.35	894.65	0.141	890	4.0	43751	5.1
		5-year								1512	4.0	43751	5.1
		10-year								2006	3.8	43751	5.1
		25-year								2663	3.8	43751	5.1
		50-year								3186	3.8	43751	5.1
		100-year								3805	3.8	43751	5.1
LNCMC10	LNCMC10	2-year	Natural	10	0	1028.9	899.37	897.35	0.196	942	1.9	22377	5.0
		5-year								1532	2.0	22377	5.0
		10-year								1947	2.2	22377	5.0
		25-year								2500	2.4	22377	5.0
		50-year								2935	2.6	22377	5.0
		100-year								3538	2.8	22377	5.0
LNCMC11	LNCMC11	2-year	Natural	8	0	673.5	900.82	899.37	0.215	932	3.4	16172	4.5
		5-year								1419	3.4	16172	4.5
		10-year								1709	3.4	16172	4.5
		25-year								2124	3.4	16172	4.5
		50-year								2462	3.4	16172	4.5
		100-year								2923	3.4	16172	4.5
LNCMC12	LNCMC12	2-year	Natural	9	0	1243.9	903.48	900.82	0.214	869	2.5	30652	5.8
		5-year								1314	2.5	30652	5.8
		10-year								1578	2.5	30652	5.8
		25-year								1938	2.5	30652	5.8
		50-year								2244	2.5	30652	5.8
		100-year								2668	2.5	30652	5.8
LNCMC13	LNCMC13	2-year	Natural	6.5	0	1216.5	906.50	903.48	0.248	845	3.2	13921	4.7
		5-year								1278	3.2	13921	4.7
		10-year								1470	3.2	13921	4.7
		25-year								1783	3.2	13921	4.7
		50-year								2073	3.2	13921	4.7
		100-year								2476	3.2	13921	4.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCMC14	LNCMC14	2-year	Natural	17	0	1011.6	873.93	868.00	0.586	1174	9.6	9627	14.9
		5-year								1911	10.7	9627	14.9
		10-year								2196	11.0	9627	14.9
		25-year								3004	11.9	9627	14.9
		50-year								3594	12.4	9627	14.9
		100-year								4317	12.9	9627	14.9
LNCMC15	NCMC15A	2-year	Circular	3	0	70.4	874.00	873.93	0.099	123	17.2	11	1.6
		5-year								123	17.2	11	1.6
		10-year								123	17.2	11	1.6
		25-year								123	17.2	11	1.6
		50-year								123	17.2	11	1.6
		100-year								123	17.2	11	1.6
LNCMC15	NCMC15B	2-year	Trapezoidal	6	50	70.4	886.00	885.93	0.100	930	8.0	3297	9.8
		5-year								1661	9.7	3297	9.8
		10-year								1941	10.2	3297	9.8
		25-year								2740	11.3	3297	9.8
		50-year								3323	12.0	3297	9.8
		100-year								4034	12.7	3297	9.8
LPOL102	LPOL102	2-year	Natural	5	0	1464.0	919.01	899.87	1.307	43	0.8	8565	11.3
		5-year								63	0.9	8565	11.3
		10-year								74	0.9	8565	11.3
		25-year								89	0.9	8565	11.3
		50-year								101	0.9	8565	11.3
		100-year								116	1.0	8565	11.3
LPOL103	8193.1	2-year	Circular	2.5	0	50.2	920.49	919.01	2.950	21	13.4	65	13.3
		5-year								30	15.2	65	13.3
		10-year								35	15.9	65	13.3
		25-year								42	16.9	65	13.3
		50-year								48	17.6	65	13.3
		100-year								55	18.3	65	13.3
LPOL103	8193.2	2-year	Trapezoidal	1	30	50.2	925.32	924.09	2.452	0	0.0	478	15.9
		5-year								0	0.0	478	15.9
		10-year								0	0.0	478	15.9
		25-year								0	0.0	478	15.9
		50-year								0	0.0	478	15.9
		100-year								0	0.0	478	15.9
LPOL104	8194.1	2-year	Circular	2.5	0	38.8	921.92	920.49	3.684	21	10.5	73	14.9
		5-year								30	11.8	73	14.9
		10-year								35	12.3	73	14.9
		25-year								42	13.0	73	14.9
		50-year								48	13.4	73	14.9
		100-year								55	13.5	73	14.9
LPOL104	8194.2	2-year	Trapezoidal	1	30	38.8	926.00	925.32	1.752	0	0.0	404	13.5
		5-year								0	0.0	404	13.5
		10-year								0	0.0	404	13.5
		25-year								0	0.0	404	13.5
		50-year								0	0.0	404	13.5
		100-year								0	0.0	404	13.5
LPOL105	8195.1	2-year	Circular	2.5	0	324.8	927.30	921.92	1.657	21	9.8	49	10.0
		5-year								30	10.8	49	10.0
		10-year								35	11.1	49	10.0
		25-year								42	11.6	49	10.0
		50-year								48	11.8	49	10.0
		100-year								54	12.3	49	10.0
LPOL105	8195.2	2-year	Trapezoidal	1	30	324.8	931.05	926.00	1.555	0	0.0	380	12.7
		5-year								0	0.0	380	12.7
		10-year								0	0.0	380	12.7
		25-year								0	0.0	380	12.7
		50-year								0	0.0	380	12.7
		100-year								2	1.6	380	12.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL106	8196.1	2-year	Circular	2.5	0	32.2	928.38	927.30	3.359	10	6.3	70	14.2
		5-year								15	7.6	70	14.2
		10-year								16	8.3	70	14.2
		25-year								20	8.3	70	14.2
		50-year								24	8.5	70	14.2
		100-year								30	8.5	70	14.2
LPOL106	8196.2	2-year	Trapezoidal	1	30	32.2	931.55	931.05	1.555	0	0.0	380	12.7
		5-year								0	0.0	380	12.7
		10-year								0	0.0	380	12.7
		25-year								0	0.0	380	12.7
		50-year								0	0.0	380	12.7
		100-year								0	0.0	380	12.7
LPOL107	8197.1	2-year	Circular	2	0	188.4	930.49	928.38	1.120	10	7.3	22	7.1
		5-year								15	8.2	22	7.1
		10-year								16	8.4	22	7.1
		25-year								20	8.8	22	7.1
		50-year								23	9.0	22	7.1
		100-year								24	9.0	22	7.1
LPOL107	8197.2	2-year	Trapezoidal	1	30	188.4	932.28	931.55	0.387	0	0.0	190	6.3
		5-year								0	0.0	190	6.3
		10-year								0	0.0	190	6.3
		25-year								0	0.0	190	6.3
		50-year								0	0.3	190	6.3
		100-year								10	2.0	190	6.3
LPOL108	8397.1	2-year	Circular	2	0	290.8	931.07	930.49	0.199	10	4.3	9	3.0
		5-year								15	5.2	9	3.0
		10-year								15	5.4	9	3.0
		25-year								16	5.5	9	3.0
		50-year								16	5.5	9	3.0
		100-year								16	5.5	9	3.0
LPOL108	8397.2	2-year	Trapezoidal	1	30	290.8	933.57	933.28	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								1	0.6	96	3.2
		25-year								4	1.0	96	3.2
		50-year								7	1.3	96	3.2
		100-year								12	1.6	96	3.2
LPOL109	8396.1	2-year	Circular	2	0	63.0	931.69	931.07	0.985	10	4.4	21	6.6
		5-year								15	4.5	21	6.6
		10-year								17	5.4	21	6.6
		25-year								21	6.7	21	6.6
		50-year								23	7.3	21	6.6
		100-year								23	7.4	21	6.6
LPOL109	8396.2	2-year	Trapezoidal	1	30	63.0	934.52	933.57	1.509	0	0.0	375	12.5
		5-year								0	0.0	375	12.5
		10-year								0	0.0	375	12.5
		25-year								0	0.0	375	12.5
		50-year								1	0.3	375	12.5
		100-year								5	0.9	375	12.5
LPOL110	8402.1	2-year	Circular	2	0	26.5	932.35	931.69	2.491	10	7.0	31	9.9
		5-year								15	7.1	31	9.9
		10-year								17	7.1	31	9.9
		25-year								20	7.1	31	9.9
		50-year								21	7.1	31	9.9
		100-year								21	7.2	31	9.9
LPOL110	8402.2	2-year	Trapezoidal	1	30	26.5	934.55	934.52	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								2	0.9	96	3.2
		50-year								8	1.6	96	3.2
		100-year								12	1.9	96	3.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL201	8019.1	2-year	Special	2.5	2.5	127.5	906.08	906.00	0.063	0	-0.1	5	1.7
		5-year								0	-0.1	5	1.7
		10-year								0	-0.1	5	1.7
		25-year								0	-0.1	5	1.7
		50-year								0	-0.1	5	1.7
		100-year								0	-0.1	5	1.7
LPOL201	8019.2	2-year	Trapezoidal	1	30	127.5	909.50	909.37	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPOL301	8517.1	2-year	Circular	1.25	0	139.3	913.80	911.46	1.680	8	8.1	8	6.3
		5-year								8	7.9	8	6.3
		10-year								8	7.9	8	6.3
		25-year								8	7.9	8	6.3
		50-year								8	7.9	8	6.3
		100-year								8	7.9	8	6.3
LPOL301	8517.2	2-year	Trapezoidal	2	30	139.3	917.05	917.00	0.036	57	3.1	176	2.9
		5-year								83	3.6	176	2.9
		10-year								98	3.9	176	2.9
		25-year								117	4.2	176	2.9
		50-year								132	4.4	176	2.9
		100-year								151	4.7	176	2.9
LPOL302	8516.1	2-year	Circular	1.25	0	181.6	914.77	913.80	0.534	4	3.8	4	3.6
		5-year								5	4.1	4	3.6
		10-year								5	4.2	4	3.6
		25-year								5	4.3	4	3.6
		50-year								5	4.3	4	3.6
		100-year								5	4.7	4	3.6
LPOL302	8516.2	2-year	Trapezoidal	1	30	181.6	918.77	917.05	0.947	0	0.0	297	9.9
		5-year								0	0.0	297	9.9
		10-year								0	0.0	297	9.9
		25-year								0	0.0	297	9.9
		50-year								0	0.0	297	9.9
		100-year								0	0.0	297	9.9
LPOL303	LPOL303	2-year	Natural	4	0	1275.8	931.00	914.77	1.272	23	1.0	4715	10.5
		5-year								33	1.0	4715	10.5
		10-year								39	1.1	4715	10.5
		25-year								47	1.1	4715	10.5
		50-year								53	1.1	4715	10.5
		100-year								60	1.2	4715	10.5
LPOL304	8515.1	2-year	Circular	2	0	61.6	931.41	931.00	0.666	24	13.0	17	5.5
		5-year								28	15.2	17	5.5
		10-year								29	15.5	17	5.5
		25-year								30	15.8	17	5.5
		50-year								31	16.0	17	5.5
		100-year								32	16.3	17	5.5
LPOL304	8515.2	2-year	Trapezoidal	1	30	61.6	936.24	936.18	0.100	0	0.0	95	3.2
		5-year								5	1.3	95	3.2
		10-year								10	1.7	95	3.2
		25-year								17	2.1	95	3.2
		50-year								23	2.4	95	3.2
		100-year								30	2.6	95	3.2
LPOL305	8214.1	2-year	Circular	2	0	61.2	934.27	931.41	4.672	24	9.0	45	14.5
		5-year								34	10.7	45	14.5
		10-year								40	12.5	45	14.5
		25-year								42	13.3	45	14.5
		50-year								42	13.3	45	14.5
		100-year								42	13.3	45	14.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL305	8214.2	2-year	Trapezoidal	1	30	61.2	938.94	936.24	4.411	0	0.0	641	21.4
		5-year								0	0.0	641	21.4
		10-year								0	0.0	641	21.4
		25-year								5	1.0	641	21.4
		50-year								11	1.8	641	21.4
		100-year								19	2.5	641	21.4
LPOL306	8413.1	2-year	Circular	2	0	26.7	939.07	934.27	17.957	24	17.4	84	26.7
		5-year								34	17.6	84	26.7
		10-year								40	17.7	84	26.7
		25-year								48	17.7	84	26.7
		50-year								53	17.8	84	26.7
		100-year								56	17.9	84	26.7
LPOL306	8413.2	2-year	Trapezoidal	1	30	26.7	941.07	938.94	7.969	0	0.0	813	27.1
		5-year								0	0.0	813	27.1
		10-year								0	0.0	813	27.1
		25-year								0	0.0	813	27.1
		50-year								0	0.0	813	27.1
		100-year								6	2.3	813	27.1
LPOL401	POL401A	2-year	Circular	3	0	210.7	927.31	921.14	2.929	13	10.3	106	15.0
		5-year								20	11.7	106	15.0
		10-year								24	12.4	106	15.0
		25-year								30	13.2	106	15.0
		50-year								35	13.8	106	15.0
		100-year								41	14.4	106	15.0
LPOL401	POL401B	2-year	Trapezoidal	1	30	210.7	934.00	933.79	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPOL402	LPOL402	2-year	Trapezoidal	2.69	100	10.0	927.31	927.31	0.000	32	0.5	2361	0.0
		5-year								46	0.6	2361	0.0
		10-year								55	0.6	2361	0.0
		25-year								66	0.7	2361	0.0
		50-year								74	0.7	2361	0.0
		100-year								85	0.8	2361	0.0
LPOL403	8215.1	2-year	Circular	2	0	52.2	930.70	927.31	6.498	33	18.7	54	17.0
		5-year								47	20.2	54	17.0
		10-year								55	22.3	54	17.0
		25-year								65	24.3	54	17.0
		50-year								69	24.6	54	17.0
		100-year								72	24.8	54	17.0
LPOL403	8215.2	2-year	Trapezoidal	1	30	52.2	935.12	934.53	1.131	0	0.0	324	10.8
		5-year								0	0.0	324	10.8
		10-year								0	0.0	324	10.8
		25-year								4	2.0	324	10.8
		50-year								11	2.8	324	10.8
		100-year								18	3.5	324	10.8
LPOL404	8642.1	2-year	Circular	2	0	41.6	932.17	930.70	3.537	33	14.4	40	12.6
		5-year								47	15.4	40	12.6
		10-year								54	17.2	40	12.6
		25-year								57	18.1	40	12.6
		50-year								58	18.5	40	12.6
		100-year								60	18.9	40	12.6
LPOL404	8642.2	2-year	Trapezoidal	1	30	41.6	936.42	935.12	3.128	0	0.0	539	18.0
		5-year								0	0.0	539	18.0
		10-year								6	3.1	539	18.0
		25-year								28	5.6	539	18.0
		50-year								36	6.2	539	18.0
		100-year								48	7.0	539	18.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL405	8643.1	2-year	Circular	2	0	29.8	933.15	932.17	3.291	33	13.8	38	12.1
		5-year								47	14.6	38	12.1
		10-year								52	16.4	38	12.1
		25-year								53	16.8	38	12.1
		50-year								55	17.3	38	12.1
		100-year								55	17.4	38	12.1
LPOL405	8643.2	2-year	Trapezoidal	1	30	29.8	937.15	936.42	2.451	0	0.0	476	15.9
		5-year								0	0.0	476	15.9
		10-year								20	4.6	476	15.9
		25-year								33	5.6	476	15.9
		50-year								41	6.1	476	15.9
		100-year								52	6.7	476	15.9
LPOL406	LPOL406	2-year	Trapezoidal	2.69	100	10.0	927.31	927.31	0.000	13	0.2	2361	0.0
		5-year								20	0.2	2361	0.0
		10-year								25	0.2	2361	0.0
		25-year								31	0.2	2361	0.0
		50-year								35	0.2	2361	0.0
		100-year								42	0.3	2361	0.0
LPOL501	LPOL501	2-year	Trapezoidal	4	10	56.4	925.70	925.20	0.887	45	3.5	497	8.9
		5-year								66	4.2	497	8.9
		10-year								78	4.5	497	8.9
		25-year								95	5.0	497	8.9
		50-year								108	5.3	497	8.9
		100-year								124	5.6	497	8.9
LPOL502	8647.1	2-year	Circular	2	0	98.7	926.08	925.70	0.385	30	12.3	13	4.1
		5-year								34	12.5	13	4.1
		10-year								35	12.5	13	4.1
		25-year								36	12.5	13	4.1
		50-year								37	12.5	13	4.1
		100-year								37	12.5	13	4.1
LPOL502	8647.2	2-year	Trapezoidal	1	30	98.7	930.00	928.20	1.824	15	3.7	412	13.7
		5-year								32	5.1	412	13.7
		10-year								43	5.7	412	13.7
		25-year								59	6.4	412	13.7
		50-year								70	6.9	412	13.7
		100-year								87	7.5	412	13.7
LPOL503	8648.1	2-year	Circular	2	0	59.7	927.97	926.08	3.164	2	0.8	37	11.9
		5-year								2	0.7	37	11.9
		10-year								2	0.6	37	11.9
		25-year								1	-0.6	37	11.9
		50-year								-1	-0.7	37	11.9
		100-year								-2	-0.8	37	11.9
LPOL503	8648.2	2-year	Trapezoidal	1	30	59.7	931.80	930.00	3.014	0	0.0	530	17.7
		5-year								0	0.0	530	17.7
		10-year								0	0.0	530	17.7
		25-year								0	0.0	530	17.7
		50-year								0	0.0	530	17.7
		100-year								0	0.0	530	17.7
LPOL601	8644.1	2-year	Circular	1.25	0	83.5	930.75	930.22	0.635	0	-0.2	5	3.9
		5-year								-1	-1.1	5	3.9
		10-year								1	0.9	5	3.9
		25-year								1	0.8	5	3.9
		50-year								1	0.9	5	3.9
		100-year								-1	-1.2	5	3.9
LPOL601	8644.2	2-year	Trapezoidal	1	30	83.5	935.08	933.22	2.228	0	0.0	455	15.2
		5-year								0	0.0	455	15.2
		10-year								0	0.0	455	15.2
		25-year								0	0.0	455	15.2
		50-year								0	0.0	455	15.2
		100-year								0	0.0	455	15.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC01	LPOMC01	2-year	Natural	7	0	217.7	888.30	887.03	0.583	270	2.4	3692	7.1
		5-year								394	2.6	3692	7.1
		10-year								481	2.8	3692	7.1
		25-year								540	2.9	3692	7.1
		50-year								627	2.9	3692	7.1
		100-year								785	2.9	3692	7.1
LPOMC02	LPOMC02	2-year	Natural	10	0	2903.3	899.87	888.30	0.399	213	2.5	37344	8.7
		5-year								344	2.6	37344	8.7
		10-year								457	2.6	37344	8.7
		25-year								603	2.6	37344	8.7
		50-year								697	2.6	37344	8.7
		100-year								833	2.5	37344	8.7
LPOMC03	LPOMC03	2-year	Natural	10	0	463.2	902.40	899.87	0.546	226	5.8	23064	9.2
		5-year								342	5.9	23064	9.2
		10-year								434	5.8	23064	9.2
		25-year								560	5.8	23064	9.2
		50-year								636	5.8	23064	9.2
		100-year								745	5.8	23064	9.2
LPOMC04	POMC04A	2-year	Rectangular	3	10	56.1	902.90	902.40	0.891	73	2.3	331	11.0
		5-year								109	3.6	331	11.0
		10-year								142	4.7	331	11.0
		25-year								192	6.4	331	11.0
		50-year								222	7.4	331	11.0
		100-year								263	8.7	331	11.0
LPOMC04	POMC04B	2-year	Trapezoidal	2	30	56.1	908.00	907.94	0.100	0	0.0	304	5.1
		5-year								0	0.0	304	5.1
		10-year								0	0.0	304	5.1
		25-year								0	0.0	304	5.1
		50-year								0	0.0	304	5.1
		100-year								0	0.0	304	5.1
LPOMC05	LPOMC05	2-year	Natural	8	0	432.4	906.00	902.90	0.717	164	0.6	38594	11.9
		5-year								232	0.6	38594	11.9
		10-year								279	0.6	38594	11.9
		25-year								381	0.7	38594	11.9
		50-year								442	0.7	38594	11.9
		100-year								527	0.7	38594	11.9
LPOMC06	LPOMC06	2-year	Natural	5	0	493.0	908.31	906.00	0.469	167	3.0	4455	6.2
		5-year								234	3.3	4455	6.2
		10-year								281	3.5	4455	6.2
		25-year								395	3.8	4455	6.2
		50-year								463	3.9	4455	6.2
		100-year								560	4.1	4455	6.2
LPOMC07	POMC07A	2-year	Special	4.5	4.416	69.2	908.60	908.31	0.419	56	8.8	64	6.3
		5-year								78	10.2	64	6.3
		10-year								94	11.2	64	6.3
		25-year								131	13.8	64	6.3
		50-year								154	15.9	64	6.3
		100-year								185	18.8	64	6.3
LPOMC07	POMC07B	2-year	Trapezoidal	1	30	69.2	914.00	913.93	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPOMC08	LPOMC08	2-year	Natural	10	10	199.1	909.60	908.60	0.502	168	3.3	26408	10.1
		5-year								236	3.5	26408	10.1
		10-year								281	3.5	26408	10.1
		25-year								397	3.5	26408	10.1
		50-year								469	3.6	26408	10.1
		100-year								567	3.6	26408	10.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC09	POMC09A	2-year	Special	4.5	4.5	86.2	910.47	910.02	0.522	56	7.9	72	7.0
		5-year								79	8.8	72	7.0
		10-year								94	9.7	72	7.0
		25-year								133	13.1	72	7.0
		50-year								148	14.5	72	7.0
		100-year								163	15.9	72	7.0
LPOMC09	POMC09B	2-year	Trapezoidal	1	30	86.2	914.30	914.21	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								33	2.7	99	3.3
		100-year								110	4.4	99	3.3
LPOMC10	LPOMC10	2-year	Natural	6	25	123.1	911.46	910.47	0.804	169	3.7	4773	7.5
		5-year								237	3.7	4773	7.5
		10-year								282	3.7	4773	7.5
		25-year								400	3.8	4773	7.5
		50-year								477	3.8	4773	7.5
		100-year								594	3.8	4773	7.5
LPOMC11	POMC11A	2-year	Rectangular	3	8	87.5	911.60	911.46	0.160	35	2.6	108	4.5
		5-year								49	3.6	108	4.5
		10-year								73	4.6	108	4.5
		25-year								105	5.0	108	4.5
		50-year								126	4.9	108	4.5
		100-year								156	6.5	108	4.5
LPOMC11	POMC11B	2-year	Trapezoidal	1	30	87.5	916.00	915.91	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LPOMC12	LPOMC12	2-year	Natural	8	15	127.3	912.00	911.60	0.314	56	2.1	5952	6.1
		5-year								116	2.8	5952	6.1
		10-year								173	3.3	5952	6.1
		25-year								243	3.6	5952	6.1
		50-year								288	3.5	5952	6.1
		100-year								352	3.5	5952	6.1
LPOMC13	POMC13A	2-year	Circular	2	3.5	27.0	912.14	912.00	0.519	28	11.0	8	2.7
		5-year								38	12.9	8	2.7
		10-year								39	12.9	8	2.7
		25-year								39	12.9	8	2.7
		50-year								39	12.9	8	2.7
		100-year								39	12.9	8	2.7
LPOMC13	POMC13B	2-year	Trapezoidal	2	30	27.0	916.00	915.97	0.100	0	0.0	294	4.9
		5-year								41	3.2	294	4.9
		10-year								94	4.4	294	4.9
		25-year								168	5.5	294	4.9
		50-year								219	6.0	294	4.9
		100-year								285	6.6	294	4.9
LPOMC14	LPOMC14	2-year	Natural	10	0	832.5	921.14	912.14	1.081	146	1.0	46836	15.1
		5-year								212	1.1	46836	15.1
		10-year								253	1.1	46836	15.1
		25-year								307	1.2	46836	15.1
		50-year								347	1.2	46836	15.1
		100-year								401	1.2	46836	15.1
LPOMC15	LPOMC15	2-year	Natural	4	0	375.7	925.20	921.14	1.081	136	3.7	3790	9.6
		5-year								196	4.1	3790	9.6
		10-year								232	4.3	3790	9.6
		25-year								280	4.5	3790	9.6
		50-year								316	4.7	3790	9.6
		100-year								364	4.8	3790	9.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC16	LPOMC16	2-year	Natural	4	0	190.3	926.50	925.20	0.683	92	2.4	2154	6.7
		5-year								131	2.7	2154	6.7
		10-year								155	2.9	2154	6.7
		25-year								187	3.1	2154	6.7
		50-year								210	3.2	2154	6.7
		100-year								242	3.4	2154	6.7
LPOMC17	8645.1	2-year	Circular	3	0	82.3	930.22	926.50	4.518	92	21.9	132	18.6
		5-year								114	22.8	132	18.6
		10-year								119	22.9	132	18.6
		25-year								123	22.9	132	18.6
		50-year								125	23.2	132	18.6
		100-year								129	23.5	132	18.6
LPOMC17	8645.2	2-year	Trapezoidal	1	30	82.3	933.22	933.14	0.100	0	0.0	95	3.2
		5-year								17	2.0	95	3.2
		10-year								36	2.8	95	3.2
		25-year								64	3.5	95	3.2
		50-year								86	4.0	95	3.2
		100-year								112	4.5	95	3.2
LPOMC18	8646.1	2-year	Circular	3	0	128.4	930.58	930.22	0.283	92	13.8	33	4.7
		5-year								99	14.6	33	4.7
		10-year								99	14.6	33	4.7
		25-year								99	14.6	33	4.7
		50-year								99	14.5	33	4.7
		100-year								99	14.6	33	4.7
LPOMC18	8646.2	2-year	Trapezoidal	1	30	128.4	935.94	933.22	2.118	0	0.0	444	14.8
		5-year								41	4.9	444	14.8
		10-year								66	5.6	444	14.8
		25-year								100	6.4	444	14.8
		50-year								126	6.9	444	14.8
		100-year								158	7.5	444	14.8
LPOMC19	8414.1	2-year	Circular	3	0	55.6	931.42	930.58	1.501	-1	-0.2	76	10.7
		5-year								6	0.8	76	10.7
		10-year								15	2.1	76	10.7
		25-year								28	3.9	76	10.7
		50-year								14	2.0	76	10.7
		100-year								5	0.7	76	10.7
LPOMC19	8414.2	2-year	Trapezoidal	1	30	55.6	936.00	935.94	0.100	0	0.0	100	3.3
		5-year								0	-0.1	100	3.3
		10-year								0	0.4	100	3.3
		25-year								1	0.6	100	3.3
		50-year								1	0.3	100	3.3
		100-year								-1	0.3	100	3.3
LPRL101	LPRL101	2-year	Trapezoidal	10	4	107.3	878.04	875.00	2.833	7	0.5	7158	21.1
		5-year								18	0.7	7158	21.1
		10-year								27	0.9	7158	21.1
		25-year								32	1.0	7158	21.1
		50-year								31	1.0	7158	21.1
		100-year								38	0.9	7158	21.1
LPRL102	8013.1	2-year	Circular	3	0	8013.1	878.67	878.04	0.244	3	1.1	5	0.8
		5-year								5	1.4	5	0.8
		10-year								7	1.5	5	0.8
		25-year								8	1.6	5	0.8
		50-year								10	1.9	5	0.8
		100-year								20	3.2	5	0.8
LPRL102	8013.2	2-year	Trapezoidal	1	30	8013.1	890.00	889.00	0.012	0	0.0	34	1.1
		5-year								0	0.0	34	1.1
		10-year								0	0.0	34	1.1
		25-year								0	0.0	34	1.1
		50-year								0	0.0	34	1.1
		100-year								0	0.0	34	1.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL103	8249.1	2-year	Circular	2.5	0	82.4	879.50	878.67	1.008	11	6.1	38	7.8
		5-year								16	6.4	38	7.8
		10-year								18	6.5	38	7.8
		25-year								22	6.6	38	7.8
		50-year								25	6.6	38	7.8
		100-year								29	6.9	38	7.8
LPRL103	8249.2	2-year	Trapezoidal	1	30	82.4	890.08	890.00	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								1	0.7	95	3.2
LPRL104	8248.1	2-year	Circular	2.5	0	390.7	883.91	879.50	1.129	11	6.9	40	8.2
		5-year								16	7.6	40	8.2
		10-year								19	7.8	40	8.2
		25-year								23	7.9	40	8.2
		50-year								26	8.1	40	8.2
		100-year								30	8.3	40	8.2
LPRL104	8248.2	2-year	Trapezoidal	1	30	390.7	892.48	890.08	0.614	0	0.0	239	8.0
		5-year								0	0.0	239	8.0
		10-year								0	0.0	239	8.0
		25-year								0	0.0	239	8.0
		50-year								0	0.0	239	8.0
		100-year								0	0.0	239	8.0
LPRL105	8247.1	2-year	Circular	2.5	0	65.1	884.74	883.91	1.274	11	7.2	43	8.8
		5-year								16	8.0	43	8.8
		10-year								19	8.3	43	8.8
		25-year								23	8.7	43	8.8
		50-year								26	9.0	43	8.8
		100-year								30	9.2	43	8.8
LPRL105	8247.2	2-year	Trapezoidal	1	30	65.1	892.51	892.48	0.100	0	0.0	65	2.2
		5-year								0	0.0	65	2.2
		10-year								0	0.0	65	2.2
		25-year								0	0.0	65	2.2
		50-year								0	0.0	65	2.2
		100-year								0	0.0	65	2.2
LPRL106	8246.1	2-year	Circular	2	0	137.0	886.82	884.74	1.519	11	8.0	26	8.2
		5-year								16	8.8	26	8.2
		10-year								19	9.2	26	8.2
		25-year								23	9.7	26	8.2
		50-year								26	9.9	26	8.2
		100-year								30	10.0	26	8.2
LPRL106	8246.2	2-year	Trapezoidal	1	30	137.0	892.65	892.51	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								1	0.6	98	3.3
LPRL107	8245.1	2-year	Circular	2	0	62.2	887.31	886.82	0.788	11	6.8	19	5.9
		5-year								16	7.6	19	5.9
		10-year								19	7.9	19	5.9
		25-year								23	8.3	19	5.9
		50-year								26	8.5	19	5.9
		100-year								30	9.3	19	5.9
LPRL107	8245.2	2-year	Trapezoidal	1	30	62.2	892.71	892.65	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								11	1.7	95	3.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL201	LPRL201	2-year	Trapezoidal	11	8	123.5	877.77	875.00	2.242	178	4.0	12950	20.5
		5-year								267	4.5	12950	20.5
		10-year								321	4.8	12950	20.5
		25-year								392	5.0	12950	20.5
		50-year								444	5.0	12950	20.5
		100-year								514	5.2	12950	20.5
LPRL202	PRL202A	2-year	Rectangular	6	6	158.6	879.90	877.77	1.343	178	15.2	580	16.1
		5-year								267	17.8	580	16.1
		10-year								321	19.1	580	16.1
		25-year								392	20.6	580	16.1
		50-year								444	21.7	580	16.1
		100-year								514	23.0	580	16.1
LPRL202	PRL202B	2-year	Trapezoidal	1	30	158.6	888.00	887.84	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPRL203	LPRL203	2-year	Natural	8	7	377.2	881.77	879.90	0.497	138	3.8	7278	5.9
		5-year								209	3.8	7278	5.9
		10-year								252	3.8	7278	5.9
		25-year								308	3.8	7278	5.9
		50-year								351	3.8	7278	5.9
		100-year								408	3.8	7278	5.9
LPRL204	PRL204A	2-year	Special	7	7	154.8	888.86	881.77	4.578	138	14.6	689	27.8
		5-year								209	16.6	689	27.8
		10-year								252	18.1	689	27.8
		25-year								309	20.1	689	27.8
		50-year								351	21.2	689	27.8
		100-year								409	22.8	689	27.8
LPRL204	PRL204B	2-year	Trapezoidal	1	30	154.8	893.00	892.85	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LPRL205	LPRL205	2-year	Natural	4	2	120.2	889.04	888.86	0.150	122	1.5	1370	3.2
		5-year								184	1.7	1370	3.2
		10-year								222	1.7	1370	3.2
		25-year								272	1.8	1370	3.2
		50-year								309	1.9	1370	3.2
		100-year								360	1.9	1370	3.2
LPRL206	PRL206A	2-year	User Defined	3.25	6.5	30.4	889.96	889.04	3.027	122	5.1	0	10.2
		5-year								184	6.2	0	10.2
		10-year								222	6.8	0	10.2
		25-year								272	7.5	0	10.2
		50-year								309	7.9	0	10.2
		100-year								359	8.5	0	10.2
LPRL206	PRL206B	2-year	Trapezoidal	2	30	30.4	893.21	892.29	3.027	0	0.0	1618	27.0
		5-year								0	0.0	1618	27.0
		10-year								0	0.0	1618	27.0
		25-year								0	0.0	1618	27.0
		50-year								0	0.0	1618	27.0
		100-year								0	0.0	1618	27.0
LPRL207	LPRL207	2-year	Trapezoidal	4	12	339.4	891.00	889.96	0.306	123	2.4	1137	3.9
		5-year								185	2.6	1137	3.9
		10-year								223	2.7	1137	3.9
		25-year								273	2.8	1137	3.9
		50-year								311	2.8	1137	3.9
		100-year								361	2.9	1137	3.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL208	8401.1	2-year	Rectangular	4	4	163.9	893.42	891.00	1.477	123	14.9	206	12.9
		5-year								185	17.5	206	12.9
		10-year								223	18.5	206	12.9
		25-year								256	20.0	206	12.9
		50-year								263	20.2	206	12.9
		100-year								271	20.4	206	12.9
LPRL208	8401.2	2-year	Trapezoidal	1	30	163.9	898.93	896.00	1.788	0	0.0	408	13.6
		5-year								0	0.0	408	13.6
		10-year								0	0.0	408	13.6
		25-year								17	3.9	408	13.6
		50-year								48	5.9	408	13.6
		100-year								91	7.6	408	13.6
LPRL209	8400.1	2-year	Circular	2	0	55.4	893.97	893.42	0.993	59	19.4	21	6.7
		5-year								59	19.3	21	6.7
		10-year								58	19.3	21	6.7
		25-year								58	19.3	21	6.7
		50-year								58	19.2	21	6.7
		100-year								58	19.3	21	6.7
LPRL209	8400.2	2-year	Trapezoidal	2	30	55.4	898.89	898.83	0.100	54	3.4	306	5.1
		5-year								114	4.6	306	5.1
		10-year								153	5.2	306	5.1
		25-year								211	5.8	306	5.1
		50-year								245	6.1	306	5.1
		100-year								288	6.5	306	5.1
LPRL210	8452.1	2-year	Circular	2	0	194.4	895.57	893.97	0.823	32	10.0	19	6.1
		5-year								32	10.1	19	6.1
		10-year								32	10.1	19	6.1
		25-year								32	10.1	19	6.1
		50-year								32	10.1	19	6.1
		100-year								31	9.9	19	6.1
LPRL210	8452.2	2-year	Trapezoidal	2	30	194.4	900.78	898.89	0.972	89	5.7	917	15.3
		5-year								144	6.5	917	15.3
		10-year								178	6.8	917	15.3
		25-year								222	7.2	917	15.3
		50-year								256	7.6	917	15.3
		100-year								300	8.1	917	15.3
LPRL211	8453.1	2-year	Circular	2	0	35.7	895.58	895.57	0.028	30	9.6	4	1.1
		5-year								30	9.6	4	1.1
		10-year								30	9.6	4	1.1
		25-year								30	9.6	4	1.1
		50-year								30	9.6	4	1.1
		100-year								30	9.5	4	1.1
LPRL211	8453.2	2-year	Trapezoidal	2	30	35.7	900.83	900.78	0.140	90	4.3	348	5.8
		5-year								142	5.1	348	5.8
		10-year								174	5.5	348	5.8
		25-year								217	6.0	348	5.8
		50-year								249	6.3	348	5.8
		100-year								292	6.7	348	5.8
LPRL212	8451.1	2-year	Circular	2	0	162.7	897.68	895.58	1.291	28	8.7	24	7.6
		5-year								28	8.9	24	7.6
		10-year								27	8.6	24	7.6
		25-year								27	8.6	24	7.6
		50-year								27	8.4	24	7.6
		100-year								27	8.4	24	7.6
LPRL212	8451.2	2-year	Trapezoidal	2	30	162.7	902.26	900.83	0.879	91	5.1	872	14.5
		5-year								146	6.1	872	14.5
		10-year								179	6.7	872	14.5
		25-year								224	7.3	872	14.5
		50-year								257	7.7	872	14.5
		100-year								301	8.1	872	14.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL213	8399.1	2-year	Circular	2	0	40.9	898.20	897.68	1.273	25	8.2	24	7.5
		5-year								25	8.2	24	7.5
		10-year								25	8.2	24	7.5
		25-year								25	8.2	24	7.5
		50-year								25	8.2	24	7.5
		100-year								25	8.2	24	7.5
LPRL213	8399.2	2-year	Trapezoidal	2	30	40.9	902.62	902.26	0.881	53	4.2	873	14.5
		5-year								90	5.2	873	14.5
		10-year								113	5.7	873	14.5
		25-year								144	6.2	873	14.5
		50-year								167	6.5	873	14.5
		100-year								197	6.9	873	14.5
LPRL214	8244.1	2-year	Circular	2	0	468.8	906.73	898.20	1.820	29	9.7	28	9.0
		5-year								29	9.8	28	9.0
		10-year								29	9.8	28	9.0
		25-year								29	9.9	28	9.0
		50-year								29	9.8	28	9.0
		100-year								28	9.6	28	9.0
LPRL214	8244.2	2-year	Trapezoidal	1	30	468.8	910.73	902.62	1.730	49	5.2	401	13.4
		5-year								87	6.5	401	13.4
		10-year								110	7.0	401	13.4
		25-year								140	7.7	401	13.4
		50-year								163	8.1	401	13.4
		100-year								193	8.6	401	13.4
LPRL215	8243.1	2-year	Circular	2	0	73.5	907.39	906.73	0.898	33	10.4	20	6.3
		5-year								34	10.7	20	6.3
		10-year								34	10.8	20	6.3
		25-year								35	11.0	20	6.3
		50-year								35	11.0	20	6.3
		100-year								30	9.5	20	6.3
LPRL215	8243.2	2-year	Trapezoidal	1	30	73.5	911.56	910.73	1.129	53	5.3	324	10.8
		5-year								91	6.6	324	10.8
		10-year								114	7.2	324	10.8
		25-year								144	7.9	324	10.8
		50-year								167	8.4	324	10.8
		100-year								197	8.9	324	10.8
LPRL216	8241.1	2-year	Circular	2	0	132.2	907.69	907.39	0.227	11	4.2	10	3.2
		5-year								11	4.1	10	3.2
		10-year								11	4.1	10	3.2
		25-year								11	4.1	10	3.2
		50-year								11	4.1	10	3.2
		100-year								11	4.1	10	3.2
LPRL216	8241.2	2-year	Trapezoidal	2	30	132.2	911.69	911.56	0.100	40	2.8	292	4.9
		5-year								64	3.4	292	4.9
		10-year								78	3.7	292	4.9
		25-year								98	4.1	292	4.9
		50-year								112	4.3	292	4.9
		100-year								132	4.6	292	4.9
LPRL217	8240.1	2-year	Circular	2	0	189.8	909.24	907.69	0.817	27	8.5	19	6.0
		5-year								27	8.5	19	6.0
		10-year								27	8.6	19	6.0
		25-year								27	8.5	19	6.0
		50-year								27	8.5	19	6.0
		100-year								27	8.5	19	6.0
LPRL217	8240.2	2-year	Trapezoidal	2	30	189.8	914.99	911.69	1.739	23	2.3	1226	20.4
		5-year								48	3.4	1226	20.4
		10-year								62	3.9	1226	20.4
		25-year								82	4.5	1226	20.4
		50-year								97	4.9	1226	20.4
		100-year								117	5.3	1226	20.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL218	8239.1	2-year	Circular	2	0	38.6	910.72	909.24	3.833	39	12.3	41	13.1
		5-year								39	12.4	41	13.1
		10-year								39	12.4	41	13.1
		25-year								39	12.4	41	13.1
		50-year								39	12.4	41	13.1
		100-year								39	12.4	41	13.1
LPRL218	8239.2	2-year	Trapezoidal	1	30	38.6	916.39	914.99	3.626	10	2.7	581	19.4
		5-year								35	5.2	581	19.4
		10-year								49	6.2	581	19.4
		25-year								69	7.2	581	19.4
		50-year								84	7.8	581	19.4
		100-year								103	8.5	581	19.4
LPRL2A01	8242.1	2-year	Circular	1.25	0	83.0	909.14	907.39	2.109	9	7.7	9	7.1
		5-year								9	7.7	9	7.1
		10-year								9	7.7	9	7.1
		25-year								9	7.7	9	7.1
		50-year								9	7.7	9	7.1
		100-year								9	7.7	9	7.1
LPRL2A01	8242.2	2-year	Trapezoidal	1	30	83.0	911.97	911.56	0.494	9	1.3	214	7.1
		5-year								17	1.8	214	7.1
		10-year								22	2.0	214	7.1
		25-year								29	2.2	214	7.1
		50-year								34	2.4	214	7.1
		100-year								41	2.6	214	7.1
LPRL301	8490.1	2-year	Circular	3	0	310.8	901.92	899.57	0.756	65	9.9	54	7.6
		5-year								67	9.9	54	7.6
		10-year								68	10.0	54	7.6
		25-year								68	10.1	54	7.6
		50-year								68	10.1	54	7.6
		100-year								69	10.2	54	7.6
LPRL301	8490.2	2-year	Trapezoidal	2	30	310.8	905.00	904.69	0.100	10	1.5	294	4.9
		5-year								47	2.8	294	4.9
		10-year								69	3.3	294	4.9
		25-year								101	3.9	294	4.9
		50-year								124	4.2	294	4.9
		100-year								153	4.6	294	4.9
LPRL302	PRL302A	2-year	Circular	2.5	0	49.1	902.29	901.92	0.753	54	10.7	33	6.7
		5-year								50	10.0	33	6.7
		10-year								50	10.0	33	6.7
		25-year								50	10.0	33	6.7
		50-year								51	10.1	33	6.7
		100-year								51	10.2	33	6.7
LPRL302	PRL302B	2-year	Trapezoidal	2	30	49.1	905.29	905.00	0.590	43	4.0	715	11.9
		5-year								85	4.8	715	11.9
		10-year								110	5.0	715	11.9
		25-year								141	5.2	715	11.9
		50-year								163	5.4	715	11.9
		100-year								193	5.6	715	11.9
LPRL303	8237.1	2-year	Circular	3	0	330.3	904.79	902.29	0.757	54	7.4	54	7.6
		5-year								73	10.1	54	7.6
		10-year								73	10.1	54	7.6
		25-year								73	10.1	54	7.6
		50-year								73	10.1	54	7.6
		100-year								72	10.0	54	7.6
LPRL303	8237.2	2-year	Trapezoidal	2	30	330.3	910.12	905.29	1.765	0	0.0	1125	18.7
		5-year								6	0.7	1125	18.7
		10-year								22	1.8	1125	18.7
		25-year								44	2.8	1125	18.7
		50-year								59	3.3	1125	18.7
		100-year								79	3.8	1125	18.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL304	8236.1	2-year	Circular	2.5	0	44.3	904.94	904.79	0.339	54	11.0	22	4.5
		5-year								63	12.8	22	4.5
		10-year								63	12.8	22	4.5
		25-year								64	12.9	22	4.5
		50-year								63	12.8	22	4.5
		100-year								63	12.7	22	4.5
LPRL304	8236.2	2-year	Trapezoidal	1	30	44.3	910.16	910.12	0.100	0	0.0	92	3.1
		5-year								41	3.1	92	3.1
		10-year								56	3.5	92	3.1
		25-year								75	3.9	92	3.1
		50-year								90	4.2	92	3.1
		100-year								109	4.5	92	3.1
LPRL305	8012.1	2-year	Rectangular	2.5	4	150.4	907.35	904.94	1.602	54	6.7	113	11.3
		5-year								79	7.9	113	11.3
		10-year								84	8.3	113	11.3
		25-year								85	8.5	113	11.3
		50-year								86	8.6	113	11.3
		100-year								88	8.8	113	11.3
LPRL305	8012.2	2-year	Trapezoidal	1	30	150.4	911.93	910.16	1.177	0	0.0	331	11.0
		5-year								0	0.0	331	11.0
		10-year								10	1.1	331	11.0
		25-year								30	2.3	331	11.0
		50-year								45	3.0	331	11.0
		100-year								65	3.7	331	11.0
LPRL306	8235.1	2-year	Circular	2.5	0	37.6	908.21	907.35	2.285	5	5.8	58	11.7
		5-year								7	6.1	58	11.7
		10-year								9	6.3	58	11.7
		25-year								10	6.5	58	11.7
		50-year								12	6.6	58	11.7
		100-year								14	6.7	58	11.7
LPRL306	8235.2	2-year	Trapezoidal	1	30	37.6	912.29	911.93	0.956	0	0.0	298	9.9
		5-year								0	0.0	298	9.9
		10-year								0	0.0	298	9.9
		25-year								0	0.0	298	9.9
		50-year								0	0.0	298	9.9
		100-year								0	-0.1	298	9.9
LPRL307	8479.1	2-year	Circular	2	0	178.8	913.61	908.21	3.019	5	8.2	37	11.6
		5-year								7	9.1	37	11.6
		10-year								9	9.5	37	11.6
		25-year								10	10.0	37	11.6
		50-year								12	10.4	37	11.6
		100-year								13	10.7	37	11.6
LPRL307	8479.2	2-year	Trapezoidal	1	30	178.8	917.11	912.29	2.695	0	0.0	501	16.7
		5-year								0	0.0	501	16.7
		10-year								0	0.0	501	16.7
		25-year								0	0.0	501	16.7
		50-year								0	0.0	501	16.7
		100-year								0	0.0	501	16.7
LPRL401	8234.1	2-year	Circular	2.5	0	106.2	923.25	921.60	1.554	5	2.7	47	9.7
		5-year								7	2.7	47	9.7
		10-year								9	3.1	47	9.7
		25-year								11	3.6	47	9.7
		50-year								12	3.9	47	9.7
		100-year								14	4.4	47	9.7
LPRL401	8234.2	2-year	Trapezoidal	1	30	106.2	926.67	925.35	1.243	0	0.0	340	11.3
		5-year								0	0.0	340	11.3
		10-year								0	0.0	340	11.3
		25-year								0	0.0	340	11.3
		50-year								0	0.0	340	11.3
		100-year								0	0.0	340	11.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC01	LPRMC01	2-year	Trapezoidal	12	8	275.3	869.97	861.41	3.110	330	10.5	9702	25.3
		5-year								508	11.8	9702	25.3
		10-year								609	12.4	9702	25.3
		25-year								729	13.0	9702	25.3
		50-year								798	13.3	9702	25.3
		100-year								905	13.8	9702	25.3
LPRMC02	PRMC02A	2-year	Rectangular	7	7	81.4	871.81	869.97	2.260	330	19.7	1136	23.2
		5-year								508	23.1	1136	23.2
		10-year								609	24.8	1136	23.2
		25-year								729	26.6	1136	23.2
		50-year								798	27.7	1136	23.2
		100-year								905	29.1	1136	23.2
LPRMC02	PRMC02B	2-year	Trapezoidal	1	30	81.4	903.94	903.86	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPRMC03	PRMC03A	2-year	Rectangular	7	7	60.2	873.16	871.81	2.243	330	20.0	1131	23.1
		5-year								508	22.6	1131	23.1
		10-year								609	23.8	1131	23.1
		25-year								729	25.1	1131	23.1
		50-year								798	25.8	1131	23.1
		100-year								905	26.8	1131	23.1
LPRMC03	PRMC03B	2-year	Trapezoidal	1	30	60.2	904.00	903.94	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPRMC04	PRMC04A	2-year	Rectangular	7	7	77.5	874.91	873.16	2.259	330	20.0	1135	23.2
		5-year								508	22.5	1135	23.2
		10-year								609	23.6	1135	23.2
		25-year								729	24.8	1135	23.2
		50-year								798	25.4	1135	23.2
		100-year								905	26.2	1135	23.2
LPRMC04	PRMC04B	2-year	Trapezoidal	1	30	77.5	904.08	904.00	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LPRMC05	LPRMC05	2-year	Trapezoidal	10	5	18.6	875.00	874.91	0.483	330	7.7	3119	6.9
		5-year								508	7.7	3119	6.9
		10-year								609	7.7	3119	6.9
		25-year								729	7.7	3119	6.9
		50-year								798	7.7	3119	6.9
		100-year								904	7.7	3119	6.9
LPRMC06	LPRMC06	2-year	Trapezoidal	12	15	32.0	876.00	875.00	3.126	149	3.6	18208	26.6
		5-year								231	3.7	18208	26.6
		10-year								280	3.9	18208	26.6
		25-year								304	4.3	18208	26.6
		50-year								318	4.4	18208	26.6
		100-year								354	4.5	18208	26.6
LPRMC07	PRMC07A	2-year	Circular	5	0	64.6	878.81	876.00	4.353	148	23.8	505	25.7
		5-year								230	25.8	505	25.7
		10-year								279	26.7	505	25.7
		25-year								304	28.0	505	25.7
		50-year								318	28.4	505	25.7
		100-year								353	29.5	505	25.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC07	PRMC07B	2-year	Trapezoidal	1	30	64.6	888.00	887.94	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LPRMC08	LPRMC08	2-year	Trapezoidal	8	12	149.9	881.40	878.81	1.728	142	3.5	9892	14.7
		5-year								211	3.8	9892	14.7
		10-year								253	3.9	9892	14.7
		25-year								272	3.9	9892	14.7
		50-year								292	3.9	9892	14.7
		100-year								340	4.0	9892	14.7
LPRMC09	PRMC09A	2-year	Rectangular	4	6	343.6	883.33	881.40	0.562	142	11.7	216	9.0
		5-year								211	13.7	216	9.0
		10-year								253	14.1	216	9.0
		25-year								272	15.3	216	9.0
		50-year								292	16.3	216	9.0
		100-year								311	17.0	216	9.0
LPRMC09	PRMC09B	2-year	Trapezoidal	1	30	343.6	890.00	889.67	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								29	2.3	95	3.2
LPRMC10	PRMC10A	2-year	Special	4.5	6	176.2	885.04	883.33	0.971	69	5.7	166	7.5
		5-year								101	6.3	166	7.5
		10-year								121	6.4	166	7.5
		25-year								132	6.4	166	7.5
		50-year								133	6.3	166	7.5
		100-year								133	6.3	166	7.5
LPRMC10	PRMC10B	2-year	Trapezoidal	2	30	176.2	890.18	890.00	0.100	0	0.0	297	5.0
		5-year								0	0.0	297	5.0
		10-year								0	0.0	297	5.0
		25-year								0	0.4	297	5.0
		50-year								48	3.0	297	5.0
		100-year								121	4.4	297	5.0
LPRMC11	LPRMC11	2-year	Natural	8	10	214.5	886.56	885.04	0.709	138	4.2	12819	6.9
		5-year								203	4.2	12819	6.9
		10-year								242	4.2	12819	6.9
		25-year								276	4.2	12819	6.9
		50-year								299	4.2	12819	6.9
		100-year								337	4.2	12819	6.9
LPRMC12	PRMC12A	2-year	Special	2.5	3	77.1	887.00	886.56	0.570	55	7.9	28	3.9
		5-year								55	8.0	28	3.9
		10-year								55	8.0	28	3.9
		25-year								55	8.0	28	3.9
		50-year								55	8.0	28	3.9
		100-year								56	8.0	28	3.9
LPRMC12	PRMC12B	2-year	Trapezoidal	2	30	77.1	890.00	889.92	0.100	29	2.6	300	5.0
		5-year								97	4.2	300	5.0
		10-year								133	4.8	300	5.0
		25-year								196	5.6	300	5.0
		50-year								239	6.0	300	5.0
		100-year								294	6.5	300	5.0
LPRMC13	LPRMC13	2-year	Natural	5	2	132.8	887.24	887.00	0.181	140	0.5	3252	3.4
		5-year								203	0.5	3252	3.4
		10-year								245	0.5	3252	3.4
		25-year								290	0.5	3252	3.4
		50-year								320	0.5	3252	3.4
		100-year								357	0.5	3252	3.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC14	PRMC14A	2-year	Circular	6	0	207.0	887.37	887.24	0.063	147	9.9	99	3.5
		5-year								209	10.6	99	3.5
		10-year								246	11.5	99	3.5
		25-year								295	12.7	99	3.5
		50-year								325	13.4	99	3.5
		100-year								348	14.0	99	3.5
LPRMC14	PRMC14B	2-year	Trapezoidal	1	30	207.0	893.00	892.79	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								15	1.8	96	3.2
LPRMC15	LPRMC15	2-year	Natural	6.5	5	195.0	889.60	887.37	1.144	147	3.7	1891	6.2
		5-year								209	3.9	1891	6.2
		10-year								247	3.9	1891	6.2
		25-year								296	4.0	1891	6.2
		50-year								328	4.0	1891	6.2
		100-year								368	4.0	1891	6.2
LPRMC16	PRMC16A	2-year	Circular	6	0	1137.4	899.57	889.60	0.877	135	12.2	368	13.0
		5-year								193	13.4	368	13.0
		10-year								223	13.9	368	13.0
		25-year								266	14.5	368	13.0
		50-year								294	14.8	368	13.0
		100-year								332	15.1	368	13.0
LPRMC16	PRMC16B	2-year	Trapezoidal	3	30	1137.4	906.00	896.00	0.879	0	0.0	1650	18.3
		5-year								0	0.0	1650	18.3
		10-year								0	0.0	1650	18.3
		25-year								0	0.0	1650	18.3
		50-year								0	0.0	1650	18.3
		100-year								0	0.0	1650	18.3
LPRMC17	LPRMC17	2-year	Natural	5	10	993.6	909.36	899.57	0.985	69	1.1	5903	7.7
		5-year								97	1.2	5903	7.7
		10-year								114	1.3	5903	7.7
		25-year								135	1.3	5903	7.7
		50-year								151	1.3	5903	7.7
		100-year								173	1.4	5903	7.7
LPRMC18	8405.1	2-year	Circular	1.67	0	44.7	909.50	909.36	0.313	28	15.9	7	3.3
		5-year								30	16.3	7	3.3
		10-year								31	16.6	7	3.3
		25-year								33	16.8	7	3.3
		50-year								34	17.0	7	3.3
		100-year								35	17.1	7	3.3
LPRMC18	8405.2	2-year	Trapezoidal	1	30	44.7	913.00	912.96	0.100	43	3.1	91	3.0
		5-year								69	3.8	91	3.0
		10-year								84	4.1	91	3.0
		25-year								105	4.5	91	3.0
		50-year								120	4.7	91	3.0
		100-year								141	5.0	91	3.0
LPRMC19	8406.1	2-year	Circular	1.67	0	94.3	909.95	909.50	0.477	17	7.6	9	4.1
		5-year								17	7.6	9	4.1
		10-year								17	7.6	9	4.1
		25-year								17	7.5	9	4.1
		50-year								17	7.5	9	4.1
		100-year								17	7.5	9	4.1
LPRMC19	8406.2	2-year	Trapezoidal	1	30	94.3	913.45	913.00	0.477	62	4.2	211	7.0
		5-year								90	4.9	211	7.0
		10-year								107	5.2	211	7.0
		25-year								129	5.5	211	7.0
		50-year								146	5.7	211	7.0
		100-year								168	6.0	211	7.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC20	8407.1	2-year	Circular	1.67	0	680.3	919.87	909.95	1.458	16	7.3	16	7.2
		5-year								16	7.3	16	7.2
		10-year								16	7.3	16	7.2
		25-year								16	7.3	16	7.2
		50-year								16	7.3	16	7.2
		100-year								16	7.3	16	7.2
LPRMC20	8407.2	2-year	Trapezoidal	1	30	680.3	924.04	913.45	1.557	11	1.3	381	12.7
		5-year								22	2.0	381	12.7
		10-year								29	2.3	381	12.7
		25-year								38	2.7	381	12.7
		50-year								45	2.9	381	12.7
		100-year								54	3.2	381	12.7
LPRMC21	8408.1	2-year	Circular	2	0	80.0	921.60	919.87	2.163	26	8.9	31	9.8
		5-year								27	8.9	31	9.8
		10-year								27	8.8	31	9.8
		25-year								27	8.8	31	9.8
		50-year								27	8.9	31	9.8
		100-year								27	8.9	31	9.8
LPRMC21	8408.2	2-year	Trapezoidal	1	30	80.0	925.35	924.04	1.638	1	0.4	390	13.0
		5-year								12	2.7	390	13.0
		10-year								19	3.4	390	13.0
		25-year								28	4.2	390	13.0
		50-year								34	4.6	390	13.0
		100-year								43	5.1	390	13.0
LPRMC22	8472.1	2-year	Circular	2	0	100.3	922.45	921.60	0.848	4	1.6	19	6.2
		5-year								6	1.9	19	6.2
		10-year								7	2.1	19	6.2
		25-year								-4	-1.6	19	6.2
		50-year								-4	-1.6	19	6.2
		100-year								6	1.8	19	6.2
LPRMC22	8472.2	2-year	Trapezoidal	1	30	100.3	925.37	925.35	0.020	0	0.1	43	1.4
		5-year								0	0.2	43	1.4
		10-year								0	-0.2	43	1.4
		25-year								1	-0.2	43	1.4
		50-year								1	-0.3	43	1.4
		100-year								-1	-0.2	43	1.4
LRCL0101	LRCL0101	2-year	Natural	20	0	956.5	882.07	873.84	0.860	119	0.9	142182	18.5
		5-year								169	0.9	142182	18.5
		10-year								195	0.8	142182	18.5
		25-year								219	0.8	142182	18.5
		50-year								-255	0.7	142182	18.5
		100-year								297	0.7	142182	18.5
LRCL0102	RCL0102A	2-year	Circular	4	0	80.8	883.53	882.07	1.808	120	17.7	179	14.3
		5-year								171	20.2	179	14.3
		10-year								197	21.2	179	14.3
		25-year								220	21.9	179	14.3
		50-year								228	22.0	179	14.3
		100-year								250	22.8	179	14.3
LRCL0102	RCL0102B	2-year	Trapezoidal	5	30	80.8	887.53	887.45	0.100	0	0.0	1210	8.1
		5-year								0	0.0	1210	8.1
		10-year								0	0.0	1210	8.1
		25-year								-56	-2.6	1210	8.1
		50-year								95	-2.7	1210	8.1
		100-year								153	3.3	1210	8.1
LRCL0103	LRCL0103	2-year	Natural	10	0	46.5	883.86	883.53	0.710	89	0.8	38517	12.3
		5-year								128	0.8	38517	12.3
		10-year								149	0.9	38517	12.3
		25-year								177	0.8	38517	12.3
		50-year								194	0.8	38517	12.3
		100-year								244	0.8	38517	12.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0104	LRCL0104	2-year	Natural	8	0	784.8	895.38	883.86	1.468	102	1.3	27985	16.5
		5-year								147	1.5	27985	16.5
		10-year								174	1.6	27985	16.5
		25-year								209	1.7	27985	16.5
		50-year								236	1.7	27985	16.5
		100-year								272	1.7	27985	16.5
LRCL0105	8653.1	2-year	Circular	2.5	0	49.1	895.91	895.38	1.079	57	19.0	40	8.1
		5-year								62	19.9	40	8.1
		10-year								65	20.4	40	8.1
		25-year								68	21.0	40	8.1
		50-year								71	21.4	40	8.1
		100-year								74	21.8	40	8.1
LRCL0105	8653.2	2-year	Trapezoidal	2	30	49.1	899.57	899.52	0.100	45	3.2	297	4.9
		5-year								85	4.1	297	4.9
		10-year								110	4.6	297	4.9
		25-year								142	5.0	297	4.9
		50-year								166	5.3	297	4.9
		100-year								199	5.7	297	4.9
LRCL0106	8654.1	2-year	Circular	2.5	0	58.7	896.55	895.91	1.091	36	7.2	40	8.1
		5-year								36	7.2	40	8.1
		10-year								35	7.2	40	8.1
		25-year								35	7.1	40	8.1
		50-year								34	6.9	40	8.1
		100-year								35	7.2	40	8.1
LRCL0106	8654.2	2-year	Trapezoidal	2	30	58.7	900.30	899.57	1.245	24	2.4	1038	17.3
		5-year								52	3.4	1038	17.3
		10-year								68	3.9	1038	17.3
		25-year								90	4.4	1038	17.3
		50-year								105	4.6	1038	17.3
		100-year								124	4.9	1038	17.3
LRCL0107	8600.1	2-year	Circular	2.5	0	114.6	898.62	896.55	1.807	52	10.5	51	10.4
		5-year								52	10.6	51	10.4
		10-year								52	10.6	51	10.4
		25-year								52	10.6	51	10.4
		50-year								53	10.7	51	10.4
		100-year								53	10.7	51	10.4
LRCL0107	8600.2	2-year	Trapezoidal	1	30	114.6	902.54	900.30	1.955	5	1.2	427	14.2
		5-year								28	3.7	427	14.2
		10-year								42	4.6	427	14.2
		25-year								60	5.5	427	14.2
		50-year								74	5.9	427	14.2
		100-year								93	6.3	427	14.2
LRCL0108	8601.1	2-year	Circular	2.5	0	70.4	899.48	898.62	1.222	41	9.3	42	8.6
		5-year								41	9.3	42	8.6
		10-year								41	9.6	42	8.6
		25-year								42	9.8	42	8.6
		50-year								42	9.8	42	8.6
		100-year								45	9.3	42	8.6
LRCL0108	8601.2	2-year	Trapezoidal	1	30	70.4	902.40	902.54	-0.199	-29	-2.3	136	4.5
		5-year								-51	-3.0	136	4.5
		10-year								-64	-3.3	136	4.5
		25-year								-81	-3.7	136	4.5
		50-year								-94	-3.9	136	4.5
		100-year								-111	-4.3	136	4.5
LRCL0109	8602.1	2-year	Circular	1.5	0	189.1	906.10	899.48	3.501	23	13.5	18	10.3
		5-year								23	13.5	18	10.3
		10-year								24	13.5	18	10.3
		25-year								24	13.5	18	10.3
		50-year								24	13.5	18	10.3
		100-year								24	13.5	18	10.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0109	8602.2	2-year	Trapezoidal	2	30	189.1	910.93	902.40	4.511	36	6.2	1975	32.9
		5-year								59	6.5	1975	32.9
		10-year								73	7.2	1975	32.9
		25-year								92	7.6	1975	32.9
		50-year								105	7.6	1975	32.9
		100-year								123	7.3	1975	32.9
LRCL0110	8603.1	2-year	Circular	2.5	0	170.5	907.15	906.10	0.616	23	4.7	30	6.1
		5-year								24	4.9	30	6.1
		10-year								25	5.0	30	6.1
		25-year								25	5.1	30	6.1
		50-year								25	5.1	30	6.1
		100-year								25	5.0	30	6.1
LRCL0110	8603.2	2-year	Trapezoidal	2	30	170.5	911.65	909.93	1.009	5	0.3	934	15.6
		5-year								15	0.8	934	15.6
		10-year								22	1.1	934	15.6
		25-year								30	1.4	934	15.6
		50-year								37	1.6	934	15.6
		100-year								45	1.9	934	15.6
LRCL0111	8604.1	2-year	Circular	2	0	225.1	908.81	907.15	0.737	21	6.7	18	5.7
		5-year								21	6.7	18	5.7
		10-year								21	6.7	18	5.7
		25-year								21	6.7	18	5.7
		50-year								21	6.7	18	5.7
		100-year								21	6.7	18	5.7
LRCL0111	8604.2	2-year	Trapezoidal	1	30	225.1	912.81	911.65	0.515	12	2.4	219	7.3
		5-year								23	3.0	219	7.3
		10-year								30	3.4	219	7.3
		25-year								39	3.7	219	7.3
		50-year								45	3.9	219	7.3
		100-year								54	4.2	219	7.3
LRCL0112	8605.1	2-year	Circular	2	0	183.6	914.23	908.81	2.952	28	9.2	36	11.5
		5-year								36	11.3	36	11.5
		10-year								36	11.3	36	11.5
		25-year								36	11.4	36	11.5
		50-year								36	11.4	36	11.5
		100-year								36	11.4	36	11.5
LRCL0112	8605.2	2-year	Trapezoidal	1	30	183.6	918.23	912.81	2.952	0	0.0	524	17.5
		5-year								4	0.8	524	17.5
		10-year								10	1.8	524	17.5
		25-year								19	2.7	524	17.5
		50-year								25	3.3	524	17.5
		100-year								34	3.8	524	17.5
LRCL0113	8606.1	2-year	Circular	2	0	38.9	914.81	914.23	1.492	28	10.4	26	8.2
		5-year								34	10.8	26	8.2
		10-year								34	10.9	26	8.2
		25-year								34	10.8	26	8.2
		50-year								34	10.8	26	8.2
		100-year								34	10.8	26	8.2
LRCL0113	8606.2	2-year	Trapezoidal	1	30	38.9	918.81	918.23	1.492	0	0.0	373	12.4
		5-year								12	3.2	373	12.4
		10-year								18	3.8	373	12.4
		25-year								27	4.5	373	12.4
		50-year								34	4.8	373	12.4
		100-year								42	5.3	373	12.4
LRCL01A01	LRCL01A01	2-year	Trapezoidal	7	40	634.1	890.65	883.53	1.123	38	0.5	17951	13.0
		5-year								53	0.5	17951	13.0
		10-year								61	0.6	17951	13.0
		25-year								68	0.6	17951	13.0
		50-year								71	0.6	17951	13.0
		100-year								77	0.6	17951	13.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01A02	8481.1	2-year	Circular	3	0	52.7	890.82	890.65	0.322	39	13.5	35	5.0
		5-year								54	15.4	35	5.0
		10-year								62	16.2	35	5.0
		25-year								69	16.7	35	5.0
		50-year								73	16.8	35	5.0
		100-year								78	17.7	35	5.0
LRCL01A02	8481.2	2-year	Trapezoidal	1	30	52.7	897.24	897.00	0.455	0	0.0	206	6.9
		5-year								0	0.0	206	6.9
		10-year								0	0.0	206	6.9
		25-year								0	0.0	206	6.9
		50-year								0	0.0	206	6.9
		100-year								0	0.0	206	6.9
LRCL01A03	8599.1	2-year	Circular	3	0	50.8	890.98	890.82	0.315	32	6.7	35	4.9
		5-year								42	7.5	35	4.9
		10-year								47	7.8	35	4.9
		25-year								53	8.2	35	4.9
		50-year								56	8.5	35	4.9
		100-year								63	8.8	35	4.9
LRCL01A03	8599.2	2-year	Trapezoidal	1	30	50.8	897.90	897.24	1.299	0	0.0	348	11.6
		5-year								0	0.0	348	11.6
		10-year								0	0.0	348	11.6
		25-year								0	0.0	348	11.6
		50-year								0	0.0	348	11.6
		100-year								0	0.0	348	11.6
LRCL01A04	8598.1	2-year	Circular	3	0	161.0	891.03	890.98	0.031	32	5.6	11	1.5
		5-year								42	6.4	11	1.5
		10-year								47	6.8	11	1.5
		25-year								53	7.6	11	1.5
		50-year								56	8.0	11	1.5
		100-year								63	8.8	11	1.5
LRCL01A04	8598.2	2-year	Trapezoidal	1	30	161.0	898.06	897.90	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL01A05	LRCL01A05	2-year	Trapezoidal	6	6	166.3	891.08	891.03	0.030	33	0.2	1773	1.8
		5-year								43	0.2	1773	1.8
		10-year								48	0.2	1773	1.8
		25-year								54	0.2	1773	1.8
		50-year								58	0.2	1773	1.8
		100-year								102	0.2	1773	1.8
LRCL01A06	RCL01A06A	2-year	Circular	2	0	40.8	891.18	891.08	0.245	37	11.4	10	3.3
		5-year								48	15.2	10	3.3
		10-year								53	16.7	10	3.3
		25-year								58	18.3	10	3.3
		50-year								61	19.2	10	3.3
		100-year								62	19.5	10	3.3
LRCL01A06	RCL01A06B	2-year	Trapezoidal	1	30	40.8	898.10	897.50	1.472	0	0.0	370	12.3
		5-year								0	0.0	370	12.3
		10-year								0	0.0	370	12.3
		25-year								0	0.0	370	12.3
		50-year								1	1.0	370	12.3
		100-year								81	6.8	370	12.3
LRCL01A07	LRCL01A07	2-year	Natural	11	20	337.8	900.00	891.18	2.611	56	0.7	102186	24.0
		5-year								90	0.5	102186	24.0
		10-year								106	0.6	102186	24.0
		25-year								129	0.7	102186	24.0
		50-year								146	0.7	102186	24.0
		100-year								168	0.7	102186	24.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01A08	8597.1	2-year	Circular	2	0	55.4	900.09	900.00	0.162	31	15.1	8	2.7
		5-year								34	15.9	8	2.7
		10-year								36	16.2	8	2.7
		25-year								37	16.6	8	2.7
		50-year								39	16.8	8	2.7
		100-year								40	17.0	8	2.7
LRCL01A08	8597.2	2-year	Trapezoidal	1	30	55.4	903.78	903.72	0.100	27	2.6	100	3.3
		5-year								56	3.5	100	3.3
		10-year								72	3.9	100	3.3
		25-year								94	4.3	100	3.3
		50-year								110	4.6	100	3.3
		100-year								132	4.9	100	3.3
LRCL01A09	8483.1	2-year	Circular	2	0	175.3	900.39	900.09	0.171	35	10.9	9	2.8
		5-year								35	10.9	9	2.8
		10-year								35	10.9	9	2.8
		25-year								35	10.9	9	2.8
		50-year								35	10.9	9	2.8
		100-year								35	10.9	9	2.8
LRCL01A09	8483.2	2-year	Trapezoidal	1	30	175.3	908.66	903.78	2.784	14	2.0	509	17.0
		5-year								43	3.7	509	17.0
		10-year								58	4.3	509	17.0
		25-year								80	5.1	509	17.0
		50-year								95	5.5	509	17.0
		100-year								116	6.0	509	17.0
LRCL01A10	8596.1	2-year	Circular	2	0	192.2	900.72	900.39	0.172	25	7.7	9	2.8
		5-year								24	7.7	9	2.8
		10-year								24	7.7	9	2.8
		25-year								24	7.6	9	2.8
		50-year								24	7.6	9	2.8
		100-year								24	7.6	9	2.8
LRCL01A10	8596.2	2-year	Trapezoidal	10	30	192.2	906.30	908.66	-1.228	-41	-0.9	11652	38.8
		5-year								-68	-1.4	11652	38.8
		10-year								-83	-1.7	11652	38.8
		25-year								-104	-1.9	11652	38.8
		50-year								-119	-2.1	11652	38.8
		100-year								-140	-2.4	11652	38.8
LRCL01A11	8592.1	2-year	Circular	2	0	33.2	901.66	900.72	2.834	22	6.9	35	11.3
		5-year								22	6.8	35	11.3
		10-year								22	6.9	35	11.3
		25-year								22	6.9	35	11.3
		50-year								22	7.0	35	11.3
		100-year								22	6.9	35	11.3
LRCL01A11	8592.2	2-year	Trapezoidal	4	30	33.2	906.66	906.30	1.085	53	2.4	2856	23.8
		5-year								85	2.8	2856	23.8
		10-year								105	3.0	2856	23.8
		25-year								138	3.0	2856	23.8
		50-year								162	3.0	2856	23.8
		100-year								192	3.6	2856	23.8
LRCL01A12	8448.1	2-year	Circular	2	0	131.0	904.88	901.66	2.459	14	5.6	33	10.5
		5-year								17	5.4	33	10.5
		10-year								19	6.0	33	10.5
		25-year								21	6.7	33	10.5
		50-year								22	6.9	33	10.5
		100-year								22	7.0	33	10.5
LRCL01A12	8448.2	2-year	Trapezoidal	3	30	131.0	908.88	906.66	1.695	12	0.4	2291	25.5
		5-year								30	0.8	2291	25.5
		10-year								44	1.1	2291	25.5
		25-year								66	1.5	2291	25.5
		50-year								79	1.7	2291	25.5
		100-year								96	2.0	2291	25.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01B01	8482.1	2-year	Circular	1.5	0	42.6	906.86	906.10	1.786	14	7.8	13	7.4
		5-year								15	8.2	13	7.4
		10-year								15	8.2	13	7.4
		25-year								15	8.3	13	7.4
		50-year								15	8.3	13	7.4
		100-year								15	8.6	13	7.4
LRCL01B01	8482.2	2-year	Trapezoidal	3	30	42.6	909.36	910.93	-3.689	-24	-0.8	3380	37.6
		5-year								-35	-1.1	3380	37.6
		10-year								-42	-1.3	3380	37.6
		25-year								-51	-1.5	3380	37.6
		50-year								-58	-1.6	3380	37.6
		100-year								-67	-1.8	3380	37.6
LRCL0201	LRCL0201	2-year	Natural	14	0	411.2	881.83	877.37	1.085	93	3.8	84463	17.0
		5-year								126	3.5	84463	17.0
		10-year								154	3.1	84463	17.0
		25-year								212	2.7	84463	17.0
		50-year								244	2.4	84463	17.0
		100-year								284	2.1	84463	17.0
LRCL0202	8568.1	2-year	Rectangular	4	6	408.5	892.34	881.83	2.573	82	10.9	461	19.2
		5-year								110	11.7	461	19.2
		10-year								134	12.4	461	19.2
		25-year								186	14.5	461	19.2
		50-year								210	15.2	461	19.2
		100-year								242	16.4	461	19.2
LRCL0202	8568.2	2-year	Trapezoidal	1	30	408.5	898.34	888.00	2.531	0	0.0	485	16.2
		5-year								0	0.0	485	16.2
		10-year								0	0.0	485	16.2
		25-year								0	0.0	485	16.2
		50-year								0	0.0	485	16.2
		100-year								0	0.0	485	16.2
LRCL0203	8567.1	2-year	Rectangular	4	6	209.9	894.76	892.34	1.153	68	10.2	309	12.9
		5-year								88	11.1	309	12.9
		10-year								112	12.2	309	12.9
		25-year								153	13.4	309	12.9
		50-year								174	14.0	309	12.9
		100-year								202	14.6	309	12.9
LRCL0203	8567.2	2-year	Trapezoidal	1	30	209.9	900.26	898.34	0.915	0	0.0	292	9.7
		5-year								0	0.0	292	9.7
		10-year								0	0.0	292	9.7
		25-year								0	0.0	292	9.7
		50-year								0	0.0	292	9.7
		100-year								0	0.0	292	9.7
LRCL0204	8566.1	2-year	Circular	2.5	0	534.3	907.00	894.76	2.291	49	13.0	58	11.7
		5-year								53	13.3	58	11.7
		10-year								58	13.6	58	11.7
		25-year								64	13.9	58	11.7
		50-year								66	13.9	58	11.7
		100-year								66	13.9	58	11.7
LRCL0204	8566.2	2-year	Trapezoidal	1	30	534.3	911.50	900.26	2.104	10	3.4	442	14.7
		5-year								22	4.5	442	14.7
		10-year								41	5.8	442	14.7
		25-year								69	7.1	442	14.7
		50-year								86	7.8	442	14.7
		100-year								112	8.6	442	14.7
LRCL0205	8435.1	2-year	Circular	2.5	0	54.9	907.51	907.00	0.930	48	9.7	37	7.5
		5-year								52	10.5	37	7.5
		10-year								54	11.0	37	7.5
		25-year								55	11.1	37	7.5
		50-year								55	11.1	37	7.5
		100-year								55	11.1	37	7.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0205	8435.2	2-year	Trapezoidal	1	30	54.9	911.90	911.50	0.729	23	3.3	260	8.7
		5-year								37	4.0	260	8.7
		10-year								61	4.9	260	8.7
		25-year								93	5.8	260	8.7
		50-year								111	6.2	260	8.7
		100-year								135	6.7	260	8.7
LRCL0206	8436.1	2-year	Circular	2.5	0	35.0	908.35	907.51	2.390	48	9.9	59	12.0
		5-year								52	10.6	59	12.0
		10-year								54	11.0	59	12.0
		25-year								55	11.1	59	12.0
		50-year								55	11.2	59	12.0
		100-year								55	11.1	59	12.0
LRCL0206	8436.2	2-year	Trapezoidal	1	30	35.0	911.93	911.90	0.086	30	2.8	89	3.0
		5-year								44	3.2	89	3.0
		10-year								68	3.8	89	3.0
		25-year								99	4.4	89	3.0
		50-year								117	4.7	89	3.0
		100-year								140	5.1	89	3.0
LRCL0207	8607.1	2-year	Circular	2.5	0	100.8	908.61	908.35	0.261	40	8.1	19	4.0
		5-year								46	9.4	19	4.0
		10-year								47	9.4	19	4.0
		25-year								46	9.4	19	4.0
		50-year								46	9.4	19	4.0
		100-year								46	9.4	19	4.0
LRCL0207	8607.2	2-year	Trapezoidal	1	30	100.8	913.77	911.93	1.825	0	0.0	412	13.7
		5-year								1	0.2	412	13.7
		10-year								25	2.2	412	13.7
		25-year								43	3.0	412	13.7
		50-year								55	3.4	412	13.7
		100-year								71	3.9	412	13.7
LRCL0208	8608.1	2-year	Circular	2.5	0	562.9	916.73	908.61	1.442	40	8.5	46	9.3
		5-year								49	9.8	46	9.3
		10-year								54	10.9	46	9.3
		25-year								54	10.9	46	9.3
		50-year								54	10.9	46	9.3
		100-year								54	10.9	46	9.3
LRCL0208	8608.2	2-year	Trapezoidal	1	30	562.9	924.98	913.77	1.991	0	0.0	430	14.3
		5-year								0	0.0	430	14.3
		10-year								16	3.5	430	14.3
		25-year								33	4.8	430	14.3
		50-year								44	5.4	430	14.3
		100-year								59	6.2	430	14.3
LRCL0209	8610.1	2-year	Circular	2	0	233.5	919.13	916.73	1.028	30	9.3	21	6.8
		5-year								34	10.6	21	6.8
		10-year								34	10.5	21	6.8
		25-year								34	10.5	21	6.8
		50-year								34	10.4	21	6.8
		100-year								33	10.4	21	6.8
LRCL0209	8610.2	2-year	Trapezoidal	3	30	233.5	923.46	924.98	-0.651	0	0.0	1420	15.8
		5-year								-16	-0.6	1420	15.8
		10-year								-44	-1.3	1420	15.8
		25-year								-56	-1.6	1420	15.8
		50-year								-64	-1.7	1420	15.8
		100-year								-75	-1.9	1420	15.8
LRCL0210	8609.1	2-year	Circular	2	0	37.7	919.50	919.13	0.982	29	9.2	21	6.6
		5-year								32	10.2	21	6.6
		10-year								32	10.1	21	6.6
		25-year								30	9.6	21	6.6
		50-year								31	9.7	21	6.6
		100-year								30	9.6	21	6.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0210	8609.2	2-year	Trapezoidal	3	30	37.7	923.25	923.46	-0.558	-13	-1.5	1314	14.6
		5-year								-39	-2.2	1314	14.6
		10-year								-51	-2.3	1314	14.6
		25-year								-62	-2.4	1314	14.6
		50-year								-71	-2.5	1314	14.6
		100-year								-82	-2.5	1314	14.6
LRCL0211	8429.1	2-year	Circular	1.5	0	23.9	921.00	919.50	6.284	24	13.3	22	12.3
		5-year								24	13.6	22	12.3
		10-year								24	13.4	22	12.3
		25-year								24	13.4	22	12.3
		50-year								24	13.4	22	12.3
		100-year								24	13.4	22	12.3
LRCL0211	8429.2	2-year	Trapezoidal	3	30	23.9	923.00	923.25	-1.047	-27	-2.1	1606	17.8
		5-year								-42	-2.1	1606	17.8
		10-year								-52	-2.1	1606	17.8
		25-year								-63	-2.2	1606	17.8
		50-year								-71	-2.2	1606	17.8
		100-year								-82	-2.3	1606	17.8
LRCL02A01	8614.1	2-year	Circular	2	0	248.0	893.67	892.34	0.536	11	5.8	15	4.9
		5-year								17	6.6	15	4.9
		10-year								21	7.5	15	4.9
		25-year								26	8.7	15	4.9
		50-year								27	8.9	15	4.9
		100-year								28	9.1	15	4.9
LRCL02A01	8614.2	2-year	Trapezoidal	1	30	248.0	897.67	898.34	-0.270	0	0.0	159	5.3
		5-year								0	0.0	159	5.3
		10-year								0	0.0	159	5.3
		25-year								0	0.0	159	5.3
		50-year								0	0.0	159	5.3
		100-year								-3	-0.3	159	5.3
LRCL02A02	8613.1	2-year	Circular	2	0	61.3	896.09	893.67	3.950	11	7.2	42	13.3
		5-year								17	7.9	42	13.3
		10-year								21	8.3	42	13.3
		25-year								26	8.5	42	13.3
		50-year								29	9.3	42	13.3
		100-year								34	10.8	42	13.3
LRCL02A02	8613.2	2-year	Trapezoidal	1	30	61.3	900.09	897.67	3.950	0	0.0	606	20.2
		5-year								0	0.0	606	20.2
		10-year								0	0.0	606	20.2
		25-year								0	0.0	606	20.2
		50-year								0	0.0	606	20.2
		100-year								0	0.0	606	20.2
LRCL02B01	8615.1	2-year	Circular	2	0	182.5	893.72	892.34	0.756	4	4.0	18	5.8
		5-year								6	4.7	18	5.8
		10-year								7	5.0	18	5.8
		25-year								8	5.3	18	5.8
		50-year								9	5.6	18	5.8
		100-year								11	5.8	18	5.8
LRCL02B01	8615.2	2-year	Trapezoidal	1	30	182.5	897.72	898.34	-0.340	0	0.0	178	5.9
		5-year								0	0.0	178	5.9
		10-year								0	0.0	178	5.9
		25-year								0	0.0	178	5.9
		50-year								0	0.0	178	5.9
		100-year								0	0.0	178	5.9
LRCL02B02	8616.1	2-year	Circular	1.25	0	63.6	894.65	893.72	1.463	4	6.0	7	5.9
		5-year								6	6.8	7	5.9
		10-year								7	7.1	7	5.9
		25-year								8	7.4	7	5.9
		50-year								10	8.2	7	5.9
		100-year								11	9.0	7	5.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL02B02	8616.2	2-year	Trapezoidal	1	30	63.6	897.90	897.72	0.283	0	0.0	162	5.4
		5-year								0	0.0	162	5.4
		10-year								0	0.0	162	5.4
		25-year								0	0.0	162	5.4
		50-year								0	0.0	162	5.4
		100-year								0	0.0	162	5.4
LRCL02C01	LRCL02C01	2-year	Circular	2	0	36.0	909.35	908.61	2.057	3	1.0	30	9.6
		5-year								4	1.3	30	9.6
		10-year								5	1.5	30	9.6
		25-year								5	1.4	30	9.6
		50-year								4	1.4	30	9.6
		100-year								4	1.3	30	9.6
LRCL02C02	LRCL02C02	2-year	Circular	2	0	36.5	909.73	909.35	1.041	1	0.6	21	6.8
		5-year								2	1.0	21	6.8
		10-year								3	1.0	21	6.8
		25-year								3	1.0	21	6.8
		50-year								3	0.9	21	6.8
		100-year								3	0.9	21	6.8
LRCL02D01	8430.1	2-year	Circular	2	0	71.9	921.20	916.73	6.216	12	6.9	52	16.7
		5-year								18	9.0	52	16.7
		10-year								20	9.2	52	16.7
		25-year								23	9.4	52	16.7
		50-year								25	9.7	52	16.7
		100-year								29	9.7	52	16.7
LRCL02D01	8430.2	2-year	Trapezoidal	1	30	71.9	925.20	924.98	0.306	0	0.0	169	5.6
		5-year								0	0.0	169	5.6
		10-year								7	1.6	169	5.6
		25-year								12	2.0	169	5.6
		50-year								15	2.1	169	5.6
		100-year								20	2.3	169	5.6
LRCL02D02	8431.1	2-year	Circular	2	0	32.5	921.90	921.20	2.151	12	10.4	31	9.8
		5-year								17	12.0	31	9.8
		10-year								20	12.1	31	9.8
		25-year								24	12.0	31	9.8
		50-year								26	12.1	31	9.8
		100-year								29	12.1	31	9.8
LRCL02D02	8431.2	2-year	Trapezoidal	1	30	32.5	925.90	925.20	2.151	0	0.0	447	14.9
		5-year								0	0.0	447	14.9
		10-year								0	0.0	447	14.9
		25-year								0	0.0	447	14.9
		50-year								1	0.2	447	14.9
		100-year								4	1.0	447	14.9
LRCL02D03	8432.1	2-year	Circular	2	0	28.4	922.04	921.90	0.493	12	7.4	14	4.6
		5-year								17	8.5	14	4.6
		10-year								20	8.9	14	4.6
		25-year								24	9.2	14	4.6
		50-year								25	9.3	14	4.6
		100-year								29	9.4	14	4.6
LRCL02D03	8432.2	2-year	Trapezoidal	1	30	28.4	926.04	925.90	0.493	0	0.0	208	6.9
		5-year								0	0.0	208	6.9
		10-year								0	0.0	208	6.9
		25-year								3	1.3	208	6.9
		50-year								7	1.9	208	6.9
		100-year								11	2.2	208	6.9
LRCL0300	LRCL0300	2-year	Natural	16	0	121.4	890.05	878.97	9.124	60	2.5	331778	65.1
		5-year								88	2.1	331778	65.1
		10-year								104	1.9	331778	65.1
		25-year								127	1.7	331778	65.1
		50-year								144	1.5	331778	65.1
		100-year								166	1.4	331778	65.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0301	LRCL0301	2-year	Natural	3.6	0	373.3	903.38	890.05	3.571	58	5.7	1732	14.5
		5-year								84	6.3	1732	14.5
		10-year								99	6.7	1732	14.5
		25-year								120	7.1	1732	14.5
		50-year								136	7.3	1732	14.5
		100-year								157	7.6	1732	14.5
LRCL0302	8395.1	2-year	Circular	2	0	42.2	903.61	903.38	0.545	41	16.9	16	4.9
		5-year								45	17.4	16	4.9
		10-year								46	17.6	16	4.9
		25-year								48	17.9	16	4.9
		50-year								49	18.1	16	4.9
		100-year								51	18.3	16	4.9
LRCL0302	8395.2	2-year	Trapezoidal	1	30	42.2	906.86	906.82	0.095	16	2.1	94	3.1
		5-year								39	3.1	94	3.1
		10-year								53	3.5	94	3.1
		25-year								72	3.9	94	3.1
		50-year								87	4.2	94	3.1
		100-year								105	4.5	94	3.1
LRCL0303	8612.1	2-year	Circular	2	0	29.3	904.24	903.61	2.149	33	10.4	30	9.7
		5-year								33	10.4	30	9.7
		10-year								33	10.4	30	9.7
		25-year								33	10.4	30	9.7
		50-year								33	10.4	30	9.7
		100-year								33	10.4	30	9.7
LRCL0303	8612.2	2-year	Trapezoidal	1	30	29.3	907.07	906.86	0.716	39	4.1	255	8.5
		5-year								67	4.9	255	8.5
		10-year								83	5.2	255	8.5
		25-year								105	5.5	255	8.5
		50-year								121	5.8	255	8.5
		100-year								142	6.0	255	8.5
LRCL0304	8611.1	2-year	Circular	2	0	406.3	911.12	904.24	1.694	30	9.5	27	8.7
		5-year								30	9.5	27	8.7
		10-year								30	9.5	27	8.7
		25-year								30	9.5	27	8.7
		50-year								30	9.5	27	8.7
		100-year								30	9.4	27	8.7
LRCL0304	8611.2	2-year	Trapezoidal	1	30	406.3	915.29	907.07	2.023	20	3.1	434	14.5
		5-year								41	4.3	434	14.5
		10-year								54	4.8	434	14.5
		25-year								71	5.4	434	14.5
		50-year								83	5.7	434	14.5
		100-year								100	6.2	434	14.5
LRCL0305	8437.1	2-year	Circular	2	0	37.3	911.56	911.12	1.181	30	9.6	23	7.3
		5-year								29	9.6	23	7.3
		10-year								30	9.6	23	7.3
		25-year								29	9.5	23	7.3
		50-year								30	9.4	23	7.3
		100-year								30	9.6	23	7.3
LRCL0305	8437.2	2-year	Trapezoidal	1	30	37.3	915.56	915.29	0.725	29	3.7	260	8.7
		5-year								49	4.5	260	8.7
		10-year								62	4.9	260	8.7
		25-year								78	5.4	260	8.7
		50-year								90	5.7	260	8.7
		100-year								106	6.1	260	8.7
LRCL0401	LRCL0401	2-year	Natural	20	0	749.3	891.42	878.62	1.708	116	1.3	194040	33.6
		5-year								168	1.4	194040	33.6
		10-year								202	1.5	194040	33.6
		25-year								245	1.5	194040	33.6
		50-year								277	1.6	194040	33.6
		100-year								318	1.6	194040	33.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0402	RCL0402A	2-year	Circular	2	0	49.7	893.68	891.42	4.550	39	17.5	45	14.3
		5-year								48	18.7	45	14.3
		10-year								51	19.1	45	14.3
		25-year								55	19.6	45	14.3
		50-year								57	19.8	45	14.3
		100-year								59	20.0	45	14.3
LRCL0402	RCL0402B	2-year	Trapezoidal	1	30	49.7	896.00	895.95	0.100	0	0.0	97	3.2
		5-year								26	2.6	97	3.2
		10-year								50	3.3	97	3.2
		25-year								82	4.1	97	3.2
		50-year								108	4.5	97	3.2
		100-year								141	5.0	97	3.2
LRCL0403	LRCL0403	2-year	Natural	10	0	855.5	915.74	893.68	2.579	96	5.8	18051	20.7
		5-year								138	5.6	18051	20.7
		10-year								163	5.6	18051	20.7
		25-year								197	5.6	18051	20.7
		50-year								223	5.6	18051	20.7
		100-year								257	5.7	18051	20.7
LRCL0404	8384.1	2-year	Circular	2	0	226.2	920.74	915.74	2.210	14	7.7	31	9.9
		5-year								20	9.5	31	9.9
		10-year								24	10.3	31	9.9
		25-year								29	11.0	31	9.9
		50-year								32	11.3	31	9.9
		100-year								36	11.4	31	9.9
LRCL0404	8384.2	2-year	Trapezoidal	1	30	226.2	924.91	918.00	3.054	0	0.0	533	17.8
		5-year								0	0.0	533	17.8
		10-year								0	0.0	533	17.8
		25-year								0	0.0	533	17.8
		50-year								0	0.0	533	17.8
		100-year								0	0.0	533	17.8
LRCL0405	8617.1	2-year	Circular	2	0	48.2	921.99	920.74	2.596	14	9.9	34	10.8
		5-year								20	10.9	34	10.8
		10-year								24	11.3	34	10.8
		25-year								29	11.7	34	10.8
		50-year								33	11.7	34	10.8
		100-year								36	11.3	34	10.8
LRCL0405	8617.2	2-year	Circular	1	30	48.2	925.99	924.91	2.243	0	0.0	5	6.3
		5-year								0	0.0	5	6.3
		10-year								0	0.0	5	6.3
		25-year								0	0.0	5	6.3
		50-year								0	0.0	5	6.3
		100-year								0	0.0	5	6.3
LRCL0406	8655.1	2-year	Circular	4	0	49.5	922.78	921.99	1.603	14	7.3	169	13.4
		5-year								20	8.0	169	13.4
		10-year								24	8.3	169	13.4
		25-year								29	8.5	169	13.4
		50-year								33	8.5	169	13.4
		100-year								36	8.4	169	13.4
LRCL0406	8655.2	2-year	Trapezoidal	1	30	49.5	925.78	925.99	-0.418	0	0.0	197	6.6
		5-year								0	0.0	197	6.6
		10-year								0	0.0	197	6.6
		25-year								0	0.0	197	6.6
		50-year								0	0.0	197	6.6
		100-year								0	0.0	197	6.6
LRCL0407	LRCL0407	2-year	Trapezoidal	4	8	101.4	924.69	922.78	1.880	14	2.3	1062	12.1
		5-year								20	2.7	1062	12.1
		10-year								24	2.8	1062	12.1
		25-year								29	3.0	1062	12.1
		50-year								33	3.0	1062	12.1
		100-year								38	3.1	1062	12.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0408	8466.1	2-year	Circular	2	0	69.1	927.85	924.69	4.576	14	13.1	45	14.3
		5-year								20	14.6	45	14.3
		10-year								24	15.3	45	14.3
		25-year								29	16.1	45	14.3
		50-year								33	16.6	45	14.3
		100-year								38	17.3	45	14.3
LRCL0408	8466.2	2-year	Trapezoidal	1	30	69.1	930.00	927.69	3.345	0	0.0	558	18.6
		5-year								0	0.0	558	18.6
		10-year								0	0.0	558	18.6
		25-year								0	0.0	558	18.6
		50-year								0	0.0	558	18.6
		100-year								1	1.4	558	18.6
LRCL0501	LRCL0501	2-year	Natural	22	0	561.6	898.15	880.54	3.136	132	3.2	164012	44.0
		5-year								193	2.6	164012	44.0
		10-year								229	2.5	164012	44.0
		25-year								277	2.4	164012	44.0
		50-year								312	2.4	164012	44.0
		100-year								358	2.4	164012	44.0
LRCL0502	8382.1	2-year	Circular	5	0	78.1	901.23	898.15	3.944	111	21.2	480	24.5
		5-year								162	24.0	480	24.5
		10-year								192	25.4	480	24.5
		25-year								232	27.0	480	24.5
		50-year								263	28.1	480	24.5
		100-year								299	29.3	480	24.5
LRCL0502	8382.2	2-year	Trapezoidal	1	30	78.1	910.00	909.92	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LRCL0503	8192.1	2-year	Circular	4	0	419.7	909.98	901.23	2.085	87	15.0	193	15.3
		5-year								126	16.4	193	15.3
		10-year								150	17.1	193	15.3
		25-year								181	17.7	193	15.3
		50-year								204	18.1	193	15.3
		100-year								219	18.6	193	15.3
LRCL0503	8192.2	2-year	Trapezoidal	1	30	419.7	915.65	910.00	1.346	0	0.0	354	11.8
		5-year								0	0.0	354	11.8
		10-year								0	0.0	354	11.8
		25-year								0	0.0	354	11.8
		50-year								0	0.0	354	11.8
		100-year								13	3.2	354	11.8
LRCL0504	8383.1	2-year	Circular	2	0	216.5	917.49	909.98	3.469	47	15.3	39	12.5
		5-year								47	15.3	39	12.5
		10-year								47	15.3	39	12.5
		25-year								47	15.3	39	12.5
		50-year								47	15.3	39	12.5
		100-year								47	15.3	39	12.5
LRCL0504	8383.2	2-year	Trapezoidal	1	30	216.5	921.57	915.65	2.735	19	4.7	504	16.8
		5-year								50	6.8	504	16.8
		10-year								68	7.7	504	16.8
		25-year								92	8.7	504	16.8
		50-year								112	9.3	504	16.8
		100-year								138	10.2	504	16.8
LRCL0505	8189.1	2-year	Circular	2	0	370.8	917.58	917.49	0.024	22	7.3	3	1.0
		5-year								22	7.3	3	1.0
		10-year								22	7.3	3	1.0
		25-year								22	7.3	3	1.0
		50-year								22	7.3	3	1.0
		100-year								22	7.3	3	1.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0505	8189.2	2-year	Trapezoidal	1	30	370.8	922.75	921.57	0.318	47	3.5	172	5.7
		5-year								73	4.1	172	5.7
		10-year								89	4.5	172	5.7
		25-year								109	4.8	172	5.7
		50-year								124	5.1	172	5.7
		100-year								144	5.4	172	5.7
LRCL05A01	8191.1	2-year	Circular	2.5	0	201.7	913.40	909.98	1.695	22	7.8	50	10.1
		5-year								32	8.9	50	10.1
		10-year								38	9.6	50	10.1
		25-year								46	10.3	50	10.1
		50-year								52	10.6	50	10.1
		100-year								58	11.7	50	10.1
LRCL05A01	8191.2	2-year	Trapezoidal	1	30	201.7	918.82	915.65	1.571	0	0.0	382	12.7
		5-year								0	0.0	382	12.7
		10-year								0	0.0	382	12.7
		25-year								0	0.0	382	12.7
		50-year								0	0.0	382	12.7
		100-year								12	3.2	382	12.7
LRCL05A02	8190.1	2-year	Circular	2.5	0	210.6	919.68	913.40	2.982	22	11.0	66	13.4
		5-year								32	12.1	66	13.4
		10-year								39	12.4	66	13.4
		25-year								47	12.7	66	13.4
		50-year								52	13.0	66	13.4
		100-year								61	13.2	66	13.4
LRCL05A02	8190.2	2-year	Trapezoidal	1	30	210.6	924.76	918.82	2.820	0	0.0	512	17.1
		5-year								0	0.0	512	17.1
		10-year								0	0.0	512	17.1
		25-year								0	0.0	512	17.1
		50-year								0	0.0	512	17.1
		100-year								0	0.0	512	17.1
LRCL05B01	8464.1	2-year	Circular	2	0	17.3	918.86	917.58	7.390	5	1.5	43	13.8
		5-year								3	1.0	43	13.8
		10-year								4	1.2	43	13.8
		25-year								5	1.4	43	13.8
		50-year								1	0.3	43	13.8
		100-year								5	1.6	43	13.8
LRCL05B01	8464.2	2-year	Trapezoidal	1	30	17.3	922.86	922.75	0.635	1	0.7	185	6.2
		5-year								1	0.6	185	6.2
		10-year								1	0.7	185	6.2
		25-year								1	0.7	185	6.2
		50-year								0	-0.1	185	6.2
		100-year								1	0.8	185	6.2
LRCL05C01	8465.1	2-year	Circular	2	0	27.5	919.07	917.58	5.416	3	1.0	47	14.9
		5-year								7	2.3	47	14.9
		10-year								8	2.5	47	14.9
		25-year								9	2.8	47	14.9
		50-year								6	2.0	47	14.9
		100-year								7	2.1	47	14.9
LRCL05C01	8465.2	2-year	Trapezoidal	1	30	27.5	923.07	922.75	1.163	0	-0.1	315	10.5
		5-year								3	1.3	315	10.5
		10-year								3	1.1	315	10.5
		25-year								3	1.5	315	10.5
		50-year								3	1.1	315	10.5
		100-year								3	1.2	315	10.5
LRCL0601	LRCL0601	2-year	Natural	14	0	970.5	930.25	883.93	4.773	14	1.1	99089	37.5
		5-year								20	0.9	99089	37.5
		10-year								24	0.8	99089	37.5
		25-year								29	0.8	99089	37.5
		50-year								33	0.7	99089	37.5
		100-year								38	0.7	99089	37.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0602	8188.1	2-year	Circular	2	0	199.2	932.84	930.25	1.300	14	8.4	24	7.6
		5-year								18	9.7	24	7.6
		10-year								19	9.9	24	7.6
		25-year								20	10.1	24	7.6
		50-year								20	10.2	24	7.6
		100-year								21	10.3	24	7.6
LRCL0602	8188.2	2-year	Trapezoidal	1	30	199.2	936.76	936.56	0.100	0	0.0	297	2.3
		5-year								2	0.6	297	2.3
		10-year								5	0.9	297	2.3
		25-year								10	1.1	297	2.3
		50-year								13	1.2	297	2.3
		100-year								18	1.3	297	2.3
LRCL0603	8187.1	2-year	Circular	2	0	32.4	933.72	932.84	2.717	15	6.3	35	11.0
		5-year								18	6.3	35	11.0
		10-year								19	6.3	35	11.0
		25-year								19	6.3	35	11.0
		50-year								19	6.4	35	11.0
		100-year								19	6.4	35	11.0
LRCL0603	8187.2	2-year	Trapezoidal	1	30	32.4	936.97	936.76	0.648	0	0.0	246	8.2
		5-year								5	1.6	246	8.2
		10-year								9	2.0	246	8.2
		25-year								15	2.4	246	8.2
		50-year								19	2.7	246	8.2
		100-year								24	3.0	246	8.2
LRCL0701	LRCL0701	2-year	Natural	14.5	0	1532.4	923.99	887.50	2.381	42	0.3	168194	29.2
		5-year								63	0.3	168194	29.2
		10-year								74	0.3	168194	29.2
		25-year								90	0.3	168194	29.2
		50-year								101	0.3	168194	29.2
		100-year								118	0.3	168194	29.2
LRCL0702	RCL0702A	2-year	Circular	2	0	37.0	926.03	923.99	5.521	33	18.2	49	15.7
		5-year								36	18.3	49	15.7
		10-year								37	20.3	49	15.7
		25-year								39	18.6	49	15.7
		50-year								40	18.8	49	15.7
		100-year								41	19.1	49	15.7
LRCL0702	RCL0702B	2-year	Trapezoidal	1	30	37.0	928.03	925.99	5.521	17	5.4	717	23.9
		5-year								35	7.3	717	23.9
		10-year								46	8.1	717	23.9
		25-year								61	9.1	717	23.9
		50-year								72	9.7	717	23.9
		100-year								87	10.5	717	23.9
LRCL0703	LRCL0703	2-year	Natural	3	0	385.5	933.09	926.03	1.831	23	1.5	1334	7.9
		5-year								32	1.3	1334	7.9
		10-year								38	0.9	1334	7.9
		25-year								46	1.0	1334	7.9
		50-year								51	1.2	1334	7.9
		100-year								58	3.5	1334	7.9
LRCL0704	RCL0704A	2-year	Special	4	4	31.5	933.40	933.09	0.985	23	10.8	64	8.6
		5-year								32	12.3	64	8.6
		10-year								38	13.1	64	8.6
		25-year								46	14.0	64	8.6
		50-year								51	14.6	64	8.6
		100-year								59	15.4	64	8.6
LRCL0704	RCL0704B	2-year	Trapezoidal	1	30	31.5	935.09	935.06	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0705	LRCL0705	2-year	Natural	2.6	0	326.5	937.17	933.40	1.155	13	0.3	2928	7.9
		5-year								18	0.3	2928	7.9
		10-year								21	0.3	2928	7.9
		25-year								25	0.4	2928	7.9
		50-year								28	0.4	2928	7.9
		100-year								32	0.4	2928	7.9
LRCL0706	8015.1	2-year	Special	3.5	3.5	86.9	938.17	937.17	1.151	13	8.4	56	8.9
		5-year								18	9.4	56	8.9
		10-year								21	9.9	56	8.9
		25-year								25	10.5	56	8.9
		50-year								28	10.9	56	8.9
		100-year								32	11.4	56	8.9
LRCL0706	8015.2	2-year	Trapezoidal	1	30	86.9	943.84	943.33	0.587	0	0.0	234	7.8
		5-year								0	0.0	234	7.8
		10-year								0	0.0	234	7.8
		25-year								0	0.0	234	7.8
		50-year								0	0.0	234	7.8
		100-year								0	0.0	234	7.8
LRCL0707	8297.1	2-year	Special	3.83	3.83	53.3	939.50	938.17	2.498	13	6.4	101	13.7
		5-year								18	7.0	101	13.7
		10-year								21	7.5	101	13.7
		25-year								25	7.9	101	13.7
		50-year								28	8.1	101	13.7
		100-year								32	8.4	101	13.7
LRCL0707	8297.2	2-year	Trapezoidal	1	30	53.3	944.83	943.84	1.859	0	0.0	416	13.9
		5-year								0	0.0	416	13.9
		10-year								0	0.0	416	13.9
		25-year								0	0.0	416	13.9
		50-year								0	0.0	416	13.9
		100-year								0	0.0	416	13.9
LRCL0800	LRCL0800	2-year	Natural	16	0	350.0	897.63	895.30	0.667	181	2.5	199347	14.5
		5-year								295	2.7	199347	14.5
		10-year								381	2.8	199347	14.5
		25-year								489	2.9	199347	14.5
		50-year								563	2.8	199347	14.5
		100-year								668	2.5	199347	14.5
LRCL0801	LRCL0801	2-year	Natural	16	0	752.1	902.65	897.63	0.667	169	4.0	199331	14.5
		5-year								267	4.3	199331	14.5
		10-year								343	4.5	199331	14.5
		25-year								438	4.7	199331	14.5
		50-year								501	4.8	199331	14.5
		100-year								590	4.9	199331	14.5
LRCL0802	LRCL0802	2-year	Natural	10	0	1090.3	907.39	902.65	0.435	136	0.7	44801	7.6
		5-year								196	0.7	44801	7.6
		10-year								234	0.8	44801	7.6
		25-year								285	0.8	44801	7.6
		50-year								321	0.8	44801	7.6
		100-year								365	0.8	44801	7.6
LRCL0803	RCL0803A	2-year	Rectangular	3	8	52.2	907.62	907.39	0.441	121	14.2	179	7.5
		5-year								172	16.8	179	7.5
		10-year								203	18.2	179	7.5
		25-year								244	19.8	179	7.5
		50-year								272	20.8	179	7.5
		100-year								316	22.3	179	7.5
LRCL0803	RCL0803B	2-year	Trapezoidal	1	30	52.2	911.00	910.95	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0804	LRCL0804	2-year	Natural	4	0	337.1	907.67	907.62	0.015	121	1.0	433	0.9
		5-year								173	1.0	433	0.9
		10-year								203	1.0	433	0.9
		25-year								244	1.1	433	0.9
		50-year								273	1.1	433	0.9
		100-year								316	1.1	433	0.9
LRCL0805	RCL0805A	2-year	Rectangular	3	8	48.8	907.68	907.67	0.021	122	5.9	39	1.6
		5-year								173	7.2	39	1.6
		10-year								204	8.0	39	1.6
		25-year								245	9.5	39	1.6
		50-year								274	10.9	39	1.6
		100-year								317	12.7	39	1.6
LRCL0805	RCL0805B	2-year	Trapezoidal	1	30	48.8	912.00	911.95	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LRCL0806	RCL0806A	2-year	Rectangular	3	8	109.8	908.89	907.68	1.102	119	7.1	283	11.8
		5-year								169	8.0	283	11.8
		10-year								199	8.7	283	11.8
		25-year								239	9.5	283	11.8
		50-year								252	9.9	283	11.8
		100-year								250	10.4	283	11.8
LRCL0806	RCL0806B	2-year	Trapezoidal	2	30	109.8	912.11	912.00	0.100	0	0.0	294	4.9
		5-year								0	0.0	294	4.9
		10-year								0	0.0	294	4.9
		25-year								0	0.0	294	4.9
		50-year								21	2.2	294	4.9
		100-year								64	3.5	294	4.9
LRCL0807	LRCL0807	2-year	Trapezoidal	5	6	140.9	909.44	908.89	0.390	117	4.0	1006	6.0
		5-year								166	4.0	1006	6.0
		10-year								196	4.0	1006	6.0
		25-year								235	3.9	1006	6.0
		50-year								264	3.9	1006	6.0
		100-year								305	3.9	1006	6.0
LRCL0808	RCL0808A	2-year	Rectangular	3	8	46.6	909.62	909.44	0.386	117	7.4	168	7.0
		5-year								166	8.9	168	7.0
		10-year								196	9.7	168	7.0
		25-year								235	10.1	168	7.0
		50-year								265	10.2	168	7.0
		100-year								305	12.2	168	7.0
LRCL0808	RCL0808B	2-year	Trapezoidal	1	30	46.6	914.00	913.95	0.100	0	0.0	100	3.3
		5-year								0	0.0	100	3.3
		10-year								0	0.0	100	3.3
		25-year								0	0.0	100	3.3
		50-year								0	0.0	100	3.3
		100-year								0	0.0	100	3.3
LRCL0809	LRCL0809	2-year	Trapezoidal	5	2	127.9	909.88	909.62	0.203	116	4.4	612	5.0
		5-year								164	4.7	612	5.0
		10-year								193	4.8	612	5.0
		25-year								233	4.9	612	5.0
		50-year								262	4.9	612	5.0
		100-year								302	4.8	612	5.0
LRCL0810	RCL0810A	2-year	Rectangular	3.5	6	80.9	910.32	909.88	0.544	116	8.2	176	8.4
		5-year								164	9.9	176	8.4
		10-year								193	10.8	176	8.4
		25-year								233	11.6	176	8.4
		50-year								262	11.9	176	8.4
		100-year								302	13.8	176	8.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0810	RCL0810B	2-year	Trapezoidal	1	30	80.9	916.00	915.92	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL0811	LRCL0811	2-year	Trapezoidal	5.5	5	77.3	911.15	910.32	1.073	116	6.9	1015	10.6
		5-year								164	5.9	1015	10.6
		10-year								193	6.1	1015	10.6
		25-year								233	6.2	1015	10.6
		50-year								262	6.2	1015	10.6
		100-year								302	6.2	1015	10.6
LRCL0812	RCL0812A	2-year	Rectangular	3.5	6	47.0	911.54	911.15	0.829	116	9.8	217	10.3
		5-year								164	11.4	217	10.3
		10-year								193	12.3	217	10.3
		25-year								233	13.1	217	10.3
		50-year								262	13.2	217	10.3
		100-year								302	13.2	217	10.3
LRCL0812	RCL0812B	2-year	Trapezoidal	1	30	47.0	916.00	915.95	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LRCL0813	LRCL0813	2-year	Trapezoidal	6	2	60.5	911.90	911.54	0.595	104	5.3	1102	8.0
		5-year								148	5.5	1102	8.0
		10-year								174	5.6	1102	8.0
		25-year								207	5.7	1102	8.0
		50-year								237	5.7	1102	8.0
		100-year								269	5.7	1102	8.0
LRCL0814	LRCL0814	2-year	Trapezoidal	5	2	129.6	913.31	911.90	1.088	82	4.5	937	9.6
		5-year								119	4.9	937	9.6
		10-year								140	5.1	937	9.6
		25-year								170	5.4	937	9.6
		50-year								192	5.5	937	9.6
		100-year								219	5.6	937	9.6
LRCL0815	RCL0815A	2-year	Rectangular	3	5	128.5	913.50	913.31	0.148	58	5.9	59	3.9
		5-year								84	7.1	59	3.9
		10-year								99	7.7	59	3.9
		25-year								120	8.4	59	3.9
		50-year								140	9.4	59	3.9
		100-year								156	10.7	59	3.9
LRCL0815	RCL0815B	2-year	Trapezoidal	1	30	128.5	918.77	918.64	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LRCL0817	LRCL0817	2-year	Natural	4	8	206.0	917.36	913.50	1.874	2	0.2	3976	11.4
		5-year								3	0.2	3976	11.4
		10-year								4	0.2	3976	11.4
		25-year								4	0.2	3976	11.4
		50-year								5	0.2	3976	11.4
		100-year								5	0.2	3976	11.4
LRCL0818	8484.1	2-year	Circular	4	0	42.1	917.40	917.36	0.095	1	3.3	41	3.3
		5-year								2	3.3	41	3.3
		10-year								2	3.5	41	3.3
		25-year								2	3.8	41	3.3
		50-year								2	4.0	41	3.3
		100-year								3	4.2	41	3.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0818	8484.2	2-year	Trapezoidal	1	30	42.1	922.00	921.96	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LRCL0821	RCL0821A	2-year	Circular	3	0	52.8	913.39	913.31	0.151	24	5.1	24	3.4
		5-year								35	6.1	24	3.4
		10-year								42	6.8	24	3.4
		25-year								50	7.5	24	3.4
		50-year								52	7.7	24	3.4
		100-year								64	8.9	24	3.4
LRCL0821	RCL0821B	2-year	Trapezoidal	1	30	52.8	918.69	918.64	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LRCL08A01	LRCL08A01	2-year	Natural	11	0	41.0	903.90	902.65	3.047	68	1.0	161855	26.4
		5-year								138	1.0	161855	26.4
		10-year								179	1.1	161855	26.4
		25-year								228	1.1	161855	26.4
		50-year								263	3.2	161855	26.4
		100-year								314	3.3	161855	26.4
LRCL08A02	LRCL08A02	2-year	Natural	5	0	1453.0	915.00	903.90	0.764	52	0.5	20147	9.7
		5-year								63	0.5	20147	9.7
		10-year								71	0.4	20147	9.7
		25-year								87	0.4	20147	9.7
		50-year								99	0.4	20147	9.7
		100-year								119	0.5	20147	9.7
LRCL08A03	8011.1	2-year	Special	4	4	286.2	915.76	915.00	0.266	27	7.0	33	4.5
		5-year								33	7.8	33	4.5
		10-year								35	8.2	33	4.5
		25-year								36	8.5	33	4.5
		50-year								37	8.6	33	4.5
		100-year								38	8.8	33	4.5
LRCL08A03	8011.2	2-year	Trapezoidal	1	30	286.2	919.76	919.47	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								5	1.1	96	3.2
		25-year								21	2.0	96	3.2
		50-year								34	2.5	96	3.2
		100-year								52	3.0	96	3.2
LRCL08A04	8639.1	2-year	Special	4	4	79.9	916.17	915.76	0.513	27	4.3	46	6.2
		5-year								33	4.4	46	6.2
		10-year								39	5.2	46	6.2
		25-year								47	6.3	46	6.2
		50-year								54	7.2	46	6.2
		100-year								64	8.6	46	6.2
LRCL08A04	8639.2	2-year	Trapezoidal	3	30	79.9	922.00	919.76	2.805	0	0.0	2947	32.7
		5-year								0	0.0	2947	32.7
		10-year								0	0.0	2947	32.7
		25-year								0	0.0	2947	32.7
		50-year								0	0.0	2947	32.7
		100-year								0	0.0	2947	32.7
LRCL08A05	8638.1	2-year	Rectangular	3	5	50.1	916.42	916.17	0.499	55	6.4	108	7.2
		5-year								66	6.5	108	7.2
		10-year								78	6.6	108	7.2
		25-year								94	6.6	108	7.2
		50-year								108	7.2	108	7.2
		100-year								128	8.5	108	7.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08A05	8638.2	2-year	Circular	1	30	50.1	922.42	922.00	0.838	0	0.0	3	3.9
		5-year								0	0.0	3	3.9
		10-year								0	0.0	3	3.9
		25-year								0	0.0	3	3.9
		50-year								0	0.0	3	3.9
		100-year								0	0.0	3	3.9
LRCL08A06	LRCL08A06	2-year	Trapezoidal	6	8	290.5	924.35	916.42	2.729	22	1.2	15432	37.8
		5-year								30	1.3	15432	37.8
		10-year								33	1.3	15432	37.8
		25-year								36	1.3	15432	37.8
		50-year								45	1.3	15432	37.8
		100-year								56	1.2	15432	37.8
LRCL08A07	RCL08A07A	2-year	Circular	2.67	0	38.7	924.60	924.35	0.646	22	8.7	21	3.8
		5-year								30	9.9	21	3.8
		10-year								33	10.1	21	3.8
		25-year								36	10.9	21	3.8
		50-year								38	11.4	21	3.8
		100-year								40	11.7	21	3.8
LRCL08A07	RCL08A07B	2-year	Trapezoidal	3	30	38.7	928.00	927.96	0.100	0	0.0	566	6.3
		5-year								0	0.0	566	6.3
		10-year								0	0.0	566	6.3
		25-year								0	0.0	566	6.3
		50-year								8	1.6	566	6.3
		100-year								17	2.2	566	6.3
LRCL08A08	LRCL08A08	2-year	Trapezoidal	4	12	240.0	926.00	924.60	0.583	23	1.1	2078	14.4
		5-year								35	1.2	2078	14.4
		10-year								45	1.3	2078	14.4
		25-year								54	1.3	2078	14.4
		50-year								59	1.4	2078	14.4
		100-year								61	1.4	2078	14.4
LRCL08A09	RCL08A09A	2-year	Circular	2.5	0	62.6	928.00	926.00	3.197	23	9.5	40	8.1
		5-year								32	10.3	40	8.1
		10-year								36	10.5	40	8.1
		25-year								41	10.5	40	8.1
		50-year								42	10.6	40	8.1
		100-year								43	10.6	40	8.1
LRCL08A09	RCL08A09B	2-year	Trapezoidal	1	30	62.6	930.00	929.94	0.100	0	0.0	94	3.1
		5-year								1	0.6	94	3.1
		10-year								3	1.0	94	3.1
		25-year								7	1.5	94	3.1
		50-year								9	1.6	94	3.1
		100-year								14	1.9	94	3.1
LRCL08B01	8216.1	2-year	Circular	2	0	181.4	907.71	907.68	0.017	4	6.7	3	0.9
		5-year								5	7.3	3	0.9
		10-year								6	1.9	3	0.9
		25-year								7	2.2	3	0.9
		50-year								8	2.4	3	0.9
		100-year								14	4.6	3	0.9
LRCL08B01	8216.2	2-year	Trapezoidal	1	30	181.4	912.18	912.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL08B02	8394.1	2-year	Circular	2	0	172.4	908.33	907.71	0.360	4	2.2	13	4.0
		5-year								5	1.6	13	4.0
		10-year								6	4.0	13	4.0
		25-year								7	2.2	13	4.0
		50-year								8	3.7	13	4.0
		100-year								13	4.1	13	4.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08B02	8394.2	2-year	Trapezoidal	1	30	172.4	914.00	911.38	1.520	0	0.0	376	12.5
		5-year								0	0.0	376	12.5
		10-year								0	0.0	376	12.5
		25-year								0	0.0	376	12.5
		50-year								0	0.0	376	12.5
		100-year								0	0.0	376	12.5
LRCL08B03	8221.1	2-year	Circular	2	0	133.4	911.45	908.33	2.340	4	3.2	32	10.2
		5-year								5	3.3	32	10.2
		10-year								6	3.3	32	10.2
		25-year								7	3.7	32	10.2
		50-year								8	4.0	32	10.2
		100-year								9	4.6	32	10.2
LRCL08B03	8221.2	2-year	Trapezoidal	1	30	133.4	915.70	914.00	1.275	0	0.0	344	11.5
		5-year								0	0.0	344	11.5
		10-year								0	0.0	344	11.5
		25-year								0	0.0	344	11.5
		50-year								0	0.0	344	11.5
		100-year								0	0.0	344	11.5
LRCL08C01	8010.1	2-year	Rectangular	4	6	137.6	912.08	911.54	0.392	29	3.3	180	7.5
		5-year								41	3.7	180	7.5
		10-year								48	3.8	180	7.5
		25-year								58	4.0	180	7.5
		50-year								65	4.2	180	7.5
		100-year								74	4.2	180	7.5
LRCL08C01	8010.2	2-year	Trapezoidal	1	30	137.6	918.72	916.00	1.977	0	0.0	429	14.3
		5-year								0	0.0	429	14.3
		10-year								0	0.0	429	14.3
		25-year								0	0.0	429	14.3
		50-year								0	0.0	429	14.3
		100-year								0	0.0	429	14.3
LRCL08C02	8569.1	2-year	Special	4	2.5	74.8	912.38	912.08	0.401	29	9.4	41	5.5
		5-year								41	10.1	41	5.5
		10-year								48	10.4	41	5.5
		25-year								58	10.7	41	5.5
		50-year								65	11.0	41	5.5
		100-year								74	11.2	41	5.5
LRCL08C02	8569.2	2-year	Trapezoidal	1	30	74.8	916.38	918.72	-3.127	0	0.0	539	18.0
		5-year								0	0.0	539	18.0
		10-year								0	0.0	539	18.0
		25-year								0	0.0	539	18.0
		50-year								0	0.0	539	18.0
		100-year								0	0.0	539	18.0
LRCL08C03	8570.1	2-year	Special	4	2.5	260.5	914.88	912.38	0.960	29	8.0	63	8.5
		5-year								41	8.8	63	8.5
		10-year								48	9.1	63	8.5
		25-year								58	9.4	63	8.5
		50-year								65	9.6	63	8.5
		100-year								74	10.0	63	8.5
LRCL08C03	8570.2	2-year	Trapezoidal	1	30	260.5	921.00	916.38	1.774	0	0.0	406	13.5
		5-year								0	0.0	406	13.5
		10-year								0	0.0	406	13.5
		25-year								0	0.0	406	13.5
		50-year								0	0.0	406	13.5
		100-year								0	0.0	406	13.5
LRCL08C04	RCL08C04A	2-year	Special	4	2.5	106.3	917.77	914.88	2.718	29	10.3	106	14.3
		5-year								41	11.1	106	14.3
		10-year								48	11.4	106	14.3
		25-year								58	11.7	106	14.3
		50-year								65	11.9	106	14.3
		100-year								74	11.9	106	14.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08C04	RCL08C04B	2-year	Trapezoidal	1	30	106.3	921.77	921.00	0.724	0	0.0	260	8.7
		5-year								0	0.0	260	8.7
		10-year								0	0.0	260	8.7
		25-year								0	0.0	260	8.7
		50-year								0	0.0	260	8.7
		100-year								0	0.0	260	8.7
LRCL08D01	8009.1	2-year	Special	4.17	4.17	124.0	912.34	911.90	0.355	41	5.6	48	5.5
		5-year								59	6.9	48	5.5
		10-year								69	7.8	48	5.5
		25-year								82	9.3	48	5.5
		50-year								92	10.4	48	5.5
		100-year								99	11.2	48	5.5
LRCL08D01	8009.2	2-year	Trapezoidal	1	30	124.0	917.09	916.07	0.823	0	0.0	277	9.2
		5-year								0	0.0	277	9.2
		10-year								0	0.0	277	9.2
		25-year								0	0.0	277	9.2
		50-year								0	0.0	277	9.2
		100-year								12	2.7	277	9.2
LRCL08D02	8220.1	2-year	Circular	2	0	73.3	913.31	912.34	1.323	40	12.9	24	7.7
		5-year								45	14.1	24	7.7
		10-year								45	13.9	24	7.7
		25-year								44	13.8	24	7.7
		50-year								44	13.7	24	7.7
		100-year								43	13.5	24	7.7
LRCL08D02	8220.2	2-year	Trapezoidal	1	30	73.3	917.64	917.09	0.750	0	0.0	264	8.8
		5-year								16	2.9	264	8.8
		10-year								29	3.7	264	8.8
		25-year								47	4.5	264	8.8
		50-year								62	5.0	264	8.8
		100-year								81	5.6	264	8.8
LRCL08D03	8219.1	2-year	Circular	2	0	18.9	914.03	913.31	3.801	40	12.7	33	10.4
		5-year								40	12.6	33	10.4
		10-year								39	12.3	33	10.4
		25-year								39	12.2	33	10.4
		50-year								38	12.2	33	10.4
		100-year								38	12.1	33	10.4
LRCL08D03	8219.2	2-year	Trapezoidal	1	30	18.9	917.86	917.64	1.162	2	1.3	261	8.7
		5-year								35	4.0	261	8.7
		10-year								46	4.4	261	8.7
		25-year								61	4.9	261	8.7
		50-year								71	5.3	261	8.7
		100-year								85	5.6	261	8.7
LRCL08D04	8218.1	2-year	Circular	2	0	44.2	914.17	914.03	0.317	35	11.0	12	3.8
		5-year								35	11.0	12	3.8
		10-year								34	10.9	12	3.8
		25-year								34	10.8	12	3.8
		50-year								34	10.6	12	3.8
		100-year								33	10.5	12	3.8
LRCL08D04	8218.2	2-year	Trapezoidal	1	30	44.2	918.00	917.86	0.317	21	2.7	172	5.7
		5-year								42	3.4	172	5.7
		10-year								52	3.7	172	5.7
		25-year								65	4.0	172	5.7
		50-year								74	4.2	172	5.7
		100-year								87	4.5	172	5.7
LRCL08D05	8217.1	2-year	Circular	2	0	308.2	915.51	914.17	0.435	19	6.4	14	4.4
		5-year								19	6.4	14	4.4
		10-year								19	6.4	14	4.4
		25-year								19	6.4	14	4.4
		50-year								19	6.4	14	4.4
		100-year								19	6.4	14	4.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08D05	8217.2	2-year	Trapezoidal	2	30	308.2	918.18	918.00	0.058	32	2.3	225	3.7
		5-year								49	2.7	225	3.7
		10-year								59	3.0	225	3.7
		25-year								72	3.2	225	3.7
		50-year								82	3.4	225	3.7
		100-year								95	3.6	225	3.7
LRCL1001	LRCL1001	2-year	Natural	10	0	807.4	915.58	907.50	1.001	182	1.5	119790	14.9
		5-year								272	1.5	119790	14.9
		10-year								327	1.5	119790	14.9
		25-year								401	1.4	119790	14.9
		50-year								456	1.4	119790	14.9
		100-year								528	1.3	119790	14.9
LRCL1101	LRCL1101	2-year	Natural	10	0	2722.9	938.00	915.00	0.845	139	2.2	102271	14.0
		5-year								223	2.4	102271	14.0
		10-year								274	2.5	102271	14.0
		25-year								344	2.5	102271	14.0
		50-year								397	2.6	102271	14.0
		100-year								471	2.6	102271	14.0
LRCL1201	LRCL1201	2-year	Natural	12	0	587.1	918.00	916.50	0.255	284	1.4	41938	7.4
		5-year								424	1.3	41938	7.4
		10-year								514	1.2	41938	7.4
		25-year								627	1.0	41938	7.4
		50-year								703	0.9	41938	7.4
		100-year								836	0.8	41938	7.4
LRCL1202	LRCL1202	2-year	Natural	10	0	2002.6	930.00	918.00	0.599	178	2.2	30483	11.5
		5-year								273	2.4	30483	11.5
		10-year								333	2.6	30483	11.5
		25-year								416	2.7	30483	11.5
		50-year								480	2.7	30483	11.5
		100-year								564	2.8	30483	11.5
LRCL1203	LRCL1203	2-year	Natural	10	0	2722.2	946.61	930.00	0.610	251	1.3	91364	13.3
		5-year								360	1.5	91364	13.3
		10-year								426	1.6	91364	13.3
		25-year								514	1.6	91364	13.3
		50-year								580	1.7	91364	13.3
		100-year								667	1.8	91364	13.3
LRCL1300	LRCL1300	2-year	Natural	10	0	1000.0	922.15	918.00	0.415	538	2.2	44724	10.6
		5-year								1022	2.7	44724	10.6
		10-year								1309	3.0	44724	10.6
		25-year								1715	3.3	44724	10.6
		50-year								2026	3.5	44724	10.6
		100-year								2447	3.7	44724	10.6
LRCL1301	LRCL1301	2-year	Natural	10	0	4057.7	939.00	922.15	0.415	481	2.6	70058	10.1
		5-year								886	3.1	70058	10.1
		10-year								1157	3.4	70058	10.1
		25-year								1550	3.7	70058	10.1
		50-year								1845	3.9	70058	10.1
		100-year								2259	4.1	70058	10.1
LRCL1302	LRCL1302	2-year	Natural	13	0	2557.4	950.00	939.00	0.430	194	2.7	84153	10.6
		5-year								391	3.2	84153	10.6
		10-year								522	3.5	84153	10.6
		25-year								712	3.7	84153	10.6
		50-year								857	3.9	84153	10.6
		100-year								1058	4.1	84153	10.6
LRCL1303	LRCL1303	2-year	Natural	20	0	1326.8	960.00	950.00	0.754	206	1.1	273046	18.7
		5-year								357	1.4	273046	18.7
		10-year								454	1.5	273046	18.7
		25-year								589	1.7	273046	18.7
		50-year								692	1.8	273046	18.7
		100-year								831	1.9	273046	18.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL13A01	LRCL13A01	2-year	Natural	12	0	2253.8	950.00	939.00	0.488	171	2.4	80668	11.5
		5-year								306	2.8	80668	11.5
		10-year								392	3.0	80668	11.5
		25-year								510	3.2	80668	11.5
		50-year								600	3.3	80668	11.5
		100-year								720	3.5	80668	11.5
LRCL1400	LRCL1400	2-year	Natural	12	0	1000.0	926.46	921.00	0.546	404	2.2	138419	13.7
		5-year								615	2.3	138419	13.7
		10-year								757	2.3	138419	13.7
		25-year								949	2.3	138419	13.7
		50-year								1086	2.3	138419	13.7
		100-year								1267	2.3	138419	13.7
LRCL1401	LRCL1401	2-year	Natural	12	0	2111.9	938.00	926.46	0.546	339	2.5	172958	12.7
		5-year								549	2.8	172958	12.7
		10-year								673	3.0	172958	12.7
		25-year								847	3.1	172958	12.7
		50-year								981	3.3	172958	12.7
		100-year								1159	3.4	172958	12.7
LRCL1402	LRCL1402	2-year	Natural	12	0	1428.5	940.00	938.00	0.140	253	1.6	66469	6.1
		5-year								412	1.9	66469	6.1
		10-year								509	2.0	66469	6.1
		25-year								640	2.1	66469	6.1
		50-year								739	2.2	66469	6.1
		100-year								873	2.3	66469	6.1
LRCL1501	LRCL1501	2-year	Natural	10	0	3017.4	940.00	923.53	0.546	226	3.8	8603	12.7
		5-year								326	4.1	8603	12.7
		10-year								385	4.3	8603	12.7
		25-year								465	4.5	8603	12.7
		50-year								524	4.6	8603	12.7
		100-year								602	4.8	8603	12.7
LRCL1601	LRCL1601	2-year	Natural	12	0	1865.7	937.17	932.00	0.277	776	2.7	107754	7.9
		5-year								1216	2.9	107754	7.9
		10-year								1486	3.0	107754	7.9
		25-year								1857	3.2	107754	7.9
		50-year								1952	3.0	107754	7.9
		100-year								2304	3.0	107754	7.9
LRCL1602	LRCL1602	2-year	Natural	10	0	1416.4	940.00	937.17	0.200	386	1.7	45272	6.6
		5-year								589	2.0	45272	6.6
		10-year								712	2.2	45272	6.6
		25-year								886	2.3	45272	6.6
		50-year								1016	2.1	45272	6.6
		100-year								1185	2.2	45272	6.6
LRCL1603	LRCL1603	2-year	Natural	10	0	3567.4	954.00	940.00	0.392	303	1.7	119848	8.9
		5-year								452	1.8	119848	8.9
		10-year								549	1.9	119848	8.9
		25-year								677	2.0	119848	8.9
		50-year								771	2.0	119848	8.9
		100-year								895	2.1	119848	8.9
LRCL1604	LRCL1604	2-year	Natural	15	0	2654.6	966.72	954.00	0.479	179	2.9	71432	12.7
		5-year								264	3.2	71432	12.7
		10-year								316	3.4	71432	12.7
		25-year								386	3.6	71432	12.7
		50-year								439	3.7	71432	12.7
		100-year								507	3.8	71432	12.7
LRCL16A00	LRCL16A00	2-year	Natural	12	0	896.0	938.63	937.17	0.163	180	1.7	82118	6.1
		5-year								288	2.0	82118	6.1
		10-year								346	2.1	82118	6.1
		25-year								419	2.2	82118	6.1
		50-year								514	1.9	82118	6.1
		100-year								623	1.9	82118	6.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL16A01	LRCL16A01	2-year	Natural	12	0	4868.5	960.00	938.63	0.439	123	1.3	164395	10.8
		5-year								184	1.3	164395	10.8
		10-year								229	1.4	164395	10.8
		25-year								287	1.4	164395	10.8
		50-year								330	1.4	164395	10.8
		100-year								385	1.5	164395	10.8
LRCL1701	LRCL1701	2-year	Natural	12	0	3961.1	950.00	938.00	0.303	304	1.2	92670	9.0
		5-year								504	1.2	92670	9.0
		10-year								610	1.2	92670	9.0
		25-year								746	1.2	92670	9.0
		50-year								850	1.1	92670	9.0
		100-year								994	1.1	92670	9.0
LRCL1702	LRCL1702	2-year	Natural	16	0	1452.0	956.00	950.00	0.413	207	2.2	247849	11.4
		5-year								320	2.5	247849	11.4
		10-year								389	2.7	247849	11.4
		25-year								477	2.8	247849	11.4
		50-year								547	2.9	247849	11.4
		100-year								639	3.0	247849	11.4
LRCL1703	LRCL1703	2-year	Natural	13	0	1226.0	960.69	956.00	0.383	160	1.5	239234	12.2
		5-year								249	1.7	239234	12.2
		10-year								306	1.6	239234	12.2
		25-year								382	1.7	239234	12.2
		50-year								439	1.7	239234	12.2
		100-year								522	1.7	239234	12.2
LRCL1801	LRCL1801	2-year	Natural	10	0	1029.7	954.00	948.00	0.583	182	0.3	64927	14.0
		5-year								273	0.4	64927	14.0
		10-year								328	0.4	64927	14.0
		25-year								401	0.4	64927	14.0
		50-year								456	0.5	64927	14.0
		100-year								529	0.5	64927	14.0
LRCL1901	LRCL1901	2-year	Natural	20	0	1524.2	974.66	960.93	0.901	286	3.3	525958	19.2
		5-year								429	3.5	525958	19.2
		10-year								517	3.5	525958	19.2
		25-year								636	3.6	525958	19.2
		50-year								723	3.6	525958	19.2
		100-year								840	3.7	525958	19.2
LRCL2001	LRCL2001	2-year	Natural	15	0	1942.7	976.00	971.06	0.254	458	2.4	159572	8.8
		5-year								749	2.6	159572	8.8
		10-year								914	2.7	159572	8.8
		25-year								993	2.6	159572	8.8
		50-year								1137	2.7	159572	8.8
		100-year								1339	2.7	159572	8.8
LRCL2002	LRCL2002	2-year	Natural	20	0	2622.4	990.00	976.00	0.534	232	3.9	76289	13.1
		5-year								356	4.7	76289	13.1
		10-year								429	4.9	76289	13.1
		25-year								540	5.3	76289	13.1
		50-year								619	5.5	76289	13.1
		100-year								723	5.8	76289	13.1
LRCL901	LRCL901	2-year	Natural	20	0	854.1	912.00	904.72	0.852	226	1.9	650262	17.7
		5-year								328	1.9	650262	17.7
		10-year								389	1.9	650262	17.7
		25-year								470	1.8	650262	17.7
		50-year								531	1.7	650262	17.7
		100-year								611	1.7	650262	17.7
LRCMC01	LRCMC01	2-year	Natural	20	0	1662.4	873.76	871.75	0.121	2412	5.7	42622	5.3
		5-year								4142	6.2	42622	5.3
		10-year								5233	6.4	42622	5.3
		25-year								6745	6.5	42622	5.3
		50-year								7874	6.5	42622	5.3
		100-year								9548	6.5	42622	5.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC02	RCMC02A	2-year	User Defined	0	0	44.0	873.80	873.76	0.091	2407	4.7	0	3.7
		5-year								4138	6.3	0	3.7
		10-year								5221	7.1	0	3.7
		25-year								6739	7.4	0	3.7
		50-year								7861	8.0	0	3.7
		100-year								9534	9.0	0	3.7
LRCMC02	RCMC02B	2-year	Trapezoidal	1	30	44.0	890.00	889.96	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LRCMC03	LRCMC03	2-year	Natural	18	0	50.1	873.84	873.80	0.080	2407	4.3	10966	6.9
		5-year								4137	5.2	10966	6.9
		10-year								5220	5.7	10966	6.9
		25-year								6738	6.0	10966	6.9
		50-year								7860	6.4	10966	6.9
		100-year								9533	6.8	10966	6.9
LRCMC04	LRCMC04	2-year	Natural	18	0	261.5	874.54	873.84	0.267	2402	5.5	30360	10.8
		5-year								4146	5.5	30360	10.8
		10-year								5271	5.5	30360	10.8
		25-year								6780	5.5	30360	10.8
		50-year								7905	5.5	30360	10.8
		100-year								9615	5.5	30360	10.8
LRCMC05	RCMC05A	2-year	Rectangular	4	6	59.2	874.70	874.54	0.267	168	6.5	149	6.2
		5-year								172	6.7	149	6.2
		10-year								173	6.7	149	6.2
		25-year								173	6.7	149	6.2
		50-year								173	6.7	149	6.2
		100-year								172	6.8	149	6.2
LRCMC05	RCMC05B	2-year	Trapezoidal	15	50	59.2	878.70	878.54	0.100	2286	8.2	25737	26.4
		5-year								4081	9.6	25737	26.4
		10-year								5175	10.9	25737	26.4
		25-year								6622	12.7	25737	26.4
		50-year								7706	13.9	25737	26.4
		100-year								9358	15.6	25737	26.4
LRCMC06	LRCMC06	2-year	Natural	16	0	1000.0	877.37	874.70	0.267	2408	3.9	44452	9.9
		5-year								4155	4.0	44452	9.9
		10-year								5275	3.9	44452	9.9
		25-year								6783	4.1	44452	9.9
		50-year								7909	4.2	44452	9.9
		100-year								9619	4.2	44452	9.9
LRCMC07	LRCMC07	2-year	Natural	16	0	751.4	878.62	877.37	0.166	2410	5.1	27086	6.3
		5-year								4151	5.1	27086	6.3
		10-year								5270	5.2	27086	6.3
		25-year								6777	5.4	27086	6.3
		50-year								7901	5.5	27086	6.3
		100-year								9611	5.6	27086	6.3
LRCMC08	LRCMC08	2-year	Natural	14	0	215.2	878.97	878.62	0.163	2408	3.6	34648	6.7
		5-year								4150	3.7	34648	6.7
		10-year								5268	3.7	34648	6.7
		25-year								6772	3.6	34648	6.7
		50-year								7895	3.6	34648	6.7
		100-year								9606	3.6	34648	6.7
LRCMC09	LRCMC09	2-year	Natural	16	0	948.3	880.54	878.97	0.166	2403	5.2	36388	8.6
		5-year								4142	5.2	36388	8.6
		10-year								5257	5.2	36388	8.6
		25-year								6757	5.2	36388	8.6
		50-year								7877	5.2	36388	8.6
		100-year								9585	5.2	36388	8.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC10	LRCMC10	2-year	Natural	18	0	1046.4	882.37	880.54	0.175	2402	3.6	51705	10.4
		5-year								4139	3.6	51705	10.4
		10-year								5253	3.7	51705	10.4
		25-year								6752	4.1	51705	10.4
		50-year								7871	4.3	51705	10.4
		100-year								9578	4.6	51705	10.4
LRCMC13	RCMC13A	2-year	User Defined	0	0	53.7	882.77	882.37	0.745	2403	8.2	0	10.9
		5-year								4140	10.9	0	10.9
		10-year								5254	12.2	0	10.9
		25-year								6754	13.7	0	10.9
		50-year								7872	14.8	0	10.9
		100-year								9580	16.2	0	10.9
LRCMC13	RCMC13B	2-year	Trapezoidal	1	30	53.7	902.00	901.95	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LRCMC14	LRCMC14	2-year	Natural	16	0	388.3	883.93	882.77	0.299	2404	6.1	29996	11.9
		5-year								4141	6.1	29996	11.9
		10-year								5255	6.1	29996	11.9
		25-year								6754	6.2	29996	11.9
		50-year								7873	6.5	29996	11.9
		100-year								9580	6.8	29996	11.9
LRCMC15	LRCMC15	2-year	Natural	30	0	1684.2	885.75	883.93	0.108	2404	4.4	89890	10.8
		5-year								4142	4.9	89890	10.8
		10-year								5257	5.2	89890	10.8
		25-year								6756	5.6	89890	10.8
		50-year								7875	5.8	89890	10.8
		100-year								9585	6.2	89890	10.8
LRCMC16	RCMC16A	2-year	Rectangular	6	6	26.6	885.80	885.75	0.200	27	3.4	204	5.7
		5-year								29	3.4	204	5.7
		10-year								31	3.4	204	5.7
		25-year								35	3.4	204	5.7
		50-year								38	3.4	204	5.7
		100-year								40	3.4	204	5.7
LRCMC16	RCMC16B	2-year	Trapezoidal	20	100	26.6	886.72	886.67	0.100	2369	2.9	59513	24.8
		5-year								4102	4.0	59513	24.8
		10-year								5213	4.6	59513	24.8
		25-year								6709	5.4	59513	24.8
		50-year								7824	5.9	59513	24.8
		100-year								9527	6.7	59513	24.8
LRCMC17	LRCMC17	2-year	Natural	30	0	480.7	887.50	885.80	0.354	2406	6.0	141156	15.9
		5-year								4145	6.6	141156	15.9
		10-year								5260	6.8	141156	15.9
		25-year								6759	7.1	141156	15.9
		50-year								7879	7.3	141156	15.9
		100-year								9588	7.6	141156	15.9
LRCMC18	LRCMC18	2-year	Natural	18	0	503.2	890.00	887.50	0.497	2411	7.1	26219	17.0
		5-year								4148	8.2	26219	17.0
		10-year								5262	8.8	26219	17.0
		25-year								6759	9.5	26219	17.0
		50-year								7878	10.0	26219	17.0
		100-year								9586	10.7	26219	17.0
LRCMC19	RCMC19A	2-year	Circular	8	0	65.9	890.33	890.00	0.500	1154	23.0	599	11.9
		5-year								1391	27.1	599	11.9
		10-year								1460	29.0	599	11.9
		25-year								1549	30.7	599	11.9
		50-year								1610	31.9	599	11.9
		100-year								1693	33.5	599	11.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC19	RCMC19B	2-year	Trapezoidal	8	50	65.9	898.00	897.93	0.100	102	3.6	5353	11.5
		5-year								1366	9.1	5353	11.5
		10-year								2343	10.8	5353	11.5
		25-year								3662	12.4	5353	11.5
		50-year								4659	13.3	5353	11.5
		100-year								6201	14.5	5353	11.5
LRCMC20	LRCMC20	2-year	Natural	18	0	2590.7	893.50	890.33	0.122	2413	3.6	26466	6.8
		5-year								4152	3.8	26466	6.8
		10-year								5268	3.9	26466	6.8
		25-year								6765	4.0	26466	6.8
		50-year								7884	4.1	26466	6.8
		100-year								9596	4.2	26466	6.8
LRCMC23	RCMC23A	2-year	Circular	8.5	0	67.7	893.59	893.50	0.132	633	11.3	211	3.7
		5-year								802	13.7	211	3.7
		10-year								849	14.6	211	3.7
		25-year								853	14.7	211	3.7
		50-year								858	15.1	211	3.7
		100-year								891	15.6	211	3.7
LRCMC23	RCMC23B	2-year	Trapezoidal	10	50	67.7	900.00	899.93	0.100	891	7.9	7910	13.2
		5-year								2344	10.8	7910	13.2
		10-year								3426	12.1	7910	13.2
		25-year								4850	13.5	7910	13.2
		50-year								5925	14.3	7910	13.2
		100-year								7596	15.3	7910	13.2
LRCMC23	RCMC23C	2-year	Circular	7.833	0	67.7	893.59	893.50	0.132	898	18.3	290	6.0
		5-year								1042	21.2	290	6.0
		10-year								1093	22.6	290	6.0
		25-year								1153	23.8	290	6.0
		50-year								1185	24.5	290	6.0
		100-year								1231	25.4	290	6.0
LRCMC24	LRCMC24	2-year	Natural	18	0	1301.4	895.30	893.59	0.132	2409	3.2	28918	8.7
		5-year								4154	3.8	28918	8.7
		10-year								5277	4.0	28918	8.7
		25-year								6779	4.1	28918	8.7
		50-year								7903	4.2	28918	8.7
		100-year								9629	4.3	28918	8.7
LRCMC25	LRCMC25	2-year	Natural	14.5	0	249.1	895.94	895.30	0.257	2389	3.6	37894	7.9
		5-year								4127	3.7	37894	7.9
		10-year								5252	3.7	37894	7.9
		25-year								6750	3.6	37894	7.9
		50-year								7866	3.6	37894	7.9
		100-year								9596	3.5	37894	7.9
LRCMC26	LRCMC26	2-year	Natural	14	0	1717.9	900.75	895.94	0.280	2402	2.5	112015	9.7
		5-year								4145	2.3	112015	9.7
		10-year								5278	2.4	112015	9.7
		25-year								6782	2.4	112015	9.7
		50-year								7901	2.4	112015	9.7
		100-year								9641	2.5	112015	9.7
LRCMC27	RCMC27A	2-year	Rectangular	10	14	22.1	900.77	900.75	0.090	803	11.4	783	5.6
		5-year								1384	16.9	783	5.6
		10-year								1762	19.9	783	5.6
		25-year								2265	23.7	783	5.6
		50-year								2638	26.4	783	5.6
		100-year								3218	30.2	783	5.6
LRCMC27	RCMC27B	2-year	Trapezoidal	10	30	22.1	912.00	911.98	0.100	0	0.0	2715	9.0
		5-year								0	0.0	2715	9.0
		10-year								0	0.0	2715	9.0
		25-year								0	0.0	2715	9.0
		50-year								0	0.0	2715	9.0
		100-year								0	0.0	2715	9.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC28	LRCMC28	2-year	Natural	14.5	0	615.6	901.35	900.77	0.094	2408	2.5	47186	5.8
		5-year								4152	3.0	47186	5.8
		10-year								5284	3.2	47186	5.8
		25-year								6791	3.4	47186	5.8
		50-year								7909	3.6	47186	5.8
		100-year								9650	3.8	47186	5.8
LRCMC29	RCMC29A	2-year	User Defined	0	0	35.6	901.38	901.35	0.084	2408	5.4	0	3.7
		5-year								4153	7.4	0	3.7
		10-year								5286	8.5	0	3.7
		25-year								6793	9.7	0	3.7
		50-year								7912	10.5	0	3.7
		100-year								9653	11.6	0	3.7
LRCMC29	RCMC29B	2-year	Trapezoidal	2	30	35.6	914.80	914.76	0.100	0	0.0	312	5.2
		5-year								0	0.0	312	5.2
		10-year								0	0.0	312	5.2
		25-year								0	0.0	312	5.2
		50-year								0	0.0	312	5.2
		100-year								0	0.0	312	5.2
LRCMC30	LRCMC30	2-year	Natural	14	0	51.4	901.43	901.38	0.097	2408	5.1	7027	2.5
		5-year								4153	6.8	7027	2.5
		10-year								5286	7.7	7027	2.5
		25-year								6793	8.7	7027	2.5
		50-year								7912	9.3	7027	2.5
		100-year								9653	10.2	7027	2.5
LRCMC31	RCMC31A	2-year	User Defined	0	0	34.3	901.46	901.43	0.088	2408	5.0	0	3.8
		5-year								4153	6.7	0	3.8
		10-year								5286	7.6	0	3.8
		25-year								6793	8.6	0	3.8
		50-year								7912	9.2	0	3.8
		100-year								9653	10.1	0	3.8
LRCMC31	RCMC31B	2-year	Trapezoidal	2	30	34.3	914.80	914.77	0.100	0	0.0	275	4.6
		5-year								0	0.0	275	4.6
		10-year								0	0.0	275	4.6
		25-year								0	0.0	275	4.6
		50-year								0	0.0	275	4.6
		100-year								0	0.0	275	4.6
LRCMC32	LRCMC32	2-year	Natural	16	0	212.7	901.66	901.46	0.094	2387	1.3	123674	6.0
		5-year								4119	1.4	123674	6.0
		10-year								5242	1.5	123674	6.0
		25-year								6737	1.5	123674	6.0
		50-year								7845	1.6	123674	6.0
		100-year								9573	1.6	123674	6.0
LRCMC34	LRCMC34	2-year	Natural	18	0	1949.1	903.60	901.66	0.100	2389	1.6	155911	6.0
		5-year								4121	2.1	155911	6.0
		10-year								5240	2.3	155911	6.0
		25-year								6731	2.5	155911	6.0
		50-year								7840	2.7	155911	6.0
		100-year								9562	2.9	155911	6.0
LRCMC35	LRCMC35	2-year	Natural	17	0	1120.6	904.72	903.60	0.100	2382	2.9	114045	5.8
		5-year								4108	3.3	114045	5.8
		10-year								5222	3.5	114045	5.8
		25-year								6704	3.8	114045	5.8
		50-year								7812	3.9	114045	5.8
		100-year								9527	4.1	114045	5.8
LRCMC36	LRCMC36	2-year	Natural	16	0	939.4	905.00	904.72	0.030	2387	1.2	90597	4.1
		5-year								4119	1.4	90597	4.1
		10-year								5230	1.5	90597	4.1
		25-year								6711	1.6	90597	4.1
		50-year								7820	1.7	90597	4.1
		100-year								9543	1.8	90597	4.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC37	LRCMC37	2-year	Natural	14	0	1434.8	907.50	905.00	0.174	2383	3.3	77888	7.9
		5-year								4110	3.8	77888	7.9
		10-year								5220	4.1	77888	7.9
		25-year								6695	4.3	77888	7.9
		50-year								7801	4.5	77888	7.9
		100-year								9518	4.7	77888	7.9
LRCMC38	LRCMC38	2-year	Natural	12	0	1500.0	909.00	907.50	0.100	2348	2.7	45319	5.5
		5-year								4060	3.1	45319	5.5
		10-year								5158	3.3	45319	5.5
		25-year								6617	3.6	45319	5.5
		50-year								7710	3.7	45319	5.5
		100-year								9410	3.9	45319	5.5
LRCMC39	LRCMC39	2-year	Natural	19	0	2230.4	913.00	909.00	0.179	2342	2.8	265043	8.8
		5-year								4048	3.1	265043	8.8
		10-year								5139	3.3	265043	8.8
		25-year								6584	3.3	265043	8.8
		50-year								7672	3.5	265043	8.8
		100-year								9362	3.6	265043	8.8
LRCMC40	LRCMC40	2-year	Natural	16	0	1501.5	915.00	913.00	0.133	2308	1.8	229978	7.8
		5-year								4012	2.2	229978	7.8
		10-year								5096	2.3	229978	7.8
		25-year								6559	2.4	229978	7.8
		50-year								7637	2.5	229978	7.8
		100-year								9322	2.7	229978	7.8
LRCMC41	LRCMC41	2-year	Natural	15	0	1543.0	916.50	915.00	0.097	2301	5.4	57821	4.7
		5-year								4008	5.4	57821	4.7
		10-year								5089	5.3	57821	4.7
		25-year								6552	5.3	57821	4.7
		50-year								7627	5.3	57821	4.7
		100-year								9318	5.3	57821	4.7
LRCMC42	LRCMC42	2-year	Natural	13	0	1500.0	918.00	916.50	0.100	2172	1.1	106655	6.0
		5-year								3764	1.2	106655	6.0
		10-year								4790	1.2	106655	6.0
		25-year								6158	1.2	106655	6.0
		50-year								7139	1.2	106655	6.0
		100-year								8723	1.3	106655	6.0
LRCMC43	LRCMC43	2-year	Natural	10	0	2364.7	921.00	918.00	0.127	2066	2.9	34144	5.5
		5-year								3620	3.4	34144	5.5
		10-year								4614	3.7	34144	5.5
		25-year								5917	3.9	34144	5.5
		50-year								6847	4.1	34144	5.5
		100-year								8293	4.3	34144	5.5
LRCMC44	LRCMC44	2-year	Natural	16	0	1651.9	923.53	921.00	0.153	1984	3.9	113654	6.3
		5-year								3494	4.4	113654	6.3
		10-year								4459	4.7	113654	6.3
		25-year								5713	4.9	113654	6.3
		50-year								6599	5.1	113654	6.3
		100-year								7991	5.3	113654	6.3
LRCMC45	LRCMC45	2-year	Natural	15	0	1251.9	925.44	923.53	0.153	1977	1.6	171866	8.4
		5-year								3504	1.8	171866	8.4
		10-year								4473	1.9	171866	8.4
		25-year								5720	2.0	171866	8.4
		50-year								6592	2.1	171866	8.4
		100-year								7991	2.2	171866	8.4
LRCMC46	LRCMC46	2-year	Natural	13	0	1672.5	928.00	925.44	0.153	1956	2.8	97865	6.9
		5-year								3477	3.2	97865	6.9
		10-year								4441	3.4	97865	6.9
		25-year								5666	3.7	97865	6.9
		50-year								6528	3.8	97865	6.9
		100-year								7909	4.0	97865	6.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC47	LRCMC47	2-year	Natural	20	0	1948.2	932.00	928.00	0.205	1886	2.8	341212	10.1
		5-year								3382	3.3	341212	10.1
		10-year								4329	3.5	341212	10.1
		25-year								5523	3.7	341212	10.1
		50-year								6355	3.8	341212	10.1
		100-year								7713	4.1	341212	10.1
LRCMC48	LRCMC48	2-year	Natural	13	0	2200.2	938.00	932.00	0.273	1352	3.7	90280	8.0
		5-year								2425	4.0	90280	8.0
		10-year								3106	4.2	90280	8.0
		25-year								3969	4.3	90280	8.0
		50-year								4662	4.4	90280	8.0
		100-year								5649	4.5	90280	8.0
LRCMC49	LRCMC49	2-year	Natural	21	0	1337.0	940.00	938.00	0.150	1364	1.8	313858	8.2
		5-year								2284	2.0	313858	8.2
		10-year								2897	2.1	313858	8.2
		25-year								3637	2.2	313858	8.2
		50-year								4194	2.3	313858	8.2
		100-year								5046	2.4	313858	8.2
LRCMC50	LRCMC50	2-year	Natural	20	0	3736.0	946.00	940.00	0.161	1453	2.2	448377	9.2
		5-year								2435	2.5	448377	9.2
		10-year								3043	2.6	448377	9.2
		25-year								3767	2.8	448377	9.2
		50-year								4316	2.9	448377	9.2
		100-year								5171	3.0	448377	9.2
LRCMC51	LRCMC51	2-year	Natural	13	0	1951.2	948.00	946.00	0.103	1284	2.9	47509	5.2
		5-year								2162	3.2	47509	5.2
		10-year								2696	3.4	47509	5.2
		25-year								3329	3.5	47509	5.2
		50-year								3846	3.6	47509	5.2
		100-year								4595	3.7	47509	5.2
LRCMC52	LRCMC52	2-year	Natural	10	0	1080.4	952.00	948.00	0.370	1091	3.2	28683	8.6
		5-year								1852	3.4	28683	8.6
		10-year								2317	3.5	28683	8.6
		25-year								2846	3.7	28683	8.6
		50-year								3296	3.7	28683	8.6
		100-year								3946	3.9	28683	8.6
LRCMC53	LRCMC53	2-year	Natural	10	0	1582.8	960.93	952.00	0.564	920	5.1	26471	8.9
		5-year								1600	5.9	26471	8.9
		10-year								2000	6.2	26471	8.9
		25-year								2439	6.5	26471	8.9
		50-year								2839	6.4	26471	8.9
		100-year								3404	6.8	26471	8.9
LRCMC54	LRCMC54	2-year	Natural	10	0	2092.7	971.06	960.93	0.484	790	4.2	40477	7.8
		5-year								1385	4.7	40477	7.8
		10-year								1721	4.9	40477	7.8
		25-year								2074	5.1	40477	7.8
		50-year								2424	4.9	40477	7.8
		100-year								2899	5.1	40477	7.8
LRCMC55	LRCMC55	2-year	Natural	15	0	2936.7	976.00	971.06	0.168	550	1.7	130380	7.6
		5-year								890	1.8	130380	7.6
		10-year								1107	1.8	130380	7.6
		25-year								1422	2.0	130380	7.6
		50-year								1658	2.1	130380	7.6
		100-year								1975	2.2	130380	7.6
LRCMC56	LRCMC56	2-year	Natural	13	0	2083.0	979.00	976.00	0.144	489	2.3	33556	7.1
		5-year								742	2.6	33556	7.1
		10-year								917	2.8	33556	7.1
		25-year								1154	3.0	33556	7.1
		50-year								1341	3.1	33556	7.1
		100-year								1589	3.3	33556	7.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC57	LRCMC57	2-year	Natural	20	0	3009.5	994.00	979.00	0.498	365	3.0	115012	16.6
		5-year								514	3.2	115012	16.6
		10-year								624	3.4	115012	16.6
		25-year								772	3.6	115012	16.6
		50-year								889	3.7	115012	16.6
		100-year								1038	3.9	115012	16.6
LRCMC58	LRCMC58	2-year	Natural	14	0	1952.7	1008.00	994.00	0.717	286	3.5	93620	16.1
		5-year								368	3.3	93620	16.1
		10-year								440	3.4	93620	16.1
		25-year								537	3.6	93620	16.1
		50-year								611	3.6	93620	16.1
		100-year								709	3.7	93620	16.1
LSCL101	LSCL101	2-year	Natural	4	6	85.0	903.43	902.36	1.258	81	7.5	425	6.4
		5-year								118	8.4	425	6.4
		10-year								140	8.9	425	6.4
		25-year								169	9.3	425	6.4
		50-year								191	9.3	425	6.4
		100-year								219	9.4	425	6.4
LSCL102	LSCL102	2-year	Natural	4.5	6	18.3	903.91	903.43	2.630	48	2.5	997	8.6
		5-year								69	2.8	997	8.6
		10-year								82	2.9	997	8.6
		25-year								99	3.1	997	8.6
		50-year								112	3.2	997	8.6
		100-year								128	3.2	997	8.6
LSCL103	8362.1	2-year	Circular	3	0	189.6	904.26	903.91	0.185	48	8.0	27	3.8
		5-year								69	10.8	27	3.8
		10-year								82	12.4	27	3.8
		25-year								88	13.1	27	3.8
		50-year								88	13.1	27	3.8
		100-year								88	13.1	27	3.8
LSCL103	8362.2	2-year	Trapezoidal	1	30	189.6	910.00	907.00	1.582	0	0.0	384	12.8
		5-year								0	0.0	384	12.8
		10-year								0	0.0	384	12.8
		25-year								11	3.2	384	12.8
		50-year								24	4.3	384	12.8
		100-year								43	5.4	384	12.8
LSCL104	8512.1	2-year	Circular	3	0	63.9	908.17	904.26	6.122	38	8.9	153	21.7
		5-year								55	11.3	153	21.7
		10-year								65	11.6	153	21.7
		25-year								78	11.6	153	21.7
		50-year								87	12.1	153	21.7
		100-year								100	14.0	153	21.7
LSCL104	8512.2	2-year	Trapezoidal	1	30	63.9	912.00	910.00	3.131	0	0.0	540	18.0
		5-year								0	0.0	540	18.0
		10-year								0	0.0	540	18.0
		25-year								0	0.0	540	18.0
		50-year								0	0.0	540	18.0
		100-year								0	0.0	540	18.0
LSCL105	LSCL105	2-year	Trapezoidal	4	10	72.6	908.47	908.17	0.413	38	3.2	340	6.1
		5-year								55	3.6	340	6.1
		10-year								64	3.6	340	6.1
		25-year								78	3.6	340	6.1
		50-year								87	3.6	340	6.1
		100-year								100	3.6	340	6.1
LSCL106	SCL106A	2-year	Circular	2	0	35.6	908.74	908.47	0.758	27	10.7	11	3.4
		5-year								30	10.8	11	3.4
		10-year								31	10.8	11	3.4
		25-year								31	10.8	11	3.4
		50-year								31	10.8	11	3.4
		100-year								31	10.8	11	3.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL106	SCL106B	2-year	Trapezoidal	1	30	35.6	912.00	911.96	0.100	11	1.8	102	3.4
		5-year								24	2.6	102	3.4
		10-year								36	3.0	102	3.4
		25-year								53	3.5	102	3.4
		50-year								65	3.8	102	3.4
		100-year								82	4.2	102	3.4
LSCL107	LSCL107	2-year	Trapezoidal	4	10	27.9	908.94	908.74	0.716	38	0.8	431	7.7
		5-year								55	1.2	431	7.7
		10-year								64	1.3	431	7.7
		25-year								78	1.5	431	7.7
		50-year								87	1.7	431	7.7
		100-year								100	1.9	431	7.7
LSCL108	SCL108A	2-year	Circular	2	0	39.1	909.11	908.94	0.435	20	6.3	8	2.6
		5-year								21	6.6	8	2.6
		10-year								21	6.7	8	2.6
		25-year								21	6.8	8	2.6
		50-year								21	6.8	8	2.6
		100-year								21	6.8	8	2.6
LSCL108	SCL108B	2-year	Trapezoidal	2	30	39.1	912.00	911.96	0.100	30	2.8	298	5.0
		5-year								47	3.3	298	5.0
		10-year								57	3.6	298	5.0
		25-year								71	3.8	298	5.0
		50-year								81	3.9	298	5.0
		100-year								94	4.0	298	5.0
LSCL109	LSCL109	2-year	Trapezoidal	4	10	58.6	909.30	909.11	0.324	38	0.9	301	5.4
		5-year								55	1.2	301	5.4
		10-year								64	1.4	301	5.4
		25-year								78	1.7	301	5.4
		50-year								87	1.8	301	5.4
		100-year								100	2.0	301	5.4
LSCL110	SCL110A	2-year	Circular	2	0	38.4	909.43	909.30	0.339	19	6.1	7	2.3
		5-year								20	6.3	7	2.3
		10-year								20	6.4	7	2.3
		25-year								20	6.4	7	2.3
		50-year								20	6.4	7	2.3
		100-year								20	6.3	7	2.3
LSCL110	SCL110B	2-year	Trapezoidal	2	30	38.4	912.00	911.96	0.100	33	2.4	300	5.0
		5-year								49	2.9	300	5.0
		10-year								59	3.1	300	5.0
		25-year								72	3.3	300	5.0
		50-year								82	3.4	300	5.0
		100-year								95	3.6	300	5.0
LSCL111	LSCL111	2-year	Trapezoidal	4	10	34.2	909.50	909.43	0.204	38	1.0	239	4.3
		5-year								55	1.3	239	4.3
		10-year								64	1.5	239	4.3
		25-year								78	1.8	239	4.3
		50-year								87	2.0	239	4.3
		100-year								100	2.2	239	4.3
LSCL112	SCL112A	2-year	Circular	2	0	36.3	909.69	909.50	0.523	16	5.1	9	2.8
		5-year								17	5.2	9	2.8
		10-year								17	5.2	9	2.8
		25-year								17	5.2	9	2.8
		50-year								17	5.2	9	2.8
		100-year								16	5.1	9	2.8
LSCL112	SCL112B	2-year	Trapezoidal	2	30	36.3	912.00	911.96	0.100	34	2.3	309	5.1
		5-year								50	2.6	309	5.1
		10-year								60	2.8	309	5.1
		25-year								73	3.1	309	5.1
		50-year								83	3.2	309	5.1
		100-year								96	3.4	309	5.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL113	LSCL113	2-year	Trapezoidal	4	10	28.6	909.77	909.69	0.280	38	1.1	273	4.9
		5-year								55	1.5	273	4.9
		10-year								64	1.7	273	4.9
		25-year								78	1.9	273	4.9
		50-year								87	2.1	273	4.9
		100-year								100	2.4	273	4.9
LSCL114	SCL114A	2-year	Circular	2	0	38.4	910.07	909.77	0.781	14	4.7	11	3.4
		5-year								14	4.7	11	3.4
		10-year								14	4.7	11	3.4
		25-year								14	4.7	11	3.4
		50-year								14	4.6	11	3.4
		100-year								13	4.3	11	3.4
LSCL114	SCL114B	2-year	Trapezoidal	2	30	38.4	912.00	911.96	0.100	34	2.1	300	5.0
		5-year								51	2.5	300	5.0
		10-year								61	2.7	300	5.0
		25-year								74	2.9	300	5.0
		50-year								84	3.0	300	5.0
		100-year								97	3.2	300	5.0
LSCL115	LSCL115	2-year	Trapezoidal	4	10	118.6	910.76	910.07	0.582	38	1.5	403	7.2
		5-year								55	2.0	403	7.2
		10-year								65	2.2	403	7.2
		25-year								78	2.5	403	7.2
		50-year								88	2.8	403	7.2
		100-year								101	3.0	403	7.2
LSCL116	8474.1	2-year	Circular	2	0	47.7	911.00	910.76	0.503	27	8.7	15	4.7
		5-year								27	8.9	15	4.7
		10-year								28	9.0	15	4.7
		25-year								28	9.1	15	4.7
		50-year								28	9.1	15	4.7
		100-year								28	9.0	15	4.7
LSCL116	8474.2	2-year	Trapezoidal	2	30	47.7	913.00	912.95	0.100	12	1.8	301	5.0
		5-year								29	2.7	301	5.0
		10-year								39	3.0	301	5.0
		25-year								53	3.4	301	5.0
		50-year								63	3.7	301	5.0
		100-year								77	4.0	301	5.0
LSCL1A01	SCL1A01A	2-year	Circular	3	0	19.9	906.00	903.43	12.928	33	8.1	106	15.0
		5-year								49	10.1	106	15.0
		10-year								58	11.2	106	15.0
		25-year								71	11.9	106	15.0
		50-year								80	12.4	106	15.0
		100-year								91	13.2	106	15.0
LSCL1A01	SCL1A01B	2-year	Trapezoidal	1	30	19.9	909.00	908.98	0.100	0	0.0	79	2.6
		5-year								0	0.0	79	2.6
		10-year								0	0.0	79	2.6
		25-year								0	0.0	79	2.6
		50-year								0	0.0	79	2.6
		100-year								0	0.0	79	2.6
LSCL1A02	LSCL1A02	2-year	Natural	6	10	134.4	906.89	906.00	0.662	33	2.6	7393	7.2
		5-year								49	2.8	7393	7.2
		10-year								58	2.8	7393	7.2
		25-year								71	2.9	7393	7.2
		50-year								80	2.9	7393	7.2
		100-year								92	2.9	7393	7.2
LSCL1A03	8361.1	2-year	Circular	2	0	196.7	907.60	906.89	0.361	22	9.2	13	4.0
		5-year								24	9.3	13	4.0
		10-year								25	9.4	13	4.0
		25-year								26	9.4	13	4.0
		50-year								28	9.5	13	4.0
		100-year								28	9.5	13	4.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL1A03	8361.2	2-year	Trapezoidal	1	30	196.7	911.60	909.00	1.322	11	3.0	351	11.7
		5-year								25	4.1	351	11.7
		10-year								33	4.6	351	11.7
		25-year								45	5.2	351	11.7
		50-year								53	5.6	351	11.7
		100-year								65	6.1	351	11.7
LSCL1A04	8340.1	2-year	Circular	2	0	26.5	907.90	907.60	1.132	22	6.9	21	6.7
		5-year								22	7.0	21	6.7
		10-year								22	7.1	21	6.7
		25-year								23	7.1	21	6.7
		50-year								23	7.2	21	6.7
		100-year								23	7.2	21	6.7
LSCL1A04	8340.2	2-year	Trapezoidal	1	30	26.5	911.90	911.60	1.132	12	2.8	305	10.2
		5-year								27	3.9	305	10.2
		10-year								36	4.4	305	10.2
		25-year								49	5.0	305	10.2
		50-year								58	5.3	305	10.2
		100-year								70	5.7	305	10.2
LSCL1B01	8511.1	2-year	Circular	2	0	28.7	904.31	904.26	0.174	0	-0.3	9	2.7
		5-year								0	-0.3	9	2.7
		10-year								0	-0.3	9	2.7
		25-year								3	1.0	9	2.7
		50-year								4	1.1	9	2.7
		100-year								4	1.2	9	2.7
LSCL1B01	8511.2	2-year	Trapezoidal	1	30	28.7	910.48	910.00	1.670	0	0.0	386	12.9
		5-year								0	0.0	386	12.9
		10-year								0	0.0	386	12.9
		25-year								0	0.0	386	12.9
		50-year								0	0.0	386	12.9
		100-year								0	0.0	386	12.9
LSCL201	8341.1	2-year	Circular	2	0	140.8	907.85	905.45	1.704	14	5.0	27	8.7
		5-year								16	4.9	27	8.7
		10-year								16	5.2	27	8.7
		25-year								20	6.3	27	8.7
		50-year								16	5.2	27	8.7
		100-year								21	6.7	27	8.7
LSCL201	8341.2	2-year	Trapezoidal	2	30	140.8	911.85	910.70	0.817	0	0.0	840	14.0
		5-year								6	0.6	840	14.0
		10-year								10	0.8	840	14.0
		25-year								15	1.9	840	14.0
		50-year								20	1.6	840	14.0
		100-year								25	1.6	840	14.0
LSCL301	8409.1	2-year	Circular	2	0	181.5	909.30	906.66	1.454	14	5.0	25	8.1
		5-year								12	5.3	25	8.1
		10-year								11	5.4	25	8.1
		25-year								11	5.6	25	8.1
		50-year								14	5.7	25	8.1
		100-year								12	5.7	25	8.1
LSCL301	8409.2	2-year	Trapezoidal	1	30	181.5	912.30	911.83	0.259	3	0.9	155	5.2
		5-year								11	1.4	155	5.2
		10-year								15	1.6	155	5.2
		25-year								21	1.9	155	5.2
		50-year								25	2.0	155	5.2
		100-year								30	2.1	155	5.2
LSCL401	8533.1	2-year	Special	3	3	183.8	914.36	908.86	2.992	16	4.7	50	12.3
		5-year								22	5.2	50	12.3
		10-year								25	6.1	50	12.3
		25-year								29	7.0	50	12.3
		50-year								34	8.2	50	12.3
		100-year								41	9.8	50	12.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL401	8533.2	2-year	Trapezoidal	1	30	183.8	919.11	915.25	2.100	0	0.0	442	14.7
		5-year								0	0.0	442	14.7
		10-year								0	0.0	442	14.7
		25-year								0	0.0	442	14.7
		50-year								0	0.0	442	14.7
		100-year								1	0.1	442	14.7
LSCL402	8532.1	2-year	Special	3	3	293.9	916.52	914.36	0.735	17	6.4	25	6.1
		5-year								22	6.6	25	6.1
		10-year								25	6.7	25	6.1
		25-year								29	7.1	25	6.1
		50-year								30	7.2	25	6.1
		100-year								30	7.2	25	6.1
LSCL402	8532.2	2-year	Trapezoidal	1	30	293.9	920.44	919.11	0.452	0	0.0	205	6.8
		5-year								0	0.0	205	6.8
		10-year								0	0.0	205	6.8
		25-year								0	0.0	205	6.8
		50-year								7	1.8	205	6.8
		100-year								20	2.8	205	6.8
LSCMC01	SCMC01A	2-year	Rectangular	7	7	67.1	887.03	886.70	0.492	205	5.4	530	10.8
		5-year								291	7.2	530	10.8
		10-year								353	8.4	530	10.8
		25-year								431	10.0	530	10.8
		50-year								470	10.7	530	10.8
		100-year								551	12.0	530	10.8
LSCMC01	SCMC01B	2-year	Trapezoidal	1	30	67.1	894.00	893.93	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LSCMC02	LSCMC02	2-year	Natural	8	10	557.1	891.66	887.03	0.831	87	0.6	9623	10.0
		5-year								129	0.7	9623	10.0
		10-year								156	0.8	9623	10.0
		25-year								192	0.9	9623	10.0
		50-year								219	0.9	9623	10.0
		100-year								255	1.0	9623	10.0
LSCMC03	LSCMC03	2-year	Natural	5	0	1701.4	902.36	891.66	0.629	123	1.9	14109	8.4
		5-year								181	2.0	14109	8.4
		10-year								218	2.1	14109	8.4
		25-year								266	2.1	14109	8.4
		50-year								300	2.2	14109	8.4
		100-year								347	2.2	14109	8.4
LSCMC04	LSCMC04	2-year	Trapezoidal	2	4	24.9	903.36	902.36	4.016	54	7.9	241	10.0
		5-year								79	8.8	241	10.0
		10-year								94	9.3	241	10.0
		25-year								114	9.9	241	10.0
		50-year								127	10.3	241	10.0
		100-year								144	10.7	241	10.0
LSCMC05	SCMC05A	2-year	Circular	4	0	31.3	903.85	903.36	1.568	54	11.5	97	7.8
		5-year								79	13.3	97	7.8
		10-year								94	14.3	97	7.8
		25-year								114	15.4	97	7.8
		50-year								127	16.2	97	7.8
		100-year								144	17.0	97	7.8
LSCMC05	SCMC05B	2-year	Trapezoidal	1	30	31.3	908.00	907.97	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC06	LSCMC06	2-year	Natural	8	4	480.8	904.60	903.85	0.156	63	0.6	16338	5.5
		5-year								99	0.6	16338	5.5
		10-year								116	0.6	16338	5.5
		25-year								140	0.6	16338	5.5
		50-year								157	0.6	16338	5.5
		100-year								179	0.6	16338	5.5
LSCMC07	8520.1	2-year	Special	2.83	2.83	163.3	905.45	904.60	0.520	39	12.8	16	4.8
		5-year								42	13.1	16	4.8
		10-year								42	13.2	16	4.8
		25-year								42	13.3	16	4.8
		50-year								43	13.3	16	4.8
		100-year								43	13.4	16	4.8
LSCMC07	8520.2	2-year	Trapezoidal	2	30	163.3	910.70	910.00	0.429	45	3.7	609	10.1
		5-year								95	5.0	609	10.1
		10-year								123	5.5	609	10.1
		25-year								154	6.0	609	10.1
		50-year								178	6.4	609	10.1
		100-year								214	6.8	609	10.1
LSCMC08	8526.1	2-year	Special	2.83	2.83	183.8	906.06	905.45	0.332	22	6.5	13	3.8
		5-year								26	7.9	13	3.8
		10-year								22	6.6	13	3.8
		25-year								22	6.6	13	3.8
		50-year								22	6.8	13	3.8
		100-year								26	7.7	13	3.8
LSCMC08	8526.2	2-year	Trapezoidal	3	30	183.8	911.56	909.70	1.012	54	2.2	1770	19.7
		5-year								103	3.4	1770	19.7
		10-year								126	3.8	1770	19.7
		25-year								152	4.3	1770	19.7
		50-year								172	4.6	1770	19.7
		100-year								204	5.0	1770	19.7
LSCMC09	8527.1	2-year	Special	2.83	2.83	31.5	906.66	906.06	1.907	34	10.4	30	9.1
		5-year								34	10.3	30	9.1
		10-year								34	10.4	30	9.1
		25-year								34	10.4	30	9.1
		50-year								34	10.4	30	9.1
		100-year								34	10.3	30	9.1
LSCMC09	8527.2	2-year	Trapezoidal	1	30	31.5	911.83	911.56	0.858	21	2.6	283	9.4
		5-year								56	4.2	283	9.4
		10-year								72	4.7	283	9.4
		25-year								90	5.1	283	9.4
		50-year								105	5.5	283	9.4
		100-year								128	6.0	283	9.4
LSCMC10	8528.1	2-year	Special	3.33	3.33	173.8	907.68	906.66	0.587	40	7.7	30	5.9
		5-year								45	8.7	30	5.9
		10-year								45	8.7	30	5.9
		25-year								45	8.7	30	5.9
		50-year								45	8.7	30	5.9
		100-year								45	8.7	30	5.9
LSCMC10	8528.2	2-year	Trapezoidal	1	30	173.8	914.25	911.83	1.392	0	0.0	360	12.0
		5-year								22	2.7	360	12.0
		10-year								35	3.4	360	12.0
		25-year								48	4.0	360	12.0
		50-year								60	4.4	360	12.0
		100-year								78	5.0	360	12.0
LSCMC11	8529.1	2-year	Special	3.33	3.33	58.4	908.02	907.68	0.582	40	7.7	30	5.8
		5-year								41	8.0	30	5.8
		10-year								41	7.9	30	5.8
		25-year								41	8.0	30	5.8
		50-year								41	8.0	30	5.8
		100-year								41	8.0	30	5.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC11	8529.2	2-year	Trapezoidal	1	30	58.4	914.54	914.25	0.497	0	0.0	215	7.2
		5-year								33	3.5	215	7.2
		10-year								45	3.9	215	7.2
		25-year								58	4.3	215	7.2
		50-year								69	4.6	215	7.2
		100-year								86	5.0	215	7.2
LSCMC12	8530.1	2-year	Special	3.33	3.33	126.7	908.76	908.02	0.584	34	6.9	30	5.9
		5-year								34	7.0	30	5.9
		10-year								34	7.0	30	5.9
		25-year								35	7.0	30	5.9
		50-year								35	7.0	30	5.9
		100-year								36	7.1	30	5.9
LSCMC12	8530.2	2-year	Trapezoidal	2	30	126.7	914.18	914.54	-0.284	-17	-1.4	496	8.3
		5-year								-49	-2.5	496	8.3
		10-year								-61	-2.8	496	8.3
		25-year								-74	-3.1	496	8.3
		50-year								-85	-3.3	496	8.3
		100-year								-102	-3.6	496	8.3
LSCMC13	8531.1	2-year	Special	3	1.5	50.9	908.86	908.76	0.196	38	10.0	13	3.1
		5-year								39	10.1	13	3.1
		10-year								40	10.1	13	3.1
		25-year								40	10.1	13	3.1
		50-year								41	10.2	13	3.1
		100-year								42	10.3	13	3.1
LSCMC13	8531.2	2-year	Trapezoidal	2	30	50.9	915.25	914.18	2.101	11	1.1	1348	22.5
		5-year								42	2.5	1348	22.5
		10-year								55	3.0	1348	22.5
		25-year								69	3.5	1348	22.5
		50-year								82	3.8	1348	22.5
		100-year								102	4.3	1348	22.5
LSCMC14	8389.1	2-year	Circular	2	0	26.3	908.91	908.86	0.190	9	3.2	9	2.7
		5-year								9	3.1	9	2.7
		10-year								9	3.1	9	2.7
		25-year								9	3.1	9	2.7
		50-year								9	3.1	9	2.7
		100-year								9	3.1	9	2.7
LSCMC14	8389.2	2-year	Trapezoidal	2	30	26.3	914.16	914.25	-0.343	-10	1.7	509	8.5
		5-year								17	2.1	509	8.5
		10-year								19	2.3	509	8.5
		25-year								23	2.4	509	8.5
		50-year								26	2.4	509	8.5
		100-year								28	2.6	509	8.5
LSCMC15	8590.1	2-year	Circular	2	0	170.5	913.74	908.91	2.832	11	5.5	35	11.3
		5-year								16	5.4	35	11.3
		10-year								18	5.8	35	11.3
		25-year								21	6.7	35	11.3
		50-year								24	7.5	35	11.3
		100-year								26	8.2	35	11.3
LSCMC15	8590.2	2-year	Trapezoidal	1	30	170.5	918.49	914.16	2.539	0	0.0	486	16.2
		5-year								0	0.0	486	16.2
		10-year								0	0.0	486	16.2
		25-year								0	0.0	486	16.2
		50-year								0	0.0	486	16.2
		100-year								0	0.0	486	16.2
LSCMC16	8591.1	2-year	Circular	2	0	150.3	913.95	913.74	0.140	10	5.4	8	2.5
		5-year								16	5.4	8	2.5
		10-year								18	5.9	8	2.5
		25-year								21	6.5	8	2.5
		50-year								21	6.5	8	2.5
		100-year								21	6.5	8	2.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC16	8591.2	2-year	Trapezoidal	1	30	150.3	918.37	918.49	-0.080	0	0.0	86	2.9
		5-year								0	0.0	86	2.9
		10-year								0	0.0	86	2.9
		25-year								-1	-0.4	86	2.9
		50-year								-6	-1.0	86	2.9
		100-year								-13	-1.4	86	2.9
LSCMC17	8403.1	2-year	Circular	2	0	117.7	916.38	913.95	2.065	10	5.6	30	9.6
		5-year								16	5.9	30	9.6
		10-year								18	6.1	30	9.6
		25-year								23	7.3	30	9.6
		50-year								25	7.8	30	9.6
		100-year								26	8.2	30	9.6
LSCMC17	8403.2	2-year	Trapezoidal	1	30	117.7	920.46	918.37	1.776	0	0.0	406	13.5
		5-year								0	0.0	406	13.5
		10-year								0	0.0	406	13.5
		25-year								0	0.0	406	13.5
		50-year								0	0.0	406	13.5
		100-year								2	0.2	406	13.5
LSCMC18	8505.1	2-year	Circular	2	0	14.2	916.52	916.38	0.988	10	7.2	14	4.6
		5-year								16	7.7	14	4.6
		10-year								18	8.0	14	4.6
		25-year								23	8.3	14	4.6
		50-year								25	8.3	14	4.6
		100-year								25	8.3	14	4.6
LSCMC18	8505.2	2-year	Trapezoidal	1	30	14.2	920.44	920.46	-0.141	0	0.0	79	2.6
		5-year								0	0.0	79	2.6
		10-year								0	0.0	79	2.6
		25-year								0	0.0	79	2.6
		50-year								-3	-0.9	79	2.6
		100-year								-10	-1.7	79	2.6
LSCMC19	8119.1	2-year	Special	3	3	41.4	916.67	916.52	0.362	26	9.0	18	4.3
		5-year								37	9.8	18	4.3
		10-year								44	10.6	18	4.3
		25-year								52	12.6	18	4.3
		50-year								60	14.4	18	4.3
		100-year								69	16.5	18	4.3
LSCMC19	8119.2	2-year	Circular	0.16	0	41.4	920.25	920.44	0.000	0	0.0	0	0.8
		5-year								0	0.0	0	0.8
		10-year								0	0.0	0	0.8
		25-year								0	-2.1	0	0.8
		50-year								0	-2.6	0	0.8
		100-year								0	-2.9	0	0.8
LSCMC20	8625.1	2-year	Special	3	3	23.2	916.75	916.67	0.345	26	7.3	15	3.7
		5-year								37	9.1	15	3.7
		10-year								42	10.2	15	3.7
		25-year								45	10.9	15	3.7
		50-year								46	11.2	15	3.7
		100-year								48	11.5	15	3.7
LSCMC20	8625.2	2-year	Trapezoidal	3	30	23.2	920.27	920.25	0.100	0	0.0	454	5.0
		5-year								0	0.0	454	5.0
		10-year								9	1.7	454	5.0
		25-year								50	2.8	454	5.0
		50-year								58	2.8	454	5.0
		100-year								68	2.8	454	5.0
LSRL0101	8440.1	2-year	Circular	4.5	0	118.8	875.33	871.15	3.519	99	11.1	343	21.5
		5-year								125	12.0	343	21.5
		10-year								136	12.2	343	21.5
		25-year								148	12.6	343	21.5
		50-year								154	12.8	343	21.5
		100-year								163	13.1	343	21.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0101	8440.2	2-year	Trapezoidal	1	30	118.8	893.12	893.00	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0102	8439.1	2-year	Circular	4.5	0	296.0	877.75	875.33	0.818	98	12.3	165	10.4
		5-year								125	13.2	165	10.4
		10-year								135	13.3	165	10.4
		25-year								146	13.4	165	10.4
		50-year								153	13.4	165	10.4
		100-year								162	13.5	165	10.4
LSRL0102	8439.2	2-year	Trapezoidal	1	30	296.0	888.00	887.70	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL0103	8256.1	2-year	Circular	4.5	0	128.0	879.08	877.75	1.041	98	10.5	186	11.7
		5-year								125	11.4	186	11.7
		10-year								134	11.8	186	11.7
		25-year								146	12.1	186	11.7
		50-year								153	12.2	186	11.7
		100-year								162	12.3	186	11.7
LSRL0103	8256.2	2-year	Trapezoidal	1	30	128.0	889.00	888.00	0.781	0	0.0	270	9.0
		5-year								0	0.0	270	9.0
		10-year								0	0.0	270	9.0
		25-year								0	0.0	270	9.0
		50-year								0	0.0	270	9.0
		100-year								0	0.0	270	9.0
LSRL0104	8442.1	2-year	Circular	4.5	0	317.6	879.68	879.08	0.188	94	8.6	79	5.0
		5-year								121	9.4	79	5.0
		10-year								132	9.8	79	5.0
		25-year								144	10.1	79	5.0
		50-year								151	10.3	79	5.0
		100-year								159	10.6	79	5.0
LSRL0104	8442.2	2-year	Trapezoidal	1	30	317.6	891.01	888.00	0.948	0	0.0	297	9.9
		5-year								0	0.0	297	9.9
		10-year								0	0.0	297	9.9
		25-year								0	0.0	297	9.9
		50-year								0	0.0	297	9.9
		100-year								0	0.0	297	9.9
LSRL0105	8441.1	2-year	Circular	4.5	0	275.1	879.89	879.68	0.076	94	6.6	50	3.2
		5-year								121	7.6	50	3.2
		10-year								132	8.2	50	3.2
		25-year								144	8.9	50	3.2
		50-year								151	9.3	50	3.2
		100-year								159	9.8	50	3.2
LSRL0105	8441.2	2-year	Trapezoidal	1	30	275.1	890.47	890.01	0.167	0	0.0	125	4.2
		5-year								0	0.0	125	4.2
		10-year								0	0.0	125	4.2
		25-year								0	0.0	125	4.2
		50-year								0	0.0	125	4.2
		100-year								0	0.0	125	4.2
LSRL0106	8444.1	2-year	Circular	4.5	0	387.1	880.17	879.89	0.072	79	5.1	49	3.1
		5-year								98	6.0	49	3.1
		10-year								101	6.2	49	3.1
		25-year								104	6.4	49	3.1
		50-year								105	6.4	49	3.1
		100-year								105	6.5	49	3.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0106	8444.2	2-year	Trapezoidal	1	30	387.1	888.76	888.00	0.196	0	0.0	135	4.5
		5-year								0	0.0	135	4.5
		10-year								0	0.0	135	4.5
		25-year								0	0.0	135	4.5
		50-year								0	0.0	135	4.5
		100-year								0	0.0	135	4.5
LSRL0107	8443.1	2-year	Circular	4.5	0	193.8	880.42	880.17	0.129	80	5.0	66	4.1
		5-year								98	6.1	66	4.1
		10-year								101	6.4	66	4.1
		25-year								104	6.5	66	4.1
		50-year								105	6.6	66	4.1
		100-year								105	6.6	66	4.1
LSRL0107	8443.2	2-year	Trapezoidal	1	30	193.8	888.95	888.76	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL0108	8255.1	2-year	Circular	4.5	0	54.5	882.98	880.42	4.706	80	7.8	396	24.9
		5-year								98	8.0	396	24.9
		10-year								101	8.1	396	24.9
		25-year								104	8.1	396	24.9
		50-year								105	8.1	396	24.9
		100-year								105	8.0	396	24.9
LSRL0108	8255.2	2-year	Trapezoidal	1	30	54.5	889.00	888.95	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LSRL0109	LSRL0109	2-year	Natural	6	12	258.1	883.01	882.98	0.012	61	1.8	446	0.5
		5-year								75	1.7	446	0.5
		10-year								78	1.7	446	0.5
		25-year								78	1.7	446	0.5
		50-year								79	1.7	446	0.5
		100-year								83	1.6	446	0.5
LSRL0110	SRL0110A	2-year	Circular	4.5	0	89.0	883.52	883.01	0.573	61	8.6	138	8.7
		5-year								77	8.6	138	8.7
		10-year								80	8.6	138	8.7
		25-year								86	8.7	138	8.7
		50-year								91	8.8	138	8.7
		100-year								98	8.8	138	8.7
LSRL0110	SRL0110B	2-year	Trapezoidal	1	30	89.0	890.00	889.91	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0111	LSRL0111	2-year	Natural	7	3	311.7	884.00	883.52	0.154	61	2.3	1406	2.5
		5-year								80	2.3	1406	2.5
		10-year								86	2.3	1406	2.5
		25-year								90	2.4	1406	2.5
		50-year								97	2.4	1406	2.5
		100-year								105	2.4	1406	2.5
LSRL0112	SRL0112A	2-year	Circular	4.5	0	93.1	884.10	884.00	0.107	62	7.0	60	3.8
		5-year								81	7.9	60	3.8
		10-year								89	8.1	60	3.8
		25-year								96	8.3	60	3.8
		50-year								102	8.5	60	3.8
		100-year								111	8.7	60	3.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0112	SRL0112B	2-year	Trapezoidal	1	30	93.1	890.00	889.91	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LSRL0113	LSRL0113	2-year	Natural	6	1.5	201.4	884.20	884.10	0.050	45	2.2	370	1.1
		5-year								57	2.3	370	1.1
		10-year								60	2.2	370	1.1
		25-year								69	1.8	370	1.1
		50-year								72	1.8	370	1.1
		100-year								87	1.7	370	1.1
LSRL0114	SRL0114A	2-year	Circular	4	0	195.9	885.20	884.20	0.510	44	5.5	95	7.6
		5-year								56	6.1	95	7.6
		10-year								59	6.0	95	7.6
		25-year								68	6.1	95	7.6
		50-year								73	6.1	95	7.6
		100-year								89	6.8	95	7.6
LSRL0114	SRL0114B	2-year	Trapezoidal	1	30	195.9	892.00	891.80	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0115	LSRL0115	2-year	Natural	6.5	5	305.8	885.83	885.20	0.206	44	2.2	1414	2.2
		5-year								56	2.2	1414	2.2
		10-year								59	2.2	1414	2.2
		25-year								68	2.2	1414	2.2
		50-year								73	2.2	1414	2.2
		100-year								91	2.3	1414	2.2
LSRL0116	SRL0116A	2-year	Circular	2.5	0	89.7	886.58	885.83	0.836	44	9.4	35	7.1
		5-year								56	11.5	35	7.1
		10-year								59	12.0	35	7.1
		25-year								69	13.7	35	7.1
		50-year								74	14.7	35	7.1
		100-year								75	14.9	35	7.1
LSRL0116	SRL0116B	2-year	Trapezoidal	1	30	89.7	892.00	891.91	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.3	97	3.2
		100-year								26	2.4	97	3.2
LSRL0117	LSRL0117	2-year	Natural	6	10	109.7	887.25	886.58	0.611	27	2.1	1323	4.0
		5-year								37	2.0	1323	4.0
		10-year								40	2.0	1323	4.0
		25-year								48	2.0	1323	4.0
		50-year								51	1.9	1323	4.0
		100-year								63	1.9	1323	4.0
LSRL0118	8259.1	2-year	Circular	2.5	0	340.6	887.31	887.25	0.018	25	5.6	5	1.0
		5-year								35	7.4	5	1.0
		10-year								38	7.8	5	1.0
		25-year								36	7.4	5	1.0
		50-year								34	7.0	5	1.0
		100-year								32	6.6	5	1.0
LSRL0118	8259.2	2-year	Trapezoidal	1	30	340.6	892.89	892.00	0.261	0	0.0	156	5.2
		5-year								0	0.0	156	5.2
		10-year								2	0.9	156	5.2
		25-year								18	2.2	156	5.2
		50-year								28	2.7	156	5.2
		100-year								41	3.1	156	5.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0119	8387.1	2-year	Circular	2	0	356.0	893.82	887.31	1.829	25	8.4	28	9.0
		5-year								30	9.4	28	9.0
		10-year								30	9.4	28	9.0
		25-year								30	9.4	28	9.0
		50-year								30	9.4	28	9.0
		100-year								30	9.4	28	9.0
LSRL0119	8387.2	2-year	Trapezoidal	2	30	356.0	898.90	891.89	1.969	0	0.0	1305	21.8
		5-year								5	2.3	1305	21.8
		10-year								12	2.7	1305	21.8
		25-year								21	2.3	1305	21.8
		50-year								26	2.9	1305	21.8
		100-year								34	2.6	1305	21.8
LSRL0120	8404.1	2-year	Circular	2	0	33.7	894.02	893.82	0.593	25	9.0	16	5.1
		5-year								31	9.9	16	5.1
		10-year								32	10.2	16	5.1
		25-year								33	10.3	16	5.1
		50-year								33	10.3	16	5.1
		100-year								33	10.4	16	5.1
LSRL0120	8404.2	2-year	Trapezoidal	2	30	33.7	898.87	897.90	2.876	0	0.0	1577	26.3
		5-year								26	1.5	1577	26.3
		10-year								33	1.8	1577	26.3
		25-year								42	2.2	1577	26.3
		50-year								48	2.4	1577	26.3
		100-year								57	2.7	1577	26.3
LSRL0121	8260.1	2-year	Circular	1.25	0	76.5	894.48	894.02	0.602	14	11.2	5	3.8
		5-year								14	11.2	5	3.8
		10-year								14	11.2	5	3.8
		25-year								14	11.2	5	3.8
		50-year								14	11.2	5	3.8
		100-year								14	11.2	5	3.8
LSRL0121	8260.2	2-year	Trapezoidal	2	30	76.5	898.95	898.87	0.100	13	1.8	301	5.0
		5-year								31	2.6	301	5.0
		10-year								36	2.8	301	5.0
		25-year								44	3.1	301	5.0
		50-year								49	3.2	301	5.0
		100-year								57	3.4	301	5.0
LSRL01401	8428.1	2-year	Circular	2.5	0	84.7	904.16	904.11	0.059	10	2.3	9	1.9
		5-year								10	2.3	9	1.9
		10-year								10	2.3	9	1.9
		25-year								10	2.3	9	1.9
		50-year								10	2.2	9	1.9
		100-year								10	2.1	9	1.9
LSRL01401	8428.2	2-year	Trapezoidal	1	30	84.7	907.92	907.84	0.100	5	1.2	94	3.1
		5-year								12	1.8	94	3.1
		10-year								17	2.0	94	3.1
		25-year								22	2.2	94	3.1
		50-year								25	2.4	94	3.1
		100-year								35	2.6	94	3.1
LSRL01402	8380.1	2-year	Circular	2.5	0	238.9	904.32	904.16	0.067	11	2.2	10	2.0
		5-year								11	2.2	10	2.0
		10-year								11	2.2	10	2.0
		25-year								11	2.2	10	2.0
		50-year								11	2.2	10	2.0
		100-year								11	2.2	10	2.0
LSRL01402	8380.2	2-year	Trapezoidal	3	30	238.9	908.05	907.92	0.054	-1	-0.2	410	4.6
		5-year								6	0.7	410	4.6
		10-year								9	0.9	410	4.6
		25-year								12	1.1	410	4.6
		50-year								15	1.2	410	4.6
		100-year								21	1.3	410	4.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL01403	8379.1	2-year	Circular	2	0	23.1	904.33	904.32	0.043	11	3.4	4	1.2
		5-year								14	4.3	4	1.2
		10-year								15	4.7	4	1.2
		25-year								16	5.1	4	1.2
		50-year								17	5.3	4	1.2
		100-year								18	5.7	4	1.2
LSRL01403	8379.2	2-year	Trapezoidal	3	30	23.1	908.00	907.05	4.109	0	0.0	3131	34.8
		5-year								32	1.6	3131	34.8
		10-year								40	1.8	3131	34.8
		25-year								47	2.0	3131	34.8
		50-year								50	2.0	3131	34.8
		100-year								54	2.0	3131	34.8
LSRL01501	8427.1	2-year	Circular	2.5	0	42.8	904.95	904.51	1.029	41	8.6	39	7.9
		5-year								41	8.6	39	7.9
		10-year								41	8.6	39	7.9
		25-year								41	8.6	39	7.9
		50-year								41	8.6	39	7.9
		100-year								41	8.6	39	7.9
LSRL01501	8427.2	2-year	Trapezoidal	3	30	42.8	910.00	908.00	4.675	12	3.1	3805	42.3
		5-year								27	2.3	3805	42.3
		10-year								40	2.6	3805	42.3
		25-year								57	2.8	3805	42.3
		50-year								69	3.1	3805	42.3
		100-year								86	3.4	3805	42.3
LSRL01502	8331.1	2-year	Circular	2.5	0	315.0	909.83	904.95	1.550	43	10.0	47	9.7
		5-year								44	10.1	47	9.7
		10-year								45	10.1	47	9.7
		25-year								45	10.1	47	9.7
		50-year								45	10.2	47	9.7
		100-year								45	10.2	47	9.7
LSRL01502	8331.2	2-year	Trapezoidal	4	30	315.0	914.00	910.00	1.270	1	0.9	3089	25.7
		5-year								22	3.9	3089	25.7
		10-year								35	4.7	3089	25.7
		25-year								52	5.5	3089	25.7
		50-year								64	6.0	3089	25.7
		100-year								81	6.5	3089	25.7
LSRL01503	8330.1	2-year	Circular	2.5	0	23.7	910.00	909.83	0.706	44	10.3	28	5.8
		5-year								46	10.4	28	5.8
		10-year								49	10.5	28	5.8
		25-year								49	10.5	28	5.8
		50-year								50	10.6	28	5.8
		100-year								50	10.6	28	5.8
LSRL01503	8330.2	2-year	Trapezoidal	2	30	23.7	914.02	914.00	0.100	11	1.8	263	4.4
		5-year								32	2.9	263	4.4
		10-year								44	3.3	263	4.4
		25-year								59	3.7	263	4.4
		50-year								70	3.9	263	4.4
		100-year								86	4.2	263	4.4
LSRL0201	8286.1	2-year	Circular	2.5	0	39.8	884.28	879.65	11.630	40	9.7	76	15.4
		5-year								54	11.2	76	15.4
		10-year								58	11.4	76	15.4
		25-year								57	11.4	76	15.4
		50-year								56	11.5	76	15.4
		100-year								56	11.4	76	15.4
LSRL0201	8286.2	2-year	Trapezoidal	1	30	39.8	887.28	887.00	0.703	0	0.0	256	8.5
		5-year								0	0.0	256	8.5
		10-year								0	0.0	256	8.5
		25-year								16	2.9	256	8.5
		50-year								31	3.7	256	8.5
		100-year								50	4.5	256	8.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0202	LSRL0202	2-year	Natural	4	5	407.2	885.30	884.28	0.250	36	1.5	929	2.7
		5-year								50	1.4	929	2.7
		10-year								58	1.4	929	2.7
		25-year								67	1.3	929	2.7
		50-year								79	1.3	929	2.7
		100-year								93	1.4	929	2.7
LSRL0203	8651.1	2-year	Circular	2	0	66.5	885.68	885.30	0.571	36	11.9	16	5.1
		5-year								50	16.3	16	5.1
		10-year								53	16.9	16	5.1
		25-year								53	17.0	16	5.1
		50-year								53	17.0	16	5.1
		100-year								53	17.1	16	5.1
LSRL0203	8651.2	2-year	Trapezoidal	1	30	66.5	890.93	889.00	2.902	0	0.0	520	17.3
		5-year								0	0.0	520	17.3
		10-year								8	3.4	520	17.3
		25-year								23	5.1	520	17.3
		50-year								32	5.8	520	17.3
		100-year								46	6.7	520	17.3
LSRL0204	8287.1	2-year	Circular	2	0	27.2	885.86	885.68	0.662	36	11.3	16	5.2
		5-year								37	11.8	16	5.2
		10-year								37	11.8	16	5.2
		25-year								37	11.8	16	5.2
		50-year								37	11.8	16	5.2
		100-year								37	11.8	16	5.2
LSRL0204	8287.2	2-year	Trapezoidal	2	30	27.2	889.94	889.93	0.037	0	0.0	170	2.8
		5-year								45	2.9	170	2.8
		10-year								57	2.9	170	2.8
		25-year								69	2.8	170	2.8
		50-year								78	2.8	170	2.8
		100-year								90	2.8	170	2.8
LSRL0301	8658.1	2-year	Circular	2.5	0	14.3	880.64	880.54	0.698	78	15.8	22	4.5
		5-year								108	21.7	22	4.5
		10-year								119	23.9	22	4.5
		25-year								124	25.1	22	4.5
		50-year								125	25.2	22	4.5
		100-year								127	25.5	22	4.5
LSRL0301	8658.2	2-year	Trapezoidal	1	30	14.3	888.64	888.35	2.025	0	0.0	300	10.0
		5-year								0	0.0	300	10.0
		10-year								3	1.6	300	10.0
		25-year								33	4.2	300	10.0
		50-year								53	5.1	300	10.0
		100-year								81	6.0	300	10.0
LSRL0302	8290.1	2-year	Circular	2.5	0	327.7	882.82	880.64	0.665	51	10.3	31	6.3
		5-year								50	10.2	31	6.3
		10-year								50	10.1	31	6.3
		25-year								50	10.0	31	6.3
		50-year								49	9.9	31	6.3
		100-year								49	9.9	31	6.3
LSRL0302	8290.2	2-year	Trapezoidal	2	30	327.7	890.32	887.64	0.818	32	3.9	841	14.0
		5-year								71	5.4	841	14.0
		10-year								93	5.7	841	14.0
		25-year								118	5.8	841	14.0
		50-year								136	5.9	841	14.0
		100-year								160	6.2	841	14.0
LSRL0303	8657.1	2-year	Circular	2	0	60.2	883.52	882.82	1.164	43	13.5	23	7.2
		5-year								43	13.4	23	7.2
		10-year								42	13.3	23	7.2
		25-year								42	13.2	23	7.2
		50-year								42	13.2	23	7.2
		100-year								42	13.1	23	7.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0303	8657.2	2-year	Trapezoidal	2	30	60.2	890.85	889.32	2.543	58	4.7	1483	24.7
		5-year								89	5.0	1483	24.7
		10-year								108	5.0	1483	24.7
		25-year								132	5.3	1483	24.7
		50-year								150	5.3	1483	24.7
		100-year								173	5.4	1483	24.7
LSRL0304	8486.1	2-year	Circular	2	0	154.3	885.02	883.52	0.972	35	10.9	21	6.6
		5-year								35	11.1	21	6.6
		10-year								35	11.1	21	6.6
		25-year								35	11.1	21	6.6
		50-year								34	10.8	21	6.6
		100-year								34	10.6	21	6.6
LSRL0304	8486.2	2-year	Trapezoidal	2	30	154.3	892.02	889.85	1.406	59	4.0	1103	18.4
		5-year								89	4.6	1103	18.4
		10-year								106	4.9	1103	18.4
		25-year								130	4.8	1103	18.4
		50-year								147	5.0	1103	18.4
		100-year								170	5.5	1103	18.4
LSRL0305	8485.1	2-year	Circular	2	0	241.7	885.63	885.02	0.252	25	8.0	11	3.4
		5-year								25	7.7	11	3.4
		10-year								24	7.6	11	3.4
		25-year								23	7.3	11	3.4
		50-year								23	7.4	11	3.4
		100-year								23	7.4	11	3.4
LSRL0305	8485.2	2-year	Trapezoidal	2	30	241.7	893.05	891.02	0.840	41	1.8	852	14.2
		5-year								61	2.4	852	14.2
		10-year								73	2.7	852	14.2
		25-year								89	3.1	852	14.2
		50-year								101	3.4	852	14.2
		100-year								117	3.7	852	14.2
LSRL0306	8289.1	2-year	Circular	2	0	325.5	890.88	885.63	1.613	23	7.1	27	8.5
		5-year								22	7.4	27	8.5
		10-year								23	7.4	27	8.5
		25-year								22	7.1	27	8.5
		50-year								23	7.1	27	8.5
		100-year								23	7.1	27	8.5
LSRL0306	8289.2	2-year	Trapezoidal	2	30	325.5	895.88	892.05	1.177	35	1.7	1009	16.8
		5-year								55	2.3	1009	16.8
		10-year								68	2.6	1009	16.8
		25-year								83	3.1	1009	16.8
		50-year								95	3.4	1009	16.8
		100-year								111	3.7	1009	16.8
LSRL0307	8288.1	2-year	Circular	2	0	69.1	891.55	890.88	0.969	20	8.1	21	6.6
		5-year								21	8.2	21	6.6
		10-year								20	8.2	21	6.6
		25-year								21	8.1	21	6.6
		50-year								21	8.1	21	6.6
		100-year								21	8.2	21	6.6
LSRL0307	8288.2	2-year	Trapezoidal	2	30	69.1	895.55	894.88	0.969	61	2.4	916	15.3
		5-year								81	2.9	916	15.3
		10-year								93	3.2	916	15.3
		25-year								109	3.5	916	15.3
		50-year								121	3.8	916	15.3
		100-year								137	4.1	916	15.3
LSRL03A01	LSRL03A01	2-year	Circular	2.5	0	23.8	883.12	880.64	10.416	1	0.2	110	22.3
		5-year								1	-0.2	110	22.3
		10-year								8	1.6	110	22.3
		25-year								8	1.6	110	22.3
		50-year								8	1.7	110	22.3
		100-year								9	1.8	110	22.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL03B01	LSRL03B01	2-year	Circular	2	0	32.2	885.85	882.82	9.410	6	2.8	64	20.5
		5-year								4	1.3	64	20.5
		10-year								4	1.2	64	20.5
		25-year								-3	0.9	64	20.5
		50-year								3	0.9	64	20.5
		100-year								3	0.9	64	20.5
LSRL0401	8291.1	2-year	Circular	2.5	0	172.2	890.03	884.43	3.252	85	17.8	69	14.0
		5-year								85	17.8	69	14.0
		10-year								85	17.7	69	14.0
		25-year								85	17.6	69	14.0
		50-year								85	17.5	69	14.0
		100-year								85	17.5	69	14.0
LSRL0401	8291.2	2-year	Trapezoidal	2	30	172.2	894.53	892.00	1.469	102	7.5	1127	18.8
		5-year								191	9.5	1127	18.8
		10-year								245	10.5	1127	18.8
		25-year								316	11.6	1127	18.8
		50-year								369	12.3	1127	18.8
		100-year								440	13.2	1127	18.8
LSRL0402	8292.1	2-year	Circular	2.5	0	42.4	890.32	890.03	0.683	79	16.0	31	6.4
		5-year								79	16.0	31	6.4
		10-year								80	16.1	31	6.4
		25-year								80	16.2	31	6.4
		50-year								80	16.2	31	6.4
		100-year								80	16.2	31	6.4
LSRL0402	8292.2	2-year	Trapezoidal	3	30	42.4	895.82	894.53	3.040	115	9.1	3068	34.1
		5-year								203	11.2	3068	34.1
		10-year								256	12.2	3068	34.1
		25-year								327	13.3	3068	34.1
		50-year								380	14.1	3068	34.1
		100-year								450	15.0	3068	34.1
LSRL0403	8293.1	2-year	Circular	2.5	0	527.2	893.56	890.32	0.615	41	8.6	30	6.1
		5-year								41	8.6	30	6.1
		10-year								40	8.5	30	6.1
		25-year								40	8.5	30	6.1
		50-year								40	8.4	30	6.1
		100-year								40	8.5	30	6.1
LSRL0403	8293.2	2-year	Trapezoidal	2	30	527.2	898.06	895.82	0.425	120	5.5	606	10.1
		5-year								187	6.5	606	10.1
		10-year								227	7.0	606	10.1
		25-year								280	7.6	606	10.1
		50-year								320	8.0	606	10.1
		100-year								373	8.4	606	10.1
LSRL0404	8294.1	2-year	Circular	2.5	0	517.7	900.60	893.56	1.360	44	9.0	44	9.0
		5-year								45	9.0	44	9.0
		10-year								44	9.0	44	9.0
		25-year								44	9.0	44	9.0
		50-year								44	9.0	44	9.0
		100-year								44	9.0	44	9.0
LSRL0404	8294.2	2-year	Trapezoidal	1	30	517.7	905.10	899.06	1.167	79	6.3	329	11.0
		5-year								134	7.7	329	11.0
		10-year								166	8.4	329	11.0
		25-year								210	9.2	329	11.0
		50-year								242	9.8	329	11.0
		100-year								285	10.4	329	11.0
LSRL0405	8295.1	2-year	Circular	2.5	0	643.8	905.59	900.60	0.775	37	7.5	34	6.8
		5-year								38	7.6	34	6.8
		10-year								38	7.7	34	6.8
		25-year								38	7.6	34	6.8
		50-year								37	7.6	34	6.8
		100-year								36	7.6	34	6.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0405	8295.2	2-year	Trapezoidal	1	30	643.8	910.51	906.10	0.685	65	5.0	252	8.4
		5-year								110	6.1	252	8.4
		10-year								136	6.6	252	8.4
		25-year								171	7.3	252	8.4
		50-year								198	7.7	252	8.4
		100-year								232	8.2	252	8.4
LSRL0406	8661.1	2-year	Circular	2	0	27.2	905.63	905.59	0.147	42	13.3	8	2.4
		5-year								45	14.2	8	2.4
		10-year								42	13.4	8	2.4
		25-year								37	11.9	8	2.4
		50-year								36	11.3	8	2.4
		100-year								37	11.6	8	2.4
LSRL0406	8661.2	2-year	Trapezoidal	3	30	27.2	910.55	910.51	0.147	81	4.2	643	7.1
		5-year								124	4.9	643	7.1
		10-year								150	5.3	643	7.1
		25-year								184	5.7	643	7.1
		50-year								210	5.9	643	7.1
		100-year								244	6.3	643	7.1
LSRL0407	8662.1	2-year	Circular	2	0	122.9	906.72	905.63	0.887	25	8.0	20	6.3
		5-year								25	8.0	20	6.3
		10-year								25	7.9	20	6.3
		25-year								25	8.0	20	6.3
		50-year								25	8.0	20	6.3
		100-year								25	8.0	20	6.3
LSRL0407	8662.2	2-year	Trapezoidal	2	30	122.9	912.55	910.55	1.627	43	3.3	1186	19.8
		5-year								72	4.2	1186	19.8
		10-year								89	4.6	1186	19.8
		25-year								112	5.1	1186	19.8
		50-year								129	5.4	1186	19.8
		100-year								152	5.8	1186	19.8
LSRL0408	8316.1	2-year	Circular	2	0	677.9	916.21	906.72	1.400	23	7.9	25	7.9
		5-year								23	7.9	25	7.9
		10-year								23	7.9	25	7.9
		25-year								23	7.6	25	7.9
		50-year								23	7.6	25	7.9
		100-year								23	8.1	25	7.9
LSRL0408	8316.2	2-year	Trapezoidal	1	30	677.9	920.46	912.55	1.167	44	5.0	329	11.0
		5-year								72	6.1	329	11.0
		10-year								89	6.6	329	11.0
		25-year								112	7.2	329	11.0
		50-year								128	7.6	329	11.0
		100-year								150	8.1	329	11.0
LSRL0501	8037.1	2-year	Rectangular	5	6	744.7	891.11	885.10	0.807	151	8.4	352	11.7
		5-year								200	9.4	352	11.7
		10-year								237	10.0	352	11.7
		25-year								318	11.2	352	11.7
		50-year								334	11.5	352	11.7
		100-year								331	11.4	352	11.7
LSRL0501	8037.2	2-year	Trapezoidal	1	30	744.7	898.11	893.60	0.606	0	0.0	237	7.9
		5-year								0	0.0	237	7.9
		10-year								0	0.0	237	7.9
		25-year								0	0.0	237	7.9
		50-year								0	0.0	237	7.9
		100-year								0	0.0	237	7.9
LSRL0502	8043.1	2-year	Rectangular	5	6	178.1	891.84	891.11	0.410	151	10.3	251	8.4
		5-year								200	11.2	251	8.4
		10-year								237	11.7	251	8.4
		25-year								317	12.3	251	8.4
		50-year								334	12.3	251	8.4
		100-year								327	12.2	251	8.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0502	8043.2	2-year	Trapezoidal	1	30	178.1	899.00	898.11	0.500	0	0.0	216	7.2
		5-year								0	0.0	216	7.2
		10-year								0	0.0	216	7.2
		25-year								0	0.0	216	7.2
		50-year								0	0.0	216	7.2
		100-year								0	0.0	216	7.2
LSRL0601	8342.1	2-year	Circular	2.5	0	369.1	894.08	891.84	0.607	44	8.9	30	6.0
		5-year								48	9.8	30	6.0
		10-year								48	9.9	30	6.0
		25-year								48	9.9	30	6.0
		50-year								48	9.8	30	6.0
		100-year								47	9.6	30	6.0
LSRL0601	8342.2	2-year	Trapezoidal	1	30	369.1	899.58	899.00	0.157	0	0.0	121	4.0
		5-year								28	2.4	121	4.0
		10-year								45	2.9	121	4.0
		25-year								64	3.4	121	4.0
		50-year								78	3.7	121	4.0
		100-year								98	4.0	121	4.0
LSRL0602	8666.1	2-year	Circular	2.5	0	259.4	895.08	894.08	0.385	38	7.8	24	4.8
		5-year								36	7.2	24	4.8
		10-year								34	6.9	24	4.8
		25-year								34	6.9	24	4.8
		50-year								34	6.8	24	4.8
		100-year								33	6.7	24	4.8
LSRL0602	8666.2	2-year	Trapezoidal	2	30	259.4	900.58	898.58	0.771	17	2.3	817	13.6
		5-year								46	3.1	817	13.6
		10-year								59	3.3	817	13.6
		25-year								76	2.8	817	13.6
		50-year								89	3.7	817	13.6
		100-year								105	3.3	817	13.6
LSRL0603	8282.1	2-year	Circular	1.75	0	73.5	896.62	895.08	2.096	27	11.3	21	8.9
		5-year								22	9.1	21	8.9
		10-year								22	9.1	21	8.9
		25-year								21	8.7	21	8.9
		50-year								21	8.7	21	8.9
		100-year								21	8.7	21	8.9
LSRL0603	8282.2	2-year	Trapezoidal	2	30	73.5	902.04	899.58	3.348	9	0.5	1702	28.4
		5-year								22	1.1	1702	28.4
		10-year								30	1.4	1702	28.4
		25-year								40	1.7	1702	28.4
		50-year								47	2.0	1702	28.4
		100-year								57	2.3	1702	28.4
LSRL0604	8281.1	2-year	Circular	1.75	0	176.8	898.83	896.62	1.250	18	8.2	16	6.8
		5-year								18	8.2	16	6.8
		10-year								18	8.2	16	6.8
		25-year								18	8.2	16	6.8
		50-year								18	8.2	16	6.8
		100-year								18	8.1	16	6.8
LSRL0604	8281.2	2-year	Trapezoidal	2	30	176.8	905.08	901.04	2.285	13	2.8	1406	23.4
		5-year								25	3.6	1406	23.4
		10-year								33	3.3	1406	23.4
		25-year								42	3.9	1406	23.4
		50-year								49	3.9	1406	23.4
		100-year								59	4.5	1406	23.4
LSRL0605	8665.1	2-year	Circular	1.25	0	54.2	900.07	898.83	2.290	18	14.4	9	7.4
		5-year								18	14.5	9	7.4
		10-year								18	14.5	9	7.4
		25-year								18	14.5	9	7.4
		50-year								18	14.5	9	7.4
		100-year								18	14.5	9	7.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0605	8665.2	2-year	Trapezoidal	2	30	54.2	905.74	904.08	3.065	23	3.7	1628	27.1
		5-year								35	4.0	1628	27.1
		10-year								42	3.8	1628	27.1
		25-year								52	4.3	1628	27.1
		50-year								59	3.5	1628	27.1
		100-year								69	4.4	1628	27.1
LSRL0606	8664.1	2-year	Circular	1.25	0	77.4	901.59	900.07	1.964	13	10.8	8	6.9
		5-year								13	10.8	8	6.9
		10-year								13	10.8	8	6.9
		25-year								13	10.8	8	6.9
		50-year								13	10.8	8	6.9
		100-year								13	10.8	8	6.9
LSRL0606	8664.2	2-year	Trapezoidal	2	30	77.4	906.34	904.74	2.067	24	3.2	1337	22.3
		5-year								37	3.7	1337	22.3
		10-year								44	3.8	1337	22.3
		25-year								53	3.8	1337	22.3
		50-year								61	3.9	1337	22.3
		100-year								70	3.5	1337	22.3
LSRL0607	8663.1	2-year	Circular	1.25	0	40.2	903.02	901.59	3.556	12	9.7	11	9.2
		5-year								12	9.9	11	9.2
		10-year								12	9.8	11	9.2
		25-year								12	9.9	11	9.2
		50-year								12	9.8	11	9.2
		100-year								12	9.5	11	9.2
LSRL0607	8663.2	2-year	Trapezoidal	2	30	40.2	906.35	905.34	2.512	29	2.7	1474	24.6
		5-year								41	2.7	1474	24.6
		10-year								48	2.4	1474	24.6
		25-year								58	2.9	1474	24.6
		50-year								65	2.9	1474	24.6
		100-year								75	3.2	1474	24.6
LSRL0701	8333.1	2-year	Circular	2.5	0	298.9	898.32	893.82	1.505	36	7.8	47	9.5
		5-year								46	9.3	47	9.5
		10-year								48	9.8	47	9.5
		25-year								49	9.9	47	9.5
		50-year								49	9.9	47	9.5
		100-year								49	9.9	47	9.5
LSRL0701	8333.2	2-year	Trapezoidal	1	30	298.9	903.65	902.00	0.552	0	0.0	227	7.6
		5-year								0	0.0	227	7.6
		10-year								4	1.5	227	7.6
		25-year								28	3.3	227	7.6
		50-year								43	3.9	227	7.6
		100-year								60	4.5	227	7.6
LSRL0702	8334.1	2-year	Circular	2.5	0	255.2	901.89	898.32	1.399	32	8.7	45	9.2
		5-year								46	9.3	45	9.2
		10-year								51	10.4	45	9.2
		25-year								51	10.3	45	9.2
		50-year								50	10.2	45	9.2
		100-year								50	10.1	45	9.2
LSRL0702	8334.2	2-year	Trapezoidal	3	30	255.2	907.89	902.65	2.053	0	0.0	2521	28.0
		5-year								0	0.0	2521	28.0
		10-year								4	0.3	2521	28.0
		25-year								23	1.1	2521	28.0
		50-year								33	1.5	2521	28.0
		100-year								45	1.9	2521	28.0
LSRL0703	8335.1	2-year	Circular	2	0	219.5	907.52	901.89	2.566	32	12.2	34	10.7
		5-year								41	12.9	34	10.7
		10-year								40	12.6	34	10.7
		25-year								40	12.6	34	10.7
		50-year								40	12.5	34	10.7
		100-year								39	12.4	34	10.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0703	8335.2	2-year	Trapezoidal	2	30	219.5	913.52	906.89	3.021	0	0.0	1617	26.9
		5-year								7	3.2	1617	26.9
		10-year								23	4.7	1617	26.9
		25-year								38	3.9	1617	26.9
		50-year								47	4.1	1617	26.9
		100-year								60	4.3	1617	26.9
LSRL0704	8336.1	2-year	Circular	2	0	307.8	912.46	907.52	1.605	32	11.0	27	8.5
		5-year								36	11.6	27	8.5
		10-year								36	11.4	27	8.5
		25-year								34	11.0	27	8.5
		50-year								34	10.9	27	8.5
		100-year								34	11.0	27	8.5
LSRL0704	8336.2	2-year	Trapezoidal	2	30	307.8	918.38	912.52	1.904	0	0.0	1283	21.4
		5-year								21	3.2	1283	21.4
		10-year								32	3.5	1283	21.4
		25-year								45	3.5	1283	21.4
		50-year								54	3.6	1283	21.4
		100-year								67	4.6	1283	21.4
LSRL0705	8337.1	2-year	Circular	2	0	136.2	914.05	912.46	1.167	31	9.9	23	7.2
		5-year								31	9.9	23	7.2
		10-year								31	9.9	23	7.2
		25-year								31	9.9	23	7.2
		50-year								31	9.9	23	7.2
		100-year								31	9.7	23	7.2
LSRL0705	8337.2	2-year	Trapezoidal	2	30	136.2	919.22	917.38	1.351	2	1.4	1081	18.0
		5-year								32	3.4	1081	18.0
		10-year								42	3.2	1081	18.0
		25-year								55	3.4	1081	18.0
		50-year								64	3.3	1081	18.0
		100-year								77	3.1	1081	18.0
LSRL0706	8338.1	2-year	Circular	2	0	297.6	917.90	914.05	1.294	27	8.4	24	7.6
		5-year								24	8.0	24	7.6
		10-year								23	7.8	24	7.6
		25-year								24	7.9	24	7.6
		50-year								24	7.9	24	7.6
		100-year								24	8.0	24	7.6
LSRL0706	8338.2	2-year	Trapezoidal	1	30	297.6	922.23	920.22	0.675	10	2.3	251	8.4
		5-year								25	3.4	251	8.4
		10-year								34	3.8	251	8.4
		25-year								45	4.3	251	8.4
		50-year								54	4.6	251	8.4
		100-year								65	4.9	251	8.4
LSRL0707	8339.1	2-year	Circular	2	0	321.3	919.80	917.90	0.591	24	7.8	16	5.1
		5-year								24	7.9	16	5.1
		10-year								25	8.1	16	5.1
		25-year								23	7.7	16	5.1
		50-year								22	7.3	16	5.1
		100-year								23	7.6	16	5.1
LSRL0707	8339.2	2-year	Trapezoidal	1	30	321.3	923.88	923.23	0.202	16	2.0	137	4.6
		5-year								30	2.6	137	4.6
		10-year								39	2.9	137	4.6
		25-year								50	3.2	137	4.6
		50-year								59	3.4	137	4.6
		100-year								70	3.7	137	4.6
LSRL0801	SRL0801A	2-year	Circular	2	0	37.5	898.04	896.70	3.571	45	17.2	23	7.4
		5-year								55	17.5	23	7.4
		10-year								58	18.2	23	7.4
		25-year								58	18.3	23	7.4
		50-year								58	18.4	23	7.4
		100-year								59	18.5	23	7.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0801	SRL0801B	2-year	Trapezoidal	10	30	37.5	903.04	903.00	0.100	0	0.0	3433	11.4
		5-year								0	0.0	3433	11.4
		10-year								20	2.7	3433	11.4
		25-year								56	3.6	3433	11.4
		50-year								79	4.2	3433	11.4
		100-year								108	4.6	3433	11.4
LSRL0802	LSRL0802	2-year	Natural	7	6	252.5	900.00	898.04	0.776	40	4.4	3965	5.8
		5-year								66	4.2	3965	5.8
		10-year								83	4.1	3965	5.8
		25-year								112	4.0	3965	5.8
		50-year								130	4.2	3965	5.8
		100-year								154	4.2	3965	5.8
LSRL0803	SRL0803A	2-year	Circular	2	0	43.3	900.56	900.00	1.292	40	12.6	24	7.6
		5-year								42	13.3	24	7.6
		10-year								42	13.3	24	7.6
		25-year								42	13.3	24	7.6
		50-year								42	13.4	24	7.6
		100-year								43	13.4	24	7.6
LSRL0803	SRL0803B	2-year	Trapezoidal	5	30	43.3	904.00	903.96	0.100	0	0.0	1168	7.8
		5-year								28	2.7	1168	7.8
		10-year								51	3.4	1168	7.8
		25-year								80	4.1	1168	7.8
		50-year								100	4.4	1168	7.8
		100-year								124	4.8	1168	7.8
LSRL0804	LSRL0804	2-year	Natural	5	5	337.4	905.73	900.56	1.532	22	1.4	8619	7.6
		5-year								32	1.4	8619	7.6
		10-year								38	1.4	8619	7.6
		25-year								46	1.4	8619	7.6
		50-year								52	1.4	8619	7.6
		100-year								60	1.4	8619	7.6
LSRL0901	8372.1	2-year	Circular	2	0	163.5	899.70	896.81	1.767	3	4.5	28	8.9
		5-year								4	9.1	28	8.9
		10-year								4	4.6	28	8.9
		25-year								5	4.7	28	8.9
		50-year								6	3.5	28	8.9
		100-year								6	3.3	28	8.9
LSRL0901	8372.2	2-year	Trapezoidal	1	30	163.5	906.05	905.89	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LSRL0902	8371.1	2-year	Circular	1	0	54.9	901.05	899.70	2.460	3	8.2	5	6.6
		5-year								4	12.6	5	6.6
		10-year								4	8.7	5	6.6
		25-year								5	13.7	5	6.6
		50-year								6	8.6	5	6.6
		100-year								6	8.9	5	6.6
LSRL0902	8371.2	2-year	Trapezoidal	1	30	54.9	906.10	906.05	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LSRL0903	8370.1	2-year	Circular	1	0	100.8	902.30	901.05	1.240	3	5.3	4	4.7
		5-year								4	10.6	4	4.7
		10-year								4	7.3	4	4.7
		25-year								5	7.1	4	4.7
		50-year								6	7.2	4	4.7
		100-year								6	17.9	4	4.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0903	8370.2	2-year	Trapezoidal	1	30	100.8	906.30	906.10	0.198	0	0.0	136	4.5
		5-year								0	0.0	136	4.5
		10-year								0	0.0	136	4.5
		25-year								0	0.0	136	4.5
		50-year								0	0.0	136	4.5
		100-year								0	0.0	136	4.5
LSRL0904	8369.1	2-year	Circular	1	0	65.0	903.98	902.30	2.587	3	12.4	5	6.8
		5-year								4	7.9	5	6.8
		10-year								4	9.3	5	6.8
		25-year								5	6.4	5	6.8
		50-year								6	7.2	5	6.8
		100-year								6	7.3	5	6.8
LSRL0904	8369.2	2-year	Trapezoidal	1	30	65.0	906.98	905.30	2.587	0	0.0	491	16.4
		5-year								0	0.0	491	16.4
		10-year								0	0.0	491	16.4
		25-year								0	0.0	491	16.4
		50-year								0	0.9	491	16.4
		100-year								2	1.0	491	16.4
LSRL09A01	SRL09A01A	2-year	Circular	2.5	0	94.6	899.65	896.81	3.003	36	8.6	66	13.4
		5-year								47	9.8	66	13.4
		10-year								50	9.9	66	13.4
		25-year								52	10.6	66	13.4
		50-year								55	11.2	66	13.4
		100-year								59	12.0	66	13.4
LSRL09A01	SRL09A01B	2-year	Trapezoidal	3	30	94.6	906.00	905.89	0.116	0	0.0	600	6.7
		5-year								0	0.0	600	6.7
		10-year								0	0.0	600	6.7
		25-year								0	0.0	600	6.7
		50-year								0	0.0	600	6.7
		100-year								0	0.0	600	6.7
LSRL09A02	LSRL09A02	2-year	Natural	4.8	10	1257.0	916.18	899.65	1.315	18	1.8	1545	8.2
		5-year								26	2.0	1545	8.2
		10-year								30	2.0	1545	8.2
		25-year								37	2.1	1545	8.2
		50-year								42	2.1	1545	8.2
		100-year								48	2.1	1545	8.2
LSRL09A03	SRL09A03A	2-year	Circular	2	0	103.7	917.18	916.18	0.964	18	9.2	21	6.6
		5-year								25	11.0	21	6.6
		10-year								27	11.2	21	6.6
		25-year								28	11.3	21	6.6
		50-year								29	11.4	21	6.6
		100-year								30	11.5	21	6.6
LSRL09A03	SRL09A03B	2-year	Trapezoidal	1	30	103.7	920.00	919.90	0.100	0	0.0	95	3.2
		5-year								0	0.4	95	3.2
		10-year								4	1.1	95	3.2
		25-year								10	1.6	95	3.2
		50-year								14	1.8	95	3.2
		100-year								19	2.1	95	3.2
LSRL09B01	LSRL09B01	2-year	Circular	1	0	42.3	901.05	899.70	3.193	0	0.0	6	7.5
		5-year								0	0.0	6	7.5
		10-year								0	-0.1	6	7.5
		25-year								0	-0.3	6	7.5
		50-year								0	-0.3	6	7.5
		100-year								0	0.5	6	7.5
LSRL1001	8368.1	2-year	Circular	2.67	0	243.0	899.92	896.81	1.280	9	3.6	51	9.2
		5-year								13	3.8	51	9.2
		10-year								15	4.2	51	9.2
		25-year								19	5.1	51	9.2
		50-year								21	5.5	51	9.2
		100-year								25	6.1	51	9.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1001	8368.2	2-year	Trapezoidal	1	30	243.0	906.13	905.89	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL1002	8446.1	2-year	Circular	1.25	0	41.9	900.50	899.92	1.385	7	7.7	7	5.8
		5-year								10	9.3	7	5.8
		10-year								12	10.1	7	5.8
		25-year								15	12.5	7	5.8
		50-year								17	13.8	7	5.8
		100-year								20	15.6	7	5.8
LSRL1002	8446.2	2-year	Trapezoidal	2	30	41.9	906.17	906.13	0.100	0	0.0	287	4.8
		5-year								0	0.0	287	4.8
		10-year								0	0.0	287	4.8
		25-year								0	0.0	287	4.8
		50-year								0	0.0	287	4.8
		100-year								0	0.0	287	4.8
LSRL1003	8445.1	2-year	Circular	1.25	0	110.4	902.11	900.50	1.458	7	6.8	7	5.9
		5-year								10	8.4	7	5.9
		10-year								11	9.2	7	5.9
		25-year								11	9.2	7	5.9
		50-year								11	9.2	7	5.9
		100-year								11	9.2	7	5.9
LSRL1003	8445.2	2-year	Trapezoidal	2	30	110.4	906.36	906.17	0.172	0	0.0	386	6.4
		5-year								0	0.0	386	6.4
		10-year								0	0.3	386	6.4
		25-year								5	1.3	386	6.4
		50-year								8	1.6	386	6.4
		100-year								13	1.9	386	6.4
LSRL1004	8367.1	2-year	Circular	1.25	0	59.3	903.32	902.11	2.040	7	7.3	9	7.0
		5-year								10	7.9	9	7.0
		10-year								10	8.1	9	7.0
		25-year								10	8.1	9	7.0
		50-year								10	8.1	9	7.0
		100-year								10	8.1	9	7.0
LSRL1004	8367.2	2-year	Trapezoidal	2	30	59.3	906.57	905.36	2.040	0	0.0	1328	22.1
		5-year								2	1.7	1328	22.1
		10-year								8	1.9	1328	22.1
		25-year								12	2.2	1328	22.1
		50-year								14	2.1	1328	22.1
		100-year								17	2.2	1328	22.1
LSRL1101	8351.1	2-year	Circular	2.5	0	240.5	899.25	897.00	0.935	40	8.1	37	7.5
		5-year								48	9.7	37	7.5
		10-year								57	11.6	37	7.5
		25-year								58	11.7	37	7.5
		50-year								58	11.8	37	7.5
		100-year								59	11.9	37	7.5
LSRL1101	8351.2	2-year	Trapezoidal	3	30	240.5	906.24	906.00	0.100	0	0.0	556	6.2
		5-year								0	0.0	556	6.2
		10-year								1	0.5	556	6.2
		25-year								12	1.6	556	6.2
		50-year								31	2.4	556	6.2
		100-year								51	3.0	556	6.2
LSRL1102	8350.1	2-year	Circular	2.5	0	240.6	902.72	899.25	1.442	40	9.3	46	9.3
		5-year								48	9.7	46	9.3
		10-year								49	9.9	46	9.3
		25-year								49	10.0	46	9.3
		50-year								50	10.0	46	9.3
		100-year								50	10.0	46	9.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1102	8350.2	2-year	Trapezoidal	4	30	240.6	908.64	906.24	0.998	0	0.0	2738	22.8
		5-year								0	0.0	2738	22.8
		10-year								20	3.5	2738	22.8
		25-year								31	4.1	2738	22.8
		50-year								52	4.4	2738	22.8
		100-year								72	4.8	2738	22.8
LSRL1103	8347.1	2-year	Circular	2.5	0	155.0	904.87	902.72	1.387	40	10.2	45	9.1
		5-year								52	10.5	45	9.1
		10-year								54	10.8	45	9.1
		25-year								55	11.0	45	9.1
		50-year								55	11.1	45	9.1
		100-year								55	11.2	45	9.1
LSRL1103	8347.2	2-year	Trapezoidal	2	30	155.0	911.04	907.64	2.193	0	0.0	1377	23.0
		5-year								0	0.0	1377	23.0
		10-year								13	0.8	1377	23.0
		25-year								23	1.2	1377	23.0
		50-year								43	1.9	1377	23.0
		100-year								62	2.6	1377	23.0
LSRL1104	8346.1	2-year	Circular	2	0	122.2	907.85	904.87	2.439	18	7.8	33	10.4
		5-year								26	8.1	33	10.4
		10-year								28	9.0	33	10.4
		25-year								30	9.5	33	10.4
		50-year								31	9.6	33	10.4
		100-year								30	9.6	33	10.4
LSRL1104	8346.2	2-year	Trapezoidal	2	30	122.2	913.52	910.04	2.848	0	0.0	1570	26.2
		5-year								0	0.0	1570	26.2
		10-year								0	0.0	1570	26.2
		25-year								0	0.0	1570	26.2
		50-year								13	0.7	1570	26.2
		100-year								20	1.0	1570	26.2
LSRL1105	8353.1	2-year	Circular	2	0	222.7	912.61	907.85	2.137	18	10.2	31	9.8
		5-year								25	10.4	31	9.8
		10-year								25	10.4	31	9.8
		25-year								32	10.5	31	9.8
		50-year								32	10.5	31	9.8
		100-year								32	10.5	31	9.8
LSRL1105	8353.2	2-year	Trapezoidal	2	30	222.7	917.94	912.52	2.433	0	0.0	1451	24.2
		5-year								0	0.0	1451	24.2
		10-year								0	0.0	1451	24.2
		25-year								1	0.1	1451	24.2
		50-year								12	0.9	1451	24.2
		100-year								20	1.2	1451	24.2
LSRL1106	8357.1	2-year	Circular	1.75	0	152.7	915.38	912.61	1.814	18	9.6	20	8.2
		5-year								25	10.3	20	8.2
		10-year								25	10.5	20	8.2
		25-year								26	10.9	20	8.2
		50-year								27	10.9	20	8.2
		100-year								27	11.2	20	8.2
LSRL1106	8357.2	2-year	Trapezoidal	2	30	152.7	920.46	916.94	2.305	0	0.0	1412	23.5
		5-year								0	0.0	1412	23.5
		10-year								0	0.0	1412	23.5
		25-year								17	3.4	1412	23.5
		50-year								23	3.6	1412	23.5
		100-year								30	3.8	1412	23.5
LSRL1107	8365.1	2-year	Circular	1.5	0	236.5	918.03	915.38	1.120	4	4.7	10	5.8
		5-year								6	5.3	10	5.8
		10-year								7	5.5	10	5.8
		25-year								8	5.8	10	5.8
		50-year								9	5.9	10	5.8
		100-year								11	6.3	10	5.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1107	8365.2	2-year	Trapezoidal	1	30	236.5	922.53	919.46	1.298	0	0.0	348	11.6
		5-year								0	0.0	348	11.6
		10-year								0	0.0	348	11.6
		25-year								0	0.0	348	11.6
		50-year								0	0.0	348	11.6
		100-year								0	0.0	348	11.6
LSRL1108	8360.1	2-year	Circular	1.5	0	38.4	918.40	918.03	0.963	4	5.2	10	5.4
		5-year								6	5.8	10	5.4
		10-year								7	6.0	10	5.4
		25-year								8	6.3	10	5.4
		50-year								9	6.5	10	5.4
		100-year								11	6.6	10	5.4
LSRL1108	8360.2	2-year	Trapezoidal	1	30	38.4	921.90	921.53	0.963	0	0.0	299	10.0
		5-year								0	0.0	299	10.0
		10-year								0	0.0	299	10.0
		25-year								0	0.0	299	10.0
		50-year								0	0.0	299	10.0
		100-year								0	0.0	299	10.0
LSRL1109	LSRL1109	2-year	Circular	1.25	0	160.1	919.99	918.40	0.993	4	5.2	6	4.9
		5-year								6	5.8	6	4.9
		10-year								7	5.9	6	4.9
		25-year								8	6.9	6	4.9
		50-year								9	7.5	6	4.9
		100-year								11	8.4	6	4.9
LSRL1110	LSRL1110	2-year	Circular	1.25	0	46.4	920.49	919.99	1.077	4	5.1	6	5.1
		5-year								6	5.4	6	5.1
		10-year								7	5.5	6	5.1
		25-year								8	6.5	6	5.1
		50-year								9	7.4	6	5.1
		100-year								11	8.4	6	5.1
LSRL11A01	LSRL11A01	2-year	Circular	1.25	0	31.0	904.14	902.72	4.582	1	1.2	13	10.5
		5-year								7	5.8	13	10.5
		10-year								7	5.8	13	10.5
		25-year								7	5.7	13	10.5
		50-year								7	5.8	13	10.5
		100-year								7	5.9	13	10.5
LSRL11A02	LSRL11A02	2-year	Circular	1.25	0	25.1	904.65	904.14	2.036	0	0.9	8	6.4
		5-year								5	4.5	8	6.4
		10-year								5	4.3	8	6.4
		25-year								5	4.3	8	6.4
		50-year								6	4.8	8	6.4
		100-year								5	4.5	8	6.4
LSRL11B01	LSRL11B01	2-year	Circular	1.25	0	33.8	907.47	904.87	7.692	0	0.0	17	13.6
		5-year								6	5.4	17	13.6
		10-year								6	5.3	17	13.6
		25-year								6	5.1	17	13.6
		50-year								6	5.1	17	13.6
		100-year								6	4.7	17	13.6
LSRL11C01	LSRL11C01	2-year	Circular	1.25	0	57.2	909.82	907.85	3.443	0	0.0	11	9.1
		5-year								3	3.6	11	9.1
		10-year								-3	3.3	11	9.1
		25-year								5	3.9	11	9.1
		50-year								5	3.8	11	9.1
		100-year								4	4.4	11	9.1
LSRL11C02	LSRL11C02	2-year	Circular	1.25	0	31.3	910.25	909.82	1.373	0	0.0	7	5.7
		5-year								1	2.2	7	5.7
		10-year								-2	-2.3	7	5.7
		25-year								3	3.3	7	5.7
		50-year								3	3.0	7	5.7
		100-year								3	-2.6	7	5.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL11D01	LSRL11D01	2-year	Circular	1.25	0	35.2	913.98	912.61	3.898	0	0.0	12	9.6
		5-year								1	0.9	12	9.6
		10-year								1	1.2	12	9.6
		25-year								2	1.5	12	9.6
		50-year								2	1.3	12	9.6
		100-year								2	1.5	12	9.6
LSRL11E01	LSRL11E01	2-year	Circular	1.25	0	30.1	913.35	912.61	2.458	0	-0.1	9	7.7
		5-year								1	0.7	9	7.7
		10-year								1	0.8	9	7.7
		25-year								2	1.6	9	7.7
		50-year								2	1.4	9	7.7
		100-year								2	1.4	9	7.7
LSRL11F01	LSRL11F01	2-year	Circular	1.25	0	48.5	916.54	915.38	2.394	0	0.3	9	7.6
		5-year								4	3.3	9	7.6
		10-year								6	4.9	9	7.6
		25-year								5	4.1	9	7.6
		50-year								5	4.3	9	7.6
		100-year								6	4.9	9	7.6
LSRL11F02	LSRL11F02	2-year	Circular	1.25	0	42.3	917.47	916.54	2.199	0	0.0	9	7.2
		5-year								4	3.8	9	7.2
		10-year								4	4.7	9	7.2
		25-year								4	4.4	9	7.2
		50-year								4	4.5	9	7.2
		100-year								4	4.6	9	7.2
LSRL1201	8332.1	2-year	Circular	2	0	173.5	899.29	897.45	1.061	12	5.1	22	6.9
		5-year								23	7.6	22	6.9
		10-year								23	7.5	22	6.9
		25-year								23	7.6	22	6.9
		50-year								23	7.6	22	6.9
		100-year								23	7.6	22	6.9
LSRL1201	8332.2	2-year	Trapezoidal	2	30	173.5	902.00	901.83	0.100	-1	-0.2	291	4.9
		5-year								-27	-1.8	291	4.9
		10-year								-22	-1.3	291	4.9
		25-year								-20	-1.2	291	4.9
		50-year								-19	-1.1	291	4.9
		100-year								-21	1.5	291	4.9
LSRL1202	8374.1	2-year	Circular	1.25	0	27.0	899.55	899.29	0.963	12	10.3	6	4.6
		5-year								14	11.7	6	4.6
		10-year								14	11.7	6	4.6
		25-year								14	11.7	6	4.6
		50-year								14	11.7	6	4.6
		100-year								14	11.7	6	4.6
LSRL1202	8374.2	2-year	Trapezoidal	4	30	27.0	902.03	902.00	0.100	0	0.0	867	7.2
		5-year								4	1.3	867	7.2
		10-year								14	2.1	867	7.2
		25-year								23	2.4	867	7.2
		50-year								26	2.6	867	7.2
		100-year								31	2.7	867	7.2
LSRL1601	8329.1	2-year	Circular	2	0	159.6	910.07	908.44	1.022	13	6.0	21	6.8
		5-year								18	6.5	21	6.8
		10-year								21	6.8	21	6.8
		25-year								24	7.6	21	6.8
		50-year								26	8.0	21	6.8
		100-year								26	8.2	21	6.8
LSRL1601	8329.2	2-year	Trapezoidal	1	30	159.6	913.97	913.81	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								4	1.0	96	3.2
		100-year								16	1.9	96	3.2

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1602	8328.1	2-year	Circular	1	0	284.8	916.46	910.07	2.244	6	7.7	5	6.3
		5-year								6	7.7	5	6.3
		10-year								6	7.7	5	6.3
		25-year								6	7.6	5	6.3
		50-year								6	7.7	5	6.3
		100-year								6	7.6	5	6.3
LSRL1602	8328.2	2-year	Trapezoidal	2	30	284.8	919.21	912.74	2.272	7	3.0	1402	23.4
		5-year								13	3.8	1402	23.4
		10-year								20	4.4	1402	23.4
		25-year								21	4.4	1402	23.4
		50-year								25	4.5	1402	23.4
		100-year								30	4.6	1402	23.4
LSRL1701	8375.1	2-year	Circular	2	0	125.5	910.56	909.33	0.980	22	7.4	21	6.6
		5-year								22	7.4	21	6.6
		10-year								22	7.3	21	6.6
		25-year								22	7.3	21	6.6
		50-year								22	7.3	21	6.6
		100-year								22	7.3	21	6.6
LSRL1701	8375.2	2-year	Trapezoidal	4	30	125.5	915.39	915.26	0.100	13	1.8	869	7.2
		5-year								40	2.8	869	7.2
		10-year								52	3.2	869	7.2
		25-year								68	3.5	869	7.2
		50-year								80	3.8	869	7.2
		100-year								95	4.1	869	7.2
LSRL1702	8327.1	2-year	Circular	2	0	138.9	916.09	910.56	3.982	34	10.8	42	13.3
		5-year								39	12.4	42	13.3
		10-year								39	12.4	42	13.3
		25-year								39	12.4	42	13.3
		50-year								39	12.4	42	13.3
		100-year								40	12.5	42	13.3
LSRL1702	8327.2	2-year	Trapezoidal	5	30	138.9	920.42	914.39	4.343	0	0.0	8008	53.4
		5-year								22	1.0	8008	53.4
		10-year								35	1.4	8008	53.4
		25-year								51	1.9	8008	53.4
		50-year								62	2.2	8008	53.4
		100-year								78	2.6	8008	53.4
LSRL1703	8326.1	2-year	Circular	2	0	74.6	917.45	916.09	1.824	35	11.3	28	9.0
		5-year								36	11.3	28	9.0
		10-year								36	11.4	28	9.0
		25-year								36	11.4	28	9.0
		50-year								36	11.4	28	9.0
		100-year								36	11.5	28	9.0
LSRL1703	8326.2	2-year	Trapezoidal	2	30	74.6	921.53	919.42	2.830	0	0.0	1565	26.1
		5-year								35	2.3	1565	26.1
		10-year								47	2.8	1565	26.1
		25-year								62	3.3	1565	26.1
		50-year								74	3.4	1565	26.1
		100-year								90	4.0	1565	26.1
LSRL1704	8325.1	2-year	Circular	2	0	291.3	924.48	917.45	2.414	26	9.3	33	10.4
		5-year								32	10.0	33	10.4
		10-year								32	10.0	33	10.4
		25-year								32	10.0	33	10.4
		50-year								32	10.0	33	10.4
		100-year								32	10.0	33	10.4
LSRL1704	8325.2	2-year	Trapezoidal	2	30	291.3	928.15	920.53	2.616	0	0.0	1504	25.1
		5-year								7	0.4	1504	25.1
		10-year								14	0.8	1504	25.1
		25-year								24	1.2	1504	25.1
		50-year								31	1.5	1504	25.1
		100-year								41	1.9	1504	25.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1705	8324.1	2-year	Circular	2	0	61.4	925.58	924.48	1.790	26	10.6	28	8.9
		5-year								31	10.6	28	8.9
		10-year								31	10.6	28	8.9
		25-year								31	10.6	28	8.9
		50-year								32	10.6	28	8.9
		100-year								32	10.6	28	8.9
LSRL1705	8324.2	2-year	Trapezoidal	2	30	61.4	928.16	927.15	1.644	0	0.0	1192	19.9
		5-year								28	2.4	1192	19.9
		10-year								36	2.5	1192	19.9
		25-year								46	2.3	1192	19.9
		50-year								53	2.6	1192	19.9
		100-year								63	2.9	1192	19.9
LSRL17A01	LSRL17A01	2-year	Circular	2	0	29.9	916.81	916.09	2.406	1	0.9	33	10.4
		5-year								1	0.8	33	10.4
		10-year								1	0.7	33	10.4
		25-year								1	0.7	33	10.4
		50-year								1	0.7	33	10.4
		100-year								2	0.7	33	10.4
LSRL17B01	LSRL17B01	2-year	Circular	2	0	64.4	918.18	917.45	1.134	5	1.7	22	7.1
		5-year								4	1.6	22	7.1
		10-year								4	1.6	22	7.1
		25-year								4	1.6	22	7.1
		50-year								4	1.6	22	7.1
		100-year								5	1.6	22	7.1
LSRL1801	LSRL1801	2-year	Natural	6	10	246.8	916.74	912.78	1.605	103	2.5	4937	11.8
		5-year								144	2.7	4937	11.8
		10-year								172	2.7	4937	11.8
		25-year								204	2.8	4937	11.8
		50-year								228	2.8	4937	11.8
		100-year								254	2.9	4937	11.8
LSRL1802	SRL1802A	2-year	Circular	3.5	0	74.3	918.60	916.74	2.504	52	11.0	86	9.0
		5-year								72	12.3	86	9.0
		10-year								86	12.9	86	9.0
		25-year								102	14.5	86	9.0
		50-year								114	15.9	86	9.0
		100-year								127	17.3	86	9.0
LSRL1802	SRL1802B	2-year	Trapezoidal	1	30	74.3	928.00	927.93	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL1803	LSRL1803	2-year	Natural	8	10	416.4	924.00	918.60	1.297	83	4.3	3344	8.4
		5-year								118	4.6	3344	8.4
		10-year								141	4.5	3344	8.4
		25-year								175	4.4	3344	8.4
		50-year								198	4.3	3344	8.4
		100-year								227	4.2	3344	8.4
LSRL1804	LSRL1804	2-year	Natural	8	12	227.5	924.20	924.00	0.088	62	1.8	997	2.1
		5-year								89	2.1	997	2.1
		10-year								105	2.2	997	2.1
		25-year								130	2.4	997	2.1
		50-year								146	2.6	997	2.1
		100-year								167	2.7	997	2.1
LSRL1805	8321.1	2-year	Circular	2.5	0	315.6	925.00	924.20	0.254	36	7.9	19	3.9
		5-year								38	8.1	19	3.9
		10-year								38	8.0	19	3.9
		25-year								38	8.0	19	3.9
		50-year								38	8.1	19	3.9
		100-year								38	8.0	19	3.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1805	8321.2	2-year	Trapezoidal	4	30	315.6	929.00	928.68	0.100	0	0.4	868	7.2
		5-year								15	1.7	868	7.2
		10-year								25	2.2	868	7.2
		25-year								45	2.8	868	7.2
		50-year								55	3.0	868	7.2
		100-year								69	3.3	868	7.2
LSRL1806	8320.1	2-year	Circular	2.5	0	206.3	930.09	925.00	2.468	42	10.0	60	12.2
		5-year								54	11.0	60	12.2
		10-year								64	12.9	60	12.2
		25-year								66	13.4	60	12.2
		50-year								67	13.5	60	12.2
		100-year								67	13.5	60	12.2
LSRL1806	8320.2	2-year	Trapezoidal	5	30	206.3	935.59	928.00	3.680	0	0.0	7372	49.1
		5-year								0	0.0	7372	49.1
		10-year								0	0.0	7372	49.1
		25-year								16	0.7	7372	49.1
		50-year								26	1.0	7372	49.1
		100-year								40	1.4	7372	49.1
LSRL1807	8319.1	2-year	Circular	2.5	0	160.4	930.70	930.09	0.380	32	7.7	23	4.8
		5-year								45	9.1	23	4.8
		10-year								46	9.2	23	4.8
		25-year								46	9.1	23	4.8
		50-year								45	9.1	23	4.8
		100-year								45	9.0	23	4.8
LSRL1807	8319.2	2-year	Trapezoidal	2	30	160.4	935.02	934.59	0.268	0	0.0	482	8.0
		5-year								3	1.1	482	8.0
		10-year								34	2.8	482	8.0
		25-year								55	2.8	482	8.0
		50-year								62	2.8	482	8.0
		100-year								71	2.8	482	8.0
LSRL1808	8318.1	2-year	Circular	2.5	0	54.8	930.91	930.70	0.383	31	6.5	24	4.8
		5-year								44	8.8	24	4.8
		10-year								50	10.1	24	4.8
		25-year								52	10.6	24	4.8
		50-year								53	10.7	24	4.8
		100-year								53	10.8	24	4.8
LSRL1808	8318.2	2-year	Trapezoidal	2	30	54.8	936.41	934.02	4.361	0	0.0	1942	32.4
		5-year								0	0.0	1942	32.4
		10-year								0	0.0	1942	32.4
		25-year								15	0.6	1942	32.4
		50-year								23	0.9	1942	32.4
		100-year								33	1.2	1942	32.4
LSRL1809	8017.1	2-year	Special	2.5	1.58	68.2	932.40	930.91	2.183	31	9.9	32	9.7
		5-year								35	10.7	32	9.7
		10-year								34	10.4	32	9.7
		25-year								34	10.3	32	9.7
		50-year								34	10.2	32	9.7
		100-year								34	10.1	32	9.7
LSRL1809	8017.2	2-year	Trapezoidal	2	30	68.2	935.57	935.41	0.234	0	0.0	450	7.5
		5-year								32	2.9	450	7.5
		10-year								47	2.9	450	7.5
		25-year								58	2.9	450	7.5
		50-year								65	3.0	450	7.5
		100-year								74	3.0	450	7.5
LSRL18A01	8322.1	2-year	Circular	2	0	388.9	926.26	924.00	0.581	23	7.3	16	5.1
		5-year								27	8.5	16	5.1
		10-year								28	8.9	16	5.1
		25-year								28	9.0	16	5.1
		50-year								28	9.1	16	5.1
		100-year								28	9.1	16	5.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL18A01	8322.2	2-year	Trapezoidal	1	30	388.9	932.26	932.00	0.067	0	0.0	79	2.6
		5-year								2	0.7	79	2.6
		10-year								9	1.3	79	2.6
		25-year								19	1.8	79	2.6
		50-year								26	2.0	79	2.6
		100-year								34	2.3	79	2.6
LSRL18A02	8425.1	2-year	Circular	2	0	47.4	927.66	926.26	2.954	23	7.9	36	11.5
		5-year								29	9.2	36	11.5
		10-year								30	9.6	36	11.5
		25-year								32	10.0	36	11.5
		50-year								32	10.0	36	11.5
		100-year								32	10.1	36	11.5
LSRL18A02	8425.2	2-year	Trapezoidal	2	30	47.4	932.66	931.26	2.954	0	0.0	1598	26.6
		5-year								12	0.8	1598	26.6
		10-year								23	1.2	1598	26.6
		25-year								35	1.5	1598	26.6
		50-year								44	1.8	1598	26.6
		100-year								55	2.1	1598	26.6
LSRL18A03	8424.1	2-year	Circular	2	0	44.1	927.85	927.66	0.431	23	8.5	14	4.4
		5-year								24	8.5	14	4.4
		10-year								23	8.6	14	4.4
		25-year								24	8.6	14	4.4
		50-year								24	8.7	14	4.4
		100-year								24	8.8	14	4.4
LSRL18A03	8424.2	2-year	Trapezoidal	2	30	44.1	931.85	931.66	0.431	0	0.0	610	10.2
		5-year								33	2.1	610	10.2
		10-year								40	2.1	610	10.2
		25-year								48	2.2	610	10.2
		50-year								54	2.2	610	10.2
		100-year								63	2.2	610	10.2
LSRL1901	LSRL1901	2-year	Trapezoidal	2	5	228.2	925.02	915.47	4.185	13	4.8	221	10.1
		5-year								19	4.6	221	10.1
		10-year								22	5.1	221	10.1
		25-year								27	5.3	221	10.1
		50-year								30	5.5	221	10.1
		100-year								34	9.0	221	10.1
LSRL1902	8378.1	2-year	Circular	2	0	254.0	925.17	925.02	0.059	13	6.8	5	1.6
		5-year								15	7.5	5	1.6
		10-year								16	7.6	5	1.6
		25-year								17	7.7	5	1.6
		50-year								17	7.8	5	1.6
		100-year								18	7.8	5	1.6
LSRL1902	8378.2	2-year	Trapezoidal	1	30	254.0	929.50	927.02	0.976	0	0.0	301	10.0
		5-year								3	1.7	301	10.0
		10-year								6	2.2	301	10.0
		25-year								10	2.6	301	10.0
		50-year								13	2.9	301	10.0
		100-year								17	3.2	301	10.0
LSRL1903	8323.1	2-year	Circular	2	0	61.2	927.67	925.17	4.086	13	5.8	42	13.5
		5-year								19	6.1	42	13.5
		10-year								22	7.1	42	13.5
		25-year								27	8.5	42	13.5
		50-year								30	9.5	42	13.5
		100-year								32	10.0	42	13.5
LSRL1903	8323.2	2-year	Trapezoidal	2	30	61.2	931.00	929.50	2.452	0	0.0	1456	24.3
		5-year								0	0.0	1456	24.3
		10-year								0	0.0	1456	24.3
		25-year								0	0.0	1456	24.3
		50-year								0	0.0	1456	24.3
		100-year								3	0.9	1456	24.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL2001	LSRL2001	2-year	Trapezoidal	8	15	137.0	922.92	921.32	1.168	37	2.2	9989	12.1
		5-year								55	2.2	9989	12.1
		10-year								65	2.4	9989	12.1
		25-year								78	2.6	9989	12.1
		50-year								88	2.8	9989	12.1
		100-year								102	2.9	9989	12.1
LSRL2002	8016.1	2-year	Special	2.33	2.67	314.9	926.16	922.92	1.029	31	7.1	33	5.1
		5-year								34	7.5	33	5.1
		10-year								36	7.6	33	5.1
		25-year								37	7.7	33	5.1
		50-year								38	7.8	33	5.1
		100-year								39	7.9	33	5.1
LSRL2002	8016.2	2-year	Trapezoidal	1	30	314.9	931.58	931.00	0.184	6	1.4	131	4.4
		5-year								21	2.2	131	4.4
		10-year								29	2.6	131	4.4
		25-year								41	2.9	131	4.4
		50-year								50	3.2	131	4.4
		100-year								62	3.5	131	4.4
LSRL2003	8317.1	2-year	Circular	2	0	65.9	926.92	926.16	1.153	28	8.9	23	7.2
		5-year								31	9.9	23	7.2
		10-year								32	10.1	23	7.2
		25-year								33	10.4	23	7.2
		50-year								33	10.5	23	7.2
		100-year								32	10.0	23	7.2
LSRL2003	8317.2	2-year	Trapezoidal	2	30	65.9	931.65	931.58	0.100	25	2.4	294	4.9
		5-year								43	3.1	294	4.9
		10-year								53	3.4	294	4.9
		25-year								67	3.7	294	4.9
		50-year								77	3.9	294	4.9
		100-year								91	4.1	294	4.9
LSRL2101	8377.1	2-year	Circular	2	0	240.7	934.45	927.61	2.842	27	10.2	35	11.3
		5-year								38	12.0	35	11.3
		10-year								45	14.2	35	11.3
		25-year								48	15.2	35	11.3
		50-year								48	15.2	35	11.3
		100-year								49	15.3	35	11.3
LSRL2101	8377.2	2-year	Trapezoidal	3	30	240.7	942.74	942.50	0.100	0	0.0	557	6.2
		5-year								0	0.0	557	6.2
		10-year								0	0.0	557	6.2
		25-year								8	1.3	557	6.2
		50-year								16	1.8	557	6.2
		100-year								27	2.3	557	6.2
LSRL2102	8363.1	2-year	Circular	2	0	119.6	935.90	934.45	1.213	27	9.7	23	7.4
		5-year								38	12.0	23	7.4
		10-year								40	12.5	23	7.4
		25-year								40	12.6	23	7.4
		50-year								40	12.6	23	7.4
		100-year								40	12.6	23	7.4
LSRL2102	8363.2	2-year	Trapezoidal	4	30	119.6	942.86	942.74	0.100	0	0.0	865	7.2
		5-year								0	0.0	865	7.2
		10-year								20	2.1	865	7.2
		25-year								42	2.9	865	7.2
		50-year								50	3.1	865	7.2
		100-year								61	3.4	865	7.2
LSRL2103	8364.1	2-year	Circular	2	0	80.5	936.72	935.90	1.019	27	8.3	21	6.8
		5-year								36	11.3	21	6.8
		10-year								36	11.4	21	6.8
		25-year								37	11.5	21	6.8
		50-year								37	11.5	21	6.8
		100-year								37	11.6	21	6.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL2103	8364.2	2-year	Trapezoidal	3	30	80.5	942.94	942.86	0.100	0	0.0	558	6.2
		5-year								13	1.9	558	6.2
		10-year								35	2.7	558	6.2
		25-year								47	2.8	558	6.2
		50-year								54	2.9	558	6.2
		100-year								64	3.0	558	6.2
LSRL3C01	LSRL3C01	2-year	Circular	2	0	26.7	887.03	885.02	7.531	5	2.8	54	17.3
		5-year								4	2.6	54	17.3
		10-year								4	2.4	54	17.3
		25-year								4	2.0	54	17.3
		50-year								4	2.0	54	17.3
		100-year								4	2.1	54	17.3
LSRMC01	LSRMC01	2-year	Natural	12	15	95.6	866.00	860.95	5.281	968	14.0	38439	35.3
		5-year								1281	15.3	38439	35.3
		10-year								1455	15.8	38439	35.3
		25-year								1689	16.5	38439	35.3
		50-year								1854	17.0	38439	35.3
		100-year								2081	17.5	38439	35.3
LSRMC04	SRMC04A	2-year	Rectangular	10	10	260.3	871.15	866.00	1.979	905	27.3	2750	27.5
		5-year								1217	30.4	2750	27.5
		10-year								1392	31.9	2750	27.5
		25-year								1626	33.8	2750	27.5
		50-year								1791	35.1	2750	27.5
		100-year								2017	36.6	2750	27.5
LSRMC04	SRMC04B	2-year	Trapezoidal	1	30	260.3	893.26	893.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC05	LSRMC05	2-year	Natural	14	10	499.4	871.87	871.15	0.144	942	1.7	27197	7.4
		5-year								1256	1.8	27197	7.4
		10-year								1431	1.9	27197	7.4
		25-year								1666	1.9	27197	7.4
		50-year								1837	2.0	27197	7.4
		100-year								2085	2.0	27197	7.4
LSRMC06	LSRMC06	2-year	Natural	7	5	1289.2	879.65	871.87	0.603	928	6.1	2883	7.8
		5-year								1252	6.5	2883	7.8
		10-year								1419	6.6	2883	7.8
		25-year								1642	6.8	2883	7.8
		50-year								1806	6.9	2883	7.8
		100-year								2041	7.1	2883	7.8
LSRMC07	SRMC07A	2-year	Rectangular	6.5	9	83.3	880.54	879.65	1.069	442	10.5	980	16.8
		5-year								594	12.5	980	16.8
		10-year								674	13.6	980	16.8
		25-year								781	15.2	980	16.8
		50-year								857	16.0	980	16.8
		100-year								949	17.4	980	16.8
LSRMC07	SRMC07B	2-year	Trapezoidal	2	30	83.3	887.35	886.00	1.621	0	0.0	1184	19.7
		5-year								0	0.0	1184	19.7
		10-year								0	0.0	1184	19.7
		25-year								0	0.0	1184	19.7
		50-year								0	0.0	1184	19.7
		100-year								0	0.0	1184	19.7
LSRMC08	SRMC08A	2-year	Rectangular	6.5	9	34.1	880.90	880.54	1.056	406	10.9	974	16.7
		5-year								545	12.4	974	16.7
		10-year								616	13.4	974	16.7
		25-year								716	14.8	974	16.7
		50-year								780	15.7	974	16.7
		100-year								873	17.1	974	16.7

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC08	SRMC08B	2-year	Trapezoidal	1	30	34.1	887.38	887.35	0.100	0	0.0	90	3.0
		5-year								0	0.0	90	3.0
		10-year								0	0.0	90	3.0
		25-year								0	0.0	90	3.0
		50-year								0	0.0	90	3.0
		100-year								0	0.0	90	3.0
LSRMC09	LSRMC09	2-year	Natural	7	15	446.4	882.68	880.90	0.399	761	11.3	2243	8.8
		5-year								1015	12.2	2243	8.8
		10-year								1137	12.6	2243	8.8
		25-year								1317	12.9	2243	8.8
		50-year								1430	13.2	2243	8.8
		100-year								1596	13.7	2243	8.8
LSRMC10	SRMC10A	2-year	Rectangular	6.5	8.5	108.4	883.69	882.68	0.932	380	12.7	851	15.4
		5-year								507	14.2	851	15.4
		10-year								568	14.9	851	15.4
		25-year								658	15.9	851	15.4
		50-year								715	16.5	851	15.4
		100-year								794	17.3	851	15.4
LSRMC10	SRMC10B	2-year	Trapezoidal	1	30	108.4	890.00	889.89	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRMC11	LSRMC11	2-year	Natural	8	15	300.3	884.43	883.69	0.246	761	10.0	3843	7.9
		5-year								1015	10.7	3843	7.9
		10-year								1137	10.9	3843	7.9
		25-year								1316	11.0	3843	7.9
		50-year								1430	11.1	3843	7.9
		100-year								1585	11.2	3843	7.9
LSRMC12	SRMC12A	2-year	Rectangular	6.5	7.5	291.8	885.10	884.43	0.230	299	11.0	359	7.4
		5-year								383	12.3	359	7.4
		10-year								448	13.2	359	7.4
		25-year								536	14.1	359	7.4
		50-year								587	14.3	359	7.4
		100-year								681	14.7	359	7.4
LSRMC12	SRMC12B	2-year	Trapezoidal	1	30	291.8	893.60	892.00	0.548	0	0.0	226	7.5
		5-year								0	0.0	226	7.5
		10-year								0	0.0	226	7.5
		25-year								0	0.0	226	7.5
		50-year								0	0.0	226	7.5
		100-year								0	0.0	226	7.5
LSRMC13	SRMC13A	2-year	Rectangular	5.33	9	81.9	889.71	885.10	5.632	295	13.1	1703	35.5
		5-year								380	14.4	1703	35.5
		10-year								431	15.0	1703	35.5
		25-year								493	15.9	1703	35.5
		50-year								519	15.9	1703	35.5
		100-year								724	18.6	1703	35.5
LSRMC13	SRMC13B	2-year	Trapezoidal	1	30	81.9	895.04	893.60	1.759	0	0.0	405	13.5
		5-year								0	0.0	405	13.5
		10-year								0	0.0	405	13.5
		25-year								0	0.0	405	13.5
		50-year								0	0.0	405	13.5
		100-year								0	0.0	405	13.5
LSRMC14	LSRMC14	2-year	Natural	6	9	133.3	890.00	889.71	0.217	235	11.3	6259	7.8
		5-year								305	11.3	6259	7.8
		10-year								367	11.3	6259	7.8
		25-year								421	11.3	6259	7.8
		50-year								439	11.3	6259	7.8
		100-year								611	11.3	6259	7.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC15	SRMC15A	2-year	Rectangular	5	10.5	266.0	890.15	890.00	0.056	235	7.6	188	3.6
		5-year								305	9.0	188	3.6
		10-year								367	10.2	188	3.6
		25-year								413	10.9	188	3.6
		50-year								438	10.9	188	3.6
		100-year								612	11.9	188	3.6
LSRMC15	SRMC15B	2-year	Trapezoidal	1	30	266.0	896.00	895.73	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRMC16	LSRMC16	2-year	Natural	6	9	134.9	891.05	890.15	0.667	235	9.0	3161	9.4
		5-year								305	10.1	3161	9.4
		10-year								366	11.3	3161	9.4
		25-year								413	11.7	3161	9.4
		50-year								438	11.8	3161	9.4
		100-year								607	11.9	3161	9.4
LSRMC18	SRMC18A	2-year	Rectangular	5	9	56.7	891.24	891.05	0.335	235	9.7	379	8.4
		5-year								305	10.6	379	8.4
		10-year								366	11.5	379	8.4
		25-year								411	11.9	379	8.4
		50-year								437	11.9	379	8.4
		100-year								607	12.5	379	8.4
LSRMC18	SRMC18B	2-year	Trapezoidal	1	30	56.7	898.00	897.94	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LSRMC19	SRMC19A	2-year	Rectangular	4.75	6	179.5	891.84	891.24	0.334	118	7.3	211	7.4
		5-year								152	7.9	211	7.4
		10-year								183	8.6	211	7.4
		25-year								204	8.8	211	7.4
		50-year								219	8.8	211	7.4
		100-year								303	10.2	211	7.4
LSRMC19	SRMC19B	2-year	Trapezoidal	1	30	179.5	899.00	898.00	0.557	0	0.0	228	7.6
		5-year								0	0.0	228	7.6
		10-year								0	0.0	228	7.6
		25-year								0	0.0	228	7.6
		50-year								0	0.0	228	7.6
		100-year								0	0.0	228	7.6
LSRMC20	LSRMC20	2-year	Natural	10	1.833	508.2	893.82	891.84	0.390	469	12.2	44121	17.2
		5-year								648	12.2	44121	17.2
		10-year								785	12.2	44121	17.2
		25-year								956	12.2	44121	17.2
		50-year								1055	12.2	44121	17.2
		100-year								1220	12.2	44121	17.2
LSRMC22	SRMC22A	2-year	Rectangular	6	6	530.6	896.70	893.82	0.543	145	7.2	369	10.2
		5-year								203	8.5	369	10.2
		10-year								247	9.2	369	10.2
		25-year								297	9.7	369	10.2
		50-year								319	10.1	369	10.2
		100-year								371	11.2	369	10.2
LSRMC22	SRMC22B	2-year	Trapezoidal	1	30	530.6	903.00	902.00	0.188	0	0.0	132	4.4
		5-year								0	0.0	132	4.4
		10-year								0	0.0	132	4.4
		25-year								0	0.0	132	4.4
		50-year								0	0.0	132	4.4
		100-year								0	0.0	132	4.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC23	LSRMC23	2-year	Natural	10	18	172.8	896.81	896.70	0.064	397	4.4	24982	6.8
		5-year								556	4.5	24982	6.8
		10-year								673	4.5	24982	6.8
		25-year								805	4.4	24982	6.8
		50-year								846	4.4	24982	6.8
		100-year								1034	4.4	24982	6.8
LSRMC24	SRMC24A	2-year	Rectangular	6	8	111.1	897.00	896.81	0.171	179	6.3	302	6.3
		5-year								257	7.8	302	6.3
		10-year								314	8.8	302	6.3
		25-year								375	9.7	302	6.3
		50-year								394	10.0	302	6.3
		100-year								486	11.4	302	6.3
LSRMC24	SRMC24B	2-year	Trapezoidal	1	30	111.1	906.00	905.89	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC25	LSRMC25	2-year	Natural	10	10	386.8	897.45	897.00	0.116	320	3.3	7210	3.7
		5-year								471	3.3	7210	3.7
		10-year								578	3.3	7210	3.7
		25-year								695	3.3	7210	3.7
		50-year								737	3.3	7210	3.7
		100-year								919	3.3	7210	3.7
LSRMC26	LSRMC26	2-year	Natural	7	10	411.5	899.89	897.45	0.593	330	4.3	3421	5.5
		5-year								488	4.3	3421	5.5
		10-year								597	4.3	3421	5.5
		25-year								702	4.3	3421	5.5
		50-year								736	4.2	3421	5.5
		100-year								926	4.2	3421	5.5
LSRMC27	SRMC27A	2-year	Rectangular	4	14	96.3	900.69	899.89	0.830	354	7.2	727	13.0
		5-year								382	7.3	727	13.0
		10-year								431	7.5	727	13.0
		25-year								526	9.4	727	13.0
		50-year								547	9.7	727	13.0
		100-year								651	11.6	727	13.0
LSRMC27	SRMC27B	2-year	Trapezoidal	2	30	96.3	905.69	905.59	0.100	0	0.0	300	5.0
		5-year								0	0.0	300	5.0
		10-year								0	0.0	300	5.0
		25-year								6	1.3	300	5.0
		50-year								12	1.8	300	5.0
		100-year								75	3.8	300	5.0
LSRMC27	SRMC27C	2-year	Rectangular	5	4	96.3	900.69	899.89	0.830	-29	3.1	208	10.4
		5-year								140	7.3	208	10.4
		10-year								163	8.0	208	10.4
		25-year								173	8.2	208	10.4
		50-year								178	8.3	208	10.4
		100-year								201	9.2	208	10.4
LSRMC28	LSRMC28	2-year	Natural	6	9	467.6	904.00	900.69	0.708	367	4.6	4476	6.4
		5-year								496	4.6	4476	6.4
		10-year								591	4.6	4476	6.4
		25-year								702	4.6	4476	6.4
		50-year								735	4.6	4476	6.4
		100-year								928	4.6	4476	6.4
LSRMC29	8167.1	2-year	Rectangular	3.5	6	35.8	904.11	904.00	0.308	177	8.5	132	6.3
		5-year								238	10.6	132	6.3
		10-year								253	11.1	132	6.3
		25-year								262	11.5	132	6.3
		50-year								265	11.7	132	6.3
		100-year								268	12.4	132	6.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC29	8167.2	2-year	Trapezoidal	3	30	35.8	907.84	907.00	2.349	0	0.0	2697	30.0
		5-year								27	2.2	2697	30.0
		10-year								91	5.1	2697	30.0
		25-year								193	8.1	2697	30.0
		50-year								227	8.9	2697	30.0
		100-year								407	12.0	2697	30.0
LSRMC30	8168.1	2-year	Rectangular	3.5	6	123.1	904.51	904.11	0.325	166	7.8	136	6.5
		5-year								206	9.1	136	6.5
		10-year								217	9.9	136	6.5
		25-year								221	10.4	136	6.5
		50-year								225	10.6	136	6.5
		100-year								241	11.5	136	6.5
LSRMC30	8168.2	2-year	Trapezoidal	3	30	123.1	908.00	907.84	0.130	10	1.6	634	7.0
		5-year								75	3.8	634	7.0
		10-year								150	4.9	634	7.0
		25-year								247	6.0	634	7.0
		50-year								282	6.3	634	7.0
		100-year								439	7.4	634	7.0
LSRMC31	8634.1	2-year	Rectangular	4	11	288.5	905.43	904.51	0.319	299	7.7	340	7.7
		5-year								423	8.9	340	7.7
		10-year								452	9.7	340	7.7
		25-year								457	9.8	340	7.7
		50-year								467	10.1	340	7.7
		100-year								466	10.1	340	7.7
LSRMC31	8634.2	2-year	Trapezoidal	3	30	288.5	910.00	908.00	0.693	0	0.0	1465	16.3
		5-year								0	0.0	1465	16.3
		10-year								53	2.5	1465	16.3
		25-year								177	5.4	1465	16.3
		50-year								242	6.5	1465	16.3
		100-year								421	8.4	1465	16.3
LSRMC32	LSRMC32	2-year	Natural	12	12	550.9	908.00	905.43	0.467	245	7.7	45848	17.6
		5-year								352	8.3	45848	17.6
		10-year								421	8.6	45848	17.6
		25-year								520	8.3	45848	17.6
		50-year								619	8.3	45848	17.6
		100-year								772	8.3	45848	17.6
LSRMC33	SRMC33A	2-year	Rectangular	4	5.5	51.1	908.44	908.00	0.862	122	10.7	239	10.9
		5-year								176	11.4	239	10.9
		10-year								210	11.6	239	10.9
		25-year								264	12.3	239	10.9
		50-year								243	12.3	239	10.9
		100-year								254	12.3	239	10.9
LSRMC33	SRMC33B	2-year	Trapezoidal	1	30	51.1	912.81	912.76	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								23	2.4	96	3.2
		50-year								145	5.1	96	3.2
		100-year								276	9.2	96	3.2
LSRMC34	SRMC34A	2-year	Rectangular	4	5.5	64.2	909.00	908.44	0.873	117	10.5	241	10.9
		5-year								169	11.2	241	10.9
		10-year								201	11.5	241	10.9
		25-year								256	11.9	241	10.9
		50-year								233	12.0	241	10.9
		100-year								235	12.0	241	10.9
LSRMC34	SRMC34B	2-year	Trapezoidal	2	30	64.2	912.87	912.81	0.100	0	0.0	294	4.9
		5-year								0	0.0	294	4.9
		10-year								0	0.0	294	4.9
		25-year								55	3.4	294	4.9
		50-year								220	5.9	294	4.9
		100-year								348	6.9	294	4.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC35	LSRMC35	2-year	Natural	6	7	649.5	909.33	909.00	0.051	190	2.7	619	1.9
		5-year								276	2.9	619	1.9
		10-year								341	2.9	619	1.9
		25-year								494	2.8	619	1.9
		50-year								575	2.8	619	1.9
		100-year								716	2.8	619	1.9
LSRMC36	SRMC36A	2-year	Rectangular	4	5	166.6	911.95	909.33	1.573	79	7.0	286	14.3
		5-year								110	7.8	286	14.3
		10-year								152	9.2	286	14.3
		25-year								226	11.5	286	14.3
		50-year								264	13.2	286	14.3
		100-year								287	14.3	286	14.3
LSRMC36	SRMC36B	2-year	Trapezoidal	1	30	166.6	917.00	916.83	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								79	3.7	97	3.2
LSRMC37	LSRMC37	2-year	Natural	6	10	238.8	912.78	911.95	0.348	131	3.9	2638	4.6
		5-year								182	4.0	2638	4.6
		10-year								286	3.9	2638	4.6
		25-year								435	3.9	2638	4.6
		50-year								516	3.9	2638	4.6
		100-year								617	3.9	2638	4.6
LSRMC38	LSRMC38	2-year	Natural	7	7	446.8	915.47	912.78	0.602	35	1.1	6739	7.5
		5-year								99	1.3	6739	7.5
		10-year								174	1.5	6739	7.5
		25-year								265	1.7	6739	7.5
		50-year								319	1.8	6739	7.5
		100-year								380	1.9	6739	7.5
LSRMC39	LSRMC39	2-year	Natural	8	8	128.3	915.91	915.47	0.343	26	2.3	5351	6.2
		5-year								95	3.4	5351	6.2
		10-year								166	3.9	5351	6.2
		25-year								251	4.2	5351	6.2
		50-year								301	4.3	5351	6.2
		100-year								358	4.4	5351	6.2
LSRMC40	SRMC40A	2-year	Circular	2	0	113.7	918.64	915.91	2.402	26	10.6	19	6.0
		5-year								36	11.7	19	6.0
		10-year								36	11.7	19	6.0
		25-year								36	11.7	19	6.0
		50-year								36	11.7	19	6.0
		100-year								36	11.7	19	6.0
LSRMC40	SRMC40B	2-year	Trapezoidal	1	30	113.7	926.00	925.89	0.100	0	0.0	97	3.2
		5-year								59	3.3	97	3.2
		10-year								131	4.7	97	3.2
		25-year								216	7.2	97	3.2
		50-year								266	8.9	97	3.2
		100-year								323	10.8	97	3.2
LSRMC41	LSRMC41	2-year	Natural	12	0	724.6	921.32	918.64	0.370	159	0.9	22460	7.0
		5-year								230	0.9	22460	7.0
		10-year								271	0.9	22460	7.0
		25-year								326	0.8	22460	7.0
		50-year								369	0.8	22460	7.0
		100-year								428	0.8	22460	7.0
LSRMC42	LSRMC42	2-year	Natural	8	0	990.2	927.46	921.32	0.620	96	3.1	5371	8.3
		5-year								135	3.4	5371	8.3
		10-year								158	3.6	5371	8.3
		25-year								188	3.7	5371	8.3
		50-year								214	3.9	5371	8.3
		100-year								246	4.0	5371	8.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC43	SRMC43A	2-year	Rectangular	3	5.17	110.0	927.61	927.46	0.136	97	8.1	59	3.8
		5-year								135	9.6	59	3.8
		10-year								158	10.6	59	3.8
		25-year								189	12.9	59	3.8
		50-year								215	14.4	59	3.8
		100-year								247	16.3	59	3.8
LSRMC43	SRMC43B	2-year	Trapezoidal	1	30	110.0	942.50	942.39	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC44	SRMC44A	2-year	Rectangular	3	5.17	41.2	927.67	927.61	0.146	71	5.5	61	3.9
		5-year								99	6.3	61	3.9
		10-year								116	6.8	61	3.9
		25-year								138	8.9	61	3.9
		50-year								155	9.9	61	3.9
		100-year								177	11.3	61	3.9
LSRMC44	SRMC44B	2-year	Trapezoidal	1	30	41.2	941.54	941.50	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSYMC01	LSYMC01	2-year	Circular	2.5	0	135.5	900.61	870.86	21.954	17	22.9	178	36.4
		5-year								25	25.7	178	36.4
		10-year								30	27.1	178	36.4
		25-year								37	28.7	178	36.4
		50-year								42	29.7	178	36.4
		100-year								49	31.0	178	36.4
LSYMC02	8460.1	2-year	Circular	2.5	0	61.0	900.87	900.61	0.426	17	9.1	25	5.1
		5-year								25	10.7	25	5.1
		10-year								30	11.4	25	5.1
		25-year								37	12.4	25	5.1
		50-year								42	13.0	25	5.1
		100-year								49	13.8	25	5.1
LSYMC02	8460.2	2-year	Trapezoidal	1	30	61.0	906.20	905.94	0.426	0	0.0	199	6.6
		5-year								0	0.0	199	6.6
		10-year								0	0.0	199	6.6
		25-year								0	0.0	199	6.6
		50-year								0	0.0	199	6.6
		100-year								0	0.0	199	6.6
LSYMC03	8461.1	2-year	Circular	2.5	0	232.3	906.71	900.87	2.515	13	6.5	60	12.3
		5-year								19	7.5	60	12.3
		10-year								22	8.0	60	12.3
		25-year								27	8.6	60	12.3
		50-year								31	9.0	60	12.3
		100-year								36	9.4	60	12.3
LSYMC03	8461.2	2-year	Trapezoidal	1	30	232.3	911.79	906.20	2.407	0	0.0	473	15.8
		5-year								0	0.0	473	15.8
		10-year								0	0.0	473	15.8
		25-year								0	0.0	473	15.8
		50-year								0	0.0	473	15.8
		100-year								0	0.0	473	15.8
LSYMC04	8296.1	2-year	Special	3	3	63.6	910.66	906.71	6.216	13	8.5	42	10.3
		5-year								19	9.4	42	10.3
		10-year								22	9.8	42	10.3
		25-year								27	10.3	42	10.3
		50-year								31	10.7	42	10.3
		100-year								36	11.2	42	10.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSYMC04	8296.2	2-year	Trapezoidal	1	30	63.6	915.08	911.79	5.177	0	0.0	694	23.1
		5-year								0	0.0	694	23.1
		10-year								0	0.0	694	23.1
		25-year								0	0.0	694	23.1
		50-year								0	0.0	694	23.1
		100-year								0	0.0	694	23.1
LSYMC05	8462.1	2-year	Special	3	3	53.3	911.21	910.66	1.033	13	5.7	17	4.2
		5-year								19	6.7	17	4.2
		10-year								22	7.1	17	4.2
		25-year								27	8.1	17	4.2
		50-year								31	8.9	17	4.2
		100-year								36	9.9	17	4.2
LSYMC05	8462.2	2-year	Trapezoidal	1	30	53.3	915.13	915.08	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LUWL101	LUWL101	2-year	Natural	10	0	1052.6	902.91	893.90	0.856	244	2.2	166246	10.4
		5-year								321	2.2	166246	10.4
		10-year								383	2.1	166246	10.4
		25-year								465	1.9	166246	10.4
		50-year								530	1.8	166246	10.4
		100-year								613	1.8	166246	10.4
LUWL201	LUWL201	2-year	Natural	12	0	3039.0	908.00	902.70	0.174	468	1.5	112604	5.3
		5-year								690	1.3	112604	5.3
		10-year								828	1.1	112604	5.3
		25-year								1004	1.0	112604	5.3
		50-year								1133	1.0	112604	5.3
		100-year								1324	1.0	112604	5.3
LUWL301	LUWL301	2-year	Natural	15	0	1619.9	915.78	907.00	0.542	356	1.7	408518	11.8
		5-year								568	1.9	408518	11.8
		10-year								701	1.9	408518	11.8
		25-year								887	1.9	408518	11.8
		50-year								1036	2.0	408518	11.8
		100-year								1228	2.0	408518	11.8
LUWL302	LUWL302	2-year	Natural	12	0	3250.9	946.34	915.78	0.940	177	3.0	102728	12.9
		5-year								309	3.5	102728	12.9
		10-year								395	3.6	102728	12.9
		25-year								508	3.8	102728	12.9
		50-year								602	3.9	102728	12.9
		100-year								723	4.1	102728	12.9
LUWMC00	LUWMC00	2-year	Natural	11.6	0	186.2	884.53	884.30	0.124	1058	3.2	16261	3.8
		5-year								1785	3.1	16261	3.8
		10-year								2347	3.1	16261	3.8
		25-year								3204	3.1	16261	3.8
		50-year								3801	3.1	16261	3.8
		100-year								4444	3.1	16261	3.8
LUWMC01	LUWMC01	2-year	Natural	11	0	981.7	885.58	884.53	0.107	1080	2.7	15072	3.5
		5-year								1795	2.7	15072	3.5
		10-year								2326	2.7	15072	3.5
		25-year								3171	2.7	15072	3.5
		50-year								3794	2.7	15072	3.5
		100-year								4500	2.8	15072	3.5
LUWMC02	LUWMC02	2-year	Natural	11.4	0	254.9	886.00	885.58	0.165	913	2.4	22772	4.4
		5-year								1512	-2.5	22772	4.4
		10-year								1913	2.5	22772	4.4
		25-year								2542	2.6	22772	4.4
		50-year								2942	2.6	22772	4.4
		100-year								3444	2.6	22772	4.4

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LUWMC03	UWMC03A	2-year	Rectangular	6	12	48.1	886.32	886.00	0.666	457	5.9	990	13.7
		5-year								758	10.5	990	13.7
		10-year								945	13.1	990	13.7
		25-year								1199	16.6	990	13.7
		50-year								1337	18.5	990	13.7
		100-year								1492	20.7	990	13.7
LUWMC03	UWMC03B	2-year	Trapezoidal	6	30	48.1	894.00	893.95	0.100	0	0.0	1626	9.0
		5-year								0	0.0	1626	9.0
		10-year								22	2.4	1626	9.0
		25-year								141	5.0	1626	9.0
		50-year								265	6.3	1626	9.0
		100-year								462	7.7	1626	9.0
LUWMC04	LUWMC04	2-year	Natural	13.6	0	5583.2	893.90	886.32	0.136	1055	1.0	53750	4.6
		5-year								1702	1.0	53750	4.6
		10-year								2126	1.0	53750	4.6
		25-year								2726	1.1	53750	4.6
		50-year								3191	1.2	53750	4.6
		100-year								3830	1.3	53750	4.6
LUWMC05	LUWMC05	2-year	Natural	16	0	1613.0	895.00	893.90	0.068	1062	1.5	96235	4.6
		5-year								1718	1.8	96235	4.6
		10-year								2147	1.9	96235	4.6
		25-year								2749	2.0	96235	4.6
		50-year								3208	2.1	96235	4.6
		100-year								3849	2.2	96235	4.6
LUWMC06	LUWMC06	2-year	Natural	10	0	2304.8	901.39	895.00	0.277	948	1.5	88655	6.7
		5-year								1535	1.6	88655	6.7
		10-year								1921	1.7	88655	6.7
		25-year								2461	1.8	88655	6.7
		50-year								2876	1.9	88655	6.7
		100-year								3453	2.0	88655	6.7
LUWMC07	LUWMC07	2-year	Natural	8	0	2190.2	902.70	901.39	0.060	880	2.2	6749	2.6
		5-year								1420	2.6	6749	2.6
		10-year								1772	2.7	6749	2.6
		25-year								2269	3.0	6749	2.6
		50-year								2647	3.1	6749	2.6
		100-year								3175	3.3	6749	2.6
LUWMC08	LUWMC08	2-year	Natural	15	0	1312.5	907.00	902.70	0.328	593	1.1	294534	7.8
		5-year								997	1.4	294534	7.8
		10-year								1281	1.5	294534	7.8
		25-year								1672	1.8	294534	7.8
		50-year								1979	1.9	294534	7.8
		100-year								2413	2.0	294534	7.8
LUWMC09	LUWMC09	2-year	Natural	10	0	5593.4	924.05	907.00	0.305	581	1.8	78406	7.0
		5-year								981	2.0	78406	7.0
		10-year								1245	2.1	78406	7.0
		25-year								1616	2.3	78406	7.0
		50-year								1898	2.4	78406	7.0
		100-year								2288	2.5	78406	7.0
LUWMC10	LUWMC10	2-year	Natural	20	0	3120.2	935.70	924.05	0.373	409	2.8	171892	10.2
		5-year								713	3.2	171892	10.2
		10-year								922	3.5	171892	10.2
		25-year								1209	3.7	171892	10.2
		50-year								1434	3.9	171892	10.2
		100-year								1733	4.1	171892	10.2
LUWMC11	LUWMC11	2-year	Natural	20	0	1782.7	945.11	935.70	0.528	376	1.6	238422	16.1
		5-year								620	1.8	238422	16.1
		10-year								785	2.0	238422	16.1
		25-year								999	2.1	238422	16.1
		50-year								1160	2.2	238422	16.1
		100-year								1378	2.3	238422	16.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LUWMC12	LUWMC12	2-year	Natural	17	0	3249.4	984.56	945.11	1.214	200	4.4	94269	16.4
		5-year								342	5.1	94269	16.4
		10-year								434	5.5	94269	16.4
		25-year								555	5.8	94269	16.4
		50-year								648	6.1	94269	16.4
		100-year								776	6.4	94269	16.4
LVCL102	LVCL102	2-year	Natural	10	0	2910.5	891.74	873.67	0.621	137	2.2	28188	6.7
		5-year								213	2.3	28188	6.7
		10-year								260	2.3	28188	6.7
		25-year								322	2.4	28188	6.7
		50-year								369	2.4	28188	6.7
		100-year								431	2.3	28188	6.7
LVCL201	LVCL201	2-year	Natural	9	0	827.6	926.49	908.57	2.165	67	1.7	33221	17.3
		5-year								101	2.0	33221	17.3
		10-year								122	2.1	33221	17.3
		25-year								150	2.2	33221	17.3
		50-year								171	2.3	33221	17.3
		100-year								199	2.2	33221	17.3
LVCMC02	LVCMC02	2-year	Natural	16	0	2269.3	873.67	860.79	0.568	609	7.5	13351	12.9
		5-year								964	8.5	13351	12.9
		10-year								1178	9.0	13351	12.9
		25-year								1385	9.2	13351	12.9
		50-year								1486	9.2	13351	12.9
		100-year								1614	9.2	13351	12.9
LVCMC03	LVCMC03	2-year	Natural	12.5	0	2262.7	882.12	873.67	0.373	536	3.6	24985	6.2
		5-year								838	4.1	24985	6.2
		10-year								1016	4.3	24985	6.2
		25-year								1250	4.5	24985	6.2
		50-year								1413	4.7	24985	6.2
		100-year								1622	4.8	24985	6.2
LVCMC04	LVCMC04	2-year	Natural	16	0	2893.5	908.57	882.12	0.914	309	3.9	45060	17.2
		5-year								463	4.5	45060	17.2
		10-year								561	4.7	45060	17.2
		25-year								691	5.0	45060	17.2
		50-year								787	5.2	45060	17.2
		100-year								924	5.5	45060	17.2
LVCMC05	LVCMC05	2-year	Natural	6	0	968.3	925.16	908.57	1.713	235	3.7	8951	12.2
		5-year								344	3.8	8951	12.2
		10-year								410	3.9	8951	12.2
		25-year								498	4.0	8951	12.2
		50-year								564	4.1	8951	12.2
		100-year								652	4.2	8951	12.2
LVCMC06	VCMC06A	2-year	Rectangular	4	6	152.9	926.96	925.16	1.177	104	11.6	312	13.0
		5-year								136	12.7	312	13.0
		10-year								153	13.3	312	13.0
		25-year								175	14.0	312	13.0
		50-year								191	14.4	312	13.0
		100-year								211	15.0	312	13.0
LVCMC06	VCMC06B	2-year	Trapezoidal	5	30	152.9	928.00	927.85	0.100	29	2.4	1204	8.0
		5-year								75	3.6	1204	8.0
		10-year								107	4.2	1204	8.0
		25-year								150	4.8	1204	8.0
		50-year								185	5.2	1204	8.0
		100-year								231	5.7	1204	8.0
LVCMC07	LVCMC07	2-year	Natural	6	0	924.8	933.88	926.96	0.748	151	2.5	7969	8.6
		5-year								219	2.5	7969	8.6
		10-year								260	2.5	7969	8.6
		25-year								313	2.5	7969	8.6
		50-year								354	2.5	7969	8.6
		100-year								408	2.6	7969	8.6

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LVCMC08	LVCMC08	2-year	Natural	6	0	378.9	939.98	933.88	1.610	67	2.4	8313	10.5
		5-year								98	2.7	8313	10.5
		10-year								117	2.8	8313	10.5
		25-year								142	3.1	8313	10.5
		50-year								162	3.1	8313	10.5
		100-year								187	3.3	8313	10.5
LW13L101	8621.1	2-year	Special	5	5	182.6	901.29	901.00	0.159	25	4.8	31	2.4
		5-year								37	5.6	31	2.4
		10-year								42	5.9	31	2.4
		25-year								53	6.6	31	2.4
		50-year								60	7.0	31	2.4
		100-year								69	7.9	31	2.4
LW13L101	8621.2	2-year	Trapezoidal	1	30	182.6	905.79	905.61	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.1	96	3.2
LW13L102	8201.1	2-year	Circular	2	0	114.6	903.74	901.29	2.138	25	9.5	31	9.8
		5-year								37	11.4	31	9.8
		10-year								42	13.2	31	9.8
		25-year								44	13.9	31	9.8
		50-year								44	13.9	31	9.8
		100-year								44	14.0	31	9.8
LW13L102	8201.2	2-year	Trapezoidal	1	30	114.6	908.74	905.79	2.575	0	0.0	489	16.3
		5-year								0	0.0	489	16.3
		10-year								0	0.0	489	16.3
		25-year								10	3.5	489	16.3
		50-year								21	4.7	489	16.3
		100-year								34	5.7	489	16.3
LW13L103	8199.1	2-year	Circular	1.25	0	310.3	911.48	903.74	2.495	6	5.8	9	7.7
		5-year								8	7.6	9	7.7
		10-year								9	7.7	9	7.7
		25-year								10	8.0	9	7.7
		50-year								11	8.6	9	7.7
		100-year								11	9.0	9	7.7
LW13L103	8199.2	2-year	Trapezoidal	1	30	310.3	915.97	908.74	2.330	0	0.0	466	15.5
		5-year								0	0.0	466	15.5
		10-year								0	0.0	466	15.5
		25-year								2	1.1	466	15.5
		50-year								4	1.6	466	15.5
		100-year								6	1.7	466	15.5
LW13L1A01	LW13L1A01	2-year	Circular	2	0	38.6	902.63	901.29	3.469	0	-0.1	39	12.5
		5-year								0	-0.1	39	12.5
		10-year								1	0.4	39	12.5
		25-year								1	0.6	39	12.5
		50-year								1	0.4	39	12.5
		100-year								1	0.4	39	12.5
LW13L1B01	8200.1	2-year	Circular	2	0	38.6	903.98	903.74	0.621	19	7.9	17	5.3
		5-year								29	9.1	17	5.3
		10-year								34	10.6	17	5.3
		25-year								34	10.6	17	5.3
		50-year								32	10.1	17	5.3
		100-year								32	10.2	17	5.3
LW13L1B01	8200.2	2-year	Trapezoidal	2	30	38.6	907.56	908.74	-3.055	0	0.0	1625	27.1
		5-year								0	0.0	1625	27.1
		10-year								-6	-0.3	1625	27.1
		25-year								-26	-1.1	1625	27.1
		50-year								-32	-1.2	1625	27.1
		100-year								-39	-1.4	1625	27.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LW13L1C01	8198.1	2-year	Circular	2	0	30.9	911.97	911.48	1.585	6	6.2	26	8.4
		5-year								8	7.1	26	8.4
		10-year								9	6.9	26	8.4
		25-year								11	6.8	26	8.4
		50-year								21	6.8	26	8.4
		100-year								22	6.8	26	8.4
LW13L1C01	8198.2	2-year	Trapezoidal	1	30	30.9	915.48	915.97	-1.585	0	0.0	384	12.8
		5-year								0	0.0	384	12.8
		10-year								0	0.0	384	12.8
		25-year								-4	-0.4	384	12.8
		50-year								-5	0.6	384	12.8
		100-year								-6	-0.6	384	12.8
LW13L201	8209.1	2-year	Circular	3.5	0	90.0	903.95	903.31	0.711	12	6.5	79	8.2
		5-year								18	7.6	79	8.2
		10-year								21	8.2	79	8.2
		25-year								26	8.9	79	8.2
		50-year								29	9.3	79	8.2
		100-year								33	9.9	79	8.2
LW13L201	8209.2	2-year	Trapezoidal	1	30	90.0	907.89	908.00	-0.122	0	0.0	107	3.6
		5-year								0	0.0	107	3.6
		10-year								0	0.0	107	3.6
		25-year								0	0.0	107	3.6
		50-year								0	0.0	107	3.6
		100-year								0	0.0	107	3.6
LW13L202	8208.1	2-year	Circular	3	0	109.8	904.00	903.95	0.046	7	3.2	13	1.9
		5-year								11	3.7	13	1.9
		10-year								13	4.0	13	1.9
		25-year								16	4.3	13	1.9
		50-year								18	4.5	13	1.9
		100-year								21	4.8	13	1.9
LW13L202	8208.2	2-year	Trapezoidal	1	30	109.8	908.00	907.89	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LW13L301	LW13L301	2-year	Circular	4	0	189.0	908.38	907.25	0.598	-1	-0.3	103	8.2
		5-year								-1	-0.4	103	8.2
		10-year								-1	-0.4	103	8.2
		25-year								-1	-0.4	103	8.2
		50-year								-1	-0.4	103	8.2
		100-year								-1	-0.4	103	8.2
LW13L401	8652.1	2-year	Circular	1	0	60.0	915.34	907.25	13.490	4	8.4	12	15.5
		5-year								6	11.0	12	15.5
		10-year								8	12.4	12	15.5
		25-year								9	14.0	12	15.5
		50-year								10	15.0	12	15.5
		100-year								12	16.3	12	15.5
LW13L401	8652.2	2-year	Trapezoidal	1	30	60.0	917.00	914.08	4.869	0	0.0	673	22.4
		5-year								0	0.0	673	22.4
		10-year								0	0.0	673	22.4
		25-year								0	0.0	673	22.4
		50-year								0	0.0	673	22.4
		100-year								0	0.0	673	22.4
LW13MC01	LW13MC01	2-year	Natural	4	0	128.2	903.31	901.00	1.802	54	3.5	4543	10.8
		5-year								79	3.8	4543	10.8
		10-year								94	4.0	4543	10.8
		25-year								114	4.2	4543	10.8
		50-year								129	4.3	4543	10.8
		100-year								148	4.5	4543	10.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LW13MC02	LW13MC02	2-year	Natural	4	0	588.0	907.00	903.31	0.628	44	1.1	4478	7.2
		5-year								62	1.3	4478	7.2
		10-year								74	1.4	4478	7.2
		25-year								89	1.5	4478	7.2
		50-year								100	1.6	4478	7.2
		100-year								115	1.7	4478	7.2
LW13MC03	8513.1	2-year	Circular	4	0	68.2	907.25	907.00	0.367	44	12.7	81	6.4
		5-year								63	14.6	81	6.4
		10-year								74	15.6	81	6.4
		25-year								89	16.8	81	6.4
		50-year								101	17.6	81	6.4
		100-year								115	18.6	81	6.4
LW13MC03	8513.2	2-year	Trapezoidal	1	30	68.2	914.08	914.00	0.117	0	0.0	104	3.5
		5-year								0	0.0	104	3.5
		10-year								0	0.0	104	3.5
		25-year								0	0.0	104	3.5
		50-year								0	0.0	104	3.5
		100-year								0	0.0	104	3.5
LW13MC04	8415.1	2-year	Circular	4	0	431.0	913.59	907.25	1.471	40	8.6	162	12.9
		5-year								57	9.7	162	12.9
		10-year								67	10.3	162	12.9
		25-year								80	11.0	162	12.9
		50-year								91	11.4	162	12.9
		100-year								104	11.9	162	12.9
LW13MC04	8415.2	2-year	Trapezoidal	1	30	431.0	918.00	914.08	0.909	0	0.0	291	9.7
		5-year								0	0.0	291	9.7
		10-year								0	0.0	291	9.7
		25-year								0	0.0	291	9.7
		50-year								0	0.0	291	9.7
		100-year								0	0.0	291	9.7
LWLL101	8261.1	2-year	Circular	4.5	0	618.4	881.28	874.16	1.151	95	8.6	196	12.3
		5-year								133	10.2	196	12.3
		10-year								157	10.8	196	12.3
		25-year								180	11.2	196	12.3
		50-year								193	12.1	196	12.3
		100-year								199	12.4	196	12.3
LWLL101	8261.2	2-year	Trapezoidal	1	30	618.4	896.24	911.00	-2.387	0	0.0	471	15.7
		5-year								0	0.0	471	15.7
		10-year								0	0.0	471	15.7
		25-year								0	0.0	471	15.7
		50-year								0	0.0	471	15.7
		100-year								0	0.0	471	15.7
LWLL102	8262.1	2-year	Circular	4.5	0	222.7	883.84	881.28	1.149	96	12.3	196	12.3
		5-year								134	13.3	196	12.3
		10-year								158	13.4	196	12.3
		25-year								181	13.6	196	12.3
		50-year								192	13.6	196	12.3
		100-year								199	13.6	196	12.3
LWLL102	8262.2	2-year	Trapezoidal	1	30	222.7	895.59	895.24	0.157	0	0.0	121	4.0
		5-year								0	0.0	121	4.0
		10-year								0	0.0	121	4.0
		25-year								0	0.0	121	4.0
		50-year								0	0.0	121	4.0
		100-year								0	0.0	121	4.0
LWLL103	8263.1	2-year	Circular	4.5	0	182.4	885.94	883.84	1.151	95	12.2	196	12.3
		5-year								134	13.3	196	12.3
		10-year								158	13.6	196	12.3
		25-year								185	13.7	196	12.3
		50-year								193	13.7	196	12.3
		100-year								199	13.8	196	12.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL103	8263.2	2-year	Trapezoidal	1	30	182.4	894.77	894.59	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LWLL104	8265.1	2-year	Circular	4.5	0	428.5	886.50	885.94	0.131	54	6.3	66	4.2
		5-year								76	7.2	66	4.2
		10-year								89	7.5	66	4.2
		25-year								107	8.0	66	4.2
		50-year								133	8.2	66	4.2
		100-year								118	7.3	66	4.2
LWLL104	8265.2	2-year	Trapezoidal	2	30	428.5	893.00	892.44	0.131	0	0.0	336	5.6
		5-year								0	0.0	336	5.6
		10-year								0	0.0	336	5.6
		25-year								0	0.0	336	5.6
		50-year								37	2.6	336	5.6
		100-year								118	2.9	336	5.6
LWLL105	8266.1	2-year	Circular	4.5	0	38.7	887.10	886.50	1.549	53	6.0	227	14.3
		5-year								74	6.5	227	14.3
		10-year								87	6.8	227	14.3
		25-year								104	7.1	227	14.3
		50-year								123	10.1	227	14.3
		100-year								134	8.4	227	14.3
LWLL105	8266.2	2-year	Trapezoidal	1	30	38.7	895.68	894.00	4.337	0	0.0	635	21.2
		5-year								0	0.0	635	21.2
		10-year								0	0.0	635	21.2
		25-year								0	0.0	635	21.2
		50-year								0	0.0	635	21.2
		100-year								0	0.0	635	21.2
LWLL106	8267.1	2-year	Circular	2.5	0	341.7	888.84	887.10	0.509	13	5.4	27	5.5
		5-year								17	5.7	27	5.5
		10-year								20	14.0	27	5.5
		25-year								25	5.9	27	5.5
		50-year								26	6.0	27	5.5
		100-year								29	6.1	27	5.5
LWLL106	8267.2	2-year	Trapezoidal	1	30	341.7	900.03	895.68	1.273	0	0.0	344	11.5
		5-year								0	0.0	344	11.5
		10-year								0	0.0	344	11.5
		25-year								0	0.0	344	11.5
		50-year								0	0.0	344	11.5
		100-year								0	0.0	344	11.5
LWLL107	8268.1	2-year	Circular	2.5	0	64.9	889.17	888.84	0.509	13	5.4	27	5.5
		5-year								17	5.8	27	5.5
		10-year								20	6.0	27	5.5
		25-year								24	6.2	27	5.5
		50-year								26	6.4	27	5.5
		100-year								31	6.5	27	5.5
LWLL107	8268.2	2-year	Trapezoidal	1	30	64.9	896.17	896.11	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.1	93	3.1
LWLL108	8270.1	2-year	Circular	2	0	140.6	895.14	889.17	4.245	13	8.6	43	13.8
		5-year								17	9.4	43	13.8
		10-year								20	9.8	43	13.8
		25-year								25	11.1	43	13.8
		50-year								27	11.6	43	13.8
		100-year								30	12.2	43	13.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL108	8270.2	2-year	Trapezoidal	1	30	140.6	899.14	897.17	1.401	0	0.0	361	12.0
		5-year								0	0.0	361	12.0
		10-year								0	0.0	361	12.0
		25-year								0	0.0	361	12.0
		50-year								0	0.0	361	12.0
		100-year								0	0.0	361	12.0
LWLL109	8269.1	2-year	Circular	2	0	128.5	895.31	895.14	0.132	13	6.3	8	2.4
		5-year								17	7.1	8	2.4
		10-year								20	8.3	8	2.4
		25-year								24	9.9	8	2.4
		50-year								26	10.5	8	2.4
		100-year								30	11.4	8	2.4
LWLL109	8269.2	2-year	Trapezoidal	1	30	128.5	900.27	900.14	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								3	0.9	97	3.2
LWLL1A01	8264.1	2-year	Circular	2	0	458.5	892.17	885.94	1.359	29	9.6	24	7.8
		5-year								29	9.5	24	7.8
		10-year								29	9.4	24	7.8
		25-year								29	9.3	24	7.8
		50-year								28	9.1	24	7.8
		100-year								28	8.8	24	7.8
LWLL1A01	8264.2	2-year	Trapezoidal	1	30	458.5	895.84	893.44	0.523	14	2.5	221	7.4
		5-year								35	3.6	221	7.4
		10-year								47	4.0	221	7.4
		25-year								63	4.5	221	7.4
		50-year								80	5.0	221	7.4
		100-year								98	5.4	221	7.4
LWLL1A02	8391.1	2-year	Circular	2	0	87.9	892.93	892.17	0.864	19	5.9	20	6.2
		5-year								22	7.0	20	6.2
		10-year								22	7.1	20	6.2
		25-year								23	7.1	20	6.2
		50-year								22	7.1	20	6.2
		100-year								22	7.1	20	6.2
LWLL1A02	8391.2	2-year	Trapezoidal	1	30	87.9	896.93	896.84	0.100	0	0.0	98	3.3
		5-year								5	1.2	98	3.3
		10-year								10	1.6	98	3.3
		25-year								17	2.0	98	3.3
		50-year								22	2.3	98	3.3
		100-year								29	2.6	98	3.3
LWLL1B01	8271.1	2-year	Circular	2	0	305.5	893.42	887.10	2.069	38	12.3	30	9.6
		5-year								38	12.3	30	9.6
		10-year								38	12.3	30	9.6
		25-year								38	12.3	30	9.6
		50-year								38	12.3	30	9.6
		100-year								38	12.3	30	9.6
LWLL1B01	8271.2	2-year	Trapezoidal	1	30	305.5	898.00	894.68	1.087	14	3.1	318	10.6
		5-year								36	4.5	318	10.6
		10-year								49	5.1	318	10.6
		25-year								67	5.8	318	10.6
		50-year								85	6.3	318	10.6
		100-year								104	6.9	318	10.6
LWLL201	LWLL201	2-year	Natural	10	3	167.5	877.86	875.25	1.559	20	1.4	10476	15.3
		5-year								28	1.3	10476	15.3
		10-year								32	1.3	10476	15.3
		25-year								37	1.2	10476	15.3
		50-year								50	1.1	10476	15.3
		100-year								-74	1.1	10476	15.3

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL202	8478.1	2-year	Circular	4	0	146.5	883.34	877.86	3.741	20	9.3	258	20.5
		5-year								28	10.6	258	20.5
		10-year								33	11.2	258	20.5
		25-year								40	11.9	258	20.5
		50-year								45	12.4	258	20.5
		100-year								52	12.9	258	20.5
LWLL202	8478.2	2-year	Trapezoidal	1	30	146.5	889.34	888.00	0.915	0	0.0	292	9.7
		5-year								0	0.0	292	9.7
		10-year								0	0.0	292	9.7
		25-year								0	0.0	292	9.7
		50-year								0	0.0	292	9.7
		100-year								0	0.0	292	9.7
LWLL301	8307.1	2-year	Rectangular	5	7	149.5	882.59	882.28	0.207	118	5.6	218	6.2
		5-year								191	6.7	218	6.2
		10-year								229	7.1	218	6.2
		25-year								239	7.5	218	6.2
		50-year								239	7.6	218	6.2
		100-year								239	7.7	218	6.2
LWLL301	8307.2	2-year	Trapezoidal	3	30	149.5	889.59	888.00	1.063	0	0.0	1815	20.2
		5-year								0	0.0	1815	20.2
		10-year								0	0.0	1815	20.2
		25-year								44	4.3	1815	20.2
		50-year								84	6.1	1815	20.2
		100-year								131	6.9	1815	20.2
LWLL302	8306.1	2-year	Rectangular	5	7	231.3	886.75	882.59	1.799	118	9.0	641	18.3
		5-year								192	10.3	641	18.3
		10-year								230	10.8	641	18.3
		25-year								262	11.0	641	18.3
		50-year								302	11.1	641	18.3
		100-year								349	11.1	641	18.3
LWLL302	8306.2	2-year	Trapezoidal	1	30	231.3	914.00	890.59	10.121	0	0.0	970	32.3
		5-year								0	0.0	970	32.3
		10-year								0	0.0	970	32.3
		25-year								0	0.0	970	32.3
		50-year								0	0.0	970	32.3
		100-year								0	0.0	970	32.3
LWLL303	LWLL303	2-year	Natural	5	3	216.7	890.36	886.75	1.666	107	5.3	1428	6.3
		5-year								174	5.9	1428	6.3
		10-year								205	6.2	1428	6.3
		25-year								250	6.3	1428	6.3
		50-year								281	6.3	1428	6.3
		100-year								326	6.2	1428	6.3
LWLL304	WLL304A	2-year	Special	7.08	7.08	24.0	890.22	890.18	0.166	107	11.3	118	4.7
		5-year								179	14.7	118	4.7
		10-year								205	15.5	118	4.7
		25-year								250	16.8	118	4.7
		50-year								282	17.6	118	4.7
		100-year								327	18.8	118	4.7
LWLL304	WLL304B	2-year	Trapezoidal	1	30	24.0	894.00	893.98	0.100	0	0.0	79	2.6
		5-year								0	0.0	79	2.6
		10-year								0	0.0	79	2.6
		25-year								0	0.0	79	2.6
		50-year								0	0.0	79	2.6
		100-year								0	0.0	79	2.6
LWLL305	WLL305A	2-year	Special	7.08	7.08	77.4	890.36	890.22	0.181	95	8.4	137	5.5
		5-year								155	10.6	137	5.5
		10-year								177	11.1	137	5.5
		25-year								217	12.1	137	5.5
		50-year								243	12.8	137	5.5
		100-year								282	13.8	137	5.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL305	WLL305B	2-year	Trapezoidal	2	30	77.4	894.08	894.00	0.100	0	0.0	299	5.0
		5-year								0	0.0	299	5.0
		10-year								0	0.0	299	5.0
		25-year								0	0.0	299	5.0
		50-year								0	0.0	299	5.0
		100-year								0	0.0	299	5.0
LWLL306	LWLL306	2-year	Natural	5	6	46.1	892.10	890.36	3.771	90	10.3	4396	22.0
		5-year								136	12.2	4396	22.0
		10-year								162	13.0	4396	22.0
		25-year								198	14.1	4396	22.0
		50-year								223	14.5	4396	22.0
		100-year								257	14.6	4396	22.0
LWLL307	WLL307A	2-year	Circular	2	0	44.4	893.74	892.10	3.697	26	10.8	24	7.5
		5-year								31	11.2	24	7.5
		10-year								33	11.3	24	7.5
		25-year								34	11.3	24	7.5
		50-year								34	11.3	24	7.5
		100-year								34	11.3	24	7.5
LWLL307	WLL307B	2-year	Trapezoidal	2	30	44.4	896.00	895.96	0.100	65	3.7	279	4.7
		5-year								105	4.5	279	4.7
		10-year								129	4.9	279	4.7
		25-year								164	5.3	279	4.7
		50-year								191	5.6	279	4.7
		100-year								226	6.0	279	4.7
LWLL308	LWLL308	2-year	Natural	5	6	162.4	896.11	893.74	1.459	90	7.6	6816	16.7
		5-year								136	8.8	6816	16.7
		10-year								162	8.8	6816	16.7
		25-year								198	8.8	6816	16.7
		50-year								223	8.9	6816	16.7
		100-year								258	8.8	6816	16.7
LWLL309	WLL309A	2-year	Circular	2	0	15.7	896.41	896.11	1.913	29	10.9	12	3.9
		5-year								32	11.0	12	3.9
		10-year								32	10.9	12	3.9
		25-year								33	10.9	12	3.9
		50-year								33	10.9	12	3.9
		100-year								33	10.9	12	3.9
LWLL309	WLL309B	2-year	Trapezoidal	2	30	15.7	899.00	898.98	0.100	61	3.7	240	4.0
		5-year								103	4.5	240	4.0
		10-year								130	4.9	240	4.0
		25-year								167	5.4	240	4.0
		50-year								194	5.7	240	4.0
		100-year								232	6.1	240	4.0
LWLL310	LWLL310	2-year	Natural	5	6	33.7	897.07	896.41	1.958	90	3.7	12122	22.3
		5-year								136	3.7	12122	22.3
		10-year								174	3.7	12122	22.3
		25-year								198	3.7	12122	22.3
		50-year								229	3.7	12122	22.3
		100-year								259	3.7	12122	22.3
LWLL311	WLL311A	2-year	Circular	2.5	0	16.3	897.36	897.07	1.776	63	12.6	37	7.6
		5-year								65	13.1	37	7.6
		10-year								68	13.5	37	7.6
		25-year								68	13.5	37	7.6
		50-year								68	13.5	37	7.6
		100-year								68	13.6	37	7.6
LWLL311	WLL311B	2-year	Trapezoidal	2	30	16.3	900.00	899.98	0.100	28	2.7	240	4.0
		5-year								70	3.9	240	4.0
		10-year								95	4.4	240	4.0
		25-year								134	5.0	240	4.0
		50-year								165	5.4	240	4.0
		100-year								198	5.8	240	4.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL312	LWLL312	2-year	Natural	5	6	78.8	897.52	897.36	0.203	91	3.1	7629	9.2
		5-year								136	3.2	7629	9.2
		10-year								163	3.2	7629	9.2
		25-year								198	3.2	7629	9.2
		50-year								224	3.2	7629	9.2
		100-year								260	3.3	7629	9.2
LWLL313	8503.1	2-year	Circular	2	0	75.4	897.68	897.52	0.212	24	8.1	10	3.1
		5-year								24	8.1	10	3.1
		10-year								24	8.1	10	3.1
		25-year								24	8.1	10	3.1
		50-year								24	8.1	10	3.1
		100-year								24	8.1	10	3.1
LWLL313	8503.2	2-year	Trapezoidal	2	30	75.4	899.97	899.89	0.100	79	3.9	303	5.0
		5-year								124	4.7	303	5.0
		10-year								151	5.0	303	5.0
		25-year								187	5.5	303	5.0
		50-year								214	5.8	303	5.0
		100-year								250	6.1	303	5.0
LWLL314	8278.1	2-year	Circular	2	0	26.5	897.73	897.68	0.188	29	8.9	9	2.7
		5-year								29	8.9	9	2.7
		10-year								28	8.8	9	2.7
		25-year								28	8.6	9	2.7
		50-year								27	8.5	9	2.7
		100-year								27	8.4	9	2.7
LWLL314	8278.2	2-year	Trapezoidal	2	30	26.5	900.58	899.97	2.299	75	4.8	1326	22.1
		5-year								122	5.8	1326	22.1
		10-year								149	6.2	1326	22.1
		25-year								185	6.6	1326	22.1
		50-year								212	6.8	1326	22.1
		100-year								247	7.1	1326	22.1
LWLL315	8422.2	2-year	Trapezoidal	3	30	161.5	900.74	900.58	0.100	75	3.6	554	6.2
		5-year								114	4.3	554	6.2
		10-year								137	4.6	554	6.2
		25-year								168	5.0	554	6.2
		50-year								192	5.3	554	6.2
		100-year								222	5.6	554	6.2
LWLL316	8423.1	2-year	Circular	2	0	320.0	901.44	898.07	1.053	26	8.1	22	6.9
		5-year								26	8.1	22	6.9
		10-year								26	8.1	22	6.9
		25-year								26	8.1	22	6.9
		50-year								26	8.1	22	6.9
		100-year								26	8.1	22	6.9
LWLL316	8423.2	2-year	Trapezoidal	3	30	320.0	905.69	901.74	1.234	60	5.7	1955	21.7
		5-year								99	7.0	1955	21.7
		10-year								122	7.6	1955	21.7
		25-year								153	8.3	1955	21.7
		50-year								177	8.8	1955	21.7
		100-year								208	9.4	1955	21.7
LWLL317	8279.1	2-year	Circular	2	0	63.5	901.73	901.44	0.456	23	7.4	14	4.5
		5-year								24	7.5	14	4.5
		10-year								24	7.5	14	4.5
		25-year								24	7.4	14	4.5
		50-year								24	7.5	14	4.5
		100-year								24	7.5	14	4.5
LWLL317	8279.2	2-year	Trapezoidal	3	30	63.5	905.75	905.69	0.100	69	3.7	541	6.0
		5-year								106	4.4	541	6.0
		10-year								129	4.8	541	6.0
		25-year								159	5.2	541	6.0
		50-year								182	5.4	541	6.0
		100-year								212	5.8	541	6.0

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL318	8421.1	2-year	Circular	2	0	56.9	901.99	901.73	0.457	23	7.2	14	4.5
		5-year								22	7.0	14	4.5
		10-year								22	7.0	14	4.5
		25-year								22	7.0	14	4.5
		50-year								22	6.9	14	4.5
		100-year								22	7.0	14	4.5
LWLL318	8421.2	2-year	Trapezoidal	3	30	56.9	905.81	905.75	0.100	75	3.5	571	6.3
		5-year								114	4.2	571	6.3
		10-year								137	4.6	571	6.3
		25-year								168	5.0	571	6.3
		50-year								191	5.2	571	6.3
		100-year								222	5.6	571	6.3
LWLL3A01	LWLL3A01	2-year	Natural	5.5	10	480.5	889.49	886.75	0.570	4	1.6	936	4.6
		5-year								6	1.7	936	4.6
		10-year								7	1.7	936	4.6
		25-year								8	1.7	936	4.6
		50-year								9	1.6	936	4.6
		100-year								11	1.6	936	4.6
LWLL3A02	WLL3A02A	2-year	Circular	2.5	0	113.2	890.59	889.49	0.972	4	4.5	38	7.6
		5-year								6	5.2	38	7.6
		10-year								7	5.6	38	7.6
		25-year								8	6.0	38	7.6
		50-year								9	6.2	38	7.6
		100-year								11	6.5	38	7.6
LWLL3A02	WLL3A02B	2-year	Trapezoidal	1	30	113.2	894.11	894.00	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LWLL3B01	8633.1	2-year	Special	4.5	4.5	89.0	890.50	890.22	0.315	17	3.1	56	5.4
		5-year								26	3.6	56	5.4
		10-year								29	3.9	56	5.4
		25-year								34	4.3	56	5.4
		50-year								39	4.5	56	5.4
		100-year								45	4.9	56	5.4
LWLL3B01	8633.2	2-year	Trapezoidal	1	30	89.0	894.63	894.00	0.708	0	0.0	257	8.6
		5-year								0	0.0	257	8.6
		10-year								0	0.0	257	8.6
		25-year								0	0.0	257	8.6
		50-year								0	0.0	257	8.6
		100-year								0	0.0	257	8.6
LWLL3B02	8632.1	2-year	Special	4.5	4.5	38.8	890.62	890.50	0.310	17	3.8	55	5.4
		5-year								25	4.1	55	5.4
		10-year								29	4.4	55	5.4
		25-year								34	4.7	55	5.4
		50-year								39	4.9	55	5.4
		100-year								45	5.1	55	5.4
LWLL3B02	8632.2	2-year	Trapezoidal	1	30	38.8	894.87	893.63	3.198	0	0.0	545	18.2
		5-year								0	0.0	545	18.2
		10-year								0	0.0	545	18.2
		25-year								0	0.0	545	18.2
		50-year								0	0.0	545	18.2
		100-year								0	0.0	545	18.2
LWLL3B03	8631.1	2-year	Special	4.5	4.5	43.0	890.76	890.62	0.326	17	4.2	57	5.5
		5-year								25	4.3	57	5.5
		10-year								29	4.7	57	5.5
		25-year								34	5.0	57	5.5
		50-year								39	5.1	57	5.5
		100-year								44	5.3	57	5.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL3B03	8631.2	2-year	Trapezoidal	1	30	43.0	895.19	893.87	3.072	0	0.0	535	17.8
		5-year								0	0.0	535	17.8
		10-year								0	0.0	535	17.8
		25-year								0	0.0	535	17.8
		50-year								0	0.0	535	17.8
		100-year								0	0.0	535	17.8
LWLL3B04	8630.1	2-year	Special	4.5	4.5	52.0	890.92	890.76	0.308	17	4.4	55	5.4
		5-year								24	4.7	55	5.4
		10-year								29	4.9	55	5.4
		25-year								34	5.2	55	5.4
		50-year								39	5.3	55	5.4
		100-year								44	5.5	55	5.4
LWLL3B04	8630.2	2-year	Trapezoidal	1	30	52.0	896.00	894.19	3.479	0	0.0	569	19.0
		5-year								0	0.0	569	19.0
		10-year								0	0.0	569	19.0
		25-year								0	0.0	569	19.0
		50-year								0	0.0	569	19.0
		100-year								0	0.0	569	19.0
LWLL3B05	8629.1	2-year	Special	4.5	4.5	39.5	891.04	890.92	0.304	17	4.5	55	5.4
		5-year								24	4.9	55	5.4
		10-year								29	5.1	55	5.4
		25-year								34	5.4	55	5.4
		50-year								39	5.5	55	5.4
		100-year								44	5.6	55	5.4
LWLL3B05	8629.2	2-year	Trapezoidal	2	30	39.5	895.04	895.00	0.100	0	0.0	296	4.9
		5-year								0	0.0	296	4.9
		10-year								0	0.0	296	4.9
		25-year								0	0.0	296	4.9
		50-year								0	0.0	296	4.9
		100-year								0	0.0	296	4.9
LWLL401	8277.1	2-year	Circular	2	0	166.3	891.50	885.32	3.717	21	8.9	40	12.9
		5-year								29	11.7	40	12.9
		10-year								34	12.4	40	12.9
		25-year								41	13.0	40	12.9
		50-year								44	14.0	40	12.9
		100-year								46	14.4	40	12.9
LWLL401	8277.2	2-year	Trapezoidal	1	30	166.3	895.50	892.00	2.105	0	0.0	443	14.8
		5-year								0	0.0	443	14.8
		10-year								0	0.0	443	14.8
		25-year								0	0.0	443	14.8
		50-year								6	2.8	443	14.8
		100-year								15	3.9	443	14.8
LWLL501	WLL501A	2-year	Circular	2	0	110.2	887.97	886.55	1.289	26	7.8	24	7.6
		5-year								26	7.9	24	7.6
		10-year								26	7.9	24	7.6
		25-year								26	7.9	24	7.6
		50-year								26	8.0	24	7.6
		100-year								26	7.9	24	7.6
LWLL501	WLL501B	2-year	Trapezoidal	6	30	110.2	890.11	890.00	0.100	29	2.5	1593	8.8
		5-year								58	3.3	1593	8.8
		10-year								75	3.7	1593	8.8
		25-year								102	4.2	1593	8.8
		50-year								123	4.3	1593	8.8
		100-year								146	4.4	1593	8.8
LWLL601	8420.1	2-year	Circular	1.5	0	22.1	887.95	887.33	2.811	15	8.6	14	7.9
		5-year								15	8.7	14	7.9
		10-year								15	8.7	14	7.9
		25-year								15	8.7	14	7.9
		50-year								15	8.8	14	7.9
		100-year								15	8.9	14	7.9

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL601	8420.2	2-year	Trapezoidal	6	30	22.1	893.89	893.87	0.100	11	2.0	1302	7.2
		5-year								21	2.4	1302	7.2
		10-year								28	2.7	1302	7.2
		25-year								36	3.0	1302	7.2
		50-year								42	3.2	1302	7.2
		100-year								51	3.4	1302	7.2
LWLL701	8419.1	2-year	Circular	1.5	0	21.6	890.11	888.58	7.083	24	13.5	22	12.5
		5-year								24	13.5	22	12.5
		10-year								24	13.5	22	12.5
		25-year								24	13.5	22	12.5
		50-year								24	13.5	22	12.5
		100-year								24	13.5	22	12.5
LWLL701	8419.2	2-year	Trapezoidal	2	30	21.6	895.02	895.00	0.100	-17	2.1	240	4.0
		5-year								36	2.7	240	4.0
		10-year								47	2.9	240	4.0
		25-year								62	3.3	240	4.0
		50-year								73	3.4	240	4.0
		100-year								88	3.6	240	4.0
LWLMC01	LWLMC01	2-year	Circular	6	0	109.1	873.21	871.99	1.118	340	16.4	416	14.7
		5-year								439	16.8	416	14.7
		10-year								487	17.5	416	14.7
		25-year								587	20.3	416	14.7
		50-year								681	24.1	416	14.7
		100-year								757	26.7	416	14.7
LWLMC02	WLMC02A	2-year	Circular	6	0	85.0	874.16	873.21	1.118	340	16.4	416	14.7
		5-year								439	16.8	416	14.7
		10-year								487	17.1	416	14.7
		25-year								587	20.3	416	14.7
		50-year								681	24.0	416	14.7
		100-year								757	26.7	416	14.7
LWLMC02	WLMC02B	2-year	Trapezoidal	1	30	85.0	910.00	909.92	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LWLMC03	WLMC03A	2-year	Circular	6	0	70.4	874.95	874.16	1.122	262	14.2	417	14.7
		5-year								330	15.0	417	14.7
		10-year								374	16.3	417	14.7
		25-year								513	18.1	417	14.7
		50-year								597	21.0	417	14.7
		100-year								663	23.3	417	14.7
LWLMC03	WLMC03B	2-year	Trapezoidal	1	30	70.4	910.07	910.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LWLMC04	LWLMC04	2-year	Trapezoidal	10	4	18.2	875.25	874.95	1.650	262	4.4	5527	12.6
		5-year								330	4.5	5527	12.6
		10-year								374	4.5	5527	12.6
		25-year								513	4.4	5527	12.6
		50-year								598	4.4	5527	12.6
		100-year								663	4.4	5527	12.6
LWLMC05	LWLMC05	2-year	Natural	18	4	321.2	880.50	875.25	1.634	234	7.1	53939	18.8
		5-year								294	7.2	53939	18.8
		10-year								343	7.2	53939	18.8
		25-year								478	7.2	53939	18.8
		50-year								570	7.1	53939	18.8
		100-year								607	7.1	53939	18.8

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC06	WLMC06A	2-year	Circular	4	0	40.4	882.00	880.50	3.711	234	19.9	150	11.9
		5-year								294	24.1	150	11.9
		10-year								316	25.5	150	11.9
		25-year								319	25.6	150	11.9
		50-year								319	25.6	150	11.9
		100-year								320	25.6	150	11.9
LWLMC06	WLMC06B	2-year	Trapezoidal	1	30	40.4	890.00	889.96	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								27	2.6	96	3.2
		25-year								165	5.5	96	3.2
		50-year								260	8.7	96	3.2
		100-year								342	11.4	96	3.2
LWLMC07	LWLMC07	2-year	Natural	9	30	195.7	882.28	882.00	0.143	213	1.2	5617	3.8
		5-year								274	1.2	5617	3.8
		10-year								318	1.2	5617	3.8
		25-year								450	1.1	5617	3.8
		50-year								591	1.2	5617	3.8
		100-year								674	1.2	5617	3.8
LWLMC08	LWLMC08	2-year	Natural	10	10	329.5	882.76	882.28	0.146	168	1.7	10491	4.8
		5-year								260	1.7	10491	4.8
		10-year								312	1.7	10491	4.8
		25-year								378	1.7	10491	4.8
		50-year								422	1.7	10491	4.8
		100-year								477	1.7	10491	4.8
LWLMC09	WLMC09A	2-year	User Defined	0	0	16.9	882.84	882.76	0.473	169	1.4	0	6.1
		5-year								261	1.9	0	6.1
		10-year								314	2.2	0	6.1
		25-year								379	2.3	0	6.1
		50-year								423	2.5	0	6.1
		100-year								479	2.6	0	6.1
LWLMC09	WLMC09B	2-year	Trapezoidal	1	30	16.9	898.00	897.98	0.100	0	0.0	79	2.6
		5-year								0	0.0	79	2.6
		10-year								0	0.0	79	2.6
		25-year								0	0.0	79	2.6
		50-year								0	0.0	79	2.6
		100-year								0	0.0	79	2.6
LWLMC10	LWLMC10	2-year	Natural	10	12	628.0	884.21	882.84	0.218	115	2.6	9285	5.5
		5-year								174	2.8	9285	5.5
		10-year								208	2.9	9285	5.5
		25-year								245	3.0	9285	5.5
		50-year								268	3.1	9285	5.5
		100-year								295	3.1	9285	5.5
LWLMC11	WLMC11A	2-year	Rectangular	3	6	134.0	884.94	884.21	0.545	115	6.8	141	7.8
		5-year								175	9.5	141	7.8
		10-year								209	11.6	141	7.8
		25-year								245	13.6	141	7.8
		50-year								268	14.8	141	7.8
		100-year								295	16.3	141	7.8
LWLMC11	WLMC11B	2-year	Trapezoidal	1	30	134.0	894.00	893.87	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LWLMC12	LWLMC12	2-year	Natural	8	10	137.9	885.32	884.94	0.276	111	2.0	2168	5.5
		5-year								173	2.1	2168	5.5
		10-year								205	2.1	2168	5.5
		25-year								241	2.1	2168	5.5
		50-year								265	2.1	2168	5.5
		100-year								291	2.1	2168	5.5

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC13	LWLMC13	2-year	Natural	7	5	446.7	886.55	885.32	0.275	101	2.4	2827	5.0
		5-year								180	2.4	2827	5.0
		10-year								223	2.4	2827	5.0
		25-year								255	2.4	2827	5.0
		50-year								283	2.4	2827	5.0
		100-year								315	2.4	2827	5.0
LWLMC14	8276.1	2-year	Circular	2	0	79.9	887.33	886.55	0.976	49	15.3	21	6.6
		5-year								57	17.9	21	6.6
		10-year								57	17.9	21	6.6
		25-year								57	18.0	21	6.6
		50-year								57	18.0	21	6.6
		100-year								57	18.1	21	6.6
LWLMC14	8276.2	2-year	Trapezoidal	2	30	79.9	894.87	891.00	4.842	0	0.0	2046	34.1
		5-year								52	8.2	2046	34.1
		10-year								91	10.2	2046	34.1
		25-year								130	11.8	2046	34.1
		50-year								157	12.7	2046	34.1
		100-year								193	13.8	2046	34.1
LWLMC15	8275.1	2-year	Circular	2.5	0	635.5	888.58	887.33	0.197	33	6.7	17	3.4
		5-year								34	6.8	17	3.4
		10-year								33	6.8	17	3.4
		25-year								33	6.8	17	3.4
		50-year								33	6.8	17	3.4
		100-year								33	6.7	17	3.4
LWLMC15	8275.2	2-year	Trapezoidal	3	30	635.5	896.00	892.87	0.493	17	2.4	1235	13.7
		5-year								69	1.9	1235	13.7
		10-year								97	2.3	1235	13.7
		25-year								125	2.8	1235	13.7
		50-year								144	3.2	1235	13.7
		100-year								170	3.6	1235	13.7
LWLMC16	8274.1	2-year	Circular	2	0	429.9	894.42	888.58	1.358	18	5.7	24	7.8
		5-year								17	5.4	24	7.8
		10-year								17	5.4	24	7.8
		25-year								17	5.4	24	7.8
		50-year								17	5.3	24	7.8
		100-year								17	5.6	24	7.8
LWLMC16	8274.2	2-year	Trapezoidal	3	30	429.9	898.75	894.00	1.105	0	0.0	1850	20.6
		5-year								30	0.8	1850	20.6
		10-year								39	1.0	1850	20.6
		25-year								51	1.3	1850	20.6
		50-year								60	1.4	1850	20.6
		100-year								72	1.6	1850	20.6
LWLMC17	8273.1	2-year	Circular	2	0	603.9	906.62	894.42	2.020	30	9.5	30	9.5
		5-year								31	9.8	30	9.5
		10-year								31	9.8	30	9.5
		25-year								31	9.8	30	9.5
		50-year								31	9.8	30	9.5
		100-year								31	9.9	30	9.5
LWLMC17	8273.2	2-year	Trapezoidal	2	30	603.9	911.12	897.75	2.214	0	0.0	1384	23.1
		5-year								16	0.9	1384	23.1
		10-year								25	1.3	1384	23.1
		25-year								37	1.7	1384	23.1
		50-year								46	2.1	1384	23.1
		100-year								58	2.5	1384	23.1
LWLMC18	8417.1	2-year	Circular	2	0	51.3	908.89	906.62	4.428	32	13.1	44	14.1
		5-year								36	13.1	44	14.1
		10-year								36	13.1	44	14.1
		25-year								36	13.1	44	14.1
		50-year								37	13.2	44	14.1
		100-year								37	13.0	44	14.1

Table B.4
Hydraulic Modeling - Conduit Results for Existing Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC18	8417.2	2-year	Trapezoidal	2	30	51.3	911.89	910.12	3.453	0	0.0	1728	28.8
		5-year								21	1.2	1728	28.8
		10-year								30	1.6	1728	28.8
		25-year								42	2.1	1728	28.8
		50-year								51	2.5	1728	28.8
		100-year								63	2.9	1728	28.8
RCL0820	RCL0820A	2-year	Circular	3	0	77.3	913.50	913.39	0.142	24	4.8	23	3.3
		5-year								35	5.7	23	3.3
		10-year								42	6.3	23	3.3
		25-year								50	7.0	23	3.3
		50-year								52	7.2	23	3.3
		100-year								64	8.8	23	3.3
RCL0820	RCL0820B	2-year	Trapezoidal	1	30	77.3	918.77	918.69	0.104	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
COUNTRY CLUB (CC)					
CCMC00	CCMC00	1	7.57	6.13	69
CCMC01	CCMC01	1	13.02	14.69	75
CCMC02	CCMC02	1	3.60	1.69	82
CCMC04	CCMC04	1	15.85	14.32	91
CCMC06	CCMC06	1	19.58	5.56	87
CCMC10	CCMC10	1	44.25	20.05	87
CCMC11	CCMC11	1	39.58	19.51	90
CCMC12	CCMC12	1	58.27	18.13	85
CCL101	CCL101	1	21.23	13.24	79
CCL103	CCL103	1	20.86	14.35	84
CCL107	CCL107	1	28.25	16.30	83
CCL112	CCL112	1	5.80	9.74	86
CCL113	CCL113	1	13.11	9.33	87
CCL204	CCL204	1	9.11	8.25	93
EAST 4TH STREET (E4)					
E4MC01	E4MC01	1	26.38	9.62	82
EAST 7TH STREET (E7)					
E7MC01	E7MC01	1	38.82	16.97	88
EISENHOWER / 23RD STREET (E23)					
E23MC01	E23MC01	1	226.24	55.28	85
E23MC02	E23MC02	1	229.22	46.03	85
E23MC03	E23MC03	1	97.42	35.22	89
E23MC04	E23MC04	1	147.45	46.72	88
E23MC05	E23MC05	1	68.54	44.59	91
E23L105	E23L105	1	2.87	4.91	89
E23L106	E23L106	1	2.08	2.66	89
E23L1A01	E23L1A01	1	8.42	7.97	86
FOREST PARK (FP)					
FPMC03	FPMC03	1	2.73	9.92	72
FPMC04	FPMC04	1	35.23	20.86	79
FPMC05	FPMC05	1	28.83	25.81	70
FPL102	FPL102	1	3.40	3.55	81
FPL104	FPL104	1	6.43	9.61	90
FPL203	FPL203	1	2.10	0.77	90
FPL206	FPL206	1	42.96	36.23	91
FPL301	FPL301	1	12.12	14.04	69
INDUSTRIAL PARK (IP)					
UWMC01	UWMC01	1	86.26	62.95	89
IPMC07	IPMC07	1	145.47	51.01	93
IPMC09	IPMC09	1	150.31	72.62	92
IPMC10	IPMC10	1	5.09	11.15	92
IPMC11	IPMC11	1	46.89	26.59	89

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
IPMC13	IPMC13	1	120.05	48.62	89
IPMC15	IPMC15	1	56.17	38.67	93
IPMC19	IPMC19	1	280.85	96.54	92
IPMC20	IPMC20	1	204.11	49.43	86
IPL201	IPL201	1	12.34	13.24	92
IPL202	IPL202	1	15.36	10.94	93
IPL206	IPL206	1	1.61	3.23	92
IPL2A01	IPL2A01	1	14.36	11.61	93
IPL2A02	IPL2A02	1	7.91	8.54	87
IPL2A05	IPL2A05	1	10.88	6.83	88
IPL411	IPL411	1	9.00	6.39	87
IPL502	IPL502	1	10.81	18.56	93
IPL601	IPL601	1	37.96	18.48	87
IPL605	IPL605	1	6.51	9.57	89
IPL6A01	IPL6A01	1	8.18	13.94	87
IPL6A03	IPL6A03	1	8.35	8.78	87
LOWER WILSON (LW)					
LWMC02	LWMC02	1	139.51	64.58	81
LWMC04	LWMC04	1	84.70	52.63	74
LWMC06	LWMC06	1	48.04	21.59	88
LWMC08	LWMC08	1	77.05	20.75	82
LWMC09	LWMC09	1	14.36	15.77	82
LWMC11	LWMC11	1	94.25	70.81	87
LWMC12	LWMC12	1	70.99	30.33	89
LWMC13	LWMC13	1	122.83	97.12	89
LWMC14	LWMC14	1	117.77	116.47	88
LWL101	LWL101	1	143.51	36.01	86
NUGENT CREEK (NC)					
NCMC01	NCMC01	1	133.69	84.16	82
NCMC02	NCMC02	1	154.02	100.40	84
NCMC04	NCMC04	1	166.46	95.55	87
NCMC05	NCMC05	1	33.53	31.36	87
NCMC06	NCMC06	1	181.82	76.30	86
NCMC08	NCMC08	1	161.30	67.48	86
NCMC09	NCMC09	1	84.85	41.13	87
NCMC10	NCMC10	1	103.54	46.97	87
NCMC11	NCMC11	1	159.57	45.57	83
NCMC12	NCMC12	1	146.11	37.18	89
NCL201	NCL201	1	25.06	19.22	88
NCL202	NCL202	1	11.43	9.39	86
NCL401	NCL401	1	97.26	38.92	85
NCL4A01	NCL4A01	1	17.99	18.01	91
NCL4B01	NCL4B01	1	10.31	14.06	90

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
NCL4D01	NCL4D01	1	6.46	5.41	90
NCL500	NCL500	1	103.54	46.97	87
NCL502	NCL502	1	137.35	24.11	74
NCL503	NCL503	1	121.20	31.64	72
PIN OAK (PO)					
POMC01	POMC01	1	88.38	33.79	86
POMC02	POMC02	1	34.51	19.10	91
POMC03	POMC03	1	58.08	29.21	87
POMC11	POMC11	1	30.13	15.25	86
POMC18	POMC18	1	41.98	16.82	89
POL102	POL102	1	11.22	12.92	87
POL105	POL105	1	5.22	11.45	87
POL110	POL110	1	4.82	16.35	87
POL301	POL301	1	25.53	14.61	92
POL306	POL306	1	10.01	8.82	89
POL405	POL405	1	14.34	11.76	89
POL502	POL502	1	20.96	14.05	87
POSSUM RUN (PR)					
PRMC05	PRMC05	1	5.31	9.09	79
PRMC07	PRMC07	1	9.87	13.47	91
PRMC09	PRMC09	1	8.20	9.21	94
PRMC15	PRMC15	1	13.20	7.05	90
PRMC16	PRMC16	1	18.58	21.18	86
PRMC19	PRMC19	1	17.02	8.58	93
PRMC21	PRMC21	1	9.00	6.95	90
PRL101	PRL101	1	3.16	6.20	85
PRL107	PRL107	1	5.00	10.15	89
PRL202	PRL202	1	19.15	11.53	87
PRL204	PRL204	1	9.07	7.96	86
PRL208	PRL208	1	7.80	6.81	84
PRL212	PRL212	1	17.47	9.96	84
PRL215	PRL215	1	5.24	7.39	84
PRL218	PRL218	1	24.68	12.45	85
PRL2A01	PRL2A01	1	8.59	13.05	86
PRL302	PRL302	1	10.27	9.49	88
PRL305	PRL305	1	24.15	15.02	88
PRL307	PRL307	1	2.23	5.97	88
PRL401	PRL401	1	2.22	9.32	90
ROCK CREEK (RC)					
RCMC01	RCMC01	1	108.36	30.88	83
RCMC02	RCMC02	1	8.53	11.41	70
RCMC03	RCMC03	1	35.29	20.66	77
RCMC06	RCMC06	1	30.76	10.30	82

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
RCMC07	RCMC07	1	5.44	4.84	79
RCMC08	RCMC08	1	81.30	59.07	82
RCMC09	RCMC09	1	4.66	4.35	77
RCMC14	RCMC14	1	11.58	5.94	86
RCMC17	RCMC17	1	76.55	27.12	85
RCMC19	RCMC19	1	100.58	32.15	88
RCMC23	RCMC23	1	133.93	37.41	90
RCMC24	RCMC24	1	49.51	19.37	85
RCMC25	RCMC25	1	17.33	10.07	85
RCMC27	RCMC27	1	44.01	34.24	93
RCMC31	RCMC31	1	232.73	78.77	91
RCMC32	RCMC32	1	115.23	29.84	86
RCMC34	RCMC34	1	223.79	62.78	87
RCMC36	RCMC36	1	158.63	62.37	90
RCMC37	RCMC37	1	259.98	63.44	83
RCMC38	RCMC38	1	197.35	88.32	84
RCMC39	RCMC39	1	228.58	76.07	84
RCMC40	RCMC40	1	76.97	28.83	87
RCMC41	RCMC41	1	136.06	109.60	78
RCMC42	RCMC42	1	224.49	85.45	84
RCMC43	RCMC43	1	217.78	104.77	86
RCMC44	RCMC44	1	128.78	48.66	85
RCMC45	RCMC45	1	184.82	61.58	85
RCMC46	RCMC46	1	168.94	149.79	85
RCMC47	RCMC47	1	117.80	75.85	85
RCMC48	RCMC48	1	211.92	59.64	86
RCMC49	RCMC49	1	188.98	68.45	82
RCMC50	RCMC50	1	155.77	65.77	83
RCMC51	RCMC51	1	125.43	60.85	85
RCMC52	RCMC52	1	207.23	63.83	85
RCMC53	RCMC53	1	124.22	50.85	82
RCMC54	RCMC54	1	152.98	37.25	83
RCMC55	RCMC55	1	202.39	53.22	80
RCMC56	RCMC56	1	204.43	42.33	81
RCMC57	RCMC57	1	157.92	65.12	82
RCMC58	RCMC58	1	179.47	43.79	87
RCL0102	RCL0102	1	7.94	6.81	87
RCL0103	RCL0103	1	10.69	8.83	87
RCL0105	RCL0105	1	22.29	12.40	86
RCL0113	RCL0113	1	11.26	5.95	92
RCL01A02	RCL01A02	1	10.46	6.75	84
RCL01A06	RCL01A06	1	11.77	10.73	85
RCL01A08	RCL01A08	1	4.54	3.18	86

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
RCL01A11	RCL01A11	1	17.30	6.91	87
RCL01A12	RCL01A12	1	6.08	6.22	87
RCL01B01	RCL01B01	1	12.03	6.29	89
RCL0201	RCL0201	1	9.57	5.05	81
RCL0203	RCL0203	1	4.69	5.68	84
RCL0206	RCL0206	1	11.40	5.80	79
RCL0211	RCL0211	1	14.23	9.94	86
RCL02A02	RCL02A02	1	5.87	3.51	90
RCL02B02	RCL02B02	1	1.93	2.41	86
RCL02D03	RCL02D03	1	5.09	7.61	91
RCL0300	RCL0300	1	1.92	3.60	81
RCL0303	RCL0303	1	5.30	3.45	75
RCL0305	RCL0305	1	21.30	12.57	90
RCL0402	RCL0402	1	12.65	7.68	82
RCL0403	RCL0403	1	38.60	17.17	90
RCL0408	RCL0408	1	6.38	5.87	85
RCL0501	RCL0501	1	10.62	11.19	85
RCL0502	RCL0502	1	11.79	11.53	86
RCL0504	RCL0504	1	3.33	6.31	88
RCL0505	RCL0505	1	27.29	16.94	90
RCL05A02	RCL05A02	1	10.16	9.46	87
RCL0603	RCL0603	1	6.42	4.57	87
RCL0702	RCL0702	1	11.40	6.75	91
RCL0704	RCL0704	1	4.54	6.16	92
RCL0707	RCL0707	1	5.06	9.53	94
RCL0800	RCL0800	1	49.51	19.37	85
RCL0802	RCL0802	1	19.84	9.85	91
RCL0805	RCL0805	1	4.47	6.82	94
RCL0806	RCL0806	1	4.62	5.14	95
RCL0808	RCL0808	1	3.02	4.80	95
RCL0812	RCL0812	1	4.82	12.60	94
RCL0815	RCL0815	1	71.07	68.78	93
RCL0818	RCL0818	1	0.88	2.32	95
RCL08A01	RCL08A01	1	50.25	32.30	90
RCL08A05	RCL08A05	1	13.44	11.54	93
RCL08A09	RCL08A09	1	9.29	8.96	91
RCL08B03	RCL08B03	1	1.42	4.26	95
RCL08C04	RCL08C04	1	13.38	22.10	94
RCL08D01	RCL08D01	1	1.01	5.09	94
RCL08D05	RCL08D05	1	21.11	31.89	94
RCL1001	RCL1001	1	136.86	44.75	86
RCL1101	RCL1101	1	106.44	24.10	81
RCL1201	RCL1201	1	179.78	134.24	86

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
RCL1202	RCL1202	1	267.48	376.54	88
RCL1203	RCL1203	1	216.68	68.80	92
RCL1300	RCL1300	1	224.49	84.45	84
RCL1301	RCL1301	1	164.04	40.44	79
RCL1302	RCL1302	1	82.58	22.30	76
RCL1303	RCL1303	1	197.67	21.93	74
RCL13A01	RCL13A01	1	158.22	27.60	77
RCL1400	RCL1400	1	217.78	104.77	86
RCL1401	RCL1401	1	64.80	38.20	87
RCL1402	RCL1402	1	184.23	22.73	81
RCL1501	RCL1501	1	145.26	43.26	90
RCL1601	RCL1601	1	229.49	84.94	87
RCL1602	RCL1602	1	177.96	74.51	89
RCL1603	RCL1603	1	148.78	59.38	88
RCL1604	RCL1604	1	147.24	56.58	88
RCL16A00	RCL16A00	1	190.90	71.79	86
RCL16A01	RCL16A01	1	119.46	41.78	87
RCL1701	RCL1701	1	182.24	86.52	85
RCL1702	RCL1702	1	185.82	108.00	87
RCL1703	RCL1703	1	117.47	26.39	81
RCL1801	RCL1801	1	166.20	61.92	86
RCL1901	RCL1901	1	182.58	30.26	85
RCL2001	RCL2001	1	165.43	34.09	85
RCL2002	RCL2002	1	184.16	40.56	84
RCL901	RCL901	1	151.21	44.47	91
SKUNK RUN (SR)					
SRMC03	SRMC03	1	1.75	23.57	74
SRMC04	SRMC04	1	25.46	10.87	80
SRMC05	SRMC05	1	49.18	13.93	86
SRMC08	SRMC08	1	26.95	14.74	85
SRMC13	SRMC13	1	30.55	22.67	88
SRMC19	SRMC19	1	19.68	11.92	91
SRMC23	SRMC23	1	3.65	4.98	91
SRMC24	SRMC24	1	6.04	9.73	86
SRMC27	SRMC27	1	6.34	8.83	87
SRMC31	SRMC31	1	27.17	13.81	87
SRMC34	SRMC34	1	24.16	12.75	87
SRMC36	SRMC36	1	15.05	13.59	85
SRMC40	SRMC40	1	12.70	10.95	85
SRMC41	SRMC41	1	15.42	10.94	85
SRMC44	SRMC44	1	28.87	11.20	92
SRL0101	SRL0101	1	1.38	4.13	88
SRL0103	SRL0103	1	2.83	11.07	88

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
SRL0105	SRL0105	1	25.09	63.85	91
SRL0108	SRL0108	1	10.63	11.51	86
SRL0112	SRL0112	1	8.47	8.76	90
SRL0116	SRL0116	1	8.14	9.70	93
SRL0121	SRL0121	1	10.26	17.24	94
SRL01401	SRL01401	1	2.06	4.95	87
SRL01403	SRL01403	1	4.85	8.97	87
SRL01503	SRL01503	1	22.84	19.80	87
SRL0201	SRL0201	1	4.76	5.85	86
SRL0204	SRL0204	1	17.93	26.03	90
SRL0304	SRL0304	1	9.41	7.30	92
SRL0307	SRL0307	1	21.15	13.66	95
SRL0402	SRL0402	1	21.02	11.21	80
SRL0403	SRL0403	1	13.13	11.10	83
SRL0404	SRL0404	1	10.24	6.53	88
SRL0406	SRL0406	1	16.39	7.46	87
SRL0408	SRL0408	1	29.17	13.46	90
SRL0601	SRL0601	1	3.04	2.54	86
SRL0602	SRL0602	1	8.34	13.10	89
SRL0607	SRL0607	1	12.48	10.00	91
SRL0701	SRL0701	1	3.45	6.33	91
SRL0705	SRL0705	1	2.52	6.65	90
SRL0707	SRL0707	1	16.34	23.75	89
SRL0801	SRL0801	1	2.57	3.99	90
SRL0803	SRL0803	1	17.60	11.76	88
SRL0804	SRL0804	1	10.49	13.12	87
SRL0904	SRL0904	1	1.06	2.15	94
SRL09A01	SRL09A01	1	11.14	13.01	90
SRL09A03	SRL09A03	1	8.15	9.17	87
SRL1001	SRL1001	1	0.86	6.90	88
SRL1004	SRL1004	1	3.27	4.93	87
SRL1103	SRL1103	1	9.85	10.30	89
SRL1106	SRL1106	1	7.56	10.68	88
SRL1110	SRL1110	1	2.70	44.81	87
SRL1202	SRL1202	1	5.36	4.42	87
SRL1602	SRL1602	1	5.72	8.96	88
SRL1703	SRL1703	1	7.74	9.40	88
SRL1705	SRL1705	1	12.74	17.33	88
SRL1802	SRL1802	1	10.97	7.14	87
SRL1804	SRL1804	1	11.56	21.89	92
SRL1806	SRL1806	1	4.43	5.75	92
SRL1809	SRL1809	1	12.68	12.96	93
SRL18A03	SRL18A03	1	10.33	10.77	88

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
SRL1903	SRL1903	1	5.65	13.00	91
SRL2003	SRL2003	1	16.51	7.05	87
SRL2103	SRL2103	1	12.24	13.80	88
SUGAR CREEK (SC)					
SCMC01	SCMC01	1	65.14	31.70	85
SCMC03	SCMC03	1	2.67	4.19	91
SCMC05	SCMC05	1	4.61	8.71	92
SCMC08	SCMC08	1	9.73	8.73	88
SCMC13	SCMC13	1	9.48	8.89	87
SCMC20	SCMC20	1	11.53	10.33	88
SCL103	SCL103	1	4.95	9.06	86
SCL116	SCL116	1	16.84	12.37	89
SCL1A04	SCL1A04	1	15.86	10.78	86
SCL201	SCL201	1	5.87	7.74	90
SCL301	SCL301	1	6.26	10.13	87
SYCAMORE STREET (SY)					
SYMC02	SYMC02	1	2.21	4.52	82
SYMC05	SYMC05	1	6.21	9.29	84
UPPER WILSON (UW)					
UWMC00	UWMC00	1	17.30	27.69	78
UWMC03	UWMC03	1	125.35	102.87	82
UWMC04	UWMC04	1	210.85	92.32	84
UWMC05	UWMC05	1	336.36	114.72	85
UWMC06	UWMC06	1	228.83	82.51	91
UWMC07	UWMC07	1	216.34	75.39	93
UWMC08	UWMC08	1	216.72	172.97	91
UWMC09	UWMC09	1	300.71	46.43	88
UWMC10	UWMC10	1	177.35	32.16	79
UWMC11	UWMC11	1	203.92	43.16	80
UWMC12	UWMC12	1	174.62	22.34	77
UWL101	UWL101	1	156.07	44.62	88
UWL201	UWL201	1	523.41	79.02	89
UWL301	UWL301	1	128.30	32.25	89
UWL302	UWL302	1	197.74	29.77	76
VISITOR CENTER (VC)					
VCMC01	VCMC01	1	178.23	75.70	78
VCMC02	VCMC02	1	83.31	33.65	81
VCMC03	VCMC03	1	123.74	30.89	82
VCMC04	VCMC04	1	30.29	17.84	93
VCMC06	VCMC06	1	44.30	13.76	91
VCMC07	VCMC07	1	37.93	15.89	92
VCMC08	VCMC08	1	32.10	12.49	91
VCL102	VCL102	1	111.36	39.30	87

Table B.5
Hydrologic Modeling - Runoff Parameters for Future Conditions

Subarea Name	SWWM Node	Catch-ment	Area (acres)	Tc (min.)	Future CN
VCL201	VCL201	1	37.12	15.27	89
WEST 13TH STREET (W13)					
NCL202	NCL202	1	11.43	9.39	88
W13MC04	W13MC04	1	17.04	12.18	90
W13L1B01	W13L1B01	1	9.14	9.74	86
W13L1C01	W13L1C01	1	2.50	6.59	87
W13L201	W13L201	1	2.10	4.92	88
W13L202	W13L202	1	3.56	3.09	85
W13L401	W13L401	1	1.96	3.27	86
WILLOW STREET (WL)					
WLMC04	WLMC04	1	22.92	19.56	86
WLMC06	WLMC06	1	21.18	35.28	84
WLMC09	WLMC09	1	51.15	47.21	85
WLMC11	WLMC11	1	2.54	10.65	93
WLMC18	WLMC18	1	17.06	23.64	87
WLL104	WLL104	1	2.48	3.11	87
WLL109	WLL109	1	4.75	3.08	95
WLL1A01	WLL1A01	1	10.59	8.29	89
WLL1A02	WLL1A02	1	8.78	13.79	87
WLL1B01	WLL1B01	1	26.25	33.35	92
WLL202	WLL202	1	8.59	9.98	90
WLL302	WLL302	1	4.88	4.67	91
WLL305	WLL305	1	6.00	4.94	87
WLL314	WLL314	1	6.26	6.08	87
WLL318	WLL318	1	40.95	17.33	88
WLL3A02	WLL3A02	1	1.76	2.59	93
WLL3B05	WLL3B05	1	7.28	7.91	89
WLL401	WLL401	1	8.48	10.72	92
WLL501	WLL501	1	30.60	27.94	87
WLL601	WLL601	1	9.91	7.87	93
WLL701	WLL701	1	18.94	11.12	87

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
CCL101	2-year	21.23	79	13	33.7
	5-year				53.3
	10-year				65.5
	25-year				81.9
	50-year				94.3
	100-yer				110.8
CCL103	2-year	20.86	84	14	40.6
	5-year				61.2
	10-year				73.6
	25-year				90.3
	50-year				102.8
	100-yer				119.4
CCL107	2-year	28.25	83	16	51.9
	5-year				78.7
	10-year				95.0
	25-year				116.9
	50-year				133.3
	100-yer				155.1
CCL112	2-year	5.80	86	10	12.4
	5-year				18.3
	10-year				21.7
	25-year				26.4
	50-year				29.9
	100-yer				34.5
CCL113	2-year	13.11	87	9	28.8
	5-year				41.9
	10-year				49.7
	25-year				60.1
	50-year				67.9
	100-yer				78.2
CCL204	2-year	9.11	93	8	23.8
	5-year				32.8
	10-year				38.1
	25-year				45.1
	50-year				50.4
	100-yer				57.4
CCMC00	2-year	7.57	69	6	8.5
	5-year				15.0
	10-year				19.2
	25-year				24.9
	50-year				29.3
	100-yer				35.3
CCMC01	2-year	13.02	75	15	16.7
	5-year				28.0
	10-year				35.2
	25-year				44.9
	50-year				52.4
	100-yer				62.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
CCMC02	2-year	3.60	82	2	7.3
	5-year				10.9
	10-year				13.0
	25-year				15.9
	50-year				18.1
	100-yer				21.0
CCMC04	2-year	15.85	91	14	38.2
	5-year				54.2
	10-year				63.8
	25-year				76.4
	50-year				85.8
	100-yer				98.2
CCMC06	2-year	19.58	87	6	43.1
	5-year				62.7
	10-year				74.4
	25-year				89.9
	50-year				101.4
	100-yer				116.7
CCMC10	2-year	44.25	87	20	87.0
	5-year				128.6
	10-year				153.5
	25-year				186.6
	50-year				211.3
	100-yer				244.1
CCMC11	2-year	39.58	90	20	86.6
	5-year				123.7
	10-year				145.9
	25-year				175.3
	50-year				197.3
	100-yer				226.5
CCMC12	2-year	58.27	85	18	111.4
	5-year				165.7
	10-year				198.6
	25-year				242.4
	50-year				275.4
	100-yer				319.4
E23L105	2-year	2.87	89	5	6.8
	5-year				9.7
	10-year				11.4
	25-year				13.6
	50-year				15.3
	100-yer				17.5
E23L106	2-year	2.08	89	3	5.0
	5-year				7.0
	10-year				8.2
	25-year				9.9
	50-year				11.1
	100-yer				12.7

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
E23L1A01	2-year	8.42	86	8	18.6
	5-year				27.1
	10-year				32.1
	25-year				38.9
	50-year				43.9
	100-yer				50.6
E23MC01	2-year	226.24	85	55	254.1
	5-year				386.3
	10-year				466.8
	25-year				574.7
	50-year				656.0
	100-yer				764.6
E23MC02	2-year	229.22	85	46	291.6
	5-year				441.8
	10-year				533.2
	25-year				655.3
	50-year				747.0
	100-yer				869.0
E23MC03	2-year	97.42	89	35	164.5
	5-year				239.5
	10-year				284.6
	25-year				344.4
	50-year				389.2
	100-yer				448.6
E23MC04	2-year	147.45	88	47	207.4
	5-year				304.9
	10-year				363.7
	25-year				441.9
	50-year				500.5
	100-yer				578.3
E23MC05	2-year	68.54	91	45	109.5
	5-year				155.9
	10-year				183.6
	25-year				220.4
	50-year				248.0
	100-yer				284.7
E4MC01	2-year	26.38	82	10	49.3
	5-year				75.3
	10-year				91.2
	25-year				112.5
	50-year				128.5
	100-yer				149.9
E7MC01	2-year	38.82	88	17	82.0
	5-year				119.2
	10-year				141.5
	25-year				171.2
	50-year				193.3
	100-yer				222.8

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
FPL102	2-year	3.40	81	4	6.9
	5-year				10.4
	10-year				12.5
	25-year				15.3
	50-year				17.5
	100-yer				20.3
FPL104	2-year	6.43	90	10	15.9
	5-year				22.4
	10-year				26.2
	25-year				31.3
	50-year				35.1
	100-yer				40.2
FPL203	2-year	2.10	90	1	3.0
	5-year				4.2
	10-year				4.9
	25-year				5.9
	50-year				6.6
	100-yer				7.5
FPL206	2-year	42.96	91	36	77.1
	5-year				109.6
	10-year				129.0
	25-year				154.7
	50-year				173.9
	100-yer				199.5
FPL301	2-year	12.12	69	14	11.8
	5-year				21.6
	10-year				28.0
	25-year				36.9
	50-year				43.8
	100-yer				53.1
FPMC03	2-year	2.73	72	10	3.2
	5-year				5.6
	10-year				7.1
	25-year				9.1
	50-year				10.7
	100-yer				12.8
FPMC04	2-year	35.23	79	21	49.8
	5-year				80.0
	10-year				98.8
	25-year				124.3
	50-year				143.7
	100-yer				169.6
FPMC05	2-year	28.83	70	26	23.3
	5-year				43.0
	10-year				55.9
	25-year				73.8
	50-year				87.7
	100-yer				106.8

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPL201	2-year	12.34	92	13	30.5
	5-year				42.5
	10-year				49.6
	25-year				59.1
	50-year				66.1
	100-yer				75.5
IPL202	2-year	15.36	93	11	39.8
	5-year				55.0
	10-year				64.0
	25-year				75.9
	50-year				84.9
	100-yer				96.8
IPL206	2-year	1.61	92	3	4.2
	5-year				5.8
	10-year				6.7
	25-year				8.0
	50-year				8.9
	100-yer				10.1
IPL2A01	2-year	14.36	93	12	37.0
	5-year				51.1
	10-year				59.5
	25-year				70.7
	50-year				79.0
	100-yer				90.0
IPL2A02	2-year	7.91	87	9	17.8
	5-year				25.7
	10-year				30.4
	25-year				36.6
	50-year				41.3
	100-yer				47.5
IPL2A05	2-year	10.88	88	7	24.8
	5-year				35.6
	10-year				42.0
	25-year				50.6
	50-year				56.9
	100-yer				65.4
IPL411	2-year	9.00	87	6	20.3
	5-year				29.1
	10-year				34.4
	25-year				41.5
	50-year				46.7
	100-yer				53.7
IPL502	2-year	10.81	93	19	25.8
	5-year				35.9
	10-year				41.9
	25-year				49.8
	50-year				55.7
	100-yer				63.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPL601	2-year	37.96	87	18	75.8
	5-year				111.4
	10-year				132.8
	25-year				161.3
	50-year				182.6
	100-yer				210.9
IPL605	2-year	6.51	89	10	15.3
	5-year				21.9
	10-year				25.8
	25-year				31.0
	50-year				34.9
	100-yer				40.1
IPL6A01	2-year	8.18	87	14	18.0
	5-year				26.2
	10-year				31.1
	25-year				37.6
	50-year				42.5
	100-yer				49.0
IPL6A03	2-year	8.35	87	9	18.7
	5-year				27.1
	10-year				32.1
	25-year				38.7
	50-year				43.7
	100-yer				50.3
IPMC07	2-year	145.47	93	51	224.9
	5-year				317.2
	10-year				372.0
	25-year				444.7
	50-year				498.9
	100-yer				570.8
IPMC09	2-year	150.31	92	73	181.9
	5-year				257.9
	10-year				303.1
	25-year				363.1
	50-year				407.8
	100-yer				467.2
IPMC10	2-year	5.09	92	11	12.4
	5-year				17.3
	10-year				20.3
	25-year				24.2
	50-year				27.1
	100-yer				31.0
IPMC11	2-year	46.89	89	27	89.3
	5-year				129.5
	10-year				153.6
	25-year				185.7
	50-year				209.7
	100-yer				241.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
IPMC13	2-year	120.05	89	49	166.6
	5-year				245.4
	10-year				292.5
	25-year				355.2
	50-year				402.0
	100-yer				464.1
IPMC15	2-year	56.17	93	39	104.2
	5-year				145.2
	10-year				169.6
	25-year				202.0
	50-year				226.2
	100-yer				258.3
IPMC19	2-year	280.85	92	97	276.5
	5-year				392.8
	10-year				462.1
	25-year				553.9
	50-year				622.3
	100-yer				713.2
IPMC20	2-year	204.11	86	49	255.6
	5-year				384.7
	10-year				463.1
	25-year				568.1
	50-year				646.9
	100-yer				751.7
LWL101	2-year	143.51	86	36	218.1
	5-year				325.9
	10-year				391.1
	25-year				478.2
	50-year				543.5
	100-yer				630.3
LWMC02	2-year	139.51	81	65	121.8
	5-year				193.1
	10-year				237.3
	25-year				297.0
	50-year				342.1
	100-yer				402.5
LWMC04	2-year	84.70	74	53	57.0
	5-year				100.5
	10-year				128.5
	25-year				167.2
	50-year				197.2
	100-yer				237.7
LWMC06	2-year	48.04	88	22	95.9
	5-year				139.8
	10-year				166.2
	25-year				201.1
	50-year				227.3
	100-yer				262.0

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
LWMC08	2-year	77.05	82	21	123.7
	5-year				192.5
	10-year				234.8
	25-year				291.7
	50-year				334.5
	100-yer				391.5
LWMC09	2-year	14.36	82	16	25.0
	5-year				38.5
	10-year				46.8
	25-year				58.0
	50-year				66.4
	100-yer				77.5
LWMC11	2-year	94.25	87	71	96.4
	5-year				143.7
	10-year				172.4
	25-year				210.9
	50-year				239.7
	100-yer				278.0
LWMC12	2-year	70.99	89	30	130.4
	5-year				188.7
	10-year				223.8
	25-year				270.3
	50-year				305.1
	100-yer				351.3
LWMC13	2-year	122.83	89	97	111.0
	5-year				161.1
	10-year				191.2
	25-year				231.3
	50-year				261.2
	100-yer				301.0
LWMC14	2-year	117.77	88	116	89.3
	5-year				131.5
	10-year				156.9
	25-year				190.9
	50-year				216.3
	100-yer				250.1
NCL201	2-year	25.06	88	19	50.7
	5-year				74.0
	10-year				88.0
	25-year				106.7
	50-year				120.7
	100-yer				139.3
NCL202	2-year	11.43	86	9	24.4
	5-year				35.7
	10-year				42.5
	25-year				51.6
	50-year				58.4
	100-yer				67.4

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
NCL401	2-year	97.26	85	39	137.1
	5-year				207.3
	10-year				250.2
	25-year				307.5
	50-year				350.4
	100-yer				407.6
NCL4A01	2-year	17.99	91	18	41.0
	5-year				57.9
	10-year				68.1
	25-year				81.5
	50-year				91.5
	100-yer				104.9
NCL4B01	2-year	10.31	90	14	24.4
	5-year				34.8
	10-year				41.0
	25-year				49.2
	50-year				55.3
	100-yer				63.5
NCL4D01	2-year	6.46	90	5	15.6
	5-year				22.0
	10-year				25.8
	25-year				30.9
	50-year				34.6
	100-yer				39.6
NCL500	2-year	103.54	87	47	140.5
	5-year				208.6
	10-year				249.8
	25-year				304.7
	50-year				345.8
	100-yer				400.5
NCL502	2-year	137.35	74	24	143.9
	5-year				247.5
	10-year				314.5
	25-year				406.6
	50-year				477.2
	100-yer				572.5
NCL503	2-year	121.20	72	32	97.2
	5-year				175.6
	10-year				226.9
	25-year				298.0
	50-year				352.9
	100-yer				427.3
NCMC02	2-year	154.02	84	100	111.8
	5-year				171.3
	10-year				207.8
	25-year				256.8
	50-year				293.7
	100-yer				342.9

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
NCMC04	2-year	166.46	87	96	139.3
	5-year				207.3
	10-year				248.5
	25-year				303.6
	50-year				344.9
	100-yer				399.8
NCMC05	2-year	33.53	87	31	56.0
	5-year				82.9
	10-year				99.2
	25-year				121.0
	50-year				137.3
	100-yer				159.0
NCMC06	2-year	181.83	86	76	172.2
	5-year				258.5
	10-year				311.1
	25-year				381.6
	50-year				434.5
	100-yer				505.0
NCMC08	2-year	161.30	86	67	163.8
	5-year				247.0
	10-year				297.6
	25-year				365.5
	50-year				416.4
	100-yer				484.3
NCMC09	2-year	84.85	87	41	123.6
	5-year				183.6
	10-year				219.9
	25-year				268.2
	50-year				304.4
	100-yer				352.5
NCMC11	2-year	159.57	83	46	186.9
	5-year				290.5
	10-year				354.2
	25-year				439.7
	50-year				504.2
	100-yer				590.2
NCMC12	2-year	146.11	89	37	239.0
	5-year				348.1
	10-year				413.6
	25-year				500.8
	50-year				565.9
	100-yer				652.5
NCMC14	2-year	133.69	82	84	99.8
	5-year				157.0
	10-year				192.4
	25-year				240.1
	50-year				276.2
	100-yer				324.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
POL102	2-year	11.22	87	13	24.1
	5-year				35.0
	10-year				41.6
	25-year				50.3
	50-year				56.8
	100-yer				65.5
POL105	2-year	5.22	87	11	11.4
	5-year				16.6
	10-year				19.7
	25-year				23.8
	50-year				26.9
	100-yer				31.0
POL110	2-year	4.82	87	16	10.0
	5-year				14.7
	10-year				17.5
	25-year				21.2
	50-year				24.0
	100-yer				27.7
POL301	2-year	25.54	92	15	62.7
	5-year				87.5
	10-year				102.4
	25-year				122.1
	50-year				136.8
	100-yer				156.3
POL306	2-year	10.01	89	9	23.9
	5-year				33.8
	10-year				39.8
	25-year				47.7
	50-year				53.5
	100-yer				61.3
POL405	2-year	14.34	89	12	33.0
	5-year				47.2
	10-year				55.6
	25-year				66.9
	50-year				75.3
	100-yer				86.4
POL502	2-year	20.96	87	14	45.9
	5-year				66.9
	10-year				79.6
	25-year				96.3
	50-year				108.9
	100-yer				125.6
POMC01	2-year	88.38	86	34	136.1
	5-year				204.2
	10-year				245.5
	25-year				300.6
	50-year				342.1
	100-yer				397.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
POMC02	2-year	34.51	91	19	78.1
	5-year				110.4
	10-year				129.7
	25-year				155.2
	50-year				174.3
	100-yer				199.6
POMC03	2-year	58.08	87	29	102.2
	5-year				150.6
	10-year				179.8
	25-year				218.6
	50-year				247.6
	100-yer				286.2
POMC11	2-year	30.13	86	15	60.3
	5-year				88.7
	10-year				105.8
	25-year				128.6
	50-year				145.6
	100-yer				168.2
POMC18	2-year	41.98	89	17	91.9
	5-year				132.1
	10-year				156.1
	25-year				187.9
	50-year				211.7
	100-yer				243.3
PRL101	2-year	3.16	85	6	6.7
	5-year				9.9
	10-year				11.8
	25-year				14.4
	50-year				16.3
	100-yer				18.8
PRL107	2-year	5.00	89	10	11.7
	5-year				16.7
	10-year				19.7
	25-year				23.6
	50-year				26.5
	100-yer				30.4
PRL202	2-year	19.15	87	12	42.1
	5-year				61.0
	10-year				72.4
	25-year				87.5
	50-year				98.7
	100-yer				113.7
PRL204	2-year	9.07	86	8	19.8
	5-year				29.0
	10-year				34.4
	25-year				41.7
	50-year				47.1
	100-yer				54.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
PRL208	2-year	7.80	84	7	15.8
	5-year				23.5
	10-year				28.2
	25-year				34.4
	50-year				39.0
	100-yer				45.2
PRL212	2-year	17.47	84	10	34.2
	5-year				51.2
	10-year				61.5
	25-year				75.2
	50-year				85.5
	100-yer				99.1
PRL215	2-year	5.24	84	7	10.6
	5-year				15.7
	10-year				18.8
	25-year				23.0
	50-year				26.1
	100-yer				30.2
PRL218	2-year	24.69	85	12	50.6
	5-year				74.9
	10-year				89.6
	25-year				109.2
	50-year				123.9
	100-yer				143.4
PRL2A01	2-year	8.59	86	13	18.0
	5-year				26.4
	10-year				31.5
	25-year				38.2
	50-year				43.3
	100-yer				49.9
PRL302	2-year	10.27	88	9	23.7
	5-year				33.9
	10-year				40.0
	25-year				48.1
	50-year				54.2
	100-yer				62.2
PRL305	2-year	24.15	88	15	51.2
	5-year				74.2
	10-year				88.0
	25-year				106.4
	50-year				120.1
	100-yer				138.3
PRL307	2-year	2.23	88	6	5.2
	5-year				7.3
	10-year				8.6
	25-year				10.4
	50-year				11.7
	100-yer				13.4

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
PRL401	2-year	2.22	90	9	5.3
	5-year				7.5
	10-year				8.8
	25-year				10.6
	50-year				11.9
	100-yer				13.6
PRMC05	2-year	5.31	79	9	9.1
	5-year				14.1
	10-year				17.3
	25-year				21.5
	50-year				24.7
	100-yer				28.9
PRMC07	2-year	9.87	91	13	23.5
	5-year				33.1
	10-year				38.8
	25-year				46.3
	50-year				52.0
	100-yer				59.5
PRMC09	2-year	8.21	94	9	21.8
	5-year				29.7
	10-year				34.5
	25-year				40.7
	50-year				45.4
	100-yer				51.7
PRMC15	2-year	13.20	90	7	32.6
	5-year				46.1
	10-year				54.1
	25-year				64.7
	50-year				72.7
	100-yer				83.2
PRMC16	2-year	18.58	86	21	33.8
	5-year				50.7
	10-year				61.0
	25-year				74.7
	50-year				84.9
	100-yer				98.6
PRMC19	2-year	17.02	93	9	44.1
	5-year				60.8
	10-year				70.7
	25-year				83.8
	50-year				93.6
	100-yer				106.7
PRMC21	2-year	9.00	90	7	22.2
	5-year				31.2
	10-year				36.6
	25-year				43.8
	50-year				49.1
	100-yer				56.2

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0102	2-year	7.94	87	7	17.9
	5-year				25.8
	10-year				30.5
	25-year				36.8
	50-year				41.5
	100-yer				47.7
RCL0103	2-year	10.69	87	9	23.5
	5-year				34.2
	10-year				40.6
	25-year				49.1
	50-year				55.5
	100-yer				63.9
RCL0105	2-year	22.29	86	12	47.1
	5-year				69.0
	10-year				82.2
	25-year				99.9
	50-year				113.0
	100-yer				130.5
RCL0113	2-year	11.26	92	6	28.3
	5-year				39.3
	10-year				45.8
	25-year				54.5
	50-year				61.0
	100-yer				69.6
RCL01A02	2-year	10.46	84	7	21.4
	5-year				31.7
	10-year				37.9
	25-year				46.1
	50-year				52.3
	100-yer				60.5
RCL01A06	2-year	11.77	85	11	24.5
	5-year				36.2
	10-year				43.1
	25-year				52.4
	50-year				59.4
	100-yer				68.6
RCL01A08	2-year	4.54	86	3	10.2
	5-year				14.7
	10-year				17.4
	25-year				21.1
	50-year				23.7
	100-yer				27.3
RCL01A11	2-year	17.30	87	7	38.8
	5-year				56.0
	10-year				66.3
	25-year				80.0
	50-year				90.2
	100-yer				103.8

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL01A12	2-year	6.08	87	6	13.8
	5-year				19.9
	10-year				23.6
	25-year				28.5
	50-year				32.1
	100-yer				37.0
RCL01B01	2-year	12.03	89	6	28.8
	5-year				40.8
	10-year				48.0
	25-year				57.5
	50-year				64.6
	100-yer				74.0
RCL0201	2-year	9.57	81	5	16.4
	5-year				25.8
	10-year				31.5
	25-year				39.1
	50-year				44.7
	100-yer				52.2
RCL0203	2-year	4.69	84	6	9.5
	5-year				14.2
	10-year				17.0
	25-year				20.7
	50-year				23.5
	100-yer				27.3
RCL0206	2-year	11.40	79	6	20.4
	5-year				31.6
	10-year				38.4
	25-year				47.5
	50-year				54.4
	100-yer				63.5
RCL0211	2-year	14.23	86	10	30.6
	5-year				44.5
	10-year				52.9
	25-year				64.1
	50-year				72.4
	100-yer				83.4
RCL02A02	2-year	5.87	90	4	14.7
	5-year				20.9
	10-year				24.6
	25-year				29.4
	50-year				33.0
	100-yer				37.8
RCL02B02	2-year	1.93	86	2	4.3
	5-year				6.3
	10-year				7.4
	25-year				9.0
	50-year				10.1
	100-yer				11.7

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL02D03	2-year	5.09	91	8	12.3
	5-year				17.2
	10-year				20.1
	25-year				24.0
	50-year				26.8
	100-yer				30.7
RCL0300	2-year	1.92	81	4	3.5
	5-year				5.5
	10-year				6.7
	25-year				8.4
	50-year				9.6
	100-yer				11.2
RCL0303	2-year	5.31	75	3	8.2
	5-year				13.2
	10-year				16.3
	25-year				20.5
	50-year				23.7
	100-yer				27.9
RCL0305	2-year	21.30	90	13	50.8
	5-year				71.9
	10-year				84.5
	25-year				101.2
	50-year				113.6
	100-yer				130.2
RCL0402	2-year	12.65	82	8	23.6
	5-year				35.7
	10-year				43.1
	25-year				53.0
	50-year				60.3
	100-yer				70.2
RCL0403	2-year	38.60	90	17	85.8
	5-year				122.5
	10-year				144.5
	25-year				173.6
	50-year				195.4
	100-yer				224.3
RCL0408	2-year	6.39	85	6	13.8
	5-year				20.1
	10-year				23.9
	25-year				29.0
	50-year				32.8
	100-yer				37.8
RCL0501	2-year	10.62	85	11	21.6
	5-year				32.0
	10-year				38.2
	25-year				46.5
	50-year				52.7
	100-yer				61.0

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0502	2-year	11.79	86	12	24.6
	5-year				36.2
	10-year				43.2
	25-year				52.5
	50-year				59.5
	100-yer				68.8
RCL0504	2-year	3.33	88	6	7.6
	5-year				10.9
	10-year				12.8
	25-year				15.4
	50-year				17.4
	100-yer				20.0
RCL0505	2-year	27.29	90	17	61.4
	5-year				87.5
	10-year				103.0
	25-year				123.7
	50-year				139.1
	100-yer				159.5
RCL05A02	2-year	10.16	87	9	22.5
	5-year				32.7
	10-year				38.7
	25-year				46.8
	50-year				52.8
	100-yer				60.8
RCL0603	2-year	6.42	87	5	14.6
	5-year				21.0
	10-year				24.8
	25-year				29.9
	50-year				33.7
	100-yer				38.7
RCL0702	2-year	11.40	91	7	28.0
	5-year				39.2
	10-year				45.9
	25-year				54.8
	50-year				61.4
	100-yer				70.2
RCL0704	2-year	4.55	92	6	11.7
	5-year				16.2
	10-year				18.9
	25-year				22.5
	50-year				25.1
	100-yer				28.6
RCL0707	2-year	5.06	94	10	13.5
	5-year				18.5
	10-year				21.5
	25-year				25.4
	50-year				28.3
	100-yer				32.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL0800	2-year	49.51	85	19	93.0
	5-year				139.1
	10-year				166.9
	25-year				204.1
	50-year				232.0
	100-yer				269.1
RCL0802	2-year	19.85	91	10	48.5
	5-year				68.2
	10-year				79.9
	25-year				95.4
	50-year				107.0
	100-yer				122.3
RCL0805	2-year	4.47	94	7	11.9
	5-year				16.3
	10-year				18.8
	25-year				22.3
	50-year				24.8
	100-yer				28.2
RCL0806	2-year	4.62	95	5	12.2
	5-year				16.5
	10-year				19.1
	25-year				22.6
	50-year				25.1
	100-yer				28.6
RCL0808	2-year	3.02	95	5	8.4
	5-year				11.3
	10-year				13.1
	25-year				15.5
	50-year				17.2
	100-yer				19.6
RCL0812	2-year	4.82	94	13	12.7
	5-year				17.4
	10-year				20.2
	25-year				23.9
	50-year				26.6
	100-yer				30.3
RCL0815	2-year	71.07	93	69	90.5
	5-year				127.6
	10-year				149.6
	25-year				178.8
	50-year				200.6
	100-yer				229.5
RCL0818	2-year	0.88	95	2	2.3
	5-year				3.2
	10-year				3.7
	25-year				4.3
	50-year				4.8
	100-yer				5.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL08A01	2-year	50.25	90	32	90.5
	5-year				130.8
	10-year				154.9
	25-year				187.0
	50-year				211.0
	100-yer				242.8
RCL08A05	2-year	13.44	93	12	34.5
	5-year				47.6
	10-year				55.3
	25-year				65.7
	50-year				73.4
	100-yer				83.7
RCL08A09	2-year	9.29	91	9	22.7
	5-year				31.8
	10-year				37.2
	25-year				44.4
	50-year				49.8
	100-yer				57.0
RCL08B03	2-year	1.42	95	4	3.8
	5-year				5.1
	10-year				5.9
	25-year				7.0
	50-year				7.8
	100-yer				8.8
RCL08C04	2-year	13.38	94	22	31.8
	5-year				43.8
	10-year				50.9
	25-year				60.4
	50-year				67.4
	100-yer				76.8
RCL08D01	2-year	1.01	94	5	2.6
	5-year				3.6
	10-year				4.1
	25-year				4.9
	50-year				5.5
	100-yer				6.2
RCL08D05	2-year	21.11	94	32	43.3
	5-year				60.1
	10-year				70.2
	25-year				83.4
	50-year				93.3
	100-yer				106.5
RCL1001	2-year	136.86	86	45	184.7
	5-year				276.1
	10-year				331.4
	25-year				405.3
	50-year				460.7
	100-yer				534.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL1101	2-year	106.44	81	24	156.8
	5-year				246.8
	10-year				302.3
	25-year				377.0
	50-year				433.3
	100-yer				508.5
RCL1201	2-year	179.78	86	134	114.7
	5-year				172.1
	10-year				206.9
	25-year				253.6
	50-year				288.6
	100-yer				335.2
RCL1202	2-year	267.48	88	377	84.0
	5-year				123.7
	10-year				147.7
	25-year				179.8
	50-year				203.9
	100-yer				236.0
RCL1203	2-year	216.68	92	69	272.0
	5-year				384.6
	10-year				451.7
	25-year				540.7
	50-year				607.2
	100-yer				695.4
RCL1300	2-year	224.49	84	85	178.8
	5-year				275.8
	10-year				335.2
	25-year				415.1
	50-year				475.3
	100-yer				555.7
RCL1301	2-year	164.04	79	40	169.0
	5-year				276.0
	10-year				343.0
	25-year				434.0
	50-year				503.7
	100-yer				597.6
RCL1302	2-year	82.58	76	22	99.0
	5-year				165.3
	10-year				207.1
	25-year				264.0
	50-year				307.3
	100-yer				365.8
RCL1303	2-year	197.67	74	22	213.0
	5-year				367.9
	10-year				467.1
	25-year				603.7
	50-year				708.2
	100-yer				849.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL13A01	2-year	158.22	77	28	181.5
	5-year				300.9
	10-year				375.9
	25-year				479.3
	50-year				558.1
	100-yer				664.1
RCL1400	2-year	217.78	86	105	166.0
	5-year				249.1
	10-year				299.6
	25-year				367.2
	50-year				417.9
	100-yer				485.4
RCL1401	2-year	64.80	87	38	100.2
	5-year				147.9
	10-year				176.7
	25-year				215.1
	50-year				243.8
	100-yer				281.9
RCL1402	2-year	184.23	81	23	274.8
	5-year				432.7
	10-year				530.1
	25-year				661.5
	50-year				761.0
	100-yer				894.4
RCL1501	2-year	145.26	90	43	234.6
	5-year				335.8
	10-year				396.3
	25-year				476.7
	50-year				536.9
	100-yer				616.9
RCL1601	2-year	229.49	87	85	212.0
	5-year				314.2
	10-year				376.0
	25-year				458.5
	50-year				520.3
	100-yer				602.5
RCL1602	2-year	177.96	89	75	190.4
	5-year				277.7
	10-year				330.2
	25-year				400.2
	50-year				452.5
	100-yer				522.0
RCL1603	2-year	148.78	88	59	180.9
	5-year				265.2
	10-year				316.0
	25-year				383.8
	50-year				434.6
	100-yer				502.1

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL1604	2-year	147.24	88	57	184.6
	5-year				270.9
	10-year				323.0
	25-year				392.6
	50-year				444.6
	100-yer				513.8
RCL16A00	2-year	190.90	86	72	190.0
	5-year				284.5
	10-year				342.1
	25-year				419.4
	50-year				477.3
	100-yer				554.5
RCL16A01	2-year	119.46	87	42	173.2
	5-year				256.9
	10-year				307.5
	25-year				375.0
	50-year				425.5
	100-yer				492.7
RCL1701	2-year	182.24	85	87	153.2
	5-year				232.4
	10-year				280.6
	25-year				345.2
	50-year				393.8
	100-yer				458.4
RCL1702	2-year	185.82	87	108	143.0
	5-year				212.7
	10-year				255.0
	25-year				311.5
	50-year				353.9
	100-yer				410.3
RCL1703	2-year	117.47	81	26	169.1
	5-year				265.6
	10-year				325.3
	25-year				405.8
	50-year				466.4
	100-yer				547.5
RCL1801	2-year	166.20	86	62	185.0
	5-year				276.5
	10-year				331.9
	25-year				405.9
	50-year				461.4
	100-yer				535.2
RCL1901	2-year	182.58	85	30	292.4
	5-year				438.9
	10-year				527.9
	25-year				647.2
	50-year				736.7
	100-yer				855.7

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCL2001	2-year	165.43	85	34	246.7
	5-year				373.7
	10-year				450.9
	25-year				554.1
	50-year				631.6
	100-yer				734.7
RCL2002	2-year	184.16	84	41	240.9
	5-year				368.3
	10-year				446.9
	25-year				552.4
	50-year				631.6
	100-yer				737.3
RCL901	2-year	151.21	91	44	241.5
	5-year				344.4
	10-year				405.8
	25-year				487.5
	50-year				548.6
	100-yer				629.8
RCMC01	2-year	108.36	83	31	159.4
	5-year				245.0
	10-year				297.3
	25-year				367.5
	50-year				420.5
	100-yer				491.4
RCMC02	2-year	8.53	70	11	8.6
	5-year				15.8
	10-year				20.4
	25-year				26.8
	50-year				31.7
	100-yer				38.3
RCMC03	2-year	35.29	77	21	46.7
	5-year				76.4
	10-year				95.0
	25-year				120.4
	50-year				139.7
	100-yer				165.5
RCMC06	2-year	30.76	82	10	55.7
	5-year				86.1
	10-year				104.6
	25-year				129.2
	50-year				147.7
	100-yer				172.2
RCMC07	2-year	5.44	79	5	9.6
	5-year				15.0
	10-year				18.2
	25-year				22.6
	50-year				25.9
	100-yer				30.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC08	2-year	81.31	82	59	73.9
	5-year				119.0
	10-year				146.7
	25-year				184.0
	50-year				212.1
	100-yer				249.6
RCMC09	2-year	4.66	77	4	7.5
	5-year				11.9
	10-year				14.7
	25-year				18.4
	50-year				21.2
	100-yer				24.9
RCMC14	2-year	11.58	86	6	24.2
	5-year				35.9
	10-year				42.9
	25-year				52.1
	50-year				59.0
	100-yer				68.1
RCMC17	2-year	76.55	85	27	129.0
	5-year				193.8
	10-year				233.0
	25-year				285.4
	50-year				324.7
	100-yer				376.9
RCMC19	2-year	100.58	88	32	167.5
	5-year				248.7
	10-year				297.4
	25-year				362.4
	50-year				410.9
	100-yer				475.2
RCMC23	2-year	133.93	90	37	231.3
	5-year				332.1
	10-year				392.3
	25-year				472.3
	50-year				532.0
	100-yer				611.2
RCMC25	2-year	17.33	85	10	31.8
	5-year				49.8
	10-year				60.5
	25-year				74.6
	50-year				85.0
	100-yer				98.9
RCMC27	2-year	44.01	93	34	84.6
	5-year				118.9
	10-year				139.3
	25-year				166.4
	50-year				186.7
	100-yer				213.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC31	2-year	232.73	91	79	255.7
	5-year				366.1
	10-year				432.2
	25-year				519.9
	50-year				585.5
	100-yer				672.6
RCMC32	2-year	115.23	86	30	188.4
	5-year				282.2
	10-year				339.0
	25-year				414.8
	50-year				471.6
	100-yer				546.9
RCMC34	2-year	223.79	87	63	246.3
	5-year				369.0
	10-year				443.3
	25-year				542.5
	50-year				616.8
	100-yer				715.6
RCMC36	2-year	158.63	90	62	199.6
	5-year				287.7
	10-year				340.6
	25-year				410.7
	50-year				463.1
	100-yer				532.6
RCMC37	2-year	259.98	83	63	251.1
	5-year				388.7
	10-year				473.0
	25-year				586.6
	50-year				672.2
	100-yer				786.3
RCMC38	2-year	197.35	84	88	156.6
	5-year				240.4
	10-year				291.6
	25-year				360.5
	50-year				412.2
	100-yer				481.2
RCMC39	2-year	228.58	84	76	201.5
	5-year				308.7
	10-year				374.4
	25-year				462.8
	50-year				529.5
	100-yer				618.3
RCMC40	2-year	76.97	87	29	133.3
	5-year				197.9
	10-year				237.0
	25-year				289.1
	50-year				328.2
	100-yer				380.1

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC41	2-year	136.06	78	110	69.4
	5-year				114.9
	10-year				143.5
	25-year				182.6
	50-year				212.5
	100-yer				252.9
RCMC44	2-year	128.78	85	49	160.8
	5-year				243.0
	10-year				293.0
	25-year				359.9
	50-year				410.0
	100-yer				476.8
RCMC45	2-year	184.82	85	62	195.9
	5-year				297.3
	10-year				359.0
	25-year				441.6
	50-year				503.7
	100-yer				586.3
RCMC46	2-year	168.94	85	150	95.1
	5-year				144.5
	10-year				174.6
	25-year				214.9
	50-year				245.3
	100-yer				285.7
RCMC47	2-year	117.80	85	76	106.4
	5-year				162.1
	10-year				196.1
	25-year				241.8
	50-year				276.3
	100-yer				322.2
RCMC48	2-year	211.92	86	60	235.1
	5-year				353.4
	10-year				425.3
	25-year				521.4
	50-year				593.7
	100-yer				690.0
RCMC49	2-year	188.98	82	68	160.6
	5-year				253.6
	10-year				311.1
	25-year				388.8
	50-year				447.6
	100-yer				526.4
RCMC50	2-year	155.77	83	66	144.6
	5-year				224.8
	10-year				274.1
	25-year				340.5
	50-year				390.5
	100-yer				457.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
RCMC51	2-year	125.43	85	61	131.3
	5-year				200.1
	10-year				242.1
	25-year				298.3
	50-year				340.6
	100-yer				397.0
RCMC52	2-year	207.23	85	64	208.7
	5-year				319.0
	10-year				386.3
	25-year				476.6
	50-year				544.4
	100-yer				634.8
RCMC53	2-year	124.22	82	51	129.7
	5-year				204.1
	10-year				250.1
	25-year				312.1
	50-year				358.9
	100-yer				421.4
RCMC54	2-year	152.98	83	37	200.9
	5-year				311.5
	10-year				379.7
	25-year				471.3
	50-year				540.3
	100-yer				632.3
RCMC55	2-year	202.39	80	53	188.6
	5-year				303.6
	10-year				375.4
	25-year				472.7
	50-year				546.3
	100-yer				645.0
RCMC56	2-year	204.43	81	42	225.4
	5-year				359.3
	10-year				442.3
	25-year				554.9
	50-year				640.5
	100-yer				755.0
RCMC57	2-year	157.92	82	65	142.5
	5-year				223.7
	10-year				273.7
	25-year				341.1
	50-year				392.0
	100-yer				460.1
RCMC58	2-year	179.47	87	44	254.2
	5-year				377.0
	10-year				451.2
	25-year				550.0
	50-year				624.1
	100-yer				722.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SCL103	2-year	4.95	86	9	10.8
	5-year				15.7
	10-year				18.7
	25-year				22.6
	50-year				25.6
	100-yer				29.5
SCL116	2-year	16.84	89	12	38.6
	5-year				55.2
	10-year				65.1
	25-year				78.2
	50-year				88.1
	100-yer				101.1
SCL1A04	2-year	15.86	86	11	34.1
	5-year				49.7
	10-year				59.1
	25-year				71.6
	50-year				80.9
	100-yer				93.3
SCL201	2-year	5.87	90	8	14.1
	5-year				19.9
	10-year				23.3
	25-year				27.9
	50-year				31.3
	100-yer				35.8
SCL301	2-year	6.26	87	10	13.6
	5-year				19.8
	10-year				23.6
	25-year				28.5
	50-year				32.2
	100-yer				37.1
SCMC01	2-year	65.14	85	32	99.0
	5-year				150.0
	10-year				181.0
	25-year				222.6
	50-year				254.0
	100-yer				295.7
SCMC03	2-year	2.67	91	4	6.7
	5-year				9.4
	10-year				11.0
	25-year				13.1
	50-year				14.7
	100-yer				16.7
SCMC05	2-year	4.61	92	9	11.8
	5-year				16.4
	10-year				19.1
	25-year				22.7
	50-year				25.4
	100-yer				29.0

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SCMC08	2-year	9.73	88	9	22.3
	5-year				32.1
	10-year				37.9
	25-year				45.7
	50-year				51.5
	100-yer				59.2
SCMC13	2-year	9.48	87	9	21.0
	5-year				30.4
	10-year				36.0
	25-year				43.5
	50-year				49.1
	100-yer				56.5
SCMC20	2-year	11.53	88	10	26.2
	5-year				37.6
	10-year				44.5
	25-year				53.5
	50-year				60.3
	100-yer				69.3
SRL0101	2-year	1.38	88	4	3.3
	5-year				4.7
	10-year				5.6
	25-year				6.7
	50-year				7.5
	100-yer				8.6
SRL0103	2-year	2.83	88	11	6.4
	5-year				9.1
	10-year				10.8
	25-year				13.0
	50-year				14.7
	100-yer				16.9
SRL0105	2-year	25.09	91	64	32.4
	5-year				46.1
	10-year				54.2
	25-year				65.1
	50-year				73.2
	100-yer				83.9
SRL0108	2-year	10.63	86	12	22.5
	5-year				33.0
	10-year				39.3
	25-year				47.8
	50-year				54.0
	100-yer				62.4
SRL0112	2-year	8.47	90	9	20.4
	5-year				28.9
	10-year				34.0
	25-year				40.7
	50-year				45.7
	100-yer				52.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0116	2-year	8.14	93	10	21.5
	5-year				29.5
	10-year				34.3
	25-year				40.7
	50-year				45.4
	100-yer				51.7
SRL0121	2-year	10.27	94	17	25.8
	5-year				35.4
	10-year				41.1
	25-year				48.6
	50-year				54.3
	100-yer				61.8
SRL01401	2-year	2.06	87	5	4.6
	5-year				6.6
	10-year				7.9
	25-year				9.5
	50-year				10.7
	100-yer				12.3
SRL01403	2-year	4.85	87	9	10.7
	5-year				15.5
	10-year				18.3
	25-year				22.2
	50-year				25.0
	100-yer				28.8
SRL01503	2-year	22.84	87	20	45.3
	5-year				66.4
	10-year				79.0
	25-year				95.9
	50-year				108.5
	100-yer				125.2
SRL0201	2-year	4.76	86	6	10.5
	5-year				15.2
	10-year				18.1
	25-year				21.8
	50-year				24.7
	100-yer				28.4
SRL0204	2-year	17.93	90	26	35.6
	5-year				51.2
	10-year				60.4
	25-year				72.8
	50-year				82.0
	100-yer				94.2
SRL0304	2-year	9.41	92	7	24.2
	5-year				33.6
	10-year				39.1
	25-year				46.5
	50-year				52.1
	100-yer				59.4

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0307	2-year	21.15	95	14	55.6
	5-year				75.8
	10-year				87.9
	25-year				103.9
	50-year				115.9
	100-yer				131.8
SRL0402	2-year	21.02	80	11	35.1
	5-year				54.9
	10-year				67.1
	25-year				83.4
	50-year				95.8
	100-yer				112.3
SRL0403	2-year	13.13	83	11	25.1
	5-year				37.8
	10-year				45.5
	25-year				55.8
	50-year				63.5
	100-yer				73.8
SRL0404	2-year	10.24	88	7	23.7
	5-year				33.8
	10-year				39.9
	25-year				47.9
	50-year				53.9
	100-yer				61.8
SRL0406	2-year	16.39	87	7	35.7
	5-year				51.8
	10-year				61.4
	25-year				74.2
	50-year				83.7
	100-yer				96.4
SRL0408	2-year	29.17	90	13	68.6
	5-year				96.9
	10-year				113.8
	25-year				136.3
	50-year				153.0
	100-yer				175.3
SRL0601	2-year	3.04	86	3	6.7
	5-year				9.6
	10-year				11.3
	25-year				13.6
	50-year				15.4
	100-yer				17.7
SRL0602	2-year	8.34	89	13	18.8
	5-year				27.0
	10-year				31.9
	25-year				38.4
	50-year				43.2
	100-yer				49.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL0607	2-year	12.48	91	10	30.1
	5-year				42.3
	10-year				49.5
	25-year				59.1
	50-year				66.3
	100-yer				75.9
SRL0701	2-year	3.45	91	6	8.5
	5-year				11.9
	10-year				13.9
	25-year				16.6
	50-year				18.6
	100-yer				21.2
SRL0705	2-year	2.52	90	7	6.1
	5-year				8.6
	10-year				10.1
	25-year				12.1
	50-year				13.5
	100-yer				15.5
SRL0707	2-year	16.34	89	24	32.4
	5-year				47.0
	10-year				55.8
	25-year				67.4
	50-year				76.1
	100-yer				87.7
SRL0801	2-year	2.57	90	4	6.3
	5-year				8.9
	10-year				10.4
	25-year				12.5
	50-year				14.0
	100-yer				16.0
SRL0803	2-year	17.60	88	12	39.3
	5-year				56.7
	10-year				67.1
	25-year				81.0
	50-year				91.3
	100-yer				105.1
SRL0804	2-year	10.49	87	13	22.7
	5-year				32.9
	10-year				39.1
	25-year				47.3
	50-year				53.4
	100-yer				61.5
SRL0904	2-year	1.06	94	2	2.7
	5-year				3.7
	10-year				4.3
	25-year				5.1
	50-year				5.7
	100-yer				6.4

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL09A01	2-year	11.14	90	13	25.9
	5-year				36.8
	10-year				43.4
	25-year				52.1
	50-year				58.5
	100-yer				67.1
SRL09A03	2-year	8.15	87	9	18.4
	5-year				26.5
	10-year				31.4
	25-year				37.9
	50-year				42.7
	100-yer				49.1
SRL1001	2-year	0.86	88	7	2.0
	5-year				2.8
	10-year				3.3
	25-year				4.0
	50-year				4.5
	100-yer				5.2
SRL1004	2-year	3.27	87	5	7.4
	5-year				10.7
	10-year				12.6
	25-year				15.2
	50-year				17.1
	100-yer				19.6
SRL1103	2-year	9.85	89	10	22.8
	5-year				32.6
	10-year				38.4
	25-year				46.2
	50-year				52.0
	100-yer				59.7
SRL1106	2-year	7.56	88	11	17.1
	5-year				24.6
	10-year				29.0
	25-year				35.0
	50-year				39.4
	100-yer				45.3
SRL1110	2-year	2.70	87	45	3.7
	5-year				5.6
	10-year				6.6
	25-year				8.1
	50-year				9.2
	100-yer				10.6
SRL1202	2-year	5.36	87	4	12.2
	5-year				17.5
	10-year				20.7
	25-year				24.9
	50-year				28.1
	100-yer				32.3

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL1602	2-year	5.72	88	9	12.9
	5-year				18.6
	10-year				21.9
	25-year				26.4
	50-year				29.8
	100-yer				34.2
SRL1703	2-year	7.74	88	9	17.5
	5-year				25.1
	10-year				29.7
	25-year				35.8
	50-year				40.4
	100-yer				46.5
SRL1705	2-year	12.74	88	17	26.5
	5-year				38.6
	10-year				45.9
	25-year				55.6
	50-year				62.8
	100-yer				72.4
SRL1802	2-year	10.97	87	7	25.3
	5-year				36.5
	10-year				43.2
	25-year				52.2
	50-year				58.9
	100-yer				67.8
SRL1804	2-year	11.56	92	22	26.1
	5-year				36.7
	10-year				42.9
	25-year				51.3
	50-year				57.5
	100-yer				65.7
SRL1806	2-year	4.43	92	6	11.4
	5-year				15.8
	10-year				18.4
	25-year				21.9
	50-year				24.5
	100-yer				28.0
SRL1809	2-year	12.68	93	13	31.7
	5-year				44.0
	10-year				51.3
	25-year				60.9
	50-year				68.1
	100-yer				77.7
SRL18A03	2-year	10.33	88	11	23.0
	5-year				33.2
	10-year				39.3
	25-year				47.4
	50-year				53.5
	100-yer				61.5

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRL1903	2-year	5.65	91	13	13.7
	5-year				19.2
	10-year				22.5
	25-year				26.9
	50-year				30.2
	100-yer				34.5
SRL2003	2-year	16.52	87	7	38.4
	5-year				55.3
	10-year				65.3
	25-year				78.8
	50-year				88.8
	100-yer				102.1
SRL2103	2-year	12.24	88	14	27.0
	5-year				39.0
	10-year				46.2
	25-year				55.9
	50-year				63.1
	100-yer				72.7
SRMC04	2-year	25.46	80	11	44.4
	5-year				69.1
	10-year				84.2
	25-year				104.5
	50-year				119.8
	100-yer				140.2
SRMC05	2-year	49.18	86	14	105.0
	5-year				154.1
	10-year				183.7
	25-year				223.0
	50-year				252.4
	100-yer				291.6
SRMC08	2-year	26.95	85	15	53.6
	5-year				79.6
	10-year				95.4
	25-year				116.3
	50-year				132.0
	100-yer				152.8
SRMC13	2-year	30.55	88	23	60.4
	5-year				88.0
	10-year				104.6
	25-year				126.8
	50-year				143.3
	100-yer				165.2
SRMC19	2-year	19.68	91	12	47.6
	5-year				66.9
	10-year				78.4
	25-year				93.6
	50-year				105.0
	100-yer				120.1

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRMC23	2-year	3.65	91	5	9.0
	5-year				12.6
	10-year				14.7
	25-year				17.5
	50-year				19.6
	100-yer				22.3
SRMC24	2-year	6.04	86	10	13.2
	5-year				19.3
	10-year				22.9
	25-year				27.8
	50-year				31.4
	100-yer				36.2
SRMC27	2-year	6.34	87	9	14.1
	5-year				20.5
	10-year				24.3
	25-year				29.3
	50-year				33.0
	100-yer				38.0
SRMC31	2-year	27.17	87	14	58.3
	5-year				85.0
	10-year				101.1
	25-year				122.5
	50-year				138.5
	100-yer				159.8
SRMC34	2-year	24.16	87	13	51.9
	5-year				75.6
	10-year				89.9
	25-year				108.9
	50-year				123.1
	100-yer				142.0
SRMC36	2-year	15.05	85	14	29.3
	5-year				43.9
	10-year				52.7
	25-year				64.4
	50-year				73.2
	100-yer				84.9
SRMC40	2-year	12.70	85	11	26.7
	5-year				39.4
	10-year				47.0
	25-year				57.1
	50-year				64.7
	100-yer				74.8
SRMC41	2-year	15.42	85	11	32.2
	5-year				47.6
	10-year				56.8
	25-year				69.1
	50-year				78.4
	100-yer				90.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
SRMC44	2-year	28.87	92	11	71.3
	5-year				99.4
	10-year				116.2
	25-year				138.4
	50-year				154.9
	100-yer				177.0
SYMC02	2-year	2.21	82	5	4.4
	5-year				6.6
	10-year				8.0
	25-year				9.7
	50-year				11.1
	100-yer				12.8
SYMC05	2-year	6.21	84	9	12.7
	5-year				18.9
	10-year				22.6
	25-year				27.6
	50-year				31.3
	100-yer				36.2
UWL101	2-year	156.07	88	45	223.9
	5-year				329.1
	10-year				392.4
	25-year				476.8
	50-year				539.9
	100-yer				623.7
UWL201	2-year	523.41	89	79	549.5
	5-year				796.9
	10-year				945.4
	25-year				1143.0
	50-year				1290.6
	100-yer				1486.7
UWL301	2-year	128.30	89	32	230.2
	5-year				332.6
	10-year				394.2
	25-year				476.2
	50-year				537.4
	100-yer				618.7
UWL302	2-year	197.75	76	30	209.5
	5-year				352.8
	10-year				443.4
	25-year				567.3
	50-year				661.6
	100-yer				789.4
UWMC00	2-year	17.30	78	28	20.7
	5-year				34.0
	10-year				42.4
	25-year				53.8
	50-year				62.5
	100-yer				74.2

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
UWMC01	2-year	86.27	89	63	104.5
	5-year				152.5
	10-year				181.2
	25-year				219.3
	50-year				247.7
	100-yer				285.5
UWMC03	2-year	125.35	82	103	79.0
	5-year				125.6
	10-year				154.5
	25-year				193.5
	50-year				223.0
	100-yer				262.5
UWMC04	2-year	210.85	84	92	159.9
	5-year				246.3
	10-year				299.2
	25-year				370.5
	50-year				424.1
	100-yer				495.6
UWMC05	2-year	336.36	85	115	227.7
	5-year				346.7
	10-year				419.5
	25-year				517.4
	50-year				590.9
	100-yer				689.0
UWMC06	2-year	228.83	91	83	242.9
	5-year				348.5
	10-year				411.6
	25-year				495.2
	50-year				557.6
	100-yer				640.4
UWMC07	2-year	216.34	93	75	259.7
	5-year				365.4
	10-year				428.4
	25-year				511.9
	50-year				574.2
	100-yer				656.9
UWMC08	2-year	216.72	91	173	137.8
	5-year				196.2
	10-year				231.2
	25-year				277.7
	50-year				312.5
	100-yer				358.8
UWMC09	2-year	300.71	88	46	424.1
	5-year				623.4
	10-year				743.5
	25-year				903.3
	50-year				1022.9
	100-yer				1181.8

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
UWMC10	2-year	177.35	79	32	212.2
	5-year				343.8
	10-year				425.9
	25-year				537.1
	50-year				621.4
	100-yer				734.3
UWMC11	2-year	203.92	80	43	218.9
	5-year				350.8
	10-year				432.7
	25-year				543.7
	50-year				627.9
	100-yer				740.7
UWMC12	2-year	174.62	77	22	216.0
	5-year				357.5
	10-year				446.2
	25-year				567.1
	50-year				658.9
	100-yer				783.0
VCL102	2-year	111.36	87	39	163.0
	5-year				244.6
	10-year				293.9
	25-year				359.5
	50-year				408.6
	100-yer				473.7
VCL201	2-year	37.12	89	15	79.9
	5-year				115.5
	10-year				136.7
	25-year				164.7
	50-year				185.6
	100-yer				213.4
VCMC01	2-year	178.23	78	76	120.4
	5-year				198.3
	10-year				247.4
	25-year				314.2
	50-year				365.1
	100-yer				433.5
VCMC02	2-year	83.31	81	34	104.8
	5-year				166.3
	10-year				204.4
	25-year				255.8
	50-year				294.6
	100-yer				346.5
VCMC03	2-year	123.74	82	31	175.0
	5-year				272.0
	10-year				331.5
	25-year				411.5
	50-year				471.7
	100-yer				552.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
VCMC04	2-year	30.29	93	18	72.8
	5-year				101.4
	10-year				118.4
	25-year				140.8
	50-year				157.6
	100-yer				179.9
VCMC06	2-year	44.30	91	14	104.1
	5-year				147.9
	10-year				174.0
	25-year				208.5
	50-year				234.2
	100-yer				268.4
VCMC07	2-year	37.93	92	16	92.7
	5-year				129.5
	10-year				151.4
	25-year				180.5
	50-year				202.2
	100-yer				231.0
VCMC08	2-year	32.10	91	12	77.9
	5-year				110.0
	10-year				129.1
	25-year				154.4
	50-year				173.2
	100-yer				198.2
W13L1B01	2-year	9.14	86	10	19.7
	5-year				28.8
	10-year				34.3
	25-year				41.7
	50-year				47.1
	100-yer				54.4
W13L1C01	2-year	2.50	87	7	5.5
	5-year				8.0
	10-year				9.5
	25-year				11.4
	50-year				12.9
	100-yer				14.9
W13L201	2-year	2.10	88	5	4.9
	5-year				7.0
	10-year				8.2
	25-year				9.9
	50-year				11.1
	100-yer				12.7
W13L202	2-year	3.56	85	3	7.5
	5-year				11.0
	10-year				13.1
	25-year				15.9
	50-year				18.0
	100-yer				20.7

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
W13L401	2-year	1.96	86	3	4.4
	5-year				6.4
	10-year				7.6
	25-year				9.1
	50-year				10.3
	100-yer				11.8
W13MC04	2-year	17.04	90	12	40.6
	5-year				57.6
	10-year				67.7
	25-year				81.1
	50-year				91.1
	100-yer				104.4
WLL104	2-year	2.48	87	3	5.7
	5-year				8.1
	10-year				9.6
	25-year				11.6
	50-year				13.0
	100-yer				15.0
WLL109	2-year	4.75	95	3	12.6
	5-year				17.2
	10-year				19.8
	25-year				23.4
	50-year				26.1
	100-yer				29.7
WLL1A01	2-year	10.59	89	8	25.0
	5-year				35.7
	10-year				42.1
	25-year				50.5
	50-year				56.8
	100-yer				65.2
WLL1A02	2-year	8.78	87	14	18.9
	5-year				27.5
	10-year				32.7
	25-year				39.6
	50-year				44.8
	100-yer				51.7
WLL1B01	2-year	26.25	92	33	50.6
	5-year				71.3
	10-year				83.6
	25-year				99.9
	50-year				112.2
	100-yer				128.4
WLL202	2-year	8.59	90	10	20.2
	5-year				28.6
	10-year				33.6
	25-year				40.2
	50-year				45.2
	100-yer				51.7

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
WLL302	2-year	4.88	91	5	12.7
	5-year				17.6
	10-year				20.6
	25-year				24.5
	50-year				27.4
	100-yer				31.3
WLL305	2-year	6.00	87	5	13.5
	5-year				19.4
	10-year				22.9
	25-year				27.6
	50-year				31.1
	100-yer				35.8
WLL314	2-year	6.26	87	6	14.3
	5-year				20.6
	10-year				24.3
	25-year				29.3
	50-year				33.0
	100-yer				38.0
WLL318	2-year	40.95	88	17	85.1
	5-year				124.0
	10-year				147.4
	25-year				178.6
	50-year				201.9
	100-yer				232.9
WLL3A02	2-year	1.76	93	3	4.5
	5-year				6.1
	10-year				7.1
	25-year				8.4
	50-year				9.4
	100-yer				10.7
WLL3B05	2-year	7.28	89	8	17.2
	5-year				24.4
	10-year				28.7
	25-year				34.5
	50-year				38.7
	100-yer				44.4
WLL401	2-year	8.48	92	11	21.3
	5-year				29.6
	10-year				34.6
	25-year				41.1
	50-year				46.0
	100-yer				52.6
WLL501	2-year	30.60	87	28	54.0
	5-year				79.6
	10-year				95.1
	25-year				115.7
	50-year				131.1
	100-yer				151.6

Table B.6
Hydrologic Modeling - Runoff Results for Future Conditions

Node Name	Return Period	Catchment 1			Max Flow (ft^3/s, m^3/s)
		Area (acres)	Curve Number	Time of Conc. (min)	
WLL601	2-year	9.91	93	8	25.9
	5-year				35.6
	10-year				41.5
	25-year				49.2
	50-year				54.9
	100-yer				62.6
WLL701	2-year	18.94	87	11	40.6
	5-year				59.1
	10-year				70.3
	25-year				85.1
	50-year				96.1
	100-yer				110.8
WLMC04	2-year	22.92	86	20	44.8
	5-year				66.1
	10-year				78.9
	25-year				96.0
	50-year				108.8
	100-yer				125.9
WLMC06	2-year	21.18	84	35	29.2
	5-year				45.1
	10-year				54.8
	25-year				67.8
	50-year				77.6
	100-yer				90.6
WLMC09	2-year	51.15	85	47	63.2
	5-year				96.2
	10-year				116.4
	25-year				143.4
	50-year				163.6
	100-yer				190.6
WLMC11	2-year	2.54	93	11	6.6
	5-year				9.0
	10-year				10.5
	25-year				12.5
	50-year				14.0
	100-yer				15.9
WLMC18	2-year	17.06	87	24	32.0
	5-year				47.1
	10-year				56.2
	25-year				68.3
	50-year				77.3
	100-yer				89.4

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL101	2-year	898.00	880.37	883.36	14.64
	5-year			883.96	14.04
	10-year			884.32	13.68
	25-year			884.69	13.31
	50-year			884.96	13.04
	100-yer			885.27	12.73
CCL102	2-year	904.00	896.75	898.37	5.63
	5-year			898.63	5.37
	10-year			898.95	5.05
	25-year			899.32	4.68
	50-year			899.50	4.50
	100-yer			899.68	4.32
CCL103	2-year	907.42	897.42	898.78	8.64
	5-year			899.14	8.28
	10-year			899.47	7.95
	25-year			899.98	7.44
	50-year			900.27	7.15
	100-yer			900.56	6.86
CCL104	2-year	908.08	898.08	898.78	9.30
	5-year			899.13	8.95
	10-year			899.46	8.62
	25-year			899.97	8.11
	50-year			900.26	7.82
	100-yer			900.56	7.52
CCL105	2-year	909.28	899.28	901.63	7.65
	5-year			902.91	6.37
	10-year			903.22	6.06
	25-year			903.43	5.85
	50-year			903.56	5.72
	100-yer			903.72	5.56
CCL106	2-year	918.00	908.00	908.56	9.44
	5-year			908.74	9.26
	10-year			908.84	9.16
	25-year			908.93	9.07
	50-year			908.99	9.01
	100-yer			909.06	8.94
CCL107	2-year	914.17	908.17	909.41	4.76
	5-year			909.71	4.46
	10-year			909.87	4.30
	25-year			910.06	4.11
	50-year			910.17	4.00
	100-yer			910.30	3.87
CCL108	2-year	915.74	909.74	909.92	5.82
	5-year			910.05	5.69
	10-year			910.11	5.63
	25-year			910.16	5.58
	50-year			910.20	5.54
	100-yer			910.32	5.42

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL109	2-year	919.85	909.85	911.85	8.00
	5-year			912.23	7.62
	10-year			912.34	7.51
	25-year			912.44	7.41
	50-year			912.50	7.35
	100-yer			912.58	7.27
CCL110	2-year	925.87	915.87	916.09	9.78
	5-year			916.15	9.72
	10-year			916.18	9.69
	25-year			916.22	9.65
	50-year			916.24	9.63
	100-yer			916.27	9.60
CCL111	2-year	922.76	917.18	921.98	0.78
	5-year			922.07	0.69
	10-year			922.11	0.65
	25-year			922.16	0.60
	50-year			922.20	0.56
	100-yer			922.24	0.52
CCL112	2-year	922.80	918.38	922.14	0.66
	5-year			922.26	0.54
	10-year			922.32	0.48
	25-year			922.40	0.40
	50-year			922.45	0.35
	100-yer			922.52	0.28
CCL113	2-year	924.64	920.06	923.77	0.87
	5-year			923.85	0.79
	10-year			923.90	0.74
	25-year			923.95	0.69
	50-year			923.98	0.66
	100-yer			924.02	0.62
CCL201	2-year	910.68	901.16	901.28	9.40
	5-year			901.30	9.38
	10-year			901.32	9.36
	25-year			901.33	9.35
	50-year			901.35	9.33
	100-yer			901.36	9.32
CCL202	2-year	910.74	905.74	906.90	3.84
	5-year			907.11	3.63
	10-year			907.22	3.52
	25-year			907.36	3.38
	50-year			907.47	3.27
	100-yer			907.61	3.13
CCL203	2-year	911.72	906.97	908.20	3.52
	5-year			908.47	3.25
	10-year			908.62	3.10
	25-year			908.83	2.89
	50-year			909.00	2.72
	100-yer			909.26	2.46

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCL204	2-year	914.18	909.18	910.28	3.90
	5-year			910.54	3.64
	10-year			910.71	3.47
	25-year			911.31	2.87
	50-year			912.36	1.82
	100-yer			913.21	0.97
CCMC00	2-year	876.00	863.18	866.63	9.37
	5-year			867.24	8.76
	10-year			867.61	8.39
	25-year			867.99	8.01
	50-year			868.27	7.73
	100-yer			868.57	7.43
CCMC01	2-year	898.00	879.96	883.42	14.58
	5-year			884.04	13.96
	10-year			884.41	13.59
	25-year			884.78	13.22
	50-year			885.07	12.93
	100-yer			885.37	12.63
CCMC02	2-year	906.00	880.68	884.45	21.55
	5-year			885.26	20.74
	10-year			885.67	20.33
	25-year			886.13	19.87
	50-year			886.46	19.54
	100-yer			886.83	19.17
CCMC03	2-year	907.00	891.70	892.85	14.15
	5-year			893.06	13.94
	10-year			893.18	13.82
	25-year			893.33	13.67
	50-year			893.43	13.57
	100-yer			893.53	13.47
CCMC04	2-year	907.00	891.74	893.90	13.10
	5-year			894.52	12.48
	10-year			894.87	12.13
	25-year			895.27	11.73
	50-year			895.57	11.43
	100-yer			895.91	11.09
CCMC05	2-year	909.00	901.74	906.19	2.81
	5-year			906.75	2.25
	10-year			907.04	1.96
	25-year			907.37	1.63
	50-year			907.60	1.40
	100-yer			907.86	1.14
CCMC06	2-year	908.00	901.74	906.19	1.81
	5-year			906.75	1.25
	10-year			907.04	0.96
	25-year			907.37	0.63
	50-year			907.60	0.40
	100-yer			907.86	0.14

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
CCMC07	2-year	910.07	901.74	906.19	3.88
	5-year			906.75	3.32
	10-year			907.04	3.03
	25-year			907.37	2.70
	50-year			907.60	2.47
	100-yer			907.86	2.21
CCMC08	2-year	910.10	901.88	906.40	3.70
	5-year			907.38	2.72
	10-year			907.77	2.33
	25-year			908.15	1.95
	50-year			908.42	1.68
	100-yer			908.72	1.38
CCMC09	2-year	913.00	904.82	906.40	6.60
	5-year			907.38	5.62
	10-year			907.76	5.24
	25-year			908.15	4.85
	50-year			908.41	4.59
	100-yer			908.71	4.29
CCMC10	2-year	920.17	904.83	907.45	12.72
	5-year			907.85	12.32
	10-year			908.09	12.08
	25-year			908.37	11.80
	50-year			908.57	11.60
	100-yer			908.81	11.36
CCMC11	2-year	928.89	914.89	916.25	12.64
	5-year			916.55	12.34
	10-year			916.70	12.19
	25-year			916.87	12.02
	50-year			917.00	11.89
	100-yer			917.15	11.74
CCMC12	2-year	934.95	928.25	929.23	5.72
	5-year			929.39	5.56
	10-year			929.47	5.48
	25-year			929.57	5.38
	50-year			929.64	5.31
	100-yer			929.72	5.23
CCMC13	2-year	935.00	928.53	929.23	5.77
	5-year			929.39	5.61
	10-year			929.48	5.52
	25-year			929.57	5.43
	50-year			929.64	5.36
	100-yer			929.72	5.28
E23L101	2-year	936.53	929.53	930.27	6.26
	5-year			930.38	6.15
	10-year			930.43	6.10
	25-year			930.52	6.01
	50-year			930.57	5.96
	100-yer			930.65	5.88

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
E23L102	2-year	935.00	930.00	934.08	0.92
	5-year			934.17	0.83
	10-year			934.21	0.79
	25-year			934.25	0.75
	50-year			934.28	0.72
	100-yer			934.32	0.68
E23L103	2-year	935.14	930.14	934.37	0.77
	5-year			934.48	0.66
	10-year			934.53	0.61
	25-year			934.60	0.54
	50-year			934.64	0.50
	100-yer			934.70	0.44
E23L104	2-year	936.09	931.42	935.20	0.89
	5-year			935.29	0.80
	10-year			935.33	0.76
	25-year			935.38	0.71
	50-year			935.41	0.68
	100-yer			935.45	0.64
E23L105	2-year	936.24	931.66	935.46	0.78
	5-year			935.56	0.68
	10-year			935.61	0.63
	25-year			935.68	0.56
	50-year			935.72	0.52
	100-yer			935.77	0.47
E23L106	2-year	941.65	937.40	938.12	3.53
	5-year			938.32	3.33
	10-year			938.49	3.16
	25-year			940.69	0.96
	50-year			940.70	0.95
	100-yer			940.72	0.93
E23L1A01	2-year	938.00	934.86	936.41	1.59
	5-year			937.07	0.93
	10-year			937.11	0.89
	25-year			937.16	0.84
	50-year			937.18	0.82
	100-yer			937.22	0.78
E23MC01	2-year	915.00	907.40	908.91	6.09
	5-year			909.44	5.56
	10-year			909.66	5.34
	25-year			910.06	4.94
	50-year			910.37	4.63
	100-yer			910.77	4.23
E23MC02	2-year	918.00	910.00	913.53	4.47
	5-year			913.88	4.12
	10-year			914.09	3.91
	25-year			914.30	3.70
	50-year			914.43	3.57
	100-yer			914.56	3.44

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
E23MC03	2-year	919.00	911.41	913.90	5.10
	5-year			914.21	4.79
	10-year			914.37	4.63
	25-year			914.58	4.42
	50-year			914.73	4.27
	100-yer			914.89	4.11
E23MC04	2-year	922.56	916.56	919.44	3.12
	5-year			919.74	2.82
	10-year			919.87	2.69
	25-year			920.01	2.55
	50-year			920.09	2.47
	100-yer			920.18	2.38
E23MC05	2-year	927.58	923.58	926.23	1.35
	5-year			926.27	1.31
	10-year			926.29	1.29
	25-year			926.30	1.28
	50-year			926.31	1.27
	100-yer			926.36	1.22
E4MC00	2-year	901.00	871.31	872.31	28.69
	5-year			872.55	28.45
	10-year			872.67	28.33
	25-year			872.82	28.18
	50-year			872.93	28.07
	100-yer			873.06	27.94
E4MC01	2-year	901.00	879.59	880.59	20.41
	5-year			880.83	20.17
	10-year			880.96	20.04
	25-year			881.11	19.89
	50-year			881.21	19.79
	100-yer			881.35	19.65
E7MC00	2-year	900.00	879.23	880.63	19.37
	5-year			880.92	19.08
	10-year			881.09	18.91
	25-year			881.29	18.71
	50-year			881.43	18.57
	100-yer			881.62	18.38
E7MC01	2-year	900.00	885.46	886.86	13.14
	5-year			887.16	12.84
	10-year			887.32	12.68
	25-year			887.52	12.48
	50-year			887.67	12.33
	100-yer			887.85	12.15
FPL101	2-year	894.02	886.42	887.35	6.67
	5-year			887.43	6.59
	10-year			887.64	6.38
	25-year			887.79	6.23
	50-year			887.89	6.13
	100-yer			888.01	6.01

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
FPL102	2-year	894.15	886.65	888.33	5.82
	5-year			888.58	5.57
	10-year			889.71	4.44
	25-year			890.49	3.66
	50-year			891.05	3.10
	100-yer			891.85	2.30
FPL103	2-year	896.03	886.95	888.57	7.46
	5-year			892.91	3.12
	10-year			893.26	2.77
	25-year			893.32	2.71
	50-year			893.36	2.67
	100-yer			893.40	2.63
FPL104	2-year	894.09	888.09	891.35	2.74
	5-year			892.91	1.18
	10-year			893.26	0.83
	25-year			893.32	0.77
	50-year			893.36	0.73
	100-yer			893.40	0.69
FPL201	2-year	893.94	884.11	887.92	6.02
	5-year			892.19	1.75
	10-year			892.30	1.64
	25-year			892.42	1.52
	50-year			892.50	1.44
	100-yer			892.59	1.35
FPL202	2-year	894.14	888.14	892.54	1.60
	5-year			892.89	1.25
	10-year			892.98	1.16
	25-year			893.09	1.05
	50-year			893.17	0.97
	100-yer			893.26	0.88
FPL203	2-year	894.66	888.41	892.64	2.02
	5-year			892.97	1.69
	10-year			893.08	1.58
	25-year			893.20	1.46
	50-year			893.29	1.37
	100-yer			893.40	1.26
FPL204	2-year	894.39	888.89	892.65	1.74
	5-year			892.99	1.40
	10-year			893.10	1.29
	25-year			893.23	1.16
	50-year			893.32	1.07
	100-yer			893.43	0.96
FPL205	2-year	896.71	890.46	894.05	2.66
	5-year			894.14	2.57
	10-year			894.18	2.53
	25-year			894.24	2.47
	50-year			894.28	2.43
	100-yer			894.33	2.38

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
FPL206	2-year	895.09	890.84	894.64	0.45
	5-year			894.78	0.31
	10-year			894.85	0.24
	25-year			894.95	0.14
	50-year			895.01	0.08
	100-yer			895.09	0.00
FPL301	2-year	889.00	878.80	879.90	9.10
	5-year			882.13	6.87
	10-year			885.63	3.37
	25-year			887.17	1.83
	50-year			887.32	1.68
	100-yer			887.47	1.53
FPMC00	2-year	909.00	871.48	873.69	35.31
	5-year			874.49	34.51
	10-year			874.90	34.10
	25-year			875.44	33.56
	50-year			875.83	33.17
	100-yer			876.42	32.58
FPMC01	2-year	908.97	873.07	875.29	33.68
	5-year			876.08	32.89
	10-year			876.49	32.48
	25-year			877.03	31.94
	50-year			877.42	31.55
	100-yer			878.01	30.96
FPMC02	2-year	909.00	873.48	875.69	33.31
	5-year			876.49	32.51
	10-year			876.89	32.11
	25-year			877.44	31.56
	50-year			877.82	31.18
	100-yer			878.42	30.58
FPMC03	2-year	910.08	874.72	876.93	33.15
	5-year			877.73	32.35
	10-year			878.14	31.94
	25-year			878.68	31.40
	50-year			879.06	31.02
	100-yer			879.66	30.42
FPMC04	2-year	892.42	886.42	888.38	4.04
	5-year			888.79	3.63
	10-year			889.00	3.42
	25-year			889.34	3.08
	50-year			889.64	2.77
	100-yer			890.06	2.36
FPMC05	2-year	893.00	887.00	888.59	4.41
	5-year			889.13	3.87
	10-year			889.40	3.60
	25-year			889.75	3.25
	50-year			890.04	2.96
	100-yer			890.41	2.59

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL201	2-year	912.00	902.67	905.19	6.81
	5-year			905.46	6.54
	10-year			905.58	6.42
	25-year			905.68	6.32
	50-year			905.77	6.23
	100-yer			905.87	6.13
IPL202	2-year	914.00	909.87	911.44	2.56
	5-year			911.71	2.29
	10-year			911.91	2.09
	25-year			912.23	1.77
	50-year			912.36	1.64
	100-yer			912.47	1.53
IPL203	2-year	928.00	923.00	923.30	4.70
	5-year			923.36	4.64
	10-year			923.39	4.61
	25-year			923.42	4.58
	50-year			923.45	4.55
	100-yer			923.48	4.52
IPL204	2-year	931.54	923.54	924.38	7.16
	5-year			924.52	7.02
	10-year			924.60	6.94
	25-year			924.68	6.86
	50-year			924.76	6.78
	100-yer			924.84	6.70
IPL205	2-year	932.29	925.04	925.50	6.79
	5-year			925.59	6.70
	10-year			925.63	6.66
	25-year			925.68	6.61
	50-year			925.72	6.57
	100-yer			925.77	6.52
IPL206	2-year	933.10	928.85	929.65	3.45
	5-year			929.88	3.22
	10-year			930.94	2.16
	25-year			932.11	0.99
	50-year			932.14	0.96
	100-yer			932.15	0.95
IPL2A01	2-year	907.91	903.91	905.21	2.70
	5-year			905.49	2.42
	10-year			905.62	2.29
	25-year			905.74	2.17
	50-year			905.83	2.08
	100-yer			905.94	1.97
IPL2A02	2-year	921.83	916.83	917.38	4.45
	5-year			917.47	4.36
	10-year			917.51	4.32
	25-year			917.57	4.26
	50-year			917.61	4.22
	100-yer			917.65	4.18

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL2A03	2-year	923.12	917.54	919.46	3.66
	5-year			920.52	2.60
	10-year			921.88	1.24
	25-year			922.22	0.90
	50-year			922.26	0.86
	100-yer			922.31	0.81
IPL2A04	2-year	924.24	917.99	920.03	4.21
	5-year			921.74	2.50
	10-year			922.38	1.86
	25-year			922.45	1.79
	50-year			922.47	1.77
	100-yer			922.50	1.74
IPL2A05	2-year	923.52	918.27	921.60	1.92
	5-year			921.89	1.63
	10-year			922.39	1.13
	25-year			922.46	1.06
	50-year			922.49	1.03
	100-yer			922.52	1.00
IPL401	2-year	908.00	901.03	902.19	5.81
	5-year			902.38	5.62
	10-year			902.44	5.56
	25-year			902.51	5.49
	50-year			902.64	5.36
	100-yer			902.82	5.18
IPL402	2-year	908.00	901.98	903.03	4.97
	5-year			903.33	4.67
	10-year			903.41	4.59
	25-year			903.55	4.45
	50-year			903.80	4.20
	100-yer			903.89	4.11
IPL403	2-year	908.81	903.61	904.66	4.15
	5-year			904.84	3.97
	10-year			904.89	3.92
	25-year			904.97	3.84
	50-year			905.10	3.71
	100-yer			905.14	3.67
IPL404	2-year	909.69	903.86	905.24	4.45
	5-year			905.48	4.21
	10-year			905.56	4.13
	25-year			905.71	3.98
	50-year			905.98	3.71
	100-yer			906.07	3.62
IPL405	2-year	912.60	906.93	907.62	4.98
	5-year			907.76	4.84
	10-year			907.80	4.80
	25-year			907.87	4.73
	50-year			907.96	4.64
	100-yer			907.99	4.61

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL406	2-year	916.60	910.27	911.51	5.09
	5-year			911.78	4.82
	10-year			911.85	4.75
	25-year			912.03	4.57
	50-year			912.29	4.31
	100-yer			912.42	4.18
IPL407	2-year	919.55	912.80	914.00	5.55
	5-year			914.41	5.14
	10-year			914.55	5.00
	25-year			915.62	3.93
	50-year			917.77	1.78
	100-yer			918.46	1.09
IPL408	2-year	925.93	919.35	920.63	5.30
	5-year			921.07	4.86
	10-year			921.65	4.28
	25-year			924.97	0.96
	50-year			925.07	0.86
	100-yer			925.10	0.83
IPL409	2-year	926.56	919.39	921.31	5.25
	5-year			922.17	4.39
	10-year			922.92	3.64
	25-year			924.93	1.63
	50-year			925.02	1.54
	100-yer			925.05	1.51
IPL410	2-year	926.69	919.61	921.93	4.76
	5-year			923.53	3.16
	10-year			924.49	2.20
	25-year			924.93	1.76
	50-year			924.98	1.71
	100-yer			925.01	1.68
IPL411	2-year	926.90	922.40	923.97	2.93
	5-year			925.07	1.83
	10-year			925.15	1.75
	25-year			925.22	1.68
	50-year			925.25	1.65
	100-yer			925.28	1.62
IPL501	2-year	906.00	900.00	901.22	4.78
	5-year			901.82	4.18
	10-year			902.13	3.87
	25-year			902.53	3.47
	50-year			902.80	3.20
	100-yer			903.08	2.92
IPL502	2-year	906.00	901.84	903.44	2.56
	5-year			903.73	2.27
	10-year			903.86	2.14
	25-year			904.01	1.99
	50-year			904.08	1.92
	100-yer			904.17	1.83

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPL601	2-year	907.59	901.37	902.20	5.39
	5-year			903.01	4.58
	10-year			903.44	4.15
	25-year			903.97	3.62
	50-year			904.34	3.25
	100-yer			904.87	2.72
IPL602	2-year	907.66	901.77	903.51	4.15
	5-year			904.28	3.38
	10-year			904.65	3.01
	25-year			904.99	2.67
	50-year			905.22	2.44
	100-yer			905.41	2.25
IPL603	2-year	913.00	904.50	904.98	8.02
	5-year			905.10	7.90
	10-year			905.16	7.84
	25-year			905.22	7.78
	50-year			905.27	7.73
	100-yer			905.41	7.59
IPL604	2-year	914.72	905.30	906.41	8.31
	5-year			906.61	8.11
	10-year			906.71	8.01
	25-year			906.85	7.87
	50-year			906.94	7.78
	100-yer			907.05	7.67
IPL605	2-year	916.55	911.63	912.64	3.91
	5-year			912.87	3.68
	10-year			913.07	3.48
	25-year			913.45	3.10
	50-year			915.34	1.21
	100-yer			915.62	0.93
IPL6A01	2-year	914.43	906.85	911.80	2.63
	5-year			912.62	1.81
	10-year			912.68	1.75
	25-year			912.75	1.68
	50-year			912.80	1.63
	100-yer			912.86	1.57
IPL6A02	2-year	914.66	907.39	912.77	1.89
	5-year			913.04	1.62
	10-year			913.10	1.56
	25-year			913.16	1.50
	50-year			913.20	1.46
	100-yer			913.26	1.40
IPL6A03	2-year	914.34	908.01	912.77	1.57
	5-year			913.04	1.30
	10-year			913.10	1.24
	25-year			913.16	1.18
	50-year			913.20	1.14
	100-yer			913.26	1.08

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC02	2-year	898.50	887.24	892.58	5.92
	5-year			893.53	4.97
	10-year			894.02	4.48
	25-year			894.51	3.99
	50-year			894.82	3.68
	100-yer			895.27	3.23
IPMC03	2-year	898.50	887.40	892.59	5.91
	5-year			893.53	4.97
	10-year			894.04	4.46
	25-year			894.57	3.93
	50-year			894.90	3.60
	100-yer			895.36	3.14
IPMC04	2-year	903.00	891.21	895.69	7.31
	5-year			896.02	6.98
	10-year			896.16	6.84
	25-year			896.48	6.52
	50-year			896.46	6.54
	100-yer			896.75	6.25
IPMC05	2-year	903.00	891.75	895.88	7.12
	5-year			896.35	6.65
	10-year			896.60	6.40
	25-year			896.97	6.03
	50-year			897.09	5.91
	100-yer			897.40	5.60
IPMC06	2-year	909.00	892.00	896.12	12.88
	5-year			896.62	12.38
	10-year			896.88	12.12
	25-year			897.23	11.77
	50-year			897.38	11.62
	100-yer			897.66	11.34
IPMC07	2-year	909.00	892.50	896.13	12.87
	5-year			896.65	12.35
	10-year			896.93	12.07
	25-year			897.30	11.70
	50-year			897.48	11.52
	100-yer			897.78	11.22
IPMC08	2-year	913.00	896.15	900.09	12.91
	5-year			900.29	12.71
	10-year			900.38	12.62
	25-year			900.49	12.51
	50-year			900.59	12.41
	100-yer			900.66	12.34
IPMC09	2-year	913.00	896.30	900.78	12.22
	5-year			901.32	11.68
	10-year			901.64	11.36
	25-year			902.04	10.97
	50-year			902.32	10.68
	100-yer			902.62	10.38

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC10	2-year	912.00	896.50	900.91	11.09
	5-year			901.52	10.48
	10-year			901.84	10.16
	25-year			902.25	9.75
	50-year			902.53	9.47
	100-yer			902.83	9.17
IPMC11	2-year	912.00	897.01	900.91	11.09
	5-year			901.51	10.49
	10-year			901.84	10.16
	25-year			902.24	9.76
	50-year			902.53	9.47
	100-yer			902.82	9.18
IPMC12	2-year	906.00	897.98	901.22	4.78
	5-year			901.82	4.18
	10-year			902.13	3.87
	25-year			902.52	3.48
	50-year			902.80	3.20
	100-yer			903.08	2.92
IPMC13	2-year	908.00	899.05	902.19	5.81
	5-year			903.01	4.99
	10-year			903.44	4.56
	25-year			903.97	4.03
	50-year			904.34	3.66
	100-yer			904.87	3.13
IPMC14	2-year	911.00	901.49	906.44	4.56
	5-year			907.24	3.76
	10-year			907.63	3.37
	25-year			908.15	2.85
	50-year			908.47	2.53
	100-yer			908.87	2.13
IPMC15	2-year	911.00	902.00	906.44	4.56
	5-year			907.31	3.69
	10-year			907.77	3.23
	25-year			908.27	2.73
	50-year			908.60	2.40
	100-yer			909.00	2.00
IPMC16	2-year	912.00	903.73	907.37	4.63
	5-year			908.16	3.84
	10-year			908.57	3.43
	25-year			909.06	2.94
	50-year			909.39	2.61
	100-yer			909.78	2.22
IPMC17	2-year	912.00	903.90	907.44	4.56
	5-year			908.26	3.74
	10-year			908.71	3.29
	25-year			909.22	2.78
	50-year			909.54	2.46
	100-yer			909.96	2.04

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
IPMC18	2-year	913.00	904.00	907.79	5.21
	5-year			908.56	4.44
	10-year			908.99	4.01
	25-year			909.48	3.52
	50-year			909.80	3.20
	100-yer			910.21	2.79
IPMC19	2-year	913.00	904.08	907.84	5.16
	5-year			908.66	4.34
	10-year			909.20	3.80
	25-year			909.72	3.28
	50-year			910.06	2.94
	100-yer			910.51	2.49
IPMC20	2-year	913.52	906.02	907.95	5.57
	5-year			908.74	4.78
	10-year			909.27	4.25
	25-year			909.78	3.74
	50-year			910.12	3.40
	100-yer			910.56	2.96
LWL101	2-year	930.00	910.43	911.88	18.12
	5-year			912.14	17.86
	10-year			912.28	17.73
	25-year			912.42	17.58
	50-year			912.52	17.48
	100-yer			912.64	17.36
LWMC01	2-year	890.00	862.03	866.37	23.63
	5-year			867.70	22.30
	10-year			868.58	21.42
	25-year			869.60	20.40
	50-year			870.10	19.90
	100-yer			870.90	19.10
LWMC02	2-year	890.00	866.22	872.01	17.99
	5-year			873.49	16.51
	10-year			874.46	15.54
	25-year			875.55	14.45
	50-year			876.07	13.93
	100-yer			876.93	13.07
LWMC03	2-year	890.00	868.75	872.09	17.91
	5-year			873.56	16.44
	10-year			874.52	15.48
	25-year			875.61	14.39
	50-year			876.14	13.86
	100-yer			876.99	13.01
LWMC04	2-year	891.00	874.60	881.86	9.14
	5-year			882.91	8.09
	10-year			883.44	7.56
	25-year			884.25	6.75
	50-year			884.58	6.42
	100-yer			884.97	6.03

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
LWMC05	2-year	896.10	878.13	884.50	11.60
	5-year			886.45	9.65
	10-year			887.71	8.39
	25-year			889.72	6.38
	50-year			890.54	5.56
	100-yer			891.27	4.83
LWMC06	2-year	896.10	878.42	884.73	11.37
	5-year			886.66	9.44
	10-year			887.91	8.19
	25-year			889.87	6.23
	50-year			890.69	5.41
	100-yer			891.45	4.65
LWMC07	2-year	907.00	879.11	886.33	20.67
	5-year			887.90	19.10
	10-year			889.01	17.99
	25-year			890.95	16.05
	50-year			892.08	14.92
	100-yer			892.96	14.04
LWMC08	2-year	907.00	879.55	886.61	20.39
	5-year			888.29	18.71
	10-year			889.47	17.53
	25-year			891.39	15.61
	50-year			892.49	14.51
	100-yer			893.43	13.57
LWMC09	2-year	898.30	884.30	891.86	6.44
	5-year			893.07	5.23
	10-year			893.55	4.75
	25-year			893.96	4.34
	50-year			894.18	4.12
	100-yer			894.71	3.59
LWMC10	2-year	902.00	887.16	891.47	10.53
	5-year			892.60	9.40
	10-year			893.06	8.94
	25-year			893.37	8.63
	50-year			893.54	8.46
	100-yer			893.73	8.27
LWMC11	2-year	902.00	887.47	891.56	10.44
	5-year			892.66	9.34
	10-year			893.12	8.88
	25-year			893.45	8.55
	50-year			893.63	8.37
	100-yer			893.83	8.17
LWMC12	2-year	920.00	898.29	900.35	19.65
	5-year			900.83	19.17
	10-year			901.04	18.96
	25-year			901.30	18.70
	50-year			901.44	18.56
	100-yer			901.62	18.38

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
LWMC13	2-year	930.00	905.80	906.72	23.28
	5-year			906.87	23.13
	10-year			906.95	23.05
	25-year			907.05	22.95
	50-year			907.12	22.88
	100-yer			907.21	22.79
LWMC14	2-year	930.00	911.74	912.25	17.75
	5-year			912.33	17.67
	10-year			912.37	17.63
	25-year			912.42	17.58
	50-year			912.45	17.55
	100-yer			912.49	17.51
NCL101	2-year	896.70	886.70	892.25	4.45
	5-year			892.61	4.09
	10-year			892.80	3.90
	25-year			892.97	3.73
	50-year			893.07	3.63
	100-yer			893.23	3.47
NCL201	2-year	898.00	890.35	891.36	6.64
	5-year			891.55	6.45
	10-year			891.65	6.35
	25-year			891.76	6.24
	50-year			891.84	6.16
	100-yer			891.93	6.07
NCL202	2-year	909.00	901.00	901.69	7.31
	5-year			901.82	7.18
	10-year			901.88	7.12
	25-year			901.95	7.05
	50-year			902.00	7.00
	100-yer			902.07	6.93
NCL401	2-year	908.00	898.00	898.98	9.02
	5-year			899.18	8.82
	10-year			899.28	8.72
	25-year			899.39	8.61
	50-year			899.47	8.53
	100-yer			899.57	8.43
NCL402	2-year	927.70	919.70	920.20	7.50
	5-year			920.29	7.41
	10-year			920.33	7.37
	25-year			920.38	7.32
	50-year			920.41	7.29
	100-yer			920.45	7.25
NCL403	2-year	926.00	920.34	924.33	1.67
	5-year			924.58	1.42
	10-year			924.69	1.31
	25-year			924.82	1.18
	50-year			924.90	1.10
	100-yer			925.01	0.99

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCL404	2-year	926.10	920.77	924.34	1.76
	5-year			924.59	1.51
	10-year			924.70	1.40
	25-year			924.82	1.28
	50-year			924.91	1.19
	100-yer			925.02	1.08
NCL405	2-year	927.42	922.50	925.40	2.02
	5-year			926.45	0.97
	10-year			926.50	0.92
	25-year			926.54	0.88
	50-year			926.57	0.85
	100-yer			926.60	0.82
NCL4A01	2-year	926.01	921.46	924.38	1.63
	5-year			924.60	1.41
	10-year			924.70	1.31
	25-year			924.83	1.18
	50-year			924.92	1.09
	100-yer			925.02	0.99
NCL4B01	2-year	927.75	923.75	925.84	1.91
	5-year			925.90	1.85
	10-year			925.93	1.82
	25-year			925.96	1.79
	50-year			925.99	1.76
	100-yer			926.02	1.73
NCL4C01	2-year	926.46	921.46	924.46	2.00
	5-year			924.59	1.87
	10-year			924.70	1.76
	25-year			924.82	1.64
	50-year			924.91	1.55
	100-yer			925.02	1.44
NCL4D01	2-year	927.56	922.56	925.63	1.93
	5-year			926.70	0.86
	10-year			926.74	0.82
	25-year			926.79	0.77
	50-year			926.82	0.74
	100-yer			926.85	0.71
NCL500	2-year	916.12	906.12	908.65	7.47
	5-year			908.85	7.27
	10-year			908.93	7.19
	25-year			909.04	7.08
	50-year			909.11	7.01
	100-yer			909.19	6.93
NCL501	2-year	935.91	922.00	924.40	11.51
	5-year			924.61	11.30
	10-year			924.71	11.20
	25-year			924.80	11.11
	50-year			924.87	11.04
	100-yer			924.95	10.96

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCL502	2-year	934.00	924.00	924.79	9.21
	5-year			925.18	8.82
	10-year			925.42	8.58
	25-year			925.73	8.27
	50-year			925.96	8.04
	100-yer			926.24	7.76
NCL503	2-year	972.00	961.73	962.14	9.86
	5-year			962.32	9.68
	10-year			962.42	9.58
	25-year			962.54	9.46
	50-year			962.62	9.38
	100-yer			962.72	9.28
NCMC01	2-year	890.00	868.00	874.91	15.09
	5-year			876.45	13.55
	10-year			876.95	13.05
	25-year			878.08	11.92
	50-year			878.93	11.07
	100-yer			879.76	10.24
NCMC02	2-year	899.08	877.70	884.66	14.42
	5-year			886.23	12.85
	10-year			886.74	12.34
	25-year			887.93	11.15
	50-year			888.88	10.20
	100-yer			889.86	9.22
NCMC03	2-year	907.00	882.76	888.04	18.96
	5-year			888.96	18.04
	10-year			888.81	18.19
	25-year			889.87	17.13
	50-year			890.97	16.03
	100-yer			891.78	15.22
NCMC04	2-year	907.00	882.89	888.08	18.92
	5-year			889.02	17.98
	10-year			888.90	18.10
	25-year			889.95	17.05
	50-year			891.04	15.96
	100-yer			891.86	15.14
NCMC05	2-year	904.93	886.36	892.68	12.25
	5-year			893.45	11.48
	10-year			893.69	11.24
	25-year			894.09	10.84
	50-year			894.32	10.61
	100-yer			894.46	10.47
NCMC06	2-year	901.88	889.88	895.49	6.39
	5-year			895.94	5.94
	10-year			896.07	5.81
	25-year			896.39	5.49
	50-year			896.63	5.25
	100-yer			896.88	5.00

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCMC07	2-year	904.69	894.60	898.34	6.35
	5-year			898.46	6.23
	10-year			899.22	5.47
	25-year			899.51	5.18
	50-year			899.74	4.95
	100-yer			899.99	4.70
NCMC08	2-year	907.00	894.65	898.97	8.03
	5-year			899.84	7.16
	10-year			900.54	6.46
	25-year			901.22	5.78
	50-year			901.85	5.15
	100-yer			902.44	4.56
NCMC09	2-year	910.00	897.35	903.25	6.75
	5-year			903.79	6.21
	10-year			903.98	6.02
	25-year			904.18	5.82
	50-year			904.29	5.71
	100-yer			904.44	5.56
NCMC10	2-year	910.00	899.37	903.68	6.32
	5-year			904.46	5.54
	10-year			904.76	5.24
	25-year			905.09	4.91
	50-year			905.36	4.64
	100-yer			905.64	4.36
NCMC11	2-year	910.00	900.82	904.93	5.07
	5-year			905.40	4.60
	10-year			905.61	4.39
	25-year			905.87	4.13
	50-year			906.06	3.94
	100-yer			906.28	3.72
NCMC12	2-year	913.00	903.48	907.35	5.65
	5-year			907.76	5.24
	10-year			907.92	5.09
	25-year			908.10	4.90
	50-year			908.23	4.77
	100-yer			908.41	4.59
NCMC13	2-year	915.00	906.50	910.40	4.60
	5-year			910.57	4.43
	10-year			910.63	4.37
	25-year			910.76	4.24
	50-year			910.89	4.11
	100-yer			911.06	3.94
NCMC14	2-year	891.93	873.93	881.55	10.38
	5-year			883.12	8.81
	10-year			883.63	8.30
	25-year			884.77	7.16
	50-year			885.63	6.30
	100-yer			886.46	5.47

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
NCMC15	2-year	896.33	874.00	888.25	8.08
	5-year			889.25	7.08
	10-year			889.59	6.74
	25-year			890.41	5.92
	50-year			891.05	5.28
	100-yer			891.70	4.63
POL102	2-year	925.09	919.01	919.39	5.70
	5-year			919.48	5.61
	10-year			919.52	5.57
	25-year			919.58	5.51
	50-year			919.62	5.47
	100-yer			919.67	5.42
POL103	2-year	926.32	920.49	921.73	4.59
	5-year			922.00	4.32
	10-year			922.11	4.21
	25-year			922.32	4.00
	50-year			922.48	3.84
	100-yer			922.75	3.57
POL104	2-year	927.00	921.92	922.83	4.17
	5-year			923.04	3.96
	10-year			923.13	3.87
	25-year			923.28	3.72
	50-year			923.43	3.57
	100-yer			923.68	3.32
POL105	2-year	932.05	927.30	928.58	3.47
	5-year			928.92	3.13
	10-year			929.07	2.98
	25-year			929.39	2.66
	50-year			930.20	1.85
	100-yer			931.09	0.96
POL106	2-year	932.55	928.38	929.02	3.53
	5-year			929.17	3.38
	10-year			929.29	3.26
	25-year			929.56	2.99
	50-year			930.08	2.47
	100-yer			931.29	1.26
POL107	2-year	934.28	930.49	931.59	2.69
	5-year			931.87	2.41
	10-year			931.99	2.29
	25-year			932.18	2.10
	50-year			932.30	1.98
	100-yer			932.46	1.82
POL108	2-year	934.57	931.07	932.73	1.84
	5-year			933.54	1.03
	10-year			933.66	0.91
	25-year			933.76	0.81
	50-year			933.81	0.76
	100-yer			933.89	0.68

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL109	2-year	935.52	931.69	932.82	2.70
	5-year			933.81	1.71
	10-year			934.10	1.42
	25-year			934.38	1.14
	50-year			934.55	0.97
	100-yer			934.59	0.93
POL110	2-year	935.55	932.35	933.13	2.42
	5-year			933.80	1.75
	10-year			934.20	1.35
	25-year			934.63	0.92
	50-year			934.73	0.82
	100-yer			934.78	0.77
POL201	2-year	910.50	906.08	906.91	3.59
	5-year			907.05	3.45
	10-year			907.15	3.35
	25-year			907.39	3.11
	50-year			907.58	2.92
	100-yer			907.82	2.68
POL301	2-year	919.05	913.80	917.77	1.28
	5-year			917.93	1.12
	10-year			918.01	1.04
	25-year			918.11	0.94
	50-year			918.17	0.88
	100-yer			918.26	0.79
POL302	2-year	919.77	914.77	915.78	3.99
	5-year			916.18	3.59
	10-year			916.42	3.35
	25-year			916.72	3.05
	50-year			916.95	2.82
	100-yer			917.22	2.55
POL303	2-year	940.00	931.00	931.22	8.78
	5-year			931.27	8.73
	10-year			931.30	8.70
	25-year			931.33	8.67
	50-year			931.35	8.65
	100-yer			931.38	8.62
POL304	2-year	937.24	931.41	935.18	2.06
	5-year			936.41	0.83
	10-year			936.49	0.75
	25-year			936.56	0.68
	50-year			936.61	0.63
	100-yer			936.67	0.57
POL305	2-year	939.94	934.27	935.94	4.00
	5-year			938.34	1.60
	10-year			938.63	1.31
	25-year			938.99	0.95
	50-year			939.03	0.91
	100-yer			939.06	0.88

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL306	2-year	942.07	939.07	939.78	2.29
	5-year			940.02	2.05
	10-year			940.18	1.89
	25-year			940.53	1.54
	50-year			940.73	1.34
	100-yer			941.10	0.97
POL401	2-year	935.00	927.31	928.22	6.78
	5-year			928.43	6.57
	10-year			928.56	6.44
	25-year			928.71	6.29
	50-year			928.84	6.16
	100-yer			928.97	6.03
POL402	2-year	935.53	927.31	928.22	7.31
	5-year			928.44	7.09
	10-year			928.56	6.97
	25-year			928.71	6.82
	50-year			928.84	6.69
	100-yer			928.97	6.56
POL403	2-year	936.12	930.70	932.05	4.07
	5-year			932.53	3.59
	10-year			934.25	1.87
	25-year			935.19	0.93
	50-year			935.24	0.88
	100-yer			935.29	0.83
POL404	2-year	937.42	932.17	933.56	3.86
	5-year			934.35	3.07
	10-year			936.48	0.94
	25-year			936.58	0.84
	50-year			936.61	0.81
	100-yer			936.65	0.77
POL405	2-year	938.15	933.15	934.57	3.58
	5-year			935.77	2.38
	10-year			937.30	0.85
	25-year			937.35	0.80
	50-year			937.38	0.77
	100-yer			937.41	0.74
POL406	2-year	930.00	927.31	928.22	1.78
	5-year			928.43	1.57
	10-year			928.56	1.44
	25-year			928.71	1.29
	50-year			928.84	1.16
	100-yer			928.97	1.03
POL501	2-year	930.20	925.70	926.74	3.46
	5-year			926.99	3.21
	10-year			927.12	3.08
	25-year			927.28	2.92
	50-year			927.39	2.81
	100-yer			927.52	2.68

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POL502	2-year	932.00	926.08	930.13	1.87
	5-year			930.21	1.79
	10-year			930.25	1.75
	25-year			930.31	1.69
	50-year			930.34	1.66
	100-yer			930.39	1.61
POL503	2-year	932.80	927.97	930.13	2.67
	5-year			930.21	2.59
	10-year			930.26	2.54
	25-year			930.31	2.49
	50-year			930.34	2.46
	100-yer			930.39	2.41
POL601	2-year	936.08	930.75	932.64	3.44
	5-year			933.56	2.52
	10-year			933.72	2.36
	25-year			933.90	2.18
	50-year			934.01	2.07
	100-yer			934.14	1.94
POMC01	2-year	898.30	888.30	891.34	6.96
	5-year			891.85	6.45
	10-year			892.16	6.14
	25-year			892.64	5.66
	50-year			892.98	5.32
	100-yer			893.28	5.02
POMC02	2-year	909.87	899.87	902.18	7.69
	5-year			902.59	7.28
	10-year			902.79	7.08
	25-year			902.97	6.90
	50-year			903.10	6.77
	100-yer			903.21	6.66
POMC03	2-year	912.40	902.40	906.40	6.00
	5-year			906.90	5.50
	10-year			907.05	5.35
	25-year			907.22	5.18
	50-year			907.34	5.06
	100-yer			907.51	4.89
POMC04	2-year	910.90	902.90	906.44	4.46
	5-year			906.95	3.95
	10-year			907.13	3.77
	25-year			907.37	3.53
	50-year			907.56	3.34
	100-yer			907.81	3.09
POMC05	2-year	914.00	906.00	906.91	7.09
	5-year			907.05	6.95
	10-year			907.14	6.86
	25-year			907.39	6.61
	50-year			907.58	6.42
	100-yer			907.82	6.18

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POMC06	2-year	915.00	908.31	909.89	5.12
	5-year			910.11	4.89
	10-year			910.23	4.77
	25-year			910.47	4.53
	50-year			910.61	4.39
	100-yer			910.75	4.25
POMC07	2-year	918.60	908.60	910.37	8.23
	5-year			910.70	7.90
	10-year			910.91	7.69
	25-year			911.63	6.97
	50-year			912.18	6.42
	100-yer			912.89	5.71
POMC08	2-year	919.60	909.60	911.24	8.36
	5-year			911.49	8.11
	10-year			911.69	7.91
	25-year			912.14	7.46
	50-year			912.49	7.11
	100-yer			913.04	6.56
POMC09	2-year	916.47	910.30	912.30	4.17
	5-year			912.79	3.68
	10-year			913.10	3.37
	25-year			914.05	2.42
	50-year			914.76	1.71
	100-yer			915.15	1.32
POMC10	2-year	919.00	911.46	913.13	5.87
	5-year			913.33	5.67
	10-year			913.52	5.48
	25-year			914.15	4.85
	50-year			914.80	4.20
	100-yer			915.19	3.81
POMC11	2-year	919.60	911.60	913.17	6.43
	5-year			913.38	6.22
	10-year			913.61	5.99
	25-year			914.24	5.36
	50-year			914.96	4.64
	100-yer			915.47	4.13
POMC12	2-year	920.00	912.00	913.25	6.75
	5-year			913.53	6.47
	10-year			913.91	6.09
	25-year			914.45	5.55
	50-year			915.08	4.92
	100-yer			915.55	4.45
POMC13	2-year	922.14	912.14	915.41	6.73
	5-year			916.42	5.72
	10-year			916.72	5.42
	25-year			917.01	5.13
	50-year			917.22	4.92
	100-yer			917.43	4.71

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
POMC14	2-year	935.00	921.14	921.60	13.40
	5-year			921.72	13.28
	10-year			921.78	13.22
	25-year			921.86	13.14
	50-year			921.91	13.09
	100-yer			921.98	13.02
POMC15	2-year	930.00	925.20	926.51	3.49
	5-year			926.71	3.29
	10-year			926.81	3.19
	25-year			926.93	3.07
	50-year			927.01	2.99
	100-yer			927.11	2.89
POMC16	2-year	934.14	926.50	927.44	6.70
	5-year			927.63	6.51
	10-year			927.72	6.42
	25-year			927.84	6.30
	50-year			927.92	6.22
	100-yer			928.01	6.13
POMC17	2-year	934.22	930.22	932.64	1.58
	5-year			933.55	0.67
	10-year			933.71	0.51
	25-year			933.89	0.33
	50-year			934.00	0.22
	100-yer			934.13	0.09
POMC18	2-year	936.94	930.58	935.47	1.47
	5-year			936.17	0.77
	10-year			936.25	0.69
	25-year			936.34	0.60
	50-year			936.40	0.54
	100-yer			936.47	0.47
POMC19	2-year	937.00	931.42	935.47	1.53
	5-year			936.18	0.82
	10-year			936.25	0.75
	25-year			936.34	0.66
	50-year			936.40	0.60
	100-yer			936.47	0.53
PRL101	2-year	890.00	878.04	878.46	11.54
	5-year			878.58	11.42
	10-year			878.95	11.05
	25-year			879.40	10.60
	50-year			879.65	10.35
	100-yer			880.04	9.96
PRL102	2-year	891.00	878.67	880.48	10.52
	5-year			881.10	9.90
	10-year			881.49	9.51
	25-year			882.18	8.82
	50-year			883.49	7.51
	100-yer			890.01	1.00

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL103	2-year	891.08	879.50	880.64	10.44
	5-year			881.25	9.83
	10-year			881.49	9.59
	25-year			882.21	8.87
	50-year			883.53	7.55
	100-yer			890.16	0.92
PRL104	2-year	893.48	883.91	884.81	8.67
	5-year			884.97	8.51
	10-year			885.13	8.35
	25-year			885.28	8.20
	50-year			885.38	8.10
	100-yer			891.45	2.03
PRL105	2-year	893.51	884.74	885.63	7.88
	5-year			885.82	7.69
	10-year			885.92	7.59
	25-year			886.06	7.45
	50-year			886.16	7.35
	100-yer			891.57	1.94
PRL106	2-year	893.65	886.82	887.79	5.86
	5-year			888.02	5.63
	10-year			888.17	5.48
	25-year			888.37	5.28
	50-year			888.55	5.10
	100-yer			892.72	0.93
PRL107	2-year	893.71	887.31	888.43	5.28
	5-year			888.70	5.01
	10-year			888.87	4.84
	25-year			889.13	4.58
	50-year			889.46	4.25
	100-yer			892.96	0.75
PRL201	2-year	889.00	877.77	879.45	9.55
	5-year			879.81	9.19
	10-year			880.00	9.00
	25-year			880.22	8.78
	50-year			880.36	8.64
	100-yer			880.55	8.45
PRL202	2-year	889.00	879.90	882.08	6.92
	5-year			882.79	6.21
	10-year			883.17	5.83
	25-year			883.65	5.35
	50-year			883.98	5.02
	100-yer			884.40	4.60
PRL203	2-year	894.00	881.77	884.14	9.86
	5-year			884.63	9.37
	10-year			884.81	9.19
	25-year			885.03	8.97
	50-year			885.25	8.75
	100-yer			885.55	8.45

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL204	2-year	894.00	888.86	890.30	3.70
	5-year			890.60	3.40
	10-year			890.75	3.25
	25-year			890.93	3.07
	50-year			891.10	2.90
	100-yer			891.28	2.72
PRL205	2-year	894.29	889.04	890.50	3.79
	5-year			890.79	3.50
	10-year			890.94	3.35
	25-year			891.11	3.18
	50-year			891.25	3.04
	100-yer			891.42	2.87
PRL206	2-year	895.21	889.96	891.32	3.89
	5-year			891.70	3.51
	10-year			891.90	3.31
	25-year			892.16	3.05
	50-year			892.34	2.87
	100-yer			892.56	2.65
PRL207	2-year	897.00	891.00	892.60	4.40
	5-year			892.88	4.12
	10-year			893.03	3.97
	25-year			893.20	3.80
	50-year			893.33	3.67
	100-yer			893.48	3.52
PRL208	2-year	900.83	893.42	895.84	4.99
	5-year			896.70	4.13
	10-year			897.58	3.25
	25-year			899.08	1.75
	50-year			899.20	1.63
	100-yer			899.33	1.50
PRL209	2-year	900.89	893.97	899.47	1.42
	5-year			899.76	1.13
	10-year			899.93	0.96
	25-year			900.15	0.74
	50-year			900.26	0.63
	100-yer			900.41	0.48
PRL210	2-year	902.78	895.57	901.25	1.53
	5-year			901.42	1.36
	10-year			901.50	1.28
	25-year			901.61	1.17
	50-year			901.69	1.09
	100-yer			901.78	1.00
PRL211	2-year	902.83	895.58	901.55	1.28
	5-year			901.78	1.05
	10-year			901.91	0.92
	25-year			902.06	0.77
	50-year			902.17	0.66
	100-yer			902.32	0.51

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL212	2-year	904.26	897.68	902.76	1.50
	5-year			902.92	1.34
	10-year			903.01	1.25
	25-year			903.12	1.14
	50-year			903.20	1.06
	100-yer			903.29	0.97
PRL213	2-year	904.62	898.20	902.98	1.64
	5-year			903.13	1.49
	10-year			903.22	1.40
	25-year			903.33	1.29
	50-year			903.40	1.22
	100-yer			903.50	1.12
PRL214	2-year	911.73	906.73	911.01	0.72
	5-year			911.12	0.61
	10-year			911.18	0.55
	25-year			911.26	0.47
	50-year			911.31	0.42
	100-yer			911.37	0.36
PRL215	2-year	913.56	907.39	911.89	1.67
	5-year			912.02	1.54
	10-year			912.09	1.47
	25-year			912.17	1.39
	50-year			912.23	1.33
	100-yer			912.30	1.26
PRL216	2-year	913.69	907.69	912.24	1.45
	5-year			912.40	1.30
	10-year			912.48	1.21
	25-year			912.58	1.11
	50-year			912.65	1.04
	100-yer			912.74	0.95
PRL217	2-year	916.99	909.24	915.17	1.82
	5-year			915.26	1.73
	10-year			915.31	1.68
	25-year			915.37	1.62
	50-year			915.41	1.58
	100-yer			915.46	1.53
PRL218	2-year	917.39	910.72	916.48	0.91
	5-year			916.57	0.82
	10-year			916.61	0.78
	25-year			916.66	0.73
	50-year			916.70	0.69
	100-yer			916.74	0.65
PRL2A01	2-year	912.97	909.14	912.12	0.85
	5-year			912.19	0.78
	10-year			912.22	0.75
	25-year			912.27	0.70
	50-year			912.30	0.67
	100-yer			912.34	0.63

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRL301	2-year	907.00	901.92	905.29	1.71
	5-year			905.67	1.33
	10-year			905.82	1.18
	25-year			906.00	1.00
	50-year			906.12	0.88
	100-yer			906.26	0.74
PRL302	2-year	907.29	902.29	905.65	1.64
	5-year			905.86	1.43
	10-year			905.98	1.31
	25-year			906.13	1.16
	50-year			906.23	1.06
	100-yer			906.35	0.94
PRL303	2-year	912.12	904.79	907.99	4.13
	5-year			910.20	1.92
	10-year			910.30	1.82
	25-year			910.39	1.73
	50-year			910.45	1.67
	100-yer			910.51	1.61
PRL304	2-year	911.16	904.94	908.89	2.27
	5-year			910.65	0.51
	10-year			910.74	0.42
	25-year			910.84	0.32
	50-year			910.91	0.25
	100-yer			911.00	0.16
PRL305	2-year	912.93	907.35	909.12	3.81
	5-year			911.82	1.11
	10-year			912.05	0.88
	25-year			912.16	0.77
	50-year			912.23	0.70
	100-yer			912.30	0.63
PRL306	2-year	913.29	908.21	908.71	4.58
	5-year			908.81	4.48
	10-year			908.86	4.43
	25-year			908.93	4.36
	50-year			908.97	4.32
	100-yer			909.04	4.25
PRL307	2-year	918.11	913.61	914.12	3.99
	5-year			914.22	3.89
	10-year			914.28	3.83
	25-year			914.35	3.76
	50-year			914.40	3.71
	100-yer			914.46	3.65
PRL401	2-year	927.67	923.25	923.81	3.86
	5-year			923.92	3.75
	10-year			923.98	3.69
	25-year			924.05	3.62
	50-year			924.10	3.57
	100-yer			924.17	3.50

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC00	2-year	874.00	861.41	863.85	10.15
	5-year			864.46	9.54
	10-year			864.75	9.25
	25-year			865.05	8.95
	50-year			865.23	8.77
	100-yer			865.46	8.54
PRMC01	2-year	905.00	869.97	872.41	32.59
	5-year			873.03	31.97
	10-year			873.31	31.69
	25-year			873.63	31.37
	50-year			873.79	31.21
	100-yer			874.03	30.97
PRMC02	2-year	905.00	871.81	874.16	30.84
	5-year			875.02	29.98
	10-year			875.44	29.56
	25-year			875.91	29.09
	50-year			876.17	28.83
	100-yer			876.55	28.45
PRMC03	2-year	905.00	873.16	875.52	29.48
	5-year			876.39	28.61
	10-year			876.83	28.17
	25-year			877.34	27.66
	50-year			877.63	27.37
	100-yer			878.04	26.96
PRMC04	2-year	905.08	874.91	877.28	27.80
	5-year			878.14	26.94
	10-year			878.59	26.49
	25-year			879.12	25.96
	50-year			879.42	25.66
	100-yer			879.86	25.22
PRMC05	2-year	888.00	875.00	877.83	10.17
	5-year			878.58	9.42
	10-year			878.95	9.05
	25-year			879.39	8.61
	50-year			879.65	8.35
	100-yer			880.03	7.97
PRMC06	2-year	889.00	876.00	877.79	11.21
	5-year			878.54	10.46
	10-year			878.91	10.09
	25-year			879.35	9.65
	50-year			879.61	9.39
	100-yer			880.00	9.00
PRMC07	2-year	889.00	878.81	880.92	8.08
	5-year			881.28	7.72
	10-year			881.46	7.54
	25-year			881.65	7.35
	50-year			881.77	7.23
	100-yer			882.01	6.99

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC08	2-year	891.00	881.40	882.64	8.36
	5-year			882.90	8.10
	10-year			883.04	7.96
	25-year			883.10	7.90
	50-year			883.16	7.84
	100-yer			883.28	7.72
PRMC09	2-year	892.00	883.33	886.00	6.00
	5-year			886.78	5.22
	10-year			887.77	4.23
	25-year			889.12	2.88
	50-year			889.97	2.03
	100-yer			890.52	1.48
PRMC10	2-year	893.04	885.04	886.88	6.16
	5-year			887.57	5.47
	10-year			888.52	4.52
	25-year			890.20	2.84
	50-year			890.82	2.22
	100-yer			891.20	1.84
PRMC11	2-year	894.56	886.56	888.84	5.72
	5-year			889.20	5.36
	10-year			889.26	5.30
	25-year			890.29	4.27
	50-year			890.86	3.70
	100-yer			891.23	3.33
PRMC12	2-year	892.00	887.00	890.43	1.57
	5-year			890.83	1.17
	10-year			890.99	1.01
	25-year			891.23	0.77
	50-year			891.40	0.60
	100-yer			891.57	0.43
PRMC13	2-year	894.00	887.24	890.43	3.57
	5-year			890.83	3.17
	10-year			891.00	3.00
	25-year			891.23	2.77
	50-year			891.40	2.60
	100-yer			891.57	2.43
PRMC14	2-year	894.00	887.37	891.25	2.75
	5-year			891.92	2.08
	10-year			892.13	1.87
	25-year			892.57	1.43
	50-year			892.92	1.08
	100-yer			893.33	0.67
PRMC15	2-year	899.00	889.60	891.81	7.19
	5-year			892.33	6.67
	10-year			892.59	6.41
	25-year			892.94	6.06
	50-year			893.19	5.81
	100-yer			893.50	5.50

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
PRMC16	2-year	910.00	899.57	902.30	7.70
	5-year			902.90	7.10
	10-year			903.24	6.76
	25-year			903.64	6.36
	50-year			903.95	6.05
	100-yer			904.33	5.67
PRMC17	2-year	914.36	909.36	910.23	4.13
	5-year			910.37	3.99
	10-year			910.44	3.92
	25-year			910.53	3.83
	50-year			910.59	3.77
	100-yer			910.66	3.70
PRMC18	2-year	914.00	909.50	913.50	0.50
	5-year			913.65	0.35
	10-year			913.73	0.27
	25-year			913.83	0.17
	50-year			913.89	0.11
	100-yer			913.98	0.02
PRMC19	2-year	914.45	909.95	913.92	0.53
	5-year			914.04	0.41
	10-year			914.11	0.34
	25-year			914.20	0.25
	50-year			914.26	0.19
	100-yer			914.34	0.11
PRMC20	2-year	925.04	919.87	924.16	0.88
	5-year			924.22	0.82
	10-year			924.25	0.79
	25-year			924.29	0.75
	50-year			924.31	0.73
	100-yer			924.34	0.70
PRMC21	2-year	926.35	921.60	925.38	0.97
	5-year			925.47	0.88
	10-year			925.51	0.84
	25-year			925.55	0.80
	50-year			925.58	0.77
	100-yer			925.61	0.74
PRMC22	2-year	926.37	922.45	925.38	0.99
	5-year			925.47	0.90
	10-year			925.51	0.86
	25-year			925.55	0.82
	50-year			925.58	0.79
	100-yer			925.61	0.76
RCL0101	2-year	902.07	882.07	883.81	18.26
	5-year			885.75	16.32
	10-year			887.10	14.97
	25-year			888.88	13.19
	50-year			889.99	12.08
	100-yer			891.47	10.60

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0102	2-year	893.53	883.53	885.96	7.57
	5-year			886.57	6.96
	10-year			887.13	6.40
	25-year			888.89	4.64
	50-year			890.00	3.53
	100-yer			891.47	2.06
RCL0103	2-year	893.86	883.86	885.97	7.89
	5-year			886.57	7.29
	10-year			887.13	6.73
	25-year			888.89	4.97
	50-year			890.00	3.86
	100-yer			891.47	2.39
RCL0104	2-year	903.38	895.38	895.87	7.51
	5-year			895.98	7.40
	10-year			896.05	7.33
	25-year			896.12	7.26
	50-year			896.17	7.21
	100-yer			896.23	7.15
RCL0105	2-year	901.57	895.91	900.09	1.48
	5-year			900.31	1.26
	10-year			900.42	1.15
	25-year			900.56	1.01
	50-year			900.65	0.92
	100-yer			900.78	0.79
RCL0106	2-year	902.30	896.55	900.50	1.80
	5-year			900.62	1.68
	10-year			900.67	1.63
	25-year			900.74	1.56
	50-year			900.82	1.48
	100-yer			900.92	1.38
RCL0107	2-year	903.54	898.62	902.61	0.93
	5-year			902.73	0.81
	10-year			902.78	0.76
	25-year			902.84	0.70
	50-year			902.88	0.66
	100-yer			902.93	0.61
RCL0108	2-year	904.40	899.48	902.96	1.44
	5-year			903.12	1.28
	10-year			903.19	1.21
	25-year			903.29	1.11
	50-year			903.35	1.05
	100-yer			903.44	0.96
RCL0109	2-year	913.93	906.10	911.10	2.83
	5-year			911.16	2.77
	10-year			911.20	2.73
	25-year			911.23	2.70
	50-year			911.26	2.67
	100-yer			911.29	2.64

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0110	2-year	913.65	907.15	911.73	1.92
	5-year			911.81	1.84
	10-year			911.85	1.80
	25-year			911.90	1.75
	50-year			911.93	1.72
	100-yer			911.96	1.69
RCL0111	2-year	913.81	908.81	912.98	0.83
	5-year			913.07	0.74
	10-year			913.11	0.70
	25-year			913.16	0.65
	50-year			913.19	0.62
	100-yer			913.23	0.58
RCL0112	2-year	919.23	914.23	916.07	3.16
	5-year			918.28	0.95
	10-year			918.32	0.91
	25-year			918.36	0.87
	50-year			918.39	0.84
	100-yer			918.42	0.81
RCL0113	2-year	919.81	914.81	916.68	3.13
	5-year			918.93	0.88
	10-year			918.97	0.84
	25-year			919.01	0.80
	50-year			919.04	0.77
	100-yer			919.08	0.73
RCL01A01	2-year	900.00	890.65	890.99	9.01
	5-year			891.06	8.94
	10-year			891.10	8.90
	25-year			891.13	8.87
	50-year			891.14	8.86
	100-yer			891.48	8.52
RCL01A02	2-year	898.24	890.82	892.78	5.46
	5-year			893.16	5.08
	10-year			893.39	4.85
	25-year			893.73	4.51
	50-year			894.02	4.22
	100-yer			894.36	3.88
RCL01A03	2-year	898.90	890.98	892.97	5.93
	5-year			893.30	5.60
	10-year			893.47	5.43
	25-year			893.80	5.10
	50-year			894.08	4.82
	100-yer			894.48	4.42
RCL01A04	2-year	899.10	891.03	893.60	5.50
	5-year			894.13	4.97
	10-year			894.39	4.71
	25-year			894.68	4.42
	50-year			894.93	4.17
	100-yer			895.97	3.13

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL01A05	2-year	898.50	891.08	893.60	4.90
	5-year			894.13	4.37
	10-year			894.39	4.11
	25-year			894.68	3.82
	50-year			894.93	3.57
	100-yer			895.97	2.53
RCL01A06	2-year	902.18	891.18	894.61	7.57
	5-year			896.00	6.18
	10-year			896.69	5.49
	25-year			897.49	4.69
	50-year			898.10	4.08
	100-yer			898.48	3.70
RCL01A07	2-year	911.00	900.00	900.53	10.47
	5-year			900.66	10.34
	10-year			900.71	10.29
	25-year			900.78	10.22
	50-year			900.83	10.17
	100-yer			900.89	10.11
RCL01A08	2-year	904.78	900.09	904.17	0.61
	5-year			904.37	0.41
	10-year			904.46	0.32
	25-year			904.57	0.21
	50-year			904.65	0.13
	100-yer			904.75	0.03
RCL01A09	2-year	918.66	900.39	908.77	9.89
	5-year			908.88	9.78
	10-year			908.93	9.73
	25-year			908.98	9.68
	50-year			909.02	9.64
	100-yer			909.07	9.59
RCL01A10	2-year	916.30	900.72	909.05	7.25
	5-year			909.22	7.08
	10-year			909.33	6.97
	25-year			909.45	6.85
	50-year			909.53	6.77
	100-yer			909.64	6.66
RCL01A11	2-year	910.66	901.66	909.05	1.61
	5-year			909.21	1.45
	10-year			909.30	1.36
	25-year			909.41	1.25
	50-year			909.49	1.17
	100-yer			909.58	1.08
RCL01A12	2-year	911.88	904.88	909.05	2.83
	5-year			909.26	2.62
	10-year			909.42	2.46
	25-year			909.58	2.30
	50-year			909.70	2.18
	100-yer			909.84	2.04

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL01B01	2-year	912.36	906.86	911.20	1.16
	5-year			911.29	1.07
	10-year			911.33	1.03
	25-year			911.39	0.97
	50-year			911.43	0.93
	100-yer			911.48	0.88
RCL0201	2-year	895.83	881.83	884.58	11.25
	5-year			885.89	9.95
	10-year			886.38	9.45
	25-year			887.01	8.82
	50-year			887.41	8.42
	100-yer			887.96	7.87
RCL0202	2-year	899.34	892.34	893.36	5.98
	5-year			893.58	5.76
	10-year			893.75	5.59
	25-year			894.08	5.26
	50-year			894.25	5.09
	100-yer			894.47	4.87
RCL0203	2-year	901.26	894.76	895.95	5.31
	5-year			896.16	5.10
	10-year			896.43	4.83
	25-year			896.82	4.44
	50-year			897.01	4.25
	100-yer			897.25	4.01
RCL0204	2-year	912.50	907.00	911.61	0.89
	5-year			911.66	0.84
	10-year			911.74	0.76
	25-year			911.82	0.68
	50-year			911.87	0.63
	100-yer			911.93	0.57
RCL0205	2-year	912.90	907.51	912.13	0.77
	5-year			912.20	0.70
	10-year			912.31	0.59
	25-year			912.43	0.47
	50-year			912.49	0.41
	100-yer			912.57	0.33
RCL0206	2-year	912.93	908.35	912.33	0.60
	5-year			912.43	0.50
	10-year			912.56	0.37
	25-year			912.71	0.22
	50-year			912.79	0.14
	100-yer			912.89	0.04
RCL0207	2-year	914.77	908.61	913.43	1.34
	5-year			913.79	0.98
	10-year			913.95	0.82
	25-year			914.02	0.75
	50-year			914.06	0.71
	100-yer			914.11	0.66

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0208	2-year	927.98	916.73	919.36	8.62
	5-year			922.45	5.53
	10-year			925.12	2.87
	25-year			925.19	2.79
	50-year			925.23	2.75
	100-yer			925.28	2.70
RCL0209	2-year	926.46	919.13	923.48	2.98
	5-year			925.17	1.29
	10-year			925.42	1.04
	25-year			925.50	0.96
	50-year			925.55	0.91
	100-yer			925.62	0.84
RCL0210	2-year	926.25	919.50	923.68	2.57
	5-year			925.17	1.08
	10-year			925.42	0.83
	25-year			925.50	0.75
	50-year			925.56	0.69
	100-yer			925.62	0.63
RCL0211	2-year	926.00	921.00	923.69	2.31
	5-year			925.17	0.83
	10-year			925.42	0.58
	25-year			925.50	0.50
	50-year			925.56	0.44
	100-yer			925.62	0.38
RCL02A01	2-year	898.67	893.67	895.35	3.32
	5-year			896.88	1.79
	10-year			897.70	0.97
	25-year			898.10	0.57
	50-year			898.42	0.25
	100-yer			898.53	0.14
RCL02A02	2-year	901.09	896.09	896.91	4.18
	5-year			897.56	3.53
	10-year			898.53	2.56
	25-year			899.28	1.81
	50-year			899.91	1.18
	100-yer			900.13	0.96
RCL02B01	2-year	898.72	893.72	894.38	4.34
	5-year			894.53	4.19
	10-year			894.61	4.11
	25-year			894.71	4.01
	50-year			894.78	3.94
	100-yer			895.01	3.71
RCL02B02	2-year	898.90	894.65	895.36	3.54
	5-year			895.56	3.34
	10-year			895.71	3.19
	25-year			896.10	2.80
	50-year			896.53	2.37
	100-yer			897.36	1.54

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL02C01	2-year	914.35	909.35	913.43	0.92
	5-year			913.79	0.56
	10-year			913.95	0.40
	25-year			914.02	0.33
	50-year			914.06	0.29
	100-yer			914.11	0.24
RCL02C02	2-year	914.73	909.73	913.43	1.30
	5-year			913.79	0.94
	10-year			913.95	0.78
	25-year			914.02	0.71
	50-year			914.06	0.67
	100-yer			914.11	0.62
RCL02D01	2-year	926.20	921.20	921.86	4.34
	5-year			922.44	3.76
	10-year			925.35	0.85
	25-year			925.40	0.80
	50-year			925.43	0.77
	100-yer			925.47	0.73
RCL02D02	2-year	926.90	921.90	922.82	4.08
	5-year			923.02	3.88
	10-year			925.64	1.26
	25-year			925.82	1.08
	50-year			925.92	0.98
	100-yer			925.96	0.94
RCL02D03	2-year	927.04	922.04	923.17	3.87
	5-year			923.38	3.66
	10-year			925.89	1.15
	25-year			926.11	0.93
	50-year			926.17	0.87
	100-yer			926.21	0.83
RCL0300	2-year	906.05	890.05	890.94	15.11
	5-year			891.09	14.96
	10-year			891.18	14.87
	25-year			891.28	14.77
	50-year			891.34	14.71
	100-yer			891.41	14.64
RCL0301	2-year	907.82	903.38	904.38	3.44
	5-year			904.52	3.30
	10-year			904.58	3.24
	25-year			904.65	3.17
	50-year			904.70	3.12
	100-yer			904.78	3.04
RCL0302	2-year	907.86	903.61	907.16	0.70
	5-year			907.33	0.53
	10-year			907.42	0.44
	25-year			907.52	0.34
	50-year			907.59	0.27
	100-yer			907.68	0.18

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0303	2-year	908.07	904.24	907.39	0.68
	5-year			907.52	0.55
	10-year			907.59	0.48
	25-year			907.68	0.39
	50-year			907.74	0.33
	100-yer			907.82	0.25
RCL0304	2-year	916.29	911.12	915.45	0.84
	5-year			915.53	0.76
	10-year			915.57	0.72
	25-year			915.62	0.67
	50-year			915.66	0.63
	100-yer			915.70	0.59
RCL0305	2-year	916.56	911.56	915.82	0.74
	5-year			915.92	0.64
	10-year			915.98	0.58
	25-year			916.04	0.52
	50-year			916.08	0.48
	100-yer			916.14	0.42
RCL0401	2-year	911.42	891.42	892.36	19.06
	5-year			892.56	18.85
	10-year			892.68	18.73
	25-year			892.83	18.59
	50-year			892.93	18.49
	100-yer			893.04	18.37
RCL0402	2-year	903.68	893.68	895.37	8.31
	5-year			896.38	7.30
	10-year			896.55	7.13
	25-year			896.72	6.96
	50-year			896.84	6.84
	100-yer			896.99	6.69
RCL0403	2-year	925.74	915.74	917.17	8.57
	5-year			917.39	8.35
	10-year			917.49	8.25
	25-year			917.62	8.12
	50-year			917.72	8.02
	100-yer			917.82	7.92
RCL0404	2-year	925.91	920.74	921.67	4.24
	5-year			921.91	4.00
	10-year			922.05	3.86
	25-year			922.26	3.65
	50-year			922.60	3.31
	100-yer			924.16	1.75
RCL0405	2-year	926.99	921.99	922.88	4.11
	5-year			923.09	3.90
	10-year			923.22	3.77
	25-year			923.42	3.57
	50-year			923.66	3.33
	100-yer			925.53	1.46

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0406	2-year	926.78	922.78	923.55	3.23
	5-year			923.71	3.07
	10-year			923.79	3.00
	25-year			923.91	2.87
	50-year			924.04	2.74
	100-yer			925.47	1.31
RCL0407	2-year	928.69	924.69	925.11	3.58
	5-year			925.21	3.48
	10-year			925.27	3.42
	25-year			925.33	3.36
	50-year			925.38	3.31
	100-yer			925.47	3.22
RCL0408	2-year	931.00	927.85	928.83	2.17
	5-year			929.06	1.94
	10-year			929.19	1.81
	25-year			929.37	1.63
	50-year			929.53	1.47
	100-yer			930.03	0.97
RCL0501	2-year	920.92	898.15	899.32	21.60
	5-year			899.51	21.41
	10-year			899.62	21.30
	25-year			899.74	21.18
	50-year			899.83	21.09
	100-yer			899.93	20.99
RCL0502	2-year	911.00	901.23	903.09	7.91
	5-year			903.51	7.49
	10-year			903.73	7.27
	25-year			904.01	6.99
	50-year			904.22	6.78
	100-yer			904.46	6.54
RCL0503	2-year	916.65	909.98	911.89	4.76
	5-year			912.40	4.25
	10-year			912.72	3.93
	25-year			913.23	3.42
	50-year			914.38	2.27
	100-yer			915.79	0.86
RCL0504	2-year	922.57	917.49	921.71	0.86
	5-year			921.81	0.76
	10-year			921.87	0.70
	25-year			921.92	0.65
	50-year			921.97	0.60
	100-yer			922.02	0.55
RCL0505	2-year	923.75	917.58	923.22	0.53
	5-year			923.36	0.39
	10-year			923.43	0.32
	25-year			923.51	0.24
	50-year			923.57	0.18
	100-yer			923.65	0.10

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL05A01	2-year	919.82	913.40	914.57	5.25
	5-year			914.87	4.95
	10-year			915.12	4.70
	25-year			916.10	3.72
	50-year			918.09	1.73
	100-yer			918.94	0.88
RCL05A02	2-year	925.76	919.68	920.68	5.08
	5-year			920.92	4.84
	10-year			921.06	4.70
	25-year			921.23	4.53
	50-year			921.83	3.93
	100-yer			924.21	1.55
RCL05B01	2-year	923.86	918.86	923.22	0.64
	5-year			923.36	0.50
	10-year			923.43	0.43
	25-year			923.51	0.35
	50-year			923.57	0.29
	100-yer			923.65	0.21
RCL05C01	2-year	924.07	919.07	923.22	0.85
	5-year			923.36	0.71
	10-year			923.43	0.64
	25-year			923.51	0.56
	50-year			923.57	0.50
	100-yer			923.65	0.42
RCL0601	2-year	944.25	930.25	930.52	13.73
	5-year			930.58	13.67
	10-year			930.62	13.63
	25-year			930.67	13.58
	50-year			930.70	13.55
	100-yer			930.74	13.51
RCL0602	2-year	937.76	932.84	934.62	3.14
	5-year			936.87	0.89
	10-year			936.94	0.82
	25-year			937.00	0.76
	50-year			937.03	0.73
	100-yer			937.07	0.69
RCL0603	2-year	937.97	933.72	934.86	3.11
	5-year			937.06	0.91
	10-year			937.11	0.86
	25-year			937.15	0.82
	50-year			937.18	0.79
	100-yer			937.21	0.76
RCL0701	2-year	938.50	923.99	924.31	14.19
	5-year			924.40	14.10
	10-year			924.44	14.06
	25-year			924.50	14.00
	50-year			924.53	13.97
	100-yer			924.58	13.92

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0702	2-year	929.03	926.03	928.13	0.90
	5-year			928.19	0.84
	10-year			928.22	0.81
	25-year			928.25	0.78
	50-year			928.28	0.75
	100-yer			928.31	0.72
RCL0703	2-year	936.09	933.09	933.65	2.44
	5-year			933.74	2.35
	10-year			933.79	2.30
	25-year			933.84	2.25
	50-year			933.88	2.21
	100-yer			933.93	2.16
RCL0704	2-year	936.09	933.40	934.43	1.66
	5-year			934.59	1.50
	10-year			934.68	1.41
	25-year			934.78	1.31
	50-year			934.86	1.23
	100-yer			934.95	1.14
RCL0705	2-year	944.33	937.17	937.31	7.02
	5-year			937.33	7.00
	10-year			937.35	6.98
	25-year			937.37	6.96
	50-year			937.38	6.95
	100-yer			937.40	6.93
RCL0706	2-year	944.84	938.17	939.20	5.64
	5-year			939.36	5.48
	10-year			939.44	5.40
	25-year			939.55	5.29
	50-year			939.63	5.21
	100-yer			939.74	5.10
RCL0707	2-year	945.83	939.50	940.15	5.68
	5-year			940.25	5.58
	10-year			940.31	5.52
	25-year			940.37	5.46
	50-year			940.42	5.41
	100-yer			940.47	5.36
RCL0800	2-year	916.00	897.63	900.47	15.53
	5-year			900.92	15.08
	10-year			901.16	14.84
	25-year			901.42	14.58
	50-year			901.58	14.42
	100-yer			901.80	14.20
RCL0801	2-year	918.65	902.65	905.43	13.22
	5-year			905.86	12.79
	10-year			906.08	12.57
	25-year			906.31	12.34
	50-year			906.47	12.18
	100-yer			906.65	12.00

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0802	2-year	917.39	907.39	907.94	9.45
	5-year			908.05	9.34
	10-year			908.12	9.27
	25-year			908.20	9.19
	50-year			908.25	9.14
	100-yer			908.30	9.09
RCL0803	2-year	912.00	907.62	909.20	2.80
	5-year			909.50	2.50
	10-year			909.66	2.34
	25-year			909.85	2.15
	50-year			909.99	2.01
	100-yer			910.16	1.84
RCL0804	2-year	912.95	907.67	910.29	2.66
	5-year			910.63	2.32
	10-year			910.80	2.15
	25-year			910.99	1.96
	50-year			911.12	1.83
	100-yer			911.29	1.66
RCL0805	2-year	914.00	907.68	910.41	3.59
	5-year			910.89	3.11
	10-year			911.09	2.91
	25-year			911.32	2.68
	50-year			911.62	2.38
	100-yer			911.95	2.05
RCL0806	2-year	914.11	908.89	910.64	3.47
	5-year			911.22	2.89
	10-year			911.51	2.60
	25-year			912.11	2.00
	50-year			912.57	1.54
	100-yer			912.85	1.26
RCL0807	2-year	914.95	909.44	911.49	3.46
	5-year			911.81	3.14
	10-year			912.01	2.94
	25-year			912.40	2.55
	50-year			912.76	2.19
	100-yer			913.02	1.93
RCL0808	2-year	915.00	909.62	911.65	3.35
	5-year			912.02	2.98
	10-year			912.23	2.77
	25-year			912.76	2.24
	50-year			913.17	1.83
	100-yer			913.60	1.40
RCL0809	2-year	916.92	909.88	912.36	4.56
	5-year			912.70	4.22
	10-year			912.88	4.04
	25-year			913.18	3.74
	50-year			913.46	3.46
	100-yer			913.81	3.11

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0810	2-year	917.32	910.32	912.71	4.61
	5-year			913.15	4.17
	10-year			913.39	3.93
	25-year			913.94	3.38
	50-year			914.40	2.92
	100-yer			915.07	2.25
RCL0811	2-year	917.15	911.15	913.24	3.91
	5-year			913.63	3.52
	10-year			913.84	3.31
	25-year			914.21	2.94
	50-year			914.56	2.59
	100-yer			915.14	2.01
RCL0812	2-year	917.54	911.54	913.57	3.97
	5-year			914.01	3.53
	10-year			914.25	3.29
	25-year			914.62	2.92
	50-year			915.14	2.40
	100-yer			915.84	1.70
RCL0813	2-year	917.90	911.90	914.25	3.65
	5-year			914.58	3.32
	10-year			914.76	3.14
	25-year			915.00	2.90
	50-year			915.36	2.54
	100-yer			915.94	1.96
RCL0814	2-year	919.64	913.31	915.24	4.40
	5-year			915.54	4.10
	10-year			915.69	3.95
	25-year			915.87	3.77
	50-year			915.97	3.67
	100-yer			916.13	3.51
RCL0815	2-year	919.77	913.50	915.67	4.10
	5-year			916.11	3.66
	10-year			916.42	3.35
	25-year			916.76	3.01
	50-year			916.89	2.88
	100-yer			917.47	2.30
RCL0816	2-year	919.69	913.39	915.44	4.25
	5-year			915.80	3.89
	10-year			916.02	3.67
	25-year			916.24	3.45
	50-year			916.35	3.34
	100-yer			916.68	3.01
RCL0817	2-year	922.96	917.36	917.45	5.51
	5-year			917.47	5.49
	10-year			917.48	5.48
	25-year			917.49	5.47
	50-year			917.50	5.46
	100-yer			917.51	5.45

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL0818	2-year	923.00	917.40	917.80	5.20
	5-year			917.85	5.15
	10-year			917.88	5.12
	25-year			917.91	5.09
	50-year			917.93	5.07
	100-yer			917.96	5.04
RCL08A01	2-year	914.90	903.90	905.12	9.78
	5-year			905.36	9.54
	10-year			905.44	9.46
	25-year			905.53	9.37
	50-year			905.60	9.30
	100-yer			905.67	9.23
RCL08A02	2-year	923.00	915.00	915.18	7.82
	5-year			915.20	7.80
	10-year			915.21	7.79
	25-year			915.24	7.76
	50-year			915.26	7.74
	100-yer			915.29	7.71
RCL08A03	2-year	922.76	915.76	917.86	4.90
	5-year			919.47	3.29
	10-year			919.97	2.79
	25-year			920.19	2.57
	50-year			920.31	2.45
	100-yer			920.46	2.30
RCL08A04	2-year	925.00	916.17	917.95	7.05
	5-year			919.68	5.32
	10-year			920.24	4.76
	25-year			920.61	4.39
	50-year			920.87	4.13
	100-yer			921.24	3.76
RCL08A05	2-year	923.42	916.42	918.09	5.33
	5-year			919.75	3.67
	10-year			920.37	3.05
	25-year			920.79	2.63
	50-year			921.11	2.31
	100-yer			921.58	1.84
RCL08A06	2-year	930.96	924.35	924.65	6.31
	5-year			924.71	6.26
	10-year			924.72	6.24
	25-year			924.74	6.22
	50-year			924.79	6.17
	100-yer			924.84	6.12
RCL08A07	2-year	931.00	924.60	926.49	4.51
	5-year			926.94	4.06
	10-year			927.35	3.65
	25-year			927.89	3.11
	50-year			928.21	2.79
	100-yer			928.31	2.69

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL08A08	2-year	930.94	926.00	926.48	4.46
	5-year			926.94	4.00
	10-year			927.35	3.59
	25-year			927.90	3.04
	50-year			928.21	2.73
	100-yer			928.30	2.64
RCL08A09	2-year	931.00	928.00	929.81	1.19
	5-year			930.08	0.92
	10-year			930.15	0.85
	25-year			930.20	0.80
	50-year			930.24	0.76
	100-yer			930.29	0.71
RCL08B01	2-year	913.19	907.71	910.41	2.78
	5-year			910.90	2.29
	10-year			911.10	2.09
	25-year			911.34	1.85
	50-year			911.63	1.56
	100-yer			911.96	1.23
RCL08B02	2-year	915.00	908.33	910.41	4.59
	5-year			910.90	4.10
	10-year			911.18	3.82
	25-year			911.52	3.48
	50-year			912.35	2.65
	100-yer			912.08	2.92
RCL08B03	2-year	916.70	911.45	911.91	4.79
	5-year			911.99	4.71
	10-year			912.03	4.67
	25-year			912.08	4.62
	50-year			912.12	4.58
	100-yer			912.17	4.53
RCL08C01	2-year	919.72	912.08	913.57	6.15
	5-year			914.01	5.71
	10-year			914.26	5.46
	25-year			914.62	5.10
	50-year			915.15	4.57
	100-yer			915.84	3.88
RCL08C02	2-year	917.38	912.38	914.40	2.98
	5-year			914.82	2.56
	10-year			915.06	2.32
	25-year			915.39	1.99
	50-year			915.72	1.66
	100-yer			916.41	0.97
RCL08C03	2-year	922.00	914.88	916.75	5.25
	5-year			917.21	4.79
	10-year			917.48	4.52
	25-year			917.87	4.13
	50-year			918.29	3.71
	100-yer			919.94	2.06

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL08C04	2-year	922.77	917.77	919.13	3.64
	5-year			919.41	3.36
	10-year			919.57	3.20
	25-year			919.82	2.95
	50-year			920.00	2.77
	100-yer			921.30	1.47
RCL08D01	2-year	918.09	912.34	914.41	3.68
	5-year			915.06	3.03
	10-year			915.55	2.54
	25-year			916.20	1.89
	50-year			916.87	1.22
	100-yer			917.27	0.82
RCL08D02	2-year	918.64	913.31	917.36	1.28
	5-year			917.84	0.80
	10-year			917.91	0.73
	25-year			918.00	0.64
	50-year			918.07	0.57
	100-yer			918.13	0.51
RCL08D03	2-year	918.86	914.03	917.94	0.92
	5-year			918.11	0.75
	10-year			918.16	0.70
	25-year			918.22	0.64
	50-year			918.26	0.60
	100-yer			918.31	0.55
RCL08D04	2-year	920.00	914.17	918.30	1.70
	5-year			918.42	1.58
	10-year			918.47	1.53
	25-year			918.54	1.46
	50-year			918.59	1.41
	100-yer			918.65	1.35
RCL08D05	2-year	920.18	915.51	918.79	1.39
	5-year			918.93	1.25
	10-year			919.00	1.18
	25-year			919.09	1.09
	50-year			919.15	1.03
	100-yer			919.23	0.95
RCL1001	2-year	926.00	915.58	916.14	9.86
	5-year			916.28	9.72
	10-year			916.35	9.65
	25-year			916.43	9.57
	50-year			916.48	9.52
	100-yer			916.55	9.45
RCL1101	2-year	950.00	938.00	938.45	11.55
	5-year			938.58	11.42
	10-year			938.66	11.34
	25-year			938.74	11.26
	50-year			938.81	11.19
	100-yer			938.88	11.12

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL1201	2-year	930.00	918.00	919.88	10.12
	5-year			920.40	9.60
	10-year			920.67	9.33
	25-year			921.02	8.98
	50-year			921.38	8.62
	100-yer			921.69	8.31
RCL1202	2-year	950.00	930.00	931.12	18.88
	5-year			931.38	18.62
	10-year			931.52	18.48
	25-year			931.69	18.31
	50-year			931.80	18.20
	100-yer			931.94	18.06
RCL1203	2-year	957.00	946.61	947.01	9.99
	5-year			947.11	9.89
	10-year			947.16	9.84
	25-year			947.22	9.78
	50-year			947.26	9.74
	100-yer			947.32	9.68
RCL1300	2-year	932.15	922.15	923.20	8.95
	5-year			923.63	8.52
	10-year			923.85	8.30
	25-year			924.13	8.03
	50-year			924.32	7.84
	100-yer			924.55	7.60
RCL1301	2-year	952.00	939.00	939.93	12.07
	5-year			940.31	11.69
	10-year			940.51	11.49
	25-year			940.75	11.25
	50-year			940.91	11.09
	100-yer			941.10	10.90
RCL1302	2-year	970.00	950.00	951.85	18.15
	5-year			952.39	17.61
	10-year			952.66	17.34
	25-year			952.97	17.03
	50-year			953.18	16.82
	100-yer			953.42	16.58
RCL1303	2-year	980.00	960.00	960.47	19.53
	5-year			960.65	19.35
	10-year			960.75	19.25
	25-year			960.87	19.13
	50-year			960.96	19.04
	100-yer			961.06	18.94
RCL13A01	2-year	970.00	950.00	951.40	18.60
	5-year			951.68	18.32
	10-year			951.80	18.20
	25-year			951.95	18.05
	50-year			952.04	17.96
	100-yer			952.15	17.85

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL1400	2-year	939.00	926.46	927.60	11.40
	5-year			927.84	11.16
	10-year			927.96	11.04
	25-year			928.10	10.90
	50-year			928.20	10.80
	100-yer			928.32	10.68
RCL1401	2-year	950.00	938.00	939.01	11.00
	5-year			939.22	10.78
	10-year			939.32	10.68
	25-year			939.45	10.55
	50-year			939.54	10.46
	100-yer			939.64	10.36
RCL1402	2-year	970.00	940.00	941.49	28.51
	5-year			941.80	28.20
	10-year			941.96	28.04
	25-year			942.14	27.86
	50-year			942.26	27.74
	100-yer			942.41	27.59
RCL1501	2-year	950.00	940.00	941.41	8.59
	5-year			941.74	8.26
	10-year			941.92	8.08
	25-year			942.13	7.87
	50-year			942.28	7.72
	100-yer			942.47	7.53
RCL1601	2-year	950.00	937.17	939.00	11.00
	5-year			939.30	10.70
	10-year			939.44	10.56
	25-year			939.60	10.40
	50-year			939.92	10.08
	100-yer			940.11	9.89
RCL1602	2-year	950.00	940.00	941.49	8.51
	5-year			941.78	8.22
	10-year			941.93	8.07
	25-year			942.11	7.89
	50-year			942.22	7.78
	100-yer			942.37	7.63
RCL1603	2-year	970.00	954.00	954.98	15.02
	5-year			955.16	14.84
	10-year			955.26	14.74
	25-year			955.37	14.63
	50-year			955.44	14.56
	100-yer			955.53	14.47
RCL1604	2-year	990.00	966.72	967.99	22.01
	5-year			968.27	21.73
	10-year			968.41	21.59
	25-year			968.59	21.41
	50-year			968.70	21.30
	100-yer			968.84	21.16

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL16A00	2-year	950.63	938.63	940.26	10.37
	5-year			940.57	10.06
	10-year			940.75	9.88
	25-year			940.97	9.66
	50-year			941.09	9.54
	100-yer			941.25	9.38
RCL16A01	2-year	980.00	960.00	960.79	19.21
	5-year			960.94	19.06
	10-year			961.02	18.98
	25-year			961.10	18.90
	50-year			961.16	18.84
	100-yer			961.23	18.77
RCL1701	2-year	970.00	950.00	951.25	18.75
	5-year			951.50	18.50
	10-year			951.69	18.31
	25-year			951.85	18.15
	50-year			951.95	18.05
	100-yer			952.08	17.92
RCL1702	2-year	980.00	956.00	956.94	23.06
	5-year			957.31	22.69
	10-year			957.30	22.70
	25-year			957.44	22.56
	50-year			957.53	22.47
	100-yer			957.64	22.36
RCL1703	2-year	980.00	960.69	961.31	18.69
	5-year			961.41	18.59
	10-year			961.54	18.46
	25-year			961.63	18.37
	50-year			961.70	18.30
	100-yer			961.77	18.23
RCL1801	2-year	969.33	954.00	954.35	14.98
	5-year			954.44	14.89
	10-year			954.50	14.84
	25-year			954.56	14.77
	50-year			954.60	14.73
	100-yer			954.66	14.67
RCL1901	2-year	995.00	974.66	975.84	19.16
	5-year			976.12	18.88
	10-year			976.27	18.73
	25-year			976.42	18.58
	50-year			976.52	18.48
	100-yer			976.66	18.34
RCL2001	2-year	1000.00	976.00	977.59	22.41
	5-year			977.86	22.14
	10-year			977.98	22.02
	25-year			978.14	21.86
	50-year			978.38	21.62
	100-yer			978.54	21.46

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCL2002	2-year	1010.00	990.00	991.47	18.53
	5-year			991.87	18.13
	10-year			992.14	17.86
	25-year			992.46	17.54
	50-year			992.62	17.38
	100-yer			992.87	17.13
RCL901	2-year	932.00	912.00	912.71	19.29
	5-year			912.86	19.14
	10-year			912.92	19.08
	25-year			913.01	18.99
	50-year			913.07	18.93
	100-yer			913.14	18.86
RCMC00	2-year	891.75	871.75	877.43	14.32
	5-year			879.44	12.31
	10-year			880.20	11.55
	25-year			881.07	10.68
	50-year			881.58	10.17
	100-yer			882.24	9.51
RCMC01	2-year	893.76	873.76	882.85	10.91
	5-year			884.68	9.08
	10-year			885.52	8.24
	25-year			887.32	6.44
	50-year			887.85	5.91
	100-yer			888.50	5.26
RCMC02	2-year	896.84	873.80	882.97	13.87
	5-year			884.86	11.98
	10-year			885.73	11.11
	25-year			887.53	9.31
	50-year			888.09	8.75
	100-yer			888.80	8.04
RCMC03	2-year	896.84	873.84	883.09	13.75
	5-year			885.75	11.09
	10-year			887.10	9.74
	25-year			888.88	7.96
	50-year			889.99	6.85
	100-yer			891.47	5.37
RCMC04	2-year	895.00	874.54	883.62	11.38
	5-year			886.02	8.98
	10-year			886.78	8.22
	25-year			887.48	7.52
	50-year			887.94	7.06
	100-yer			888.56	6.44
RCMC05	2-year	895.00	874.70	883.63	11.37
	5-year			886.02	8.98
	10-year			886.78	8.22
	25-year			887.50	7.50
	50-year			887.97	7.03
	100-yer			888.61	6.39

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC06	2-year	893.37	877.37	884.58	8.79
	5-year			885.88	7.49
	10-year			886.38	6.99
	25-year			887.01	6.36
	50-year			887.41	5.96
	100-yer			887.96	5.41
RCMC07	2-year	898.62	878.62	885.76	12.86
	5-year			887.91	10.71
	10-year			888.83	9.79
	25-year			889.76	8.86
	50-year			890.31	8.31
	100-yer			891.03	7.59
RCMC08	2-year	895.00	878.97	886.43	8.57
	5-year			887.67	7.33
	10-year			888.17	6.83
	25-year			888.71	6.29
	50-year			889.05	5.95
	100-yer			889.52	5.48
RCMC09	2-year	902.54	880.54	888.47	14.07
	5-year			889.52	13.02
	10-year			890.04	12.50
	25-year			890.71	11.83
	50-year			891.15	11.39
	100-yer			891.75	10.79
RCMC10	2-year	902.95	882.37	889.21	13.74
	5-year			890.42	12.53
	10-year			891.03	11.92
	25-year			891.81	11.14
	50-year			892.31	10.64
	100-yer			892.99	9.96
RCMC13	2-year	903.00	882.77	889.75	13.25
	5-year			891.38	11.62
	10-year			892.19	10.81
	25-year			893.20	9.80
	50-year			893.83	9.17
	100-yer			894.68	8.32
RCMC14	2-year	913.93	883.93	891.23	22.70
	5-year			892.50	21.43
	10-year			893.16	20.77
	25-year			894.00	19.93
	50-year			894.54	19.39
	100-yer			895.28	18.65
RCMC15	2-year	916.67	885.75	894.23	22.45
	5-year			896.09	20.59
	10-year			896.95	19.72
	25-year			897.98	18.70
	50-year			898.57	18.11
	100-yer			899.36	17.31

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC16	2-year	916.72	885.80	894.23	22.49
	5-year			896.09	20.63
	10-year			896.95	19.76
	25-year			897.98	18.74
	50-year			898.57	18.15
	100-yer			899.36	17.36
RCMC17	2-year	918.00	887.50	895.24	22.76
	5-year			897.21	20.79
	10-year			898.12	19.88
	25-year			899.18	18.82
	50-year			899.80	18.20
	100-yer			900.63	17.37
RCMC18	2-year	908.00	890.00	897.46	10.54
	5-year			899.19	8.81
	10-year			900.09	7.91
	25-year			901.21	6.79
	50-year			901.91	6.09
	100-yer			902.85	5.15
RCMC19	2-year	909.33	890.33	898.56	10.77
	5-year			900.88	8.45
	10-year			902.04	7.29
	25-year			903.41	5.92
	50-year			904.27	5.06
	100-yer			905.45	3.88
RCMC20	2-year	912.22	893.50	901.36	10.86
	5-year			903.00	9.22
	10-year			903.93	8.29
	25-year			905.13	7.09
	50-year			905.91	6.31
	100-yer			907.01	5.21
RCMC23	2-year	912.29	893.59	902.16	10.13
	5-year			904.05	8.24
	10-year			905.14	7.15
	25-year			906.45	5.84
	50-year			907.30	4.99
	100-yer			908.46	3.83
RCMC24	2-year	915.30	895.30	902.96	12.34
	5-year			904.88	10.42
	10-year			905.99	9.31
	25-year			907.36	7.94
	50-year			908.15	7.15
	100-yer			909.23	6.07
RCMC25	2-year	910.44	895.94	902.66	7.78
	5-year			903.75	6.69
	10-year			904.29	6.16
	25-year			904.95	5.49
	50-year			905.37	5.07
	100-yer			905.93	4.51

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC26	2-year	921.98	900.75	905.70	16.28
	5-year			906.54	15.44
	10-year			906.95	15.03
	25-year			907.44	14.54
	50-year			907.73	14.25
	100-yer			908.13	13.85
RCMC27	2-year	922.00	900.77	905.77	16.23
	5-year			906.66	15.34
	10-year			907.11	14.89
	25-year			907.65	14.35
	50-year			907.99	14.01
	100-yer			908.45	13.55
RCMC28	2-year	916.80	901.35	907.09	9.71
	5-year			907.98	8.82
	10-year			908.43	8.37
	25-year			908.98	7.82
	50-year			909.33	7.47
	100-yer			909.81	6.99
RCMC29	2-year	916.89	901.38	907.35	9.54
	5-year			908.40	8.49
	10-year			908.94	7.95
	25-year			909.62	7.27
	50-year			910.06	6.83
	100-yer			910.63	6.26
RCMC30	2-year	916.90	901.43	907.47	9.43
	5-year			908.59	8.31
	10-year			909.16	7.74
	25-year			909.90	7.00
	50-year			910.36	6.54
	100-yer			910.97	5.93
RCMC31	2-year	917.91	901.46	907.67	10.24
	5-year			908.87	9.04
	10-year			909.49	8.42
	25-year			910.28	7.63
	50-year			910.77	7.14
	100-yer			911.43	6.48
RCMC32	2-year	920.00	901.66	907.13	12.87
	5-year			908.01	11.99
	10-year			908.42	11.58
	25-year			908.92	11.08
	50-year			909.23	10.77
	100-yer			909.62	10.38
RCMC34	2-year	922.00	903.60	906.97	15.03
	5-year			907.94	14.06
	10-year			908.41	13.59
	25-year			908.98	13.02
	50-year			909.34	12.66
	100-yer			909.82	12.18

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC35	2-year	933.50	904.72	908.32	25.18
	5-year			909.39	24.12
	10-year			909.90	23.60
	25-year			910.54	22.96
	50-year			910.93	22.57
	100-yer			911.46	22.04
RCMC36	2-year	930.00	905.00	907.96	22.04
	5-year			908.91	21.09
	10-year			909.38	20.62
	25-year			909.96	20.04
	50-year			910.32	19.68
	100-yer			910.80	19.20
RCMC37	2-year	930.00	907.50	910.64	19.37
	5-year			911.54	18.46
	10-year			911.97	18.03
	25-year			912.52	17.48
	50-year			912.85	17.15
	100-yer			913.30	16.70
RCMC38	2-year	940.00	909.00	912.33	27.67
	5-year			913.29	26.71
	10-year			913.75	26.25
	25-year			914.31	25.69
	50-year			914.66	25.34
	100-yer			915.13	24.87
RCMC39	2-year	940.00	913.00	915.51	24.49
	5-year			916.29	23.71
	10-year			916.67	23.33
	25-year			917.15	22.85
	50-year			917.45	22.55
	100-yer			918.08	21.92
RCMC40	2-year	940.00	915.00	916.78	23.22
	5-year			917.42	22.58
	10-year			917.73	22.27
	25-year			918.13	21.87
	50-year			918.37	21.63
	100-yer			918.71	21.29
RCMC41	2-year	932.00	916.50	923.43	8.57
	5-year			924.46	7.54
	10-year			924.93	7.07
	25-year			925.51	6.49
	50-year			925.86	6.14
	100-yer			926.35	5.65
RCMC42	2-year	931.00	918.00	920.57	10.43
	5-year			921.28	9.72
	10-year			921.63	9.37
	25-year			922.06	8.94
	50-year			922.31	8.69
	100-yer			922.68	8.32

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC43	2-year	940.00	921.00	923.88	16.12
	5-year			924.76	15.24
	10-year			925.21	14.79
	25-year			925.72	14.28
	50-year			926.02	13.98
	100-yer			926.47	13.53
RCMC44	2-year	940.00	923.53	927.35	12.65
	5-year			928.34	11.66
	10-year			928.85	11.15
	25-year			929.42	10.58
	50-year			929.75	10.25
	100-yer			930.25	9.75
RCMC45	2-year	950.00	925.44	927.90	22.10
	5-year			928.54	21.46
	10-year			928.87	21.14
	25-year			929.23	20.77
	50-year			929.44	20.56
	100-yer			929.76	20.24
RCMC46	2-year	950.00	928.00	930.68	19.32
	5-year			931.41	18.59
	10-year			931.79	18.21
	25-year			932.20	17.80
	50-year			932.44	17.56
	100-yer			932.80	17.20
RCMC47	2-year	960.00	932.00	934.14	25.86
	5-year			934.85	25.15
	10-year			935.21	24.79
	25-year			935.60	24.40
	50-year			935.81	24.19
	100-yer			936.16	23.84
RCMC48	2-year	960.00	938.00	942.18	17.82
	5-year			942.96	17.04
	10-year			943.34	16.66
	25-year			943.79	16.21
	50-year			944.05	15.95
	100-yer			944.38	15.62
RCMC49	2-year	970.00	940.00	942.63	27.37
	5-year			943.23	26.77
	10-year			943.54	26.46
	25-year			943.90	26.10
	50-year			944.11	25.89
	100-yer			944.41	25.59
RCMC50	2-year	970.00	946.00	948.22	21.78
	5-year			948.68	21.32
	10-year			948.91	21.09
	25-year			949.18	20.82
	50-year			949.31	20.69
	100-yer			949.53	20.47

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
RCMC51	2-year	970.00	948.00	952.12	17.88
	5-year			952.91	17.09
	10-year			953.30	16.70
	25-year			953.78	16.22
	50-year			954.01	15.99
	100-yer			954.40	15.60
RCMC52	2-year	970.00	952.00	955.04	14.96
	5-year			955.79	14.21
	10-year			956.15	13.85
	25-year			956.59	13.41
	50-year			956.80	13.20
	100-yer			957.15	12.85
RCMC53	2-year	990.00	960.93	963.30	26.70
	5-year			963.99	26.01
	10-year			964.33	25.67
	25-year			964.77	25.23
	50-year			965.26	24.75
	100-yer			965.61	24.39
RCMC54	2-year	990.00	971.06	973.38	16.62
	5-year			973.96	16.04
	10-year			974.23	15.77
	25-year			974.59	15.41
	50-year			974.74	15.26
	100-yer			975.03	14.97
RCMC55	2-year	1000.00	976.00	977.80	22.20
	5-year			978.21	21.79
	10-year			978.40	21.60
	25-year			978.64	21.36
	50-year			978.81	21.19
	100-yer			979.02	20.98
RCMC56	2-year	1000.00	979.00	981.37	18.63
	5-year			981.88	18.12
	10-year			982.06	17.94
	25-year			982.35	17.65
	50-year			982.55	17.45
	100-yer			982.80	17.20
RCMC57	2-year	1020.00	994.00	995.68	24.32
	5-year			996.06	23.94
	10-year			996.17	23.83
	25-year			996.42	23.58
	50-year			996.57	23.43
	100-yer			996.76	23.24
RCMC58	2-year	1030.00	1008.00	1009.05	20.95
	5-year			1009.22	20.78
	10-year			1009.47	20.53
	25-year			1009.62	20.38
	50-year			1009.72	20.28
	100-yer			1009.83	20.17

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL101	2-year	910.00	903.43	905.81	4.19
	5-year			906.12	3.88
	10-year			906.27	3.73
	25-year			906.49	3.51
	50-year			906.68	3.32
	100-yer			906.85	3.15
SCL102	2-year	908.41	903.91	905.79	2.62
	5-year			906.10	2.31
	10-year			906.25	2.16
	25-year			906.45	1.96
	50-year			906.65	1.76
	100-yer			906.81	1.60
SCL103	2-year	911.00	904.26	907.30	3.70
	5-year			908.73	2.27
	10-year			909.66	1.34
	25-year			910.12	0.88
	50-year			910.19	0.81
	100-yer			910.26	0.74
SCL104	2-year	913.00	908.17	909.19	3.81
	5-year			909.67	3.33
	10-year			910.42	2.58
	25-year			911.04	1.96
	50-year			911.40	1.60
	100-yer			911.90	1.11
SCL105	2-year	913.00	908.47	909.56	3.44
	5-year			909.91	3.09
	10-year			910.50	2.50
	25-year			911.09	1.91
	50-year			911.44	1.56
	100-yer			911.92	1.08
SCL106	2-year	913.00	908.74	912.23	0.77
	5-year			912.35	0.65
	10-year			912.43	0.57
	25-year			912.54	0.46
	50-year			912.61	0.39
	100-yer			912.69	0.31
SCL107	2-year	914.00	908.94	912.23	1.77
	5-year			912.35	1.65
	10-year			912.44	1.56
	25-year			912.54	1.46
	50-year			912.61	1.39
	100-yer			912.70	1.30
SCL108	2-year	914.00	909.11	912.40	1.60
	5-year			912.51	1.49
	10-year			912.57	1.43
	25-year			912.66	1.34
	50-year			912.72	1.28
	100-yer			912.80	1.20

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL109	2-year	914.00	909.30	912.41	1.59
	5-year			912.52	1.48
	10-year			912.58	1.42
	25-year			912.68	1.32
	50-year			912.74	1.26
	100-yer			912.83	1.17
SCL110	2-year	914.00	909.43	912.47	1.53
	5-year			912.59	1.41
	10-year			912.65	1.35
	25-year			912.74	1.26
	50-year			912.81	1.19
	100-yer			912.89	1.11
SCL111	2-year	914.00	909.50	912.47	1.53
	5-year			912.60	1.40
	10-year			912.66	1.34
	25-year			912.76	1.24
	50-year			912.82	1.18
	100-yer			912.91	1.09
SCL112	2-year	914.00	909.69	912.51	1.49
	5-year			912.64	1.36
	10-year			912.71	1.29
	25-year			912.80	1.20
	50-year			912.87	1.13
	100-yer			912.95	1.05
SCL113	2-year	914.00	909.77	912.52	1.48
	5-year			912.65	1.35
	10-year			912.72	1.28
	25-year			912.81	1.19
	50-year			912.88	1.12
	100-yer			912.97	1.03
SCL114	2-year	914.07	910.07	912.55	1.52
	5-year			912.68	1.39
	10-year			912.76	1.31
	25-year			912.85	1.22
	50-year			912.92	1.15
	100-yer			913.01	1.06
SCL115	2-year	914.95	910.76	912.58	2.37
	5-year			912.74	2.21
	10-year			912.83	2.12
	25-year			912.95	2.00
	50-year			913.03	1.92
	100-yer			913.14	1.81
SCL116	2-year	915.00	911.00	913.25	1.75
	5-year			913.40	1.60
	10-year			913.48	1.52
	25-year			913.56	1.44
	50-year			913.62	1.38
	100-yer			913.69	1.31

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCL1A01	2-year	912.00	906.00	907.04	4.96
	5-year			907.28	4.72
	10-year			907.41	4.59
	25-year			907.69	4.31
	50-year			907.93	4.07
	100-yer			908.22	3.78
SCL1A02	2-year	912.89	906.89	907.87	5.02
	5-year			908.06	4.83
	10-year			908.16	4.73
	25-year			908.27	4.62
	50-year			908.35	4.54
	100-yer			908.56	4.33
SCL1A03	2-year	912.60	907.60	911.72	0.88
	5-year			911.80	0.80
	10-year			911.84	0.76
	25-year			911.89	0.71
	50-year			911.92	0.68
	100-yer			911.96	0.64
SCL1A04	2-year	912.90	907.90	912.03	0.87
	5-year			912.12	0.78
	10-year			912.16	0.74
	25-year			912.21	0.69
	50-year			912.25	0.65
	100-yer			912.29	0.61
SCL1B01	2-year	911.48	904.31	907.30	4.18
	5-year			908.73	2.75
	10-year			909.66	1.82
	25-year			910.12	1.36
	50-year			910.19	1.29
	100-yer			910.26	1.22
SCL201	2-year	913.85	907.85	911.78	2.07
	5-year			911.95	1.90
	10-year			911.98	1.87
	25-year			912.02	1.83
	50-year			912.05	1.80
	100-yer			912.08	1.77
SCL301	2-year	913.30	909.30	912.40	0.90
	5-year			912.50	0.80
	10-year			912.54	0.76
	25-year			912.59	0.71
	50-year			912.63	0.67
	100-yer			912.67	0.63
SCL401	2-year	920.11	914.36	915.71	4.40
	5-year			916.45	3.66
	10-year			916.88	3.23
	25-year			917.34	2.77
	50-year			917.93	2.18
	100-yer			918.82	1.29

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC01	2-year	895.03	887.03	892.28	2.75
	5-year			892.67	2.36
	10-year			892.89	2.14
	25-year			893.12	1.91
	50-year			893.26	1.77
	100-yer			893.56	1.47
SCMC02	2-year	899.66	891.66	892.68	6.98
	5-year			892.92	6.74
	10-year			893.06	6.60
	25-year			893.22	6.44
	50-year			893.33	6.33
	100-yer			893.46	6.20
SCMC03	2-year	907.36	902.36	902.99	4.37
	5-year			903.12	4.24
	10-year			903.19	4.17
	25-year			903.26	4.10
	50-year			903.32	4.04
	100-yer			903.38	3.98
SCMC04	2-year	909.00	903.36	904.43	4.57
	5-year			904.62	4.38
	10-year			904.71	4.29
	25-year			904.82	4.18
	50-year			904.90	4.10
	100-yer			904.98	4.02
SCMC05	2-year	911.85	903.85	905.84	6.01
	5-year			906.25	5.60
	10-year			906.47	5.38
	25-year			906.75	5.10
	50-year			906.95	4.90
	100-yer			907.20	4.65
SCMC06	2-year	912.60	904.60	905.85	6.75
	5-year			906.26	6.34
	10-year			906.48	6.12
	25-year			906.75	5.85
	50-year			906.95	5.65
	100-yer			907.21	5.39
SCMC07	2-year	912.70	905.45	911.10	1.60
	5-year			911.34	1.36
	10-year			911.44	1.26
	25-year			911.55	1.15
	50-year			911.63	1.07
	100-yer			911.74	0.96
SCMC08	2-year	914.56	906.06	911.91	2.65
	5-year			912.07	2.49
	10-year			912.14	2.42
	25-year			912.21	2.35
	50-year			912.26	2.30
	100-yer			912.34	2.22

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC09	2-year	912.83	906.66	912.03	0.80
	5-year			912.22	0.61
	10-year			912.29	0.54
	25-year			912.37	0.46
	50-year			912.42	0.41
	100-yer			912.50	0.33
SCMC10	2-year	915.25	907.68	913.81	1.44
	5-year			914.43	0.82
	10-year			914.49	0.76
	25-year			914.54	0.71
	50-year			914.59	0.66
	100-yer			914.64	0.61
SCMC11	2-year	917.54	908.02	914.40	3.14
	5-year			914.86	2.68
	10-year			914.93	2.61
	25-year			914.99	2.55
	50-year			915.04	2.50
	100-yer			915.11	2.43
SCMC12	2-year	916.18	908.76	914.83	1.35
	5-year			915.11	1.07
	10-year			915.19	0.99
	25-year			915.26	0.92
	50-year			915.33	0.85
	100-yer			915.42	0.76
SCMC13	2-year	917.25	908.86	915.36	1.89
	5-year			915.49	1.76
	10-year			915.53	1.72
	25-year			915.57	1.68
	50-year			915.61	1.64
	100-yer			915.66	1.59
SCMC14	2-year	916.16	908.91	915.36	0.80
	5-year			915.49	0.67
	10-year			915.53	0.63
	25-year			915.57	0.59
	50-year			915.61	0.55
	100-yer			915.66	0.50
SCMC15	2-year	919.49	913.74	915.71	3.78
	5-year			916.44	3.05
	10-year			916.85	2.64
	25-year			917.31	2.18
	50-year			917.86	1.63
	100-yer			918.52	0.97
SCMC16	2-year	919.37	913.95	916.06	3.31
	5-year			917.30	2.07
	10-year			918.03	1.34
	25-year			918.60	0.77
	50-year			918.74	0.63
	100-yer			918.89	0.48

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SCMC17	2-year	921.46	916.38	917.27	4.19
	5-year			917.82	3.64
	10-year			918.95	2.51
	25-year			920.02	1.44
	50-year			920.40	1.06
	100-yer			920.53	0.93
SCMC18	2-year	921.44	916.52	917.51	3.93
	5-year			917.93	3.51
	10-year			919.07	2.37
	25-year			920.20	1.24
	50-year			920.56	0.88
	100-yer			920.65	0.79
SCMC19	2-year	923.25	916.67	918.04	5.21
	5-year			918.60	4.65
	10-year			920.00	3.25
	25-year			921.52	1.73
	50-year			922.26	0.99
	100-yer			922.91	0.34
SCMC20	2-year	923.27	916.75	918.22	5.05
	5-year			918.99	4.28
	10-year			920.41	2.86
	25-year			921.53	1.74
	50-year			922.26	1.01
	100-yer			922.91	0.36
SRL0101	2-year	894.12	875.33	876.99	17.13
	5-year			877.37	16.75
	10-year			877.82	16.30
	25-year			878.30	15.82
	50-year			878.68	15.44
	100-yer			879.04	15.08
SRL0102	2-year	889.00	877.75	880.49	8.51
	5-year			880.90	8.10
	10-year			880.98	8.02
	25-year			881.06	7.94
	50-year			881.16	7.84
	100-yer			881.37	7.63
SRL0103	2-year	890.00	879.08	881.48	8.52
	5-year			881.90	8.10
	10-year			882.02	7.98
	25-year			882.19	7.81
	50-year			882.31	7.70
	100-yer			882.48	7.52
SRL0104	2-year	892.01	879.68	883.13	8.88
	5-year			883.75	8.26
	10-year			883.98	8.03
	25-year			884.45	7.56
	50-year			884.65	7.36
	100-yer			884.92	7.09

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0105	2-year	891.47	879.89	883.96	7.51
	5-year			884.90	6.57
	10-year			885.26	6.21
	25-year			886.04	5.43
	50-year			886.45	5.02
	100-yer			886.90	4.57
SRL0106	2-year	889.76	880.17	884.66	5.10
	5-year			885.84	3.92
	10-year			886.28	3.48
	25-year			886.78	2.98
	50-year			887.14	2.62
	100-yer			887.55	2.21
SRL0107	2-year	889.95	880.42	885.03	4.92
	5-year			886.38	3.57
	10-year			886.84	3.11
	25-year			887.20	2.75
	50-year			887.50	2.45
	100-yer			887.87	2.08
SRL0108	2-year	890.00	882.98	884.87	5.13
	5-year			886.01	3.99
	10-year			886.70	3.30
	25-year			887.27	2.73
	50-year			887.62	2.38
	100-yer			888.00	2.00
SRL0109	2-year	890.91	883.01	885.13	5.78
	5-year			886.07	4.84
	10-year			886.73	4.18
	25-year			887.33	3.58
	50-year			887.64	3.27
	100-yer			888.01	2.90
SRL0110	2-year	891.00	883.52	885.63	5.37
	5-year			886.24	4.76
	10-year			886.82	4.18
	25-year			887.43	3.57
	50-year			887.76	3.24
	100-yer			888.10	2.90
SRL0111	2-year	891.00	884.00	886.27	4.73
	5-year			886.62	4.38
	10-year			886.98	4.02
	25-year			887.51	3.49
	50-year			887.83	3.17
	100-yer			888.17	2.83
SRL0112	2-year	891.00	884.10	886.70	4.30
	5-year			887.08	3.92
	10-year			887.31	3.69
	25-year			887.73	3.27
	50-year			888.02	2.98
	100-yer			888.39	2.61

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0113	2-year	892.80	884.20	887.07	5.73
	5-year			887.38	5.42
	10-year			887.55	5.25
	25-year			887.90	4.90
	50-year			888.18	4.62
	100-yer			888.62	4.18
SRL0114	2-year	893.00	885.20	887.34	5.66
	5-year			887.71	5.29
	10-year			887.88	5.12
	25-year			888.29	4.71
	50-year			888.65	4.35
	100-yer			889.36	3.64
SRL0115	2-year	892.91	885.83	887.99	4.92
	5-year			888.24	4.67
	10-year			888.33	4.58
	25-year			888.61	4.30
	50-year			888.87	4.04
	100-yer			889.48	3.43
SRL0116	2-year	893.00	886.58	889.17	3.84
	5-year			890.06	2.94
	10-year			890.49	2.51
	25-year			891.36	1.64
	50-year			892.07	0.93
	100-yer			892.39	0.61
SRL0117	2-year	893.25	887.25	889.22	4.03
	5-year			890.07	3.18
	10-year			890.50	2.75
	25-year			891.36	1.89
	50-year			892.07	1.18
	100-yer			892.40	0.85
SRL0118	2-year	893.89	887.31	890.76	3.13
	5-year			892.29	1.60
	10-year			892.98	0.91
	25-year			893.18	0.71
	50-year			893.28	0.61
	100-yer			893.36	0.53
SRL0119	2-year	900.90	893.82	895.66	5.24
	5-year			898.97	1.93
	10-year			899.02	1.88
	25-year			899.06	1.84
	50-year			899.09	1.81
	100-yer			899.12	1.78
SRL0120	2-year	900.87	894.02	896.12	4.75
	5-year			899.03	1.84
	10-year			899.06	1.81
	25-year			899.09	1.78
	50-year			899.11	1.76
	100-yer			899.13	1.74

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0121	2-year	900.95	894.48	899.24	1.71
	5-year			899.40	1.55
	10-year			899.44	1.51
	25-year			899.49	1.46
	50-year			899.52	1.43
	100-yer			899.57	1.38
SRL01401	2-year	910.92	904.16	908.09	2.83
	5-year			908.20	2.72
	10-year			908.25	2.67
	25-year			908.41	2.51
	50-year			908.54	2.38
	100-yer			908.73	2.19
SRL01402	2-year	911.05	904.32	907.20	3.85
	5-year			908.28	2.77
	10-year			908.35	2.70
	25-year			908.43	2.62
	50-year			908.57	2.48
	100-yer			908.75	2.30
SRL01403	2-year	911.00	904.33	907.25	3.75
	5-year			908.33	2.67
	10-year			908.45	2.55
	25-year			908.61	2.39
	50-year			908.83	2.17
	100-yer			909.02	1.98
SRL01501	2-year	914.00	904.95	910.05	3.95
	5-year			910.14	3.86
	10-year			910.18	3.82
	25-year			910.22	3.78
	50-year			910.25	3.75
	100-yer			910.29	3.71
SRL01502	2-year	919.00	909.83	914.03	4.97
	5-year			914.19	4.81
	10-year			914.26	4.74
	25-year			914.32	4.68
	50-year			914.36	4.64
	100-yer			914.42	4.58
SRL01503	2-year	916.02	910.00	914.23	1.80
	5-year			914.40	1.62
	10-year			914.48	1.55
	25-year			914.57	1.46
	50-year			914.63	1.40
	100-yer			914.70	1.32
SRL0201	2-year	888.28	884.28	886.02	2.26
	5-year			886.74	1.54
	10-year			887.16	1.12
	25-year			887.46	0.82
	50-year			887.56	0.72
	100-yer			887.65	0.63

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0202	2-year	890.00	885.30	887.01	2.99
	5-year			887.13	2.87
	10-year			887.26	2.74
	25-year			887.53	2.47
	50-year			887.63	2.37
	100-yer			887.73	2.27
SRL0203	2-year	891.93	885.68	888.84	3.09
	5-year			890.68	1.25
	10-year			891.01	0.92
	25-year			891.08	0.85
	50-year			891.12	0.81
	100-yer			891.16	0.77
SRL0204	2-year	892.94	885.86	889.62	3.32
	5-year			890.69	2.25
	10-year			891.02	1.92
	25-year			891.09	1.85
	50-year			891.13	1.81
	100-yer			891.17	1.77
SRL0301	2-year	889.64	880.64	885.36	4.28
	5-year			886.59	3.05
	10-year			887.36	2.28
	25-year			888.28	1.36
	50-year			888.75	0.89
	100-yer			888.87	0.77
SRL0302	2-year	892.32	882.82	890.57	1.75
	5-year			890.73	1.59
	10-year			890.81	1.51
	25-year			890.90	1.42
	50-year			890.96	1.36
	100-yer			891.03	1.29
SRL0303	2-year	892.85	883.52	891.12	1.73
	5-year			891.21	1.64
	10-year			891.25	1.60
	25-year			891.30	1.55
	50-year			891.34	1.51
	100-yer			891.38	1.47
SRL0304	2-year	894.02	885.02	892.35	1.67
	5-year			892.44	1.58
	10-year			892.49	1.53
	25-year			892.55	1.47
	50-year			892.60	1.42
	100-yer			892.65	1.37
SRL0305	2-year	895.05	885.63	893.36	1.69
	5-year			893.45	1.60
	10-year			893.49	1.56
	25-year			893.55	1.50
	50-year			893.59	1.46
	100-yer			893.64	1.41

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0306	2-year	897.88	890.88	896.14	1.74
	5-year			896.22	1.66
	10-year			896.26	1.62
	25-year			896.31	1.57
	50-year			896.35	1.53
	100-yer			896.39	1.49
SRL0307	2-year	897.55	891.55	896.09	1.46
	5-year			896.16	1.39
	10-year			896.20	1.35
	25-year			896.25	1.30
	50-year			896.29	1.26
	100-yer			896.34	1.21
SRL03A01	2-year	890.00	883.12	885.36	4.64
	5-year			886.59	3.41
	10-year			887.36	2.64
	25-year			888.28	1.72
	50-year			888.75	1.25
	100-yer			888.87	1.13
SRL03B01	2-year	892.00	885.85	890.57	1.43
	5-year			890.73	1.27
	10-year			890.81	1.19
	25-year			890.90	1.10
	50-year			890.96	1.04
	100-yer			891.03	0.97
SRL0401	2-year	898.53	890.03	894.99	3.54
	5-year			895.20	3.33
	10-year			895.31	3.22
	25-year			895.44	3.09
	50-year			895.53	3.00
	100-yer			895.64	2.89
SRL0402	2-year	898.82	890.32	896.21	2.61
	5-year			896.38	2.44
	10-year			896.46	2.36
	25-year			896.56	2.26
	50-year			896.63	2.19
	100-yer			896.72	2.10
SRL0403	2-year	900.50	893.56	898.79	1.71
	5-year			899.02	1.48
	10-year			899.15	1.35
	25-year			899.30	1.20
	50-year			899.40	1.10
	100-yer			899.54	0.96
SRL0404	2-year	907.10	900.60	905.52	1.58
	5-year			905.68	1.42
	10-year			905.76	1.34
	25-year			905.86	1.24
	50-year			905.93	1.17
	100-yer			906.02	1.08

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0405	2-year	914.51	905.59	910.95	3.56
	5-year			911.11	3.40
	10-year			911.20	3.31
	25-year			911.30	3.21
	50-year			911.37	3.14
	100-yer			911.46	3.05
SRL0406	2-year	913.55	905.63	911.21	2.34
	5-year			911.41	2.14
	10-year			911.51	2.04
	25-year			911.65	1.90
	50-year			911.74	1.81
	100-yer			911.86	1.69
SRL0407	2-year	915.55	906.72	912.81	2.74
	5-year			912.91	2.64
	10-year			912.96	2.59
	25-year			913.02	2.53
	50-year			913.06	2.49
	100-yer			913.11	2.44
SRL0408	2-year	921.46	916.21	920.75	0.71
	5-year			920.86	0.60
	10-year			920.91	0.55
	25-year			920.98	0.48
	50-year			921.02	0.44
	100-yer			921.08	0.38
SRL0501	2-year	899.11	891.11	893.34	5.77
	5-year			893.84	5.27
	10-year			894.23	4.88
	25-year			895.13	3.98
	50-year			895.74	3.37
	100-yer			896.85	2.26
SRL0601	2-year	900.58	894.08	899.27	1.31
	5-year			900.04	0.54
	10-year			900.17	0.41
	25-year			900.30	0.28
	50-year			900.39	0.19
	100-yer			900.49	0.09
SRL0602	2-year	902.58	895.08	900.76	1.82
	5-year			900.92	1.66
	10-year			900.98	1.60
	25-year			901.04	1.54
	50-year			901.09	1.49
	100-yer			901.15	1.43
SRL0603	2-year	904.04	896.62	902.12	1.92
	5-year			902.18	1.86
	10-year			902.21	1.83
	25-year			902.24	1.80
	50-year			902.26	1.78
	100-yer			902.29	1.75

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0604	2-year	907.08	898.83	905.20	1.88
	5-year			905.25	1.83
	10-year			905.28	1.80
	25-year			905.31	1.77
	50-year			905.34	1.74
	100-yer			905.37	1.71
SRL0605	2-year	907.74	900.07	905.89	1.85
	5-year			905.93	1.81
	10-year			905.95	1.79
	25-year			905.98	1.76
	50-year			906.00	1.74
	100-yer			906.03	1.71
SRL0606	2-year	908.34	901.59	906.51	1.83
	5-year			906.56	1.78
	10-year			906.59	1.75
	25-year			906.62	1.72
	50-year			906.64	1.70
	100-yer			906.67	1.67
SRL0607	2-year	908.35	903.02	906.53	1.82
	5-year			906.57	1.78
	10-year			906.60	1.75
	25-year			906.63	1.72
	50-year			906.65	1.70
	100-yer			906.68	1.67
SRL0701	2-year	905.65	898.32	900.50	5.15
	5-year			902.68	2.97
	10-year			903.74	1.91
	25-year			903.92	1.73
	50-year			904.01	1.64
	100-yer			904.09	1.56
SRL0702	2-year	910.89	901.89	903.45	7.44
	5-year			905.97	4.92
	10-year			907.94	2.95
	25-year			908.06	2.84
	50-year			908.10	2.79
	100-yer			908.14	2.75
SRL0703	2-year	915.52	907.52	909.08	6.44
	5-year			913.58	1.94
	10-year			913.67	1.85
	25-year			913.72	1.80
	50-year			913.75	1.77
	100-yer			913.79	1.74
SRL0704	2-year	920.38	912.46	916.42	3.96
	5-year			918.54	1.84
	10-year			918.59	1.79
	25-year			918.64	1.74
	50-year			918.67	1.71
	100-yer			918.71	1.67

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0705	2-year	921.22	914.05	919.27	1.95
	5-year			919.45	1.77
	10-year			919.49	1.73
	25-year			919.54	1.68
	50-year			919.57	1.65
	100-yer			919.61	1.61
SRL0706	2-year	924.23	917.90	922.37	1.86
	5-year			922.48	1.75
	10-year			922.52	1.71
	25-year			922.58	1.65
	50-year			922.62	1.61
	100-yer			922.67	1.56
SRL0707	2-year	924.88	919.80	924.18	0.70
	5-year			924.32	0.56
	10-year			924.38	0.50
	25-year			924.46	0.42
	50-year			924.51	0.37
	100-yer			924.58	0.30
SRL0801	2-year	913.04	898.04	900.78	12.26
	5-year			902.75	10.29
	10-year			903.34	9.70
	25-year			903.58	9.46
	50-year			903.71	9.33
	100-yer			903.85	9.19
SRL0802	2-year	908.96	900.00	902.37	6.59
	5-year			902.88	6.08
	10-year			903.42	5.54
	25-year			903.69	5.27
	50-year			903.82	5.14
	100-yer			903.96	5.00
SRL0803	2-year	909.00	900.56	903.91	5.09
	5-year			904.38	4.62
	10-year			904.55	4.45
	25-year			904.70	4.30
	50-year			904.79	4.21
	100-yer			904.90	4.10
SRL0804	2-year	911.00	905.73	906.89	4.11
	5-year			907.05	3.95
	10-year			907.12	3.88
	25-year			907.19	3.81
	50-year			907.23	3.77
	100-yer			907.29	3.71
SRL0901	2-year	907.05	899.70	900.39	6.66
	5-year			900.94	6.11
	10-year			901.22	5.83
	25-year			901.51	5.54
	50-year			901.68	5.37
	100-yer			901.89	5.16

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL0902	2-year	907.10	901.05	901.62	5.48
	5-year			901.74	5.36
	10-year			901.82	5.28
	25-year			902.08	5.02
	50-year			902.66	4.44
	100-yer			903.15	3.95
SRL0903	2-year	907.30	902.30	902.98	4.32
	5-year			903.39	3.91
	10-year			903.82	3.48
	25-year			904.29	3.01
	50-year			905.31	1.99
	100-yer			905.98	1.32
SRL0904	2-year	907.98	903.98	904.49	3.49
	5-year			904.60	3.38
	10-year			904.86	3.12
	25-year			905.75	2.23
	50-year			906.99	0.99
	100-yer			907.02	0.96
SRL09A01	2-year	909.00	899.65	901.35	7.65
	5-year			902.04	6.96
	10-year			902.53	6.47
	25-year			903.13	5.87
	50-year			903.57	5.43
	100-yer			904.06	4.94
SRL09A02	2-year	921.00	916.18	916.92	4.08
	5-year			917.05	3.95
	10-year			917.13	3.87
	25-year			917.21	3.79
	50-year			917.27	3.73
	100-yer			917.34	3.66
SRL09A03	2-year	921.00	917.18	918.81	2.19
	5-year			920.06	0.94
	10-year			920.17	0.83
	25-year			920.26	0.74
	50-year			920.31	0.69
	100-yer			920.36	0.64
SRL09B01	2-year	904.05	901.05	901.05	3.00
	5-year			901.05	3.00
	10-year			901.22	2.83
	25-year			901.51	2.54
	50-year			901.68	2.37
	100-yer			901.89	2.16
SRL1001	2-year	908.13	899.92	900.69	7.44
	5-year			900.84	7.29
	10-year			900.90	7.23
	25-year			901.05	7.08
	50-year			901.13	7.00
	100-yer			901.23	6.90

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1002	2-year	908.17	900.50	901.55	6.62
	5-year			902.21	5.96
	10-year			902.50	5.67
	25-year			903.50	4.67
	50-year			904.25	3.92
	100-yer			905.50	2.67
SRL1003	2-year	908.36	902.11	903.17	5.19
	5-year			905.45	2.91
	10-year			906.39	1.97
	25-year			906.52	1.84
	50-year			906.57	1.79
	100-yer			906.63	1.73
SRL1004	2-year	908.57	903.32	904.22	4.35
	5-year			906.62	1.95
	10-year			906.66	1.91
	25-year			906.68	1.89
	50-year			906.70	1.87
	100-yer			906.71	1.86
SRL1101	2-year	910.24	899.25	902.99	7.25
	5-year			904.70	5.54
	10-year			906.32	3.92
	25-year			906.54	3.70
	50-year			906.75	3.49
	100-yer			906.91	3.33
SRL1102	2-year	912.64	902.72	905.55	7.09
	5-year			908.36	4.28
	10-year			908.84	3.80
	25-year			908.89	3.75
	50-year			908.98	3.66
	100-yer			909.05	3.59
SRL1103	2-year	913.04	904.87	907.06	5.98
	5-year			911.01	2.03
	10-year			911.16	1.88
	25-year			911.20	1.84
	50-year			911.28	1.76
	100-yer			911.34	1.70
SRL1104	2-year	915.52	907.85	908.92	6.60
	5-year			912.54	2.98
	10-year			912.70	2.82
	25-year			913.20	2.32
	50-year			913.63	1.89
	100-yer			913.66	1.86
SRL1105	2-year	919.94	912.61	913.75	6.19
	5-year			915.47	4.47
	10-year			915.82	4.12
	25-year			917.93	2.01
	50-year			918.05	1.89
	100-yer			918.08	1.86

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1106	2-year	922.46	915.38	916.80	5.66
	5-year			919.59	2.87
	10-year			920.20	2.26
	25-year			920.59	1.87
	50-year			920.62	1.84
	100-yer			920.65	1.81
SRL1107	2-year	923.53	918.03	918.65	4.88
	5-year			918.81	4.72
	10-year			918.90	4.63
	25-year			919.03	4.50
	50-year			919.13	4.40
	100-yer			919.29	4.24
SRL1108	2-year	922.90	918.40	919.05	3.85
	5-year			919.21	3.69
	10-year			919.31	3.59
	25-year			919.43	3.47
	50-year			919.54	3.36
	100-yer			919.71	3.19
SRL1109	2-year	925.00	919.99	920.74	4.26
	5-year			920.99	4.01
	10-year			921.37	3.63
	25-year			922.25	2.75
	50-year			922.97	2.03
	100-yer			924.48	0.52
SRL1110	2-year	926.00	920.49	921.19	4.81
	5-year			921.43	4.57
	10-year			921.89	4.11
	25-year			923.07	2.93
	50-year			924.02	1.98
	100-yer			925.87	0.13
SRL11A01	2-year	910.00	904.14	905.55	4.45
	5-year			908.36	1.64
	10-year			908.84	1.16
	25-year			908.90	1.10
	50-year			908.98	1.02
	100-yer			909.05	0.95
SRL11A02	2-year	911.00	904.65	905.55	5.45
	5-year			908.36	2.64
	10-year			908.84	2.16
	25-year			908.90	2.10
	50-year			908.98	2.02
	100-yer			909.06	1.94
SRL11B01	2-year	912.00	907.47	907.47	4.53
	5-year			911.02	0.98
	10-year			911.16	0.84
	25-year			911.20	0.80
	50-year			911.28	0.72
	100-yer			911.34	0.66

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL11C01	2-year	914.00	909.82	909.82	4.18
	5-year			912.54	1.46
	10-year			912.70	1.30
	25-year			913.20	0.80
	50-year			913.63	0.37
	100-yer			913.67	0.33
SRL11C02	2-year	915.00	910.25	910.25	4.75
	5-year			912.54	2.46
	10-year			912.70	2.30
	25-year			913.20	1.80
	50-year			913.63	1.37
	100-yer			913.67	1.33
SRL11D01	2-year	919.00	913.98	913.98	5.02
	5-year			915.48	3.52
	10-year			915.82	3.18
	25-year			917.95	1.05
	50-year			918.06	0.94
	100-yer			918.10	0.90
SRL11E01	2-year	919.00	913.35	913.75	5.25
	5-year			915.47	3.53
	10-year			915.82	3.18
	25-year			917.94	1.06
	50-year			918.06	0.94
	100-yer			918.10	0.90
SRL11F01	2-year	921.00	916.54	916.80	4.20
	5-year			919.60	1.40
	10-year			920.20	0.80
	25-year			920.59	0.41
	50-year			920.63	0.37
	100-yer			920.66	0.34
SRL11F02	2-year	920.72	917.47	917.47	3.25
	5-year			919.60	1.12
	10-year			920.20	0.52
	25-year			920.60	0.12
	50-year			920.63	0.09
	100-yer			920.66	0.06
SRL1201	2-year	906.00	899.29	900.36	5.64
	5-year			902.61	3.39
	10-year			902.94	3.06
	25-year			903.23	2.77
	50-year			903.39	2.61
	100-yer			903.66	2.34
SRL1202	2-year	906.03	899.55	901.43	4.60
	5-year			902.61	3.42
	10-year			902.94	3.09
	25-year			903.23	2.80
	50-year			903.39	2.64
	100-yer			903.66	2.37

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1601	2-year	914.97	910.07	911.19	3.78
	5-year			912.28	2.69
	10-year			913.07	1.90
	25-year			913.60	1.37
	50-year			914.07	0.90
	100-yer			914.27	0.70
SRL1602	2-year	921.21	916.46	919.29	1.92
	5-year			919.33	1.88
	10-year			919.35	1.86
	25-year			919.37	1.84
	50-year			919.38	1.83
	100-yer			919.40	1.81
SRL1701	2-year	919.39	910.56	915.69	3.70
	5-year			915.94	3.45
	10-year			916.02	3.37
	25-year			916.11	3.28
	50-year			916.18	3.21
	100-yer			916.26	3.13
SRL1702	2-year	925.42	916.09	919.30	6.12
	5-year			920.55	4.87
	10-year			920.59	4.83
	25-year			920.63	4.79
	50-year			920.66	4.76
	100-yer			920.70	4.72
SRL1703	2-year	923.53	917.45	921.24	2.29
	5-year			921.72	1.81
	10-year			921.76	1.77
	25-year			921.81	1.72
	50-year			921.84	1.69
	100-yer			921.87	1.66
SRL1704	2-year	930.15	924.48	926.03	4.12
	5-year			928.22	1.93
	10-year			928.27	1.88
	25-year			928.31	1.84
	50-year			928.34	1.81
	100-yer			928.37	1.78
SRL1705	2-year	930.16	925.58	927.13	3.03
	5-year			928.36	1.80
	10-year			928.39	1.77
	25-year			928.43	1.73
	50-year			928.46	1.70
	100-yer			928.49	1.67
SRL17A01	2-year	921.00	916.81	919.30	1.70
	5-year			920.55	0.45
	10-year			920.59	0.41
	25-year			920.64	0.36
	50-year			920.66	0.34
	100-yer			920.70	0.30

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL17B01	2-year	922.00	918.18	921.24	0.76
	5-year			921.72	0.28
	10-year			921.76	0.24
	25-year			921.81	0.19
	50-year			921.84	0.16
	100-yer			921.88	0.12
SRL1801	2-year	929.93	916.74	917.80	12.12
	5-year			917.99	11.93
	10-year			918.11	11.82
	25-year			918.22	11.71
	50-year			918.31	11.62
	100-yer			918.39	11.54
SRL1802	2-year	929.00	918.60	920.85	8.15
	5-year			921.36	7.64
	10-year			921.83	7.17
	25-year			923.42	5.58
	50-year			924.56	4.44
	100-yer			925.70	3.30
SRL1803	2-year	933.00	924.00	925.87	7.13
	5-year			926.16	6.84
	10-year			926.33	6.67
	25-year			926.54	6.46
	50-year			926.68	6.32
	100-yer			926.83	6.17
SRL1804	2-year	932.68	924.20	926.10	6.58
	5-year			926.43	6.25
	10-year			926.62	6.06
	25-year			926.86	5.82
	50-year			927.01	5.67
	100-yer			927.19	5.50
SRL1805	2-year	935.00	925.00	929.05	5.95
	5-year			929.36	5.64
	10-year			929.48	5.52
	25-year			929.65	5.35
	50-year			929.73	5.27
	100-yer			929.82	5.18
SRL1806	2-year	940.59	930.09	931.89	8.70
	5-year			933.46	7.13
	10-year			935.18	5.41
	25-year			935.70	4.89
	50-year			935.74	4.85
	100-yer			935.79	4.80
SRL1807	2-year	937.02	930.70	933.12	3.90
	5-year			935.12	1.90
	10-year			935.40	1.62
	25-year			935.74	1.28
	50-year			935.78	1.24
	100-yer			935.83	1.19

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL1808	2-year	938.41	930.91	933.49	4.92
	5-year			935.81	2.60
	10-year			936.34	2.07
	25-year			936.51	1.90
	50-year			936.54	1.87
	100-yer			936.57	1.84
SRL1809	2-year	937.57	932.40	934.86	2.71
	5-year			935.97	1.60
	10-year			936.35	1.22
	25-year			936.52	1.05
	50-year			936.55	1.02
	100-yer			936.59	0.98
SRL18A01	2-year	933.26	926.26	930.04	3.22
	5-year			932.40	0.86
	10-year			932.58	0.68
	25-year			932.72	0.54
	50-year			932.80	0.46
	100-yer			932.88	0.38
SRL18A02	2-year	935.66	927.66	930.58	5.08
	5-year			932.76	2.90
	10-year			932.81	2.85
	25-year			932.85	2.81
	50-year			932.88	2.78
	100-yer			932.91	2.75
SRL18A03	2-year	933.85	927.85	931.09	2.76
	5-year			932.76	1.09
	10-year			932.81	1.04
	25-year			932.85	1.00
	50-year			932.88	0.97
	100-yer			932.91	0.94
SRL1901	2-year	928.02	925.02	925.49	2.53
	5-year			925.58	2.44
	10-year			925.63	2.39
	25-year			925.70	2.32
	50-year			925.74	2.28
	100-yer			925.80	2.22
SRL1902	2-year	931.50	925.17	929.01	2.49
	5-year			929.57	1.93
	10-year			929.60	1.90
	25-year			929.63	1.87
	50-year			929.65	1.85
	100-yer			929.67	1.83
SRL1903	2-year	933.00	927.67	929.08	3.92
	5-year			930.09	2.91
	10-year			930.28	2.72
	25-year			930.60	2.40
	50-year			930.88	2.12
	100-yer			931.04	1.96

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRL2001	2-year	932.00	922.92	923.54	8.46
	5-year			923.68	8.32
	10-year			923.75	8.25
	25-year			923.83	8.17
	50-year			923.89	8.11
	100-yer			923.96	8.04
SRL2002	2-year	934.58	926.16	931.77	2.81
	5-year			931.94	2.64
	10-year			932.02	2.56
	25-year			932.11	2.47
	50-year			932.18	2.40
	100-yer			932.25	2.33
SRL2003	2-year	933.65	926.92	932.03	1.61
	5-year			932.17	1.48
	10-year			932.23	1.41
	25-year			932.31	1.33
	50-year			932.37	1.28
	100-yer			932.44	1.21
SRL2101	2-year	946.74	934.45	935.74	11.00
	5-year			938.33	8.42
	10-year			941.58	5.16
	25-year			942.99	3.75
	50-year			943.11	3.63
	100-yer			943.23	3.52
SRL2102	2-year	946.86	935.90	938.07	8.79
	5-year			942.14	4.72
	10-year			943.24	3.62
	25-year			943.42	3.44
	50-year			943.47	3.39
	100-yer			943.54	3.32
SRL2103	2-year	945.94	936.72	939.29	6.65
	5-year			943.23	2.71
	10-year			943.42	2.52
	25-year			943.54	2.40
	50-year			943.59	2.35
	100-yer			943.66	2.28
SRL3C01	2-year	893.00	887.03	892.35	0.65
	5-year			892.44	0.56
	10-year			892.49	0.51
	25-year			892.55	0.45
	50-year			892.60	0.40
	100-yer			892.65	0.35
SRMC00	2-year	903.00	860.95	863.22	39.78
	5-year			863.58	39.42
	10-year			863.78	39.22
	25-year			864.00	39.00
	50-year			864.16	38.84
	100-yer			864.35	38.65

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC01	2-year	902.85	866.00	868.28	34.57
	5-year			868.65	34.20
	10-year			868.84	34.01
	25-year			869.06	33.79
	50-year			869.22	33.63
	100-yer			869.40	33.45
SRMC04	2-year	894.26	871.15	875.29	18.97
	5-year			876.24	18.02
	10-year			876.74	17.52
	25-year			877.34	16.92
	50-year			877.79	16.47
	100-yer			878.32	15.94
SRMC05	2-year	888.00	871.87	875.42	12.58
	5-year			876.32	11.68
	10-year			876.81	11.19
	25-year			877.40	10.60
	50-year			877.85	10.15
	100-yer			878.37	9.63
SRMC06	2-year	888.00	879.65	884.79	3.21
	5-year			885.28	2.72
	10-year			885.49	2.51
	25-year			885.73	2.27
	50-year			885.86	2.14
	100-yer			886.03	1.97
SRMC07	2-year	889.35	880.54	884.86	4.49
	5-year			885.55	3.80
	10-year			885.89	3.46
	25-year			886.21	3.14
	50-year			886.43	2.92
	100-yer			886.75	2.60
SRMC08	2-year	888.38	880.90	884.93	3.45
	5-year			885.68	2.70
	10-year			886.05	2.33
	25-year			886.38	2.00
	50-year			886.62	1.76
	100-yer			887.00	1.38
SRMC09	2-year	890.89	882.68	886.40	4.49
	5-year			887.05	3.85
	10-year			887.32	3.57
	25-year			887.65	3.24
	50-year			887.87	3.02
	100-yer			888.15	2.74
SRMC10	2-year	891.69	883.69	887.04	4.65
	5-year			887.76	3.93
	10-year			888.07	3.62
	25-year			888.46	3.23
	50-year			888.71	2.98
	100-yer			889.03	2.66

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC11	2-year	895.00	884.43	887.79	7.21
	5-year			888.46	6.54
	10-year			888.81	6.19
	25-year			889.24	5.76
	50-year			889.52	5.48
	100-yer			889.81	5.19
SRMC12	2-year	895.60	885.10	889.08	6.52
	5-year			889.84	5.76
	10-year			890.24	5.36
	25-year			890.76	4.84
	50-year			891.29	4.31
	100-yer			892.06	3.54
SRMC13	2-year	896.04	889.71	891.00	5.04
	5-year			891.24	4.80
	10-year			891.38	4.66
	25-year			891.69	4.35
	50-year			892.11	3.93
	100-yer			893.20	2.84
SRMC14	2-year	896.73	890.00	892.60	4.13
	5-year			892.80	3.93
	10-year			893.00	3.73
	25-year			893.50	3.23
	50-year			893.85	2.88
	100-yer			894.28	2.45
SRMC15	2-year	897.00	890.15	893.35	3.65
	5-year			893.71	3.29
	10-year			893.93	3.07
	25-year			894.37	2.63
	50-year			894.98	2.02
	100-yer			895.67	1.33
SRMC16	2-year	898.94	891.05	893.72	5.22
	5-year			894.21	4.73
	10-year			894.53	4.41
	25-year			895.74	3.20
	50-year			896.13	2.81
	100-yer			896.39	2.55
SRMC18	2-year	899.00	891.24	893.95	5.05
	5-year			894.46	4.54
	10-year			894.80	4.20
	25-year			895.89	3.12
	50-year			896.41	2.59
	100-yer			896.83	2.17
SRMC19	2-year	901.84	891.84	894.47	7.37
	5-year			895.00	6.84
	10-year			895.41	6.43
	25-year			896.26	5.58
	50-year			897.00	4.84
	100-yer			897.83	4.01

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC20	2-year	905.00	893.82	898.21	6.79
	5-year			898.65	6.35
	10-year			899.08	5.92
	25-year			899.49	5.51
	50-year			899.57	5.43
	100-yer			899.60	5.40
SRMC22	2-year	913.00	896.70	899.21	13.79
	5-year			899.95	13.05
	10-year			900.56	12.44
	25-year			901.28	11.72
	50-year			901.71	11.29
	100-yer			902.11	10.89
SRMC23	2-year	909.00	896.81	900.36	8.64
	5-year			900.89	8.11
	10-year			901.21	7.79
	25-year			901.51	7.49
	50-year			901.67	7.33
	100-yer			901.88	7.12
SRMC24	2-year	909.00	897.00	900.52	8.48
	5-year			901.13	7.87
	10-year			901.53	7.48
	25-year			901.89	7.11
	50-year			902.09	6.91
	100-yer			902.38	6.62
SRMC25	2-year	910.00	897.45	902.02	7.98
	5-year			902.63	7.37
	10-year			902.94	7.06
	25-year			903.22	6.78
	50-year			903.37	6.63
	100-yer			903.64	6.36
SRMC26	2-year	907.59	899.89	904.31	3.28
	5-year			905.04	2.55
	10-year			905.26	2.33
	25-year			905.46	2.13
	50-year			905.57	2.02
	100-yer			905.74	1.85
SRMC27	2-year	907.69	900.69	904.27	3.42
	5-year			905.25	2.44
	10-year			905.61	2.08
	25-year			905.87	1.82
	50-year			906.06	1.63
	100-yer			906.34	1.35
SRMC28	2-year	911.00	904.00	907.43	3.57
	5-year			907.69	3.31
	10-year			907.88	3.12
	25-year			908.05	2.95
	50-year			908.16	2.84
	100-yer			908.32	2.68

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC29	2-year	913.00	904.11	907.65	5.35
	5-year			908.01	4.99
	10-year			908.21	4.79
	25-year			908.42	4.58
	50-year			908.54	4.46
	100-yer			908.73	4.27
SRMC30	2-year	911.00	904.51	908.25	2.75
	5-year			908.74	2.26
	10-year			909.09	1.91
	25-year			909.44	1.56
	50-year			909.64	1.36
	100-yer			909.95	1.05
SRMC31	2-year	917.43	905.43	908.75	8.68
	5-year			909.98	7.45
	10-year			910.39	7.04
	25-year			910.79	6.64
	50-year			910.97	6.46
	100-yer			911.30	6.13
SRMC32	2-year	920.00	908.00	910.10	9.90
	5-year			911.07	8.93
	10-year			911.41	8.59
	25-year			911.93	8.07
	50-year			913.34	6.66
	100-yer			913.66	6.34
SRMC33	2-year	914.81	908.44	910.51	4.30
	5-year			911.39	3.42
	10-year			911.75	3.06
	25-year			912.43	2.38
	50-year			913.76	1.05
	100-yer			914.12	0.69
SRMC34	2-year	916.87	909.00	911.01	5.86
	5-year			911.80	5.07
	10-year			912.18	4.69
	25-year			913.03	3.84
	50-year			914.13	2.74
	100-yer			914.54	2.33
SRMC35	2-year	919.27	909.33	912.68	6.58
	5-year			913.25	6.01
	10-year			913.53	5.73
	25-year			914.17	5.10
	50-year			914.72	4.54
	100-yer			915.13	4.13
SRMC36	2-year	918.00	911.95	913.29	4.71
	5-year			913.87	4.13
	10-year			914.50	3.50
	25-year			915.55	2.45
	50-year			916.77	1.23
	100-yer			917.75	0.25

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SRMC37	2-year	920.00	912.78	914.91	5.09
	5-year			915.34	4.66
	10-year			915.87	4.13
	25-year			916.40	3.60
	50-year			916.68	3.32
	100-yer			916.95	3.05
SRMC38	2-year	924.00	915.47	916.06	7.94
	5-year			916.50	7.50
	10-year			916.86	7.14
	25-year			917.18	6.82
	50-year			917.36	6.64
	100-yer			917.53	6.47
SRMC39	2-year	926.89	915.91	916.91	9.98
	5-year			917.63	9.26
	10-year			918.13	8.76
	25-year			918.52	8.37
	50-year			918.74	8.15
	100-yer			918.95	7.94
SRMC40	2-year	931.00	918.64	925.48	5.52
	5-year			926.65	4.35
	10-year			927.02	3.98
	25-year			927.43	3.57
	50-year			927.74	3.26
	100-yer			928.13	2.87
SRMC41	2-year	934.00	921.32	922.55	11.45
	5-year			922.81	11.19
	10-year			922.93	11.07
	25-year			923.08	10.92
	50-year			923.19	10.81
	100-yer			923.33	10.67
SRMC42	2-year	943.39	927.46	929.57	13.82
	5-year			929.81	13.58
	10-year			929.93	13.46
	25-year			930.07	13.32
	50-year			930.18	13.21
	100-yer			930.31	13.08
SRMC43	2-year	945.50	927.61	930.12	15.38
	5-year			930.64	14.86
	10-year			930.92	14.58
	25-year			931.50	14.00
	50-year			931.97	13.53
	100-yer			932.85	12.65
SRMC44	2-year	942.54	927.67	930.21	12.34
	5-year			930.82	11.72
	10-year			931.10	11.44
	25-year			931.81	10.73
	50-year			932.36	10.18
	100-yer			933.36	9.19

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
SYMC00	2-year	903.00	870.86	871.38	31.62
	5-year			871.49	31.51
	10-year			871.56	31.44
	25-year			871.63	31.37
	50-year			871.69	31.31
	100-yer			871.75	31.25
SYMC01	2-year	906.94	900.61	901.13	5.81
	5-year			901.25	5.69
	10-year			901.31	5.63
	25-year			901.38	5.56
	50-year			901.44	5.50
	100-yer			901.50	5.44
SYMC02	2-year	907.20	900.87	902.25	4.95
	5-year			902.55	4.65
	10-year			902.72	4.48
	25-year			902.97	4.23
	50-year			903.19	4.01
	100-yer			903.71	3.49
SYMC03	2-year	912.79	906.71	907.48	5.31
	5-year			907.67	5.13
	10-year			907.76	5.03
	25-year			907.89	4.90
	50-year			907.98	4.81
	100-yer			908.10	4.69
SYMC04	2-year	916.08	910.66	911.37	4.71
	5-year			911.52	4.56
	10-year			911.61	4.47
	25-year			911.71	4.37
	50-year			911.79	4.29
	100-yer			911.90	4.18
SYMC05	2-year	916.13	911.21	912.38	3.75
	5-year			912.68	3.45
	10-year			912.96	3.17
	25-year			913.70	2.43
	50-year			914.11	2.02
	100-yer			914.64	1.49
UWL101	2-year	913.00	902.91	903.86	9.14
	5-year			903.93	9.07
	10-year			904.00	9.00
	25-year			904.09	8.91
	50-year			904.14	8.86
	100-yer			904.20	8.80
UWL201	2-year	920.00	908.00	910.69	9.31
	5-year			910.97	9.03
	10-year			911.09	8.91
	25-year			911.24	8.76
	50-year			911.34	8.66
	100-yer			911.46	8.54

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
UWL301	2-year	931.00	915.78	916.58	14.42
	5-year			916.78	14.22
	10-year			916.90	14.10
	25-year			917.03	13.97
	50-year			917.11	13.89
	100-yer			917.22	13.78
UWL302	2-year	959.00	946.34	947.94	11.06
	5-year			948.32	10.68
	10-year			948.51	10.49
	25-year			948.74	10.26
	50-year			948.88	10.12
	100-yer			949.05	9.95
UWMC00	2-year	897.00	884.53	892.02	4.98
	5-year			893.15	3.85
	10-year			893.63	3.37
	25-year			894.06	2.94
	50-year			894.30	2.70
	100-yer			894.81	2.19
UWMC01	2-year	897.00	885.58	892.58	4.42
	5-year			893.52	3.48
	10-year			894.01	2.99
	25-year			894.50	2.50
	50-year			894.80	2.20
	100-yer			895.26	1.74
UWMC02	2-year	900.00	886.00	892.72	7.28
	5-year			893.61	6.39
	10-year			894.09	5.91
	25-year			894.58	5.42
	50-year			894.89	5.11
	100-yer			895.33	4.67
UWMC03	2-year	900.00	886.32	892.75	7.25
	5-year			893.81	6.19
	10-year			894.38	5.62
	25-year			895.04	4.96
	50-year			895.47	4.53
	100-yer			896.06	3.94
UWMC04	2-year	913.00	893.90	896.35	16.65
	5-year			896.93	16.07
	10-year			897.25	15.75
	25-year			897.63	15.37
	50-year			897.89	15.11
	100-yer			898.21	14.79
UWMC05	2-year	911.00	895.00	897.51	13.49
	5-year			898.08	12.92
	10-year			898.40	12.60
	25-year			898.77	12.23
	50-year			899.02	11.98
	100-yer			899.34	11.66

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
UWMC06	2-year	912.00	901.39	902.93	9.07
	5-year			903.30	8.70
	10-year			903.50	8.50
	25-year			903.73	8.27
	50-year			903.89	8.11
	100-yer			904.09	7.91
UWMC07	2-year	920.00	902.70	906.72	13.28
	5-year			907.41	12.59
	10-year			907.77	12.23
	25-year			908.20	11.80
	50-year			908.49	11.52
	100-yer			908.84	11.16
UWMC08	2-year	922.00	907.00	908.94	13.06
	5-year			909.37	12.63
	10-year			909.60	12.40
	25-year			909.88	12.12
	50-year			910.07	11.93
	100-yer			910.30	11.70
UWMC09	2-year	945.00	924.05	925.38	19.62
	5-year			925.74	19.26
	10-year			925.92	19.08
	25-year			926.15	18.85
	50-year			926.30	18.70
	100-yer			926.48	18.52
UWMC10	2-year	956.00	935.70	938.37	17.63
	5-year			939.02	16.98
	10-year			939.35	16.65
	25-year			939.73	16.27
	50-year			939.98	16.02
	100-yer			940.29	15.71
UWMC11	2-year	966.00	945.11	946.34	19.66
	5-year			946.71	19.29
	10-year			946.89	19.11
	25-year			947.10	18.90
	50-year			947.25	18.75
	100-yer			947.44	18.56
UWMC12	2-year	1002.00	984.56	986.98	15.02
	5-year			987.50	14.50
	10-year			987.74	14.26
	25-year			988.04	13.96
	50-year			988.23	13.77
	100-yer			988.46	13.54
VCL102	2-year	904.00	891.74	893.41	10.59
	5-year			893.80	10.20
	10-year			894.00	10.00
	25-year			894.24	9.76
	50-year			894.40	9.60
	100-yer			894.60	9.40

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
VCL201	2-year	936.00	926.49	927.34	8.66
	5-year			927.47	8.53
	10-year			927.55	8.45
	25-year			927.63	8.37
	50-year			927.68	8.32
	100-yer			927.75	8.25
VCMC01	2-year	890.00	860.79	863.80	26.20
	5-year			864.75	25.25
	10-year			865.26	24.74
	25-year			865.62	24.38
	50-year			865.86	24.14
	100-yer			866.12	23.88
VCMC02	2-year	890.00	873.67	877.63	12.37
	5-year			878.76	11.24
	10-year			879.35	10.65
	25-year			880.10	9.90
	50-year			880.54	9.46
	100-yer			880.93	9.07
VCMC03	2-year	910.00	882.12	885.05	24.95
	5-year			885.39	24.61
	10-year			885.56	24.44
	25-year			885.76	24.24
	50-year			886.02	23.98
	100-yer			886.20	23.80
VCMC04	2-year	926.00	908.57	910.85	15.15
	5-year			911.28	14.72
	10-year			911.49	14.51
	25-year			911.74	14.26
	50-year			911.74	14.26
	100-yer			911.96	14.04
VCMC05	2-year	933.00	925.16	926.70	6.30
	5-year			926.92	6.08
	10-year			927.03	5.97
	25-year			927.16	5.84
	50-year			927.25	5.75
	100-yer			927.35	5.65
VCMC06	2-year	933.00	926.96	928.55	4.45
	5-year			928.86	4.14
	10-year			929.01	3.99
	25-year			929.21	3.79
	50-year			929.34	3.66
	100-yer			929.51	3.49
VCMC07	2-year	940.00	933.88	935.20	4.80
	5-year			935.38	4.62
	10-year			935.47	4.53
	25-year			935.59	4.41
	50-year			935.66	4.34
	100-yer			935.75	4.25

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
VCMC08	2-year	952.00	939.98	940.96	11.04
	5-year			941.10	10.90
	10-year			941.17	10.83
	25-year			941.25	10.75
	50-year			941.31	10.69
	100-yer			941.38	10.62
W13L101	2-year	906.79	901.29	903.14	3.65
	5-year			903.52	3.27
	10-year			903.71	3.08
	25-year			904.13	2.66
	50-year			905.02	1.77
	100-yer			905.81	0.98
W13L102	2-year	910.74	903.74	905.11	5.63
	5-year			906.84	3.90
	10-year			908.20	2.54
	25-year			908.83	1.91
	50-year			908.89	1.85
	100-yer			908.94	1.80
W13L103	2-year	916.97	911.48	912.16	4.81
	5-year			912.47	4.50
	10-year			915.40	1.57
	25-year			916.01	0.96
	50-year			916.02	0.95
	100-yer			916.11	0.86
W13L1A01	2-year	906.21	902.63	903.14	3.07
	5-year			903.52	2.69
	10-year			903.71	2.50
	25-year			904.13	2.08
	50-year			905.02	1.19
	100-yer			905.81	0.40
W13L1B01	2-year	909.56	903.98	905.54	4.02
	5-year			907.56	2.00
	10-year			908.84	0.72
	25-year			909.03	0.53
	50-year			909.08	0.48
	100-yer			909.13	0.43
W13L1C01	2-year	916.48	911.97	912.59	3.89
	5-year			912.75	3.73
	10-year			915.46	1.02
	25-year			916.05	0.43
	50-year			916.07	0.41
	100-yer			916.25	0.23
W13L201	2-year	908.89	903.95	904.91	3.98
	5-year			905.11	3.78
	10-year			905.21	3.68
	25-year			905.33	3.56
	50-year			905.42	3.47
	100-yer			905.53	3.36

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
W13L202	2-year	909.00	904.00	905.18	3.82
	5-year			905.41	3.59
	10-year			905.53	3.47
	25-year			905.68	3.32
	50-year			905.79	3.21
	100-yer			905.92	3.08
W13L301	2-year	913.00	908.38	909.15	3.85
	5-year			909.48	3.52
	10-year			909.66	3.34
	25-year			909.89	3.11
	50-year			910.06	2.94
	100-yer			910.28	2.72
W13L401	2-year	918.00	915.34	915.76	2.24
	5-year			915.86	2.14
	10-year			915.91	2.09
	25-year			915.99	2.01
	50-year			916.05	1.95
	100-yer			916.14	1.86
W13MC01	2-year	909.00	903.31	904.12	4.88
	5-year			904.23	4.77
	10-year			904.29	4.71
	25-year			904.35	4.65
	50-year			904.40	4.60
	100-yer			904.45	4.55
W13MC02	2-year	915.00	907.00	907.37	7.63
	5-year			907.45	7.55
	10-year			907.50	7.50
	25-year			907.55	7.45
	50-year			907.59	7.41
	100-yer			907.64	7.36
W13MC03	2-year	915.08	907.25	909.15	5.93
	5-year			909.48	5.60
	10-year			909.66	5.42
	25-year			909.89	5.19
	50-year			910.06	5.02
	100-yer			910.28	4.80
W13MC04	2-year	919.00	913.59	914.95	4.05
	5-year			915.23	3.77
	10-year			915.39	3.61
	25-year			915.59	3.41
	50-year			915.73	3.27
	100-yer			915.92	3.08
WLL101	2-year	897.24	881.28	883.49	13.75
	5-year			884.01	13.23
	10-year			884.81	12.43
	25-year			886.86	10.38
	50-year			888.92	8.32
	100-yer			890.30	6.94

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL102	2-year	896.59	883.84	886.07	10.52
	5-year			886.57	10.02
	10-year			886.95	9.64
	25-year			888.82	7.77
	50-year			891.13	5.46
	100-yer			892.52	4.07
WLL103	2-year	895.77	885.94	888.16	7.61
	5-year			888.67	7.10
	10-year			889.01	6.76
	25-year			890.42	5.35
	50-year			892.90	2.87
	100-yer			894.57	1.20
WLL104	2-year	895.00	886.50	889.32	5.68
	5-year			889.91	5.09
	10-year			890.28	4.72
	25-year			891.55	3.45
	50-year			893.57	1.43
	100-yer			894.65	0.35
WLL105	2-year	896.68	887.10	889.21	7.47
	5-year			889.83	6.85
	10-year			890.23	6.45
	25-year			891.61	5.07
	50-year			893.75	2.93
	100-yer			894.85	1.83
WLL106	2-year	902.03	888.84	890.04	11.99
	5-year			890.42	11.61
	10-year			890.92	11.11
	25-year			892.67	9.36
	50-year			895.92	6.11
	100-yer			895.89	6.14
WLL107	2-year	898.17	889.17	890.37	7.80
	5-year			890.65	7.52
	10-year			891.04	7.13
	25-year			892.90	5.27
	50-year			896.10	2.07
	100-yer			896.17	2.00
WLL108	2-year	901.14	895.14	895.88	5.26
	5-year			896.02	5.12
	10-year			896.09	5.05
	25-year			896.20	4.94
	50-year			897.23	3.91
	100-yer			898.59	2.55
WLL109	2-year	901.27	895.31	896.97	4.30
	5-year			897.59	3.68
	10-year			898.17	3.10
	25-year			899.09	2.18
	50-year			899.49	1.78
	100-yer			900.41	0.86

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL1A01	2-year	897.84	892.17	896.03	1.81
	5-year			896.16	1.68
	10-year			896.23	1.61
	25-year			896.31	1.53
	50-year			896.38	1.46
	100-yer			896.45	1.39
WLL1A02	2-year	897.93	892.93	896.70	1.23
	5-year			897.11	0.82
	10-year			897.18	0.75
	25-year			897.26	0.67
	50-year			897.31	0.62
	100-yer			897.37	0.56
WLL1B01	2-year	899.00	893.42	898.15	0.85
	5-year			898.27	0.73
	10-year			898.32	0.68
	25-year			898.39	0.61
	50-year			898.45	0.55
	100-yer			898.51	0.49
WLL201	2-year	889.00	877.86	878.94	10.06
	5-year			879.91	9.09
	10-year			880.99	8.01
	25-year			883.21	5.79
	50-year			885.32	3.68
	100-yer			886.85	2.15
WLL202	2-year	890.34	883.34	884.09	6.25
	5-year			884.24	6.10
	10-year			884.31	6.03
	25-year			884.41	5.93
	50-year			886.44	3.90
	100-yer			887.47	2.87
WLL301	2-year	892.59	882.59	885.29	7.30
	5-year			886.35	6.24
	10-year			886.95	5.64
	25-year			889.88	2.71
	50-year			890.04	2.55
	100-yer			890.17	2.42
WLL302	2-year	915.00	886.75	888.02	26.98
	5-year			888.48	26.52
	10-year			888.72	26.28
	25-year			889.98	25.02
	50-year			890.45	24.55
	100-yer			890.90	24.10
WLL303	2-year	896.00	890.18	891.88	4.12
	5-year			892.18	3.82
	10-year			892.29	3.71
	25-year			892.47	3.53
	50-year			892.61	3.39
	100-yer			892.76	3.24

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL304	2-year	896.00	890.22	892.12	3.88
	5-year			892.48	3.52
	10-year			892.64	3.36
	25-year			892.84	3.16
	50-year			893.01	2.99
	100-yer			893.19	2.81
WLL305	2-year	896.08	890.36	892.46	3.62
	5-year			892.94	3.14
	10-year			893.14	2.94
	25-year			893.40	2.68
	50-year			893.62	2.46
	100-yer			893.87	2.21
WLL306	2-year	897.96	892.10	893.01	4.95
	5-year			893.42	4.54
	10-year			893.65	4.31
	25-year			893.95	4.01
	50-year			894.31	3.66
	100-yer			894.52	3.44
WLL307	2-year	898.74	893.74	896.62	2.12
	5-year			896.82	1.92
	10-year			896.93	1.81
	25-year			897.07	1.67
	50-year			897.17	1.57
	100-yer			897.30	1.44
WLL308	2-year	901.11	896.11	897.39	3.72
	5-year			897.64	3.47
	10-year			898.02	3.09
	25-year			898.30	2.81
	50-year			898.49	2.62
	100-yer			898.93	2.18
WLL309	2-year	901.41	896.41	899.54	1.87
	5-year			899.70	1.71
	10-year			899.82	1.59
	25-year			899.97	1.44
	50-year			900.07	1.34
	100-yer			900.23	1.18
WLL310	2-year	902.07	897.07	900.09	1.98
	5-year			900.08	1.99
	10-year			900.10	1.97
	25-year			900.11	1.96
	50-year			900.35	1.72
	100-yer			900.40	1.67
WLL311	2-year	902.36	897.36	900.20	2.16
	5-year			900.49	1.87
	10-year			900.62	1.74
	25-year			900.81	1.55
	50-year			900.95	1.41
	100-yer			901.08	1.28

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL312	2-year	903.00	897.52	900.21	2.79
	5-year			900.51	2.49
	10-year			900.64	2.36
	25-year			900.83	2.17
	50-year			900.96	2.04
	100-yer			901.09	1.91
WLL313	2-year	901.97	897.68	900.69	1.28
	5-year			900.91	1.06
	10-year			901.02	0.95
	25-year			901.16	0.81
	50-year			901.26	0.71
	100-yer			901.39	0.58
WLL314	2-year	905.58	897.73	900.91	4.67
	5-year			901.05	4.53
	10-year			901.16	4.42
	25-year			901.29	4.29
	50-year			901.38	4.20
	100-yer			901.50	4.08
WLL315	2-year	904.74	898.07	901.53	3.21
	5-year			901.73	3.01
	10-year			901.84	2.90
	25-year			901.97	2.77
	50-year			902.06	2.68
	100-yer			902.18	2.56
WLL316	2-year	909.69	901.44	906.04	3.65
	5-year			906.16	3.53
	10-year			906.23	3.46
	25-year			906.31	3.38
	50-year			906.36	3.33
	100-yer			906.43	3.26
WLL317	2-year	909.75	901.73	906.42	3.33
	5-year			906.61	3.14
	10-year			906.71	3.04
	25-year			906.83	2.92
	50-year			906.92	2.83
	100-yer			907.03	2.72
WLL318	2-year	909.81	901.99	906.55	3.26
	5-year			906.74	3.07
	10-year			906.85	2.96
	25-year			906.97	2.84
	50-year			907.06	2.75
	100-yer			907.17	2.64
WLL3A01	2-year	895.00	889.49	890.21	4.79
	5-year			890.30	4.70
	10-year			890.35	4.65
	25-year			890.41	4.59
	50-year			890.45	4.55
	100-yer			890.90	4.10

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL3A02	2-year	895.11	890.59	891.17	3.94
	5-year			891.27	3.84
	10-year			891.33	3.78
	25-year			891.39	3.72
	50-year			891.44	3.67
	100-yer			891.50	3.61
WLL3B01	2-year	895.63	890.50	892.14	3.49
	5-year			892.52	3.11
	10-year			892.69	2.94
	25-year			892.91	2.72
	50-year			893.11	2.52
	100-yer			893.36	2.27
WLL3B02	2-year	895.87	890.62	892.14	3.73
	5-year			892.53	3.34
	10-year			892.71	3.16
	25-year			892.95	2.92
	50-year			893.15	2.72
	100-yer			893.44	2.43
WLL3B03	2-year	896.19	890.76	892.17	4.02
	5-year			892.55	3.64
	10-year			892.74	3.45
	25-year			892.99	3.20
	50-year			893.19	3.00
	100-yer			893.51	2.68
WLL3B04	2-year	897.00	890.92	892.20	4.80
	5-year			892.58	4.42
	10-year			892.77	4.23
	25-year			893.03	3.97
	50-year			893.25	3.75
	100-yer			893.59	3.41
WLL3B05	2-year	897.04	891.04	892.25	4.79
	5-year			892.62	4.42
	10-year			892.81	4.23
	25-year			893.06	3.98
	50-year			893.30	3.74
	100-yer			893.64	3.40
WLL401	2-year	896.50	891.50	892.53	3.97
	5-year			892.77	3.73
	10-year			893.07	3.43
	25-year			895.41	1.09
	50-year			895.58	0.92
	100-yer			895.63	0.87
WLL501	2-year	896.11	887.97	890.57	5.54
	5-year			890.76	5.35
	10-year			890.86	5.25
	25-year			891.00	5.11
	50-year			891.26	4.85
	100-yer			891.81	4.30

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLL601	2-year	899.89	887.95	894.08	5.81
	5-year			895.08	4.81
	10-year			895.17	4.72
	25-year			895.24	4.65
	50-year			895.28	4.61
	100-yer			895.34	4.55
WLL701	2-year	897.02	890.11	896.20	0.82
	5-year			896.50	0.52
	10-year			896.61	0.41
	25-year			896.72	0.30
	50-year			896.79	0.23
	100-yer			896.87	0.15
WLMC00	2-year	911.00	871.99	876.13	34.87
	5-year			877.31	33.69
	10-year			877.61	33.39
	25-year			877.99	33.01
	50-year			877.99	33.01
	100-yer			877.99	33.01
WLMC01	2-year	911.00	873.21	877.35	33.65
	5-year			878.53	32.47
	10-year			879.18	31.82
	25-year			880.27	30.73
	50-year			881.24	29.76
	100-yer			881.99	29.01
WLMC02	2-year	912.00	874.16	878.30	33.70
	5-year			879.48	32.52
	10-year			880.45	31.55
	25-year			882.06	29.94
	50-year			883.77	28.23
	100-yer			885.08	26.92
WLMC03	2-year	911.07	874.95	878.82	32.25
	5-year			879.95	31.12
	10-year			881.00	30.07
	25-year			883.21	27.86
	50-year			885.31	25.76
	100-yer			886.82	24.25
WLMC04	2-year	911.00	875.25	878.81	32.19
	5-year			879.91	31.09
	10-year			880.99	30.01
	25-year			883.20	27.80
	50-year			885.31	25.69
	100-yer			886.82	24.18
WLMC05	2-year	898.50	880.50	883.69	14.81
	5-year			883.98	14.52
	10-year			884.20	14.30
	25-year			884.68	13.82
	50-year			885.38	13.12
	100-yer			886.82	11.68

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLMC06	2-year	891.00	882.00	887.40	3.60
	5-year			889.42	1.58
	10-year			890.40	0.60
	25-year			891.06	-0.05
	50-year			891.25	-0.25
	100-yer			891.46	-0.46
WLMC07	2-year	894.00	882.28	887.41	6.59
	5-year			889.43	4.57
	10-year			890.40	3.60
	25-year			891.06	2.94
	50-year			891.26	2.74
	100-yer			891.46	2.54
WLMC08	2-year	898.98	882.76	885.99	12.99
	5-year			886.45	12.53
	10-year			886.66	12.32
	25-year			886.87	12.11
	50-year			887.00	11.98
	100-yer			887.14	11.84
WLMC09	2-year	899.00	882.84	886.01	12.99
	5-year			886.48	12.52
	10-year			886.70	12.30
	25-year			886.91	12.09
	50-year			887.04	11.96
	100-yer			887.19	11.81
WLMC10	2-year	894.87	884.21	887.28	7.59
	5-year			887.85	7.02
	10-year			888.11	6.76
	25-year			888.35	6.52
	50-year			888.48	6.39
	100-yer			888.62	6.25
WLMC11	2-year	895.00	884.94	887.59	7.41
	5-year			888.88	6.12
	10-year			889.68	5.32
	25-year			890.51	4.49
	50-year			891.09	3.91
	100-yer			891.75	3.25
WLMC12	2-year	893.32	885.32	887.72	5.60
	5-year			888.93	4.39
	10-year			889.71	3.61
	25-year			890.53	2.79
	50-year			891.10	2.22
	100-yer			891.76	1.56
WLMC13	2-year	896.00	886.55	889.12	6.88
	5-year			889.59	6.41
	10-year			889.96	6.04
	25-year			890.63	5.37
	50-year			891.16	4.84
	100-yer			891.79	4.21

Table B.7
Hydraulic Modeling - Node Results for Future Conditions

Node Name	Return Period	Ground Elevation (feet)	Invert Elevation (feet)	Max Water Elevation (feet)	Max WSE Relative to Ground (feet)
WLMC14	2-year	899.87	887.33	893.26	6.61
	5-year			895.08	4.79
	10-year			895.17	4.70
	25-year			895.24	4.63
	50-year			895.28	4.59
	100-yer			895.34	4.53
WLMC15	2-year	899.00	888.58	896.20	2.80
	5-year			896.50	2.50
	10-year			896.61	2.39
	25-year			896.72	2.28
	50-year			896.78	2.22
	100-yer			896.87	2.13
WLMC16	2-year	901.75	894.42	898.73	3.02
	5-year			898.99	2.76
	10-year			899.03	2.72
	25-year			899.08	2.67
	50-year			899.11	2.64
	100-yer			899.15	2.60
WLMC17	2-year	913.12	906.62	910.48	2.64
	5-year			911.25	1.87
	10-year			911.29	1.83
	25-year			911.34	1.78
	50-year			911.37	1.75
	100-yer			911.41	1.71
WLMC18	2-year	913.89	908.89	911.56	2.33
	5-year			912.02	1.87
	10-year			912.06	1.83
	25-year			912.10	1.79
	50-year			912.12	1.77
	100-yer			912.15	1.74

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL101	LCCL101	2-year	Natural	14	0	7.9	880.37	879.96	5.183	169	8.5	16834	22.0
		5-year								266	9.5	16834	22.0
		10-year								344	10.2	16834	22.0
		25-year								427	10.7	16834	22.0
		50-year								505	11.3	16834	22.0
		100-year								592	11.7	16834	22.0
LCCL102	LCCL102	2-year	Natural	6	0	1292.8	896.75	880.37	1.267	86	2.6	5466	9.3
		5-year								123	2.6	5466	9.3
		10-year								156	2.6	5466	9.3
		25-year								228	2.4	5466	9.3
		50-year								279	2.3	5466	9.3
		100-year								340	2.2	5466	9.3
LCCL103	CCL103A	2-year	Rectangular	4	7	68.0	897.42	896.75	0.985	89	8.7	346	12.4
		5-year								130	10.4	346	12.4
		10-year								170	11.7	346	12.4
		25-year								251	14.3	346	12.4
		50-year								303	15.8	346	12.4
		100-year								363	17.3	346	12.4
LCCL103	CCL103B	2-year	Trapezoidal	1	30	68.0	904.00	903.00	1.471	0	0.0	370	12.3
		5-year								0	0.0	370	12.3
		10-year								0	0.0	370	12.3
		25-year								0	0.0	370	12.3
		50-year								0	0.0	370	12.3
		100-year								0	0.0	370	12.3
LCCL104	LCCL104	2-year	Natural	10	15	22.8	898.08	897.42	2.900	55	2.2	49525	21.3
		5-year								74	2.2	49525	21.3
		10-year								128	2.2	49525	21.3
		25-year								185	2.1	49525	21.3
		50-year								220	2.1	49525	21.3
		100-year								260	2.1	49525	21.3
LCCL105	CCL105A	2-year	Special	4.5	4.5	271.6	899.28	898.08	0.442	54	9.5	66	6.5
		5-year								70	10.4	66	6.5
		10-year								88	11.2	66	6.5
		25-year								104	11.6	66	6.5
		50-year								110	11.6	66	6.5
		100-year								112	11.6	66	6.5
LCCL105	CCL105B	2-year	Trapezoidal	2	30	271.6	902.78	902.00	0.287	0	0.0	498	8.3
		5-year								5	1.4	498	8.3
		10-year								38	3.2	498	8.3
		25-year								78	4.2	498	8.3
		50-year								107	4.7	498	8.3
		100-year								145	5.3	498	8.3
LCCL106	LCCL106	2-year	Natural	10	0	343.3	908.00	899.28	2.540	68	0.9	48400	21.2
		5-year								119	1.0	48400	21.2
		10-year								154	1.0	48400	21.2
		25-year								196	1.0	48400	21.2
		50-year								225	1.1	48400	21.2
		100-year								262	1.2	48400	21.2
LCCL107	CCL107A	2-year	Special	6	6	45.3	908.17	908.00	0.375	34	10.4	115	7.0
		5-year								60	12.9	115	7.0
		10-year								78	14.2	115	7.0
		25-year								98	15.8	115	7.0
		50-year								113	16.6	115	7.0
		100-year								131	17.6	115	7.0
LCCL107	CCL107B	2-year	Trapezoidal	1	30	45.3	912.00	911.95	0.100	0	0.0	101	3.4
		5-year								0	0.0	101	3.4
		10-year								0	0.0	101	3.4
		25-year								0	0.0	101	3.4
		50-year								0	0.0	101	3.4
		100-year								0	0.0	101	3.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL108	LCCL108	2-year	Natural	6	7	98.7	909.74	908.17	1.590	18	0.4	17504	12.4
		5-year								47	0.6	17504	12.4
		10-year								63	0.7	17504	12.4
		25-year								81	0.7	17504	12.4
		50-year								93	0.7	17504	12.4
		100-year								109	0.8	17504	12.4
LCCL109	CCL109A	2-year	Circular	2	0	71.1	909.85	909.74	0.155	9	5.1	5	1.5
		5-year								11	5.5	5	1.5
		10-year								11	5.7	5	1.5
		25-year								12	5.9	5	1.5
		50-year								12	6.0	5	1.5
		100-year								13	6.2	5	1.5
LCCL109	CCL109B	2-year	Trapezoidal	1	30	71.1	911.85	911.74	0.155	0	0.0	120	4.0
		5-year								26	2.6	120	4.0
		10-year								41	3.1	120	4.0
		25-year								58	3.5	120	4.0
		50-year								69	3.8	120	4.0
		100-year								84	4.1	120	4.0
LCCL110	LCCL110	2-year	Natural	10	0	350.7	915.87	909.85	1.717	40	0.5	57804	17.6
		5-year								59	0.5	57804	17.6
		10-year								70	0.6	57804	17.6
		25-year								86	0.6	57804	17.6
		50-year								97	0.6	57804	17.6
		100-year								112	0.6	57804	17.6
LCCL111	8669.1	2-year	Special	2.67	2.67	314.1	917.18	915.87	0.417	14	7.0	14	4.3
		5-year								14	7.2	14	4.3
		10-year								15	7.4	14	4.3
		25-year								15	7.5	14	4.3
		50-year								16	7.7	14	4.3
		100-year								16	7.8	14	4.3
LCCL111	8669.2	2-year	Trapezoidal	1	30	314.1	921.76	918.37	1.079	27	4.0	317	10.6
		5-year								45	4.9	317	10.6
		10-year								56	5.4	317	10.6
		25-year								70	5.9	317	10.6
		50-year								81	6.2	317	10.6
		100-year								96	6.6	317	10.6
LCCL112	8253.1	2-year	Circular	2	0	28.7	918.38	917.18	4.181	16	6.8	43	13.7
		5-year								17	6.8	43	13.7
		10-year								18	6.5	43	13.7
		25-year								19	6.6	43	13.7
		50-year								20	6.5	43	13.7
		100-year								21	6.6	43	13.7
LCCL112	8253.2	2-year	Trapezoidal	1	30	28.7	921.80	921.76	0.139	25	2.7	114	3.8
		5-year								42	3.3	114	3.8
		10-year								53	3.6	114	3.8
		25-year								67	3.9	114	3.8
		50-year								77	4.1	114	3.8
		100-year								91	4.4	114	3.8
LCCL113	8252.1	2-year	Circular	2	0	208.8	920.06	918.38	0.805	20	6.8	19	6.0
		5-year								20	6.9	19	6.0
		10-year								20	6.8	19	6.0
		25-year								20	6.8	19	6.0
		50-year								20	6.8	19	6.0
		100-year								20	6.8	19	6.0
LCCL113	8252.2	2-year	Trapezoidal	1	30	208.8	923.64	921.80	0.881	9	1.4	286	9.5
		5-year								23	2.3	286	9.5
		10-year								30	2.7	286	9.5
		25-year								41	3.1	286	9.5
		50-year								49	3.4	286	9.5
		100-year								59	3.7	286	9.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCL201	LCCL201	2-year	Natural	8	0	237.1	901.16	880.68	8.637	24	0.4	47978	37.9
		5-year								33	0.3	47978	37.9
		10-year								38	0.3	47978	37.9
		25-year								45	0.3	47978	37.9
		50-year								50	0.3	47978	37.9
		100-year								57	0.3	47978	37.9
LCCL202	8283.1	2-year	Circular	3	0	62.7	905.74	901.16	7.309	24	16.6	167	23.7
		5-year								33	18.4	167	23.7
		10-year								38	19.3	167	23.7
		25-year								45	20.3	167	23.7
		50-year								50	21.0	167	23.7
		100-year								57	21.8	167	23.7
LCCL202	8283.2	2-year	Trapezoidal	1	30	62.7	909.74	909.68	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LCCL203	8284.1	2-year	Circular	2.5	0	72.2	906.97	905.74	1.703	24	10.2	50	10.1
		5-year								33	11.2	50	10.1
		10-year								38	11.7	50	10.1
		25-year								45	12.3	50	10.1
		50-year								50	12.7	50	10.1
		100-year								57	13.2	50	10.1
LCCL203	8284.2	2-year	Trapezoidal	1	30	72.2	910.72	909.74	1.357	0	0.0	355	11.8
		5-year								0	0.0	355	11.8
		10-year								0	0.0	355	11.8
		25-year								0	0.0	355	11.8
		50-year								0	0.0	355	11.8
		100-year								0	0.0	355	11.8
LCCL204	8285.1	2-year	Circular	2	0	80.4	909.18	906.97	2.748	12	6.3	20	6.5
		5-year								16	6.9	20	6.5
		10-year								19	7.1	20	6.5
		25-year								23	7.3	20	6.5
		50-year								25	8.0	20	6.5
		100-year								28	8.7	20	6.5
LCCL204	8285.2	2-year	Trapezoidal	1	30	80.4	913.18	910.72	3.059	0	0.0	533	17.8
		5-year								0	0.0	533	17.8
		10-year								0	0.0	533	17.8
		25-year								0	0.0	533	17.8
		50-year								0	0.0	533	17.8
		100-year								2	1.8	533	17.8
LCCMC01	LCCMC01	2-year	Natural	12	0	851.5	879.96	863.18	1.971	262	7.3	11935	18.3
		5-year								442	8.2	11935	18.3
		10-year								582	8.7	11935	18.3
		25-year								751	9.3	11935	18.3
		50-year								900	9.7	11935	18.3
		100-year								1076	10.1	11935	18.3
LCCMC02	LCCMC02	2-year	Natural	14.5	0	1521.5	880.68	879.96	0.047	190	1.8	4402	3.3
		5-year								322	2.2	4402	3.3
		10-year								407	2.4	4402	3.3
		25-year								517	2.6	4402	3.3
		50-year								607	2.8	4402	3.3
		100-year								716	3.0	4402	3.3
LCCMC03	LCCMC03	2-year	Natural	14	0	160.4	891.70	880.68	6.869	199	1.6	123213	43.6
		5-year								328	1.7	123213	43.6
		10-year								412	1.8	123213	43.6
		25-year								522	2.0	123213	43.6
		50-year								610	2.1	123213	43.6
		100-year								716	2.2	123213	43.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCMC04	CCMC04A	2-year	Rectangular	10.5	10.5	131.0	891.74	891.70	0.031	199	11.1	389	3.5
		5-year								328	14.6	389	3.5
		10-year								412	16.4	389	3.5
		25-year								522	18.6	389	3.5
		50-year								610	20.1	389	3.5
		100-year								716	21.9	389	3.5
LCCMC04	CCMC04B	2-year	Trapezoidal	1	30	131.0	906.00	905.87	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LCCMC05	LCCMC05	2-year	Trapezoidal	4	4	125.8	903.76	902.24	1.209	189	5.8	654	7.8
		5-year								312	6.6	654	7.8
		10-year								393	7.0	654	7.8
		25-year								496	7.4	654	7.8
		50-year								578	7.7	654	7.8
		100-year								676	8.2	654	7.8
LCCMC06	LCCMC06	2-year	Trapezoidal	6	100	10.0	901.74	901.74	0.000	189	0.4	8632	0.0
		5-year								312	0.6	8632	0.0
		10-year								393	0.7	8632	0.0
		25-year								496	0.9	8632	0.0
		50-year								578	1.0	8632	0.0
		100-year								676	1.1	8632	0.0
LCCMC07	LCCMC07	2-year	Trapezoidal	6	100	10.0	901.74	901.74	0.000	231	0.6	8632	0.0
		5-year								349	0.7	8632	0.0
		10-year								431	0.8	8632	0.0
		25-year								531	1.0	8632	0.0
		50-year								608	1.1	8632	0.0
		100-year								707	1.2	8632	0.0
LCCMC08	CCMC08A	2-year	Rectangular	3.75	4	16.0	901.88	901.74	0.875	231	14.1	146	9.7
		5-year								339	22.5	146	9.7
		10-year								367	24.4	146	9.7
		25-year								384	25.5	146	9.7
		50-year								389	25.9	146	9.7
		100-year								396	26.3	146	9.7
LCCMC08	CCMC08B	2-year	Trapezoidal	3	30	33.0	907.10	907.07	0.100	0	0.0	556	6.2
		5-year								16	2.2	556	6.2
		10-year								77	4.1	556	6.2
		25-year								166	5.4	556	6.2
		50-year								239	6.2	556	6.2
		100-year								331	6.9	556	6.2
LCCMC09	LCCMC09	2-year	Trapezoidal	8	45	153.6	904.82	901.88	1.914	243	0.9	25709	16.0
		5-year								361	0.9	25709	16.0
		10-year								442	0.9	25709	16.0
		25-year								541	0.9	25709	16.0
		50-year								616	0.9	25709	16.0
		100-year								715	0.9	25709	16.0
LCCMC10	CCMC10A	2-year	Circular	1.5	0	22.9	904.83	904.82	0.044	14	8.7	1	0.7
		5-year								14	8.6	1	0.7
		10-year								14	8.5	1	0.7
		25-year								14	8.3	1	0.7
		50-year								14	8.2	1	0.7
		100-year								14	7.9	1	0.7
LCCMC10	CCMC10B	2-year	Circular	1		22.9	904.83	904.82	0.044	5	7.1	0	0.5
		5-year								5	6.9	0	0.5
		10-year								5	6.8	0	0.5
		25-year								5	6.5	0	0.5
		50-year								5	6.4	0	0.5
		100-year								5	6.1	0	0.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LCCMC10	CCMC10C	2-year	Trapezoidal	3	30	22.9	906.17	906.15	0.100	233	6.2	581	6.5
		5-year								359	7.2	581	6.5
		10-year								440	7.7	581	6.5
		25-year								540	8.3	581	6.5
		50-year								617	8.6	581	6.5
		100-year								717	9.1	581	6.5
LCCMC11	LCCMC11	2-year	Natural	14	0	1001.7	914.89	904.83	1.004	174	2.2	49973	11.9
		5-year								258	2.6	49973	11.9
		10-year								312	2.7	49973	11.9
		25-year								381	2.9	49973	11.9
		50-year								433	3.0	49973	11.9
		100-year								502	3.1	49973	11.9
LCCMC12	LCCMC12	2-year	Natural	5.75	0	1276.3	928.25	914.89	1.047	106	2.2	10946	8.4
		5-year								159	2.4	10946	8.4
		10-year								193	2.4	10946	8.4
		25-year								235	2.5	10946	8.4
		50-year								269	2.5	10946	8.4
		100-year								312	2.6	10946	8.4
LCCMC13	CCMC13A	2-year	Circular	4	0	52.2	928.53	928.25	0.536	0	-0.1	98	7.8
		5-year								0	-0.1	98	7.8
		10-year								0	-0.1	98	7.8
		25-year								0	-0.1	98	7.8
		50-year								0	-0.1	98	7.8
		100-year								0	-0.1	98	7.8
LCCMC13	CCMC13B	2-year	Trapezoidal	1	30	52.2	934.00	933.95	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LE23L101	LE23L101	2-year	Natural	7	2	1873.3	929.53	910.00	1.043	22	0.2	26848	10.8
		5-year								30	0.2	26848	10.8
		10-year								36	0.2	26848	10.8
		25-year								43	0.2	26848	10.8
		50-year								49	0.2	26848	10.8
		100-year								56	0.3	26848	10.8
LE23L102	8203.1	2-year	Circular	2	0	121.6	930.00	929.53	0.387	25	11.1	13	4.2
		5-year								26	11.3	13	4.2
		10-year								27	11.4	13	4.2
		25-year								28	11.5	13	4.2
		50-year								29	11.5	13	4.2
		100-year								29	11.6	13	4.2
LE23L102	8203.2	2-year	Trapezoidal	1	30	121.6	934.00	932.53	1.209	5	2.2	335	11.2
		5-year								17	3.5	335	11.2
		10-year								25	4.0	335	11.2
		25-year								34	4.6	335	11.2
		50-year								42	4.9	335	11.2
		100-year								51	5.4	335	11.2
LE23L103	8204.1	2-year	Circular	2	0	53.4	930.14	930.00	0.262	23	7.2	11	3.4
		5-year								24	7.4	11	3.4
		10-year								24	7.6	11	3.4
		25-year								25	7.8	11	3.4
		50-year								25	7.8	11	3.4
		100-year								25	7.9	11	3.4
LE23L103	8204.2	2-year	Trapezoidal	1	30	53.4	934.14	934.00	0.262	14	2.2	156	5.2
		5-year								27	2.8	156	5.2
		10-year								35	3.1	156	5.2
		25-year								45	3.4	156	5.2
		50-year								53	3.6	156	5.2
		100-year								63	3.9	156	5.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LE23L104	8212.1	2-year	Circular	2	0	83.3	931.42	930.14	1.536	22	7.1	26	8.3
		5-year								23	7.3	26	8.3
		10-year								23	7.4	26	8.3
		25-year								24	7.7	26	8.3
		50-year								25	7.8	26	8.3
		100-year								24	7.7	26	8.3
LE23L104	8212.2	2-year	Trapezoidal	1	30	83.3	935.09	934.14	1.140	8	1.7	326	10.9
		5-year								22	2.8	326	10.9
		10-year								31	3.3	326	10.9
		25-year								41	3.8	326	10.9
		50-year								50	4.1	326	10.9
		100-year								60	4.5	326	10.9
LE23L105	8514.1	2-year	Circular	2	0	46.8	931.66	931.42	0.513	23	7.1	15	4.8
		5-year								23	7.2	15	4.8
		10-year								23	7.2	15	4.8
		25-year								23	7.2	15	4.8
		50-year								23	7.3	15	4.8
		100-year								23	7.3	15	4.8
LE23L105	8514.2	2-year	Trapezoidal	1	30	46.8	935.24	935.09	0.321	14	2.2	173	5.8
		5-year								27	2.9	173	5.8
		10-year								35	3.2	173	5.8
		25-year								45	3.5	173	5.8
		50-year								53	3.7	173	5.8
		100-year								63	4.0	173	5.8
LE23L106	8213.1	2-year	Circular	1.25	0	335.1	937.40	931.66	1.713	5	5.2	8	6.4
		5-year								7	6.4	8	6.4
		10-year								8	6.9	8	6.4
		25-year								8	7.0	8	6.4
		50-year								8	7.0	8	6.4
		100-year								8	7.0	8	6.4
LE23L106	8213.2	2-year	Trapezoidal	1	30	335.1	940.65	935.24	1.614	0	0.0	388	12.9
		5-year								0	0.0	388	12.9
		10-year								0	0.0	388	12.9
		25-year								2	0.7	388	12.9
		50-year								3	0.8	388	12.9
		100-year								5	1.0	388	12.9
LE23L1A01	8211.1	2-year	Circular	2	0	134.7	934.86	931.66	2.376	18	6.5	32	10.3
		5-year								22	7.0	32	10.3
		10-year								23	7.1	32	10.3
		25-year								23	7.1	32	10.3
		50-year								23	7.1	32	10.3
		100-year								23	7.2	32	10.3
LE23L1A01	8211.2	2-year	Trapezoidal	1	30	134.7	937.00	935.24	1.307	0	0.0	349	11.6
		5-year								4	0.8	349	11.6
		10-year								10	1.4	349	11.6
		25-year								16	1.9	349	11.6
		50-year								22	2.3	349	11.6
		100-year								28	2.6	349	11.6
LE23MC01	E23MC01A	2-year	Rectangular	4	8	41.5	907.40	906.50	2.170	201	9.7	606	18.9
		5-year								313	13.2	606	18.9
		10-year								361	14.6	606	18.9
		25-year								454	16.8	606	18.9
		50-year								529	18.5	606	18.9
		100-year								630	20.6	606	18.9
LE23MC01	E23MC01B	2-year	Trapezoidal	3	30	41.5	912.00	911.96	0.100	0	0.0	546	6.1
		5-year								0	0.0	546	6.1
		10-year								0	0.0	546	6.1
		25-year								0	0.0	546	6.1
		50-year								0	0.0	546	6.1
		100-year								0	0.0	546	6.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LE23MC02	LE23MC02	2-year	Natural	5.6	0	1605.8	910.00	907.40	0.162	576	2.3	6324	3.2
		5-year								902	2.5	6324	3.2
		10-year								1024	2.5	6324	3.2
		25-year								1322	2.5	6324	3.2
		50-year								1573	2.5	6324	3.2
		100-year								1930	2.6	6324	3.2
LE23MC03	LE23MC03	2-year	Natural	7.5	0	614.9	911.41	910.00	0.229	398	1.4	17315	5.1
		5-year								615	1.4	17315	5.1
		10-year								740	1.5	17315	5.1
		25-year								886	1.7	17315	5.1
		50-year								1016	1.7	17315	5.1
		100-year								1191	1.8	17315	5.1
LE23MC04	LE23MC04	2-year	Natural	6	0	1102.0	916.56	911.41	0.467	296	3.7	7219	5.9
		5-year								458	3.7	7219	5.9
		10-year								556	3.6	7219	5.9
		25-year								691	3.6	7219	5.9
		50-year								787	3.6	7219	5.9
		100-year								911	3.6	7219	5.9
LE23MC05	LE23MC05	2-year	Natural	4	10	1172.6	923.58	916.56	0.599	135	3.2	1722	3.9
		5-year								211	3.2	1722	3.9
		10-year								248	3.2	1722	3.9
		25-year								299	3.2	1722	3.9
		50-year								337	3.3	1722	3.9
		100-year								387	3.3	1722	3.9
LE4MC01	LE4MC01	2-year	Circular	6	0	200.4	879.59	871.31	4.132	48	15.6	799	28.3
		5-year								75	17.7	799	28.3
		10-year								90	18.8	799	28.3
		25-year								112	19.9	799	28.3
		50-year								128	20.7	799	28.3
		100-year								149	21.7	799	28.3
LE7MC01	LE7MC01	2-year	Circular	5	0	158.2	885.46	879.23	3.937	82	18.3	480	24.4
		5-year								119	20.3	480	24.4
		10-year								141	21.3	480	24.4
		25-year								171	22.4	480	24.4
		50-year								193	23.1	480	24.4
		100-year								222	24.0	480	24.4
LFPL101	8250.1	2-year	Circular	3	0	378.3	886.42	874.72	3.093	23	8.8	109	15.4
		5-year								26	9.4	109	15.4
		10-year								38	9.5	109	15.4
		25-year								46	9.6	109	15.4
		50-year								52	10.3	109	15.4
		100-year								60	11.4	109	15.4
LFPL101	8250.2	2-year	Trapezoidal	1	30	378.3	893.02	891.39	0.431	0	0.0	200	6.7
		5-year								0	0.0	200	6.7
		10-year								0	0.0	200	6.7
		25-year								0	0.0	200	6.7
		50-year								0	0.0	200	6.7
		100-year								0	0.0	200	6.7
LFPL102	8454.1	2-year	Circular	2	0	46.3	886.65	886.42	0.496	23	10.3	15	4.7
		5-year								26	11.0	15	4.7
		10-year								38	14.4	15	4.7
		25-year								46	16.8	15	4.7
		50-year								52	18.4	15	4.7
		100-year								60	20.4	15	4.7
LFPL102	8454.2	2-year	Trapezoidal	1	30	46.3	893.15	893.02	0.281	0	0.0	162	5.4
		5-year								0	0.0	162	5.4
		10-year								0	0.0	162	5.4
		25-year								0	0.0	162	5.4
		50-year								0	0.0	162	5.4
		100-year								0	0.0	162	5.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPL103	8455.1	2-year	Circular	2	0	52.1	886.95	886.65	0.575	16	6.0	16	5.1
		5-year								17	6.1	16	5.1
		10-year								17	6.1	16	5.1
		25-year								17	6.1	16	5.1
		50-year								17	6.0	16	5.1
		100-year								17	6.0	16	5.1
LFPL103	8455.2	2-year	Trapezoidal	1	30	52.1	893.03	892.98	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								10	1.7	96	3.2
		25-year								15	2.0	96	3.2
		50-year								19	2.2	96	3.2
		100-year								24	2.5	96	3.2
LFPL104	8251.1	2-year	Circular	1	0	105.0	888.09	886.95	1.086	6	7.9	3	4.4
		5-year								6	7.9	3	4.4
		10-year								6	7.9	3	4.4
		25-year								6	7.9	3	4.4
		50-year								6	7.9	3	4.4
		100-year								6	7.9	3	4.4
LFPL104	8251.2	2-year	Trapezoidal	3	30	105.0	891.09	890.99	0.100	10	1.6	556	6.2
		5-year								19	2.0	556	6.2
		10-year								26	1.9	556	6.2
		25-year								32	1.9	556	6.2
		50-year								35	1.9	556	6.2
		100-year								40	1.9	556	6.2
LFPL201	8456.1	2-year	Circular	2	0	89.5	884.11	874.72	10.487	75	23.4	68	21.7
		5-year								87	27.2	68	21.7
		10-year								86	27.1	68	21.7
		25-year								86	27.1	68	21.7
		50-year								86	27.1	68	21.7
		100-year								86	27.0	68	21.7
LFPL201	8456.2	2-year	Trapezoidal	1	30	89.5	891.94	891.39	0.614	0	0.0	239	8.0
		5-year								24	3.3	239	8.0
		10-year								45	4.1	239	8.0
		25-year								72	5.0	239	8.0
		50-year								92	5.5	239	8.0
		100-year								119	6.1	239	8.0
LFPL202	8457.1	2-year	Circular	2	0	97.5	888.14	884.11	4.133	56	18.6	43	13.6
		5-year								56	18.6	43	13.6
		10-year								56	18.6	43	13.6
		25-year								56	18.6	43	13.6
		50-year								56	18.6	43	13.6
		100-year								56	18.6	43	13.6
LFPL202	8457.2	2-year	Trapezoidal	2	30	97.5	892.14	891.94	0.205	29	2.7	421	7.0
		5-year								92	4.3	421	7.0
		10-year								111	4.6	421	7.0
		25-year								138	5.0	421	7.0
		50-year								157	5.3	421	7.0
		100-year								182	5.6	421	7.0
LFPL203	8496.1	2-year	Circular	1.25	0	222.0	888.41	888.14	0.122	7	5.8	2	1.7
		5-year								7	5.8	2	1.7
		10-year								7	5.8	2	1.7
		25-year								7	5.8	2	1.7
		50-year								7	5.8	2	1.7
		100-year								7	5.8	2	1.7
LFPL203	8496.2	2-year	Trapezoidal	2	30	222.0	891.66	891.44	0.100	74	2.8	294	4.9
		5-year								109	2.8	294	4.9
		10-year								128	2.9	294	4.9
		25-year								154	3.2	294	4.9
		50-year								173	3.4	294	4.9
		100-year								198	3.7	294	4.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPL204	8499.1	2-year	Circular	1.25	0	102.8	888.89	888.41	0.467	4	3.6	4	3.3
		5-year								4	3.6	4	3.3
		10-year								4	3.6	4	3.3
		25-year								4	3.6	4	3.3
		50-year								4	3.6	4	3.3
		100-year								4	3.6	4	3.3
LFPL204	8499.2	2-year	Trapezoidal	3	30	102.8	891.39	891.29	0.100	72	1.9	557	6.2
		5-year								105	2.1	557	6.2
		10-year								124	2.4	557	6.2
		25-year								150	2.7	557	6.2
		50-year								169	2.9	557	6.2
		100-year								194	3.1	557	6.2
LFPL205	8497.1	2-year	Circular	1.25	0	124.2	890.46	888.89	1.265	8	6.2	7	5.5
		5-year								8	6.1	7	5.5
		10-year								8	6.1	7	5.5
		25-year								8	6.1	7	5.5
		50-year								8	6.1	7	5.5
		100-year								8	6.1	7	5.5
LFPL205	8497.2	2-year	Trapezoidal	3	30	124.2	893.71	891.39	1.869	70	3.2	2405	26.7
		5-year								103	3.6	2405	26.7
		10-year								123	4.0	2405	26.7
		25-year								149	4.4	2405	26.7
		50-year								168	4.7	2405	26.7
		100-year								193	5.1	2405	26.7
LFPL206	8498.1	2-year	Circular	1.25	0	95.3	890.84	890.46	0.399	6	5.2	4	3.1
		5-year								6	5.2	4	3.1
		10-year								6	5.1	4	3.1
		25-year								6	5.1	4	3.1
		50-year								6	5.1	4	3.1
		100-year								6	5.1	4	3.1
LFPL206	8498.2	2-year	Trapezoidal	1	30	95.3	894.09	893.71	0.399	72	4.4	193	6.4
		5-year								104	5.1	193	6.4
		10-year								123	5.4	193	6.4
		25-year								149	5.8	193	6.4
		50-year								168	6.1	193	6.4
		100-year								193	6.4	193	6.4
LFPL301	8458.1	2-year	Circular	2	0	451.2	878.80	874.72	0.904	12	4.9	20	6.4
		5-year								22	6.8	20	6.4
		10-year								28	8.8	20	6.4
		25-year								31	9.7	20	6.4
		50-year								31	9.8	20	6.4
		100-year								32	9.9	20	6.4
LFPL301	8458.2	2-year	Trapezoidal	1	30	451.2	887.00	886.55	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								3	0.9	96	3.2
		50-year								11	1.5	96	3.2
		100-year								22	2.0	96	3.2
LFPMC01	LFPMC01	2-year	Circular	6	0	107.8	873.07	871.48	1.475	139	14.7	478	16.9
		5-year								240	16.9	478	16.9
		10-year								296	17.8	478	16.9
		25-year								369	18.8	478	16.9
		50-year								417	19.1	478	16.9
		100-year								479	19.3	478	16.9
LFPMC02	FPMC02A	2-year	Circular	6	0	27.2	873.48	873.07	1.508	139	14.7	483	17.1
		5-year								240	16.9	483	17.1
		10-year								295	17.8	483	17.1
		25-year								369	18.8	483	17.1
		50-year								417	19.2	483	17.1
		100-year								479	19.4	483	17.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LFPMC02	FPMC02B	2-year	Trapezoidal	1	30	27.2	908.00	907.97	0.100	0	0.0	101	3.4
		5-year								0	0.0	101	3.4
		10-year								0	0.0	101	3.4
		25-year								0	0.0	101	3.4
		50-year								0	0.0	101	3.4
		100-year								0	0.0	101	3.4
LFPMC03	FPMC03A	2-year	Circular	6	0	84.2	874.72	873.48	1.473	138	14.7	477	16.9
		5-year								240	16.9	477	16.9
		10-year								295	17.8	477	16.9
		25-year								369	18.7	477	16.9
		50-year								417	19.2	477	16.9
		100-year								479	19.4	477	16.9
LFPMC03	FPMC03B	2-year	Trapezoidal	1	30	84.2	908.08	908.00	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LFPMC04	8459.1	2-year	Circular	2.5	0	385.7	886.42	874.72	3.033	37	8.7	39	7.9
		5-year								40	8.9	39	7.9
		10-year								40	8.9	39	7.9
		25-year								40	8.9	39	7.9
		50-year								40	8.9	39	7.9
		100-year								40	8.9	39	7.9
LFPMC04	8459.2	2-year	Trapezoidal	1	30	385.7	888.00	887.61	0.100	16	1.7	96	3.2
		5-year								62	3.1	96	3.2
		10-year								95	3.7	96	3.2
		25-year								128	4.6	96	3.2
		50-year								154	5.3	96	3.2
		100-year								187	6.2	96	3.2
LFPMC05	LFPMC05	2-year	Natural	6	14	1428.6	887.00	886.42	0.041	20	0.6	746	1.0
		5-year								39	0.9	746	1.0
		10-year								52	1.1	746	1.0
		25-year								68	1.2	746	1.0
		50-year								81	1.2	746	1.0
		100-year								97	1.2	746	1.0
LIPL201	LIPL201	2-year	Natural	9	10	484.0	902.67	896.50	1.275	95	3.6	28318	11.6
		5-year								154	2.2	28318	11.6
		10-year								185	1.8	28318	11.6
		25-year								223	1.6	28318	11.6
		50-year								257	1.9	28318	11.6
		100-year								297	2.8	28318	11.6
LIPL202	LIPL202	2-year	Natural	4	10	1173.1	909.87	902.67	0.614	42	2.3	848	3.7
		5-year								57	2.5	848	3.7
		10-year								63	2.6	848	3.7
		25-year								68	2.7	848	3.7
		50-year								81	2.8	848	3.7
		100-year								94	2.8	848	3.7
LIPL203	LIPL203	2-year	Natural	4	15	549.6	923.00	909.87	2.389	4	0.9	1388	8.4
		5-year								6	1.0	1388	8.4
		10-year								7	1.1	1388	8.4
		25-year								8	1.1	1388	8.4
		50-year								9	1.1	1388	8.4
		100-year								10	1.2	1388	8.4
LIPL204	8224.1	2-year	Circular	2	0	108.3	923.54	923.00	0.499	4	5.1	15	4.7
		5-year								6	5.7	15	4.7
		10-year								7	6.0	15	4.7
		25-year								8	6.3	15	4.7
		50-year								9	6.6	15	4.7
		100-year								10	6.9	15	4.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL204	8224.2	2-year	Trapezoidal	1	30	108.3	930.54	927.00	3.268	0	0.0	551	18.4
		5-year								0	0.0	551	18.4
		10-year								0	0.0	551	18.4
		25-year								0	0.0	551	18.4
		50-year								0	0.0	551	18.4
		100-year								0	0.0	551	18.4
LIPL205	8225.1	2-year	Circular	2	0	52.6	925.04	923.54	2.853	4	4.8	35	11.3
		5-year								6	5.4	35	11.3
		10-year								7	5.7	35	11.3
		25-year								8	6.0	35	11.3
		50-year								9	6.2	35	11.3
		100-year								10	6.5	35	11.3
LIPL205	8225.2	2-year	Trapezoidal	1	30	52.6	931.29	929.54	3.329	0	0.0	557	18.6
		5-year								0	0.0	557	18.6
		10-year								0	0.0	557	18.6
		25-year								0	0.0	557	18.6
		50-year								0	0.0	557	18.6
		100-year								0	0.0	557	18.6
LIPL206	8226.1	2-year	Circular	1.25	0	233.7	928.85	925.04	1.630	4	6.5	8	6.2
		5-year								6	7.0	8	6.2
		10-year								7	7.2	8	6.2
		25-year								8	8.0	8	6.2
		50-year								8	8.1	8	6.2
		100-year								8	8.2	8	6.2
LIPL206	8226.2	2-year	Trapezoidal	1	30	233.7	932.10	930.29	0.774	0	0.0	268	8.9
		5-year								0	0.0	268	8.9
		10-year								0	0.0	268	8.9
		25-year								0	0.4	268	8.9
		50-year								1	0.9	268	8.9
		100-year								2	1.2	268	8.9
LIPL2A01	LIPL2A01	2-year	Trapezoidal	4	24	168.0	903.91	902.67	0.738	46	1.1	1161	7.3
		5-year								77	1.2	1161	7.3
		10-year								93	1.2	1161	7.3
		25-year								117	1.5	1161	7.3
		50-year								133	1.6	1161	7.3
		100-year								154	1.7	1161	7.3
LIPL2A02	LIPL2A02	2-year	Natural	4	24	1114.6	916.83	903.91	1.159	40	1.7	7168	7.0
		5-year								58	1.8	7168	7.0
		10-year								68	1.8	7168	7.0
		25-year								84	1.8	7168	7.0
		50-year								96	1.8	7168	7.0
		100-year								111	1.8	7168	7.0
LIPL2A03	8229.1	2-year	Circular	2.5	0	127.5	917.54	916.83	0.557	24	9.3	28	5.8
		5-year								34	10.5	28	5.8
		10-year								41	12.7	28	5.8
		25-year								43	13.3	28	5.8
		50-year								44	13.5	28	5.8
		100-year								46	13.6	28	5.8
LIPL2A03	8229.2	2-year	Trapezoidal	1	30	127.5	922.12	920.83	1.012	0	0.0	307	10.2
		5-year								0	0.0	307	10.2
		10-year								0	0.0	307	10.2
		25-year								7	2.3	307	10.2
		50-year								12	2.9	307	10.2
		100-year								20	3.5	307	10.2
LIPL2A04	8228.1	2-year	Circular	2	0	46.5	917.99	917.54	0.969	24	7.6	21	6.6
		5-year								34	10.8	21	6.6
		10-year								36	11.5	21	6.6
		25-year								37	11.7	21	6.6
		50-year								37	11.7	21	6.6
		100-year								37	11.8	21	6.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL2A04	8228.2	2-year	Trapezoidal	2	30	46.5	922.24	921.12	2.411	0	0.0	1444	24.1
		5-year								0	0.0	1444	24.1
		10-year								19	2.8	1444	24.1
		25-year								36	3.0	1444	24.1
		50-year								43	3.1	1444	24.1
		100-year								52	3.4	1444	24.1
LIPL2A05	8227.1	2-year	Circular	2	0	134.3	918.27	917.99	0.208	23	7.4	10	3.1
		5-year								24	7.5	10	3.1
		10-year								24	7.5	10	3.1
		25-year								24	7.5	10	3.1
		50-year								24	7.6	10	3.1
		100-year								24	7.6	10	3.1
LIPL2A05	8227.2	2-year	Trapezoidal	2	30	134.3	921.52	921.24	0.208	1	0.7	425	7.1
		5-year								28	2.4	425	7.1
		10-year								40	2.5	425	7.1
		25-year								48	2.6	425	7.1
		50-year								55	2.5	425	7.1
		100-year								63	2.5	425	7.1
LIPL401	LIPL401	2-year	Natural	6	6	923.8	901.03	897.01	0.435	19	1.0	1554	3.6
		5-year								28	1.0	1554	3.6
		10-year								31	1.0	1554	3.6
		25-year								35	1.0	1554	3.6
		50-year								42	0.9	1554	3.6
		100-year								46	0.9	1554	3.6
LIPL402	IPL402A	2-year	Special	2.67	3.33	86.9	901.98	901.03	1.093	20	5.1	51	5.7
		5-year								28	5.8	51	5.7
		10-year								31	6.0	51	5.7
		25-year								35	6.3	51	5.7
		50-year								43	6.8	51	5.7
		100-year								46	7.0	51	5.7
LIPL402	IPL402B	2-year	Trapezoidal	1	30	86.9	907.00	906.91	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LIPL403	LIPL403	2-year	Natural	4.5	5	320.7	903.61	901.98	0.507	20	2.2	1927	3.9
		5-year								29	2.3	1927	3.9
		10-year								31	2.4	1927	3.9
		25-year								36	2.4	1927	3.9
		50-year								44	2.4	1927	3.9
		100-year								46	2.4	1927	3.9
LIPL404	IPL404A	2-year	Special	2.5	3.5	47.7	903.86	903.61	0.524	20	5.3	26	3.8
		5-year								29	6.4	26	3.8
		10-year								31	6.6	26	3.8
		25-year								36	7.1	26	3.8
		50-year								44	7.8	26	3.8
		100-year								46	8.1	26	3.8
LIPL404	IPL404B	2-year	Trapezoidal	1	30	47.7	908.69	907.81	1.844	0	0.0	414	13.8
		5-year								0	0.0	414	13.8
		10-year								0	0.0	414	13.8
		25-year								0	0.0	414	13.8
		50-year								0	0.0	414	13.8
		100-year								0	0.0	414	13.8
LIPL405	LIPL405	2-year	Natural	5	5	233.6	906.93	903.86	1.317	20	1.8	4157	6.7
		5-year								29	1.9	4157	6.7
		10-year								31	2.0	4157	6.7
		25-year								36	2.0	4157	6.7
		50-year								44	2.1	4157	6.7
		100-year								47	2.2	4157	6.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL406	8470.1	2-year	Circular	2.5	0	50.9	910.27	906.93	6.562	20	11.1	57	11.6
		5-year								29	12.3	57	11.6
		10-year								31	12.5	57	11.6
		25-year								36	13.1	57	11.6
		50-year								44	13.9	57	11.6
		100-year								47	13.9	57	11.6
LIPL406	8470.2	2-year	Trapezoidal	1	30	50.9	915.60	911.60	7.866	0	0.0	855	28.5
		5-year								0	0.0	855	28.5
		10-year								0	0.0	855	28.5
		25-year								0	0.0	855	28.5
		50-year								0	0.0	855	28.5
		100-year								0	0.0	855	28.5
LIPL407	8471.1	2-year	Circular	2	0	127.0	912.80	910.27	1.993	20	10.1	30	9.4
		5-year								29	10.9	30	9.4
		10-year								31	11.2	30	9.4
		25-year								36	11.9	30	9.4
		50-year								44	13.9	30	9.4
		100-year								47	14.6	30	9.4
LIPL407	8471.2	2-year	Trapezoidal	1	30	127.0	918.55	914.60	3.111	0	0.0	538	17.9
		5-year								0	0.0	538	17.9
		10-year								0	0.0	538	17.9
		25-year								0	0.0	538	17.9
		50-year								0	0.0	538	17.9
		100-year								0	0.0	538	17.9
LIPL408	8230.1	2-year	Circular	2	0	363.0	919.35	912.80	1.805	20	9.8	28	9.0
		5-year								29	10.3	28	9.0
		10-year								31	10.5	28	9.0
		25-year								35	10.9	28	9.0
		50-year								35	11.0	28	9.0
		100-year								35	11.0	28	9.0
LIPL408	8230.2	2-year	Trapezoidal	1	30	363.0	924.93	917.55	2.033	0	0.0	435	14.5
		5-year								0	0.0	435	14.5
		10-year								0	0.0	435	14.5
		25-year								2	1.8	435	14.5
		50-year								16	3.7	435	14.5
		100-year								24	4.2	435	14.5
LIPL409	8231.1	2-year	Circular	2	0	61.5	919.39	919.35	0.065	20	7.6	5	1.7
		5-year								29	9.5	5	1.7
		10-year								31	9.7	5	1.7
		25-year								33	10.4	5	1.7
		50-year								33	10.4	5	1.7
		100-year								33	10.4	5	1.7
LIPL409	8231.2	2-year	Trapezoidal	2	30	61.5	924.56	923.93	1.025	0	0.0	941	15.7
		5-year								0	0.0	941	15.7
		10-year								0	0.0	941	15.7
		25-year								42	3.1	941	15.7
		50-year								53	3.2	941	15.7
		100-year								60	3.4	941	15.7
LIPL410	8232.1	2-year	Circular	2	0	72.9	919.61	919.39	0.302	20	6.3	12	3.7
		5-year								29	9.1	12	3.7
		10-year								31	9.8	12	3.7
		25-year								31	9.9	12	3.7
		50-year								31	9.9	12	3.7
		100-year								32	10.0	12	3.7
LIPL410	8232.2	2-year	Trapezoidal	2	30	72.9	924.69	923.56	1.550	0	0.0	1158	19.3
		5-year								0	0.0	1158	19.3
		10-year								0	0.0	1158	19.3
		25-year								36	2.8	1158	19.3
		50-year								51	3.0	1158	19.3
		100-year								59	3.2	1158	19.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL411	8233.1	2-year	Circular	2	0	227.5	922.40	919.61	1.227	20	6.9	23	7.4
		5-year								23	7.2	23	7.4
		10-year								23	7.6	23	7.4
		25-year								22	7.1	23	7.4
		50-year								22	7.1	23	7.4
		100-year								22	7.1	23	7.4
LIPL411	8233.2	2-year	Trapezoidal	2	30	227.5	924.90	923.69	0.532	0	0.0	678	11.3
		5-year								11	2.3	678	11.3
		10-year								22	2.7	678	11.3
		25-year								34	2.8	678	11.3
		50-year								39	2.7	678	11.3
		100-year								46	3.0	678	11.3
LIPL501	LIPL501	2-year	Trapezoidal	6	20	67.6	900.00	897.98	2.986	26	1.0	5800	17.3
		5-year								36	1.0	5800	17.3
		10-year								42	1.0	5800	17.3
		25-year								50	1.0	5800	17.3
		50-year								56	1.1	5800	17.3
		100-year								64	1.1	5800	17.3
LIPL502	IPL502A	2-year	Circular	3.5	0	53.4	901.84	900.00	3.444	26	10.0	101	10.5
		5-year								36	11.2	101	10.5
		10-year								42	11.8	101	10.5
		25-year								50	12.4	101	10.5
		50-year								56	12.7	101	10.5
		100-year								64	13.1	101	10.5
LIPL502	IPL502B	2-year	Trapezoidal	1	30	53.4	905.00	904.95	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LIPL601	LIPL601	2-year	Natural	6.2	4	524.6	901.37	899.05	0.443	119	0.5	71892	14.7
		5-year								163	0.5	71892	14.7
		10-year								187	0.5	71892	14.7
		25-year								208	0.5	71892	14.7
		50-year								218	0.4	71892	14.7
		100-year								224	0.4	71892	14.7
LIPL602	IPL602A	2-year	Special	2	3.5	66.1	901.77	901.37	0.601	22	6.8	24	3.7
		5-year								34	7.7	24	3.7
		10-year								40	8.6	24	3.7
		25-year								47	9.4	24	3.7
		50-year								52	9.7	24	3.7
		100-year								56	10.0	24	3.7
LIPL602	IPL602B	2-year	Trapezoidal	1	30	66.1	906.66	906.59	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LIPL603	LIPL603	2-year	Natural	4	20	448.5	904.50	901.77	0.609	47	1.6	6596	10.3
		5-year								74	1.7	6596	10.3
		10-year								88	1.8	6596	10.3
		25-year								106	1.8	6596	10.3
		50-year								120	1.8	6596	10.3
		100-year								137	1.9	6596	10.3
LIPL604	8468.1	2-year	Circular	3	0	67.7	905.30	904.50	1.181	15	9.3	67	9.5
		5-year								22	10.5	67	9.5
		10-year								26	11.1	67	9.5
		25-year								31	11.8	67	9.5
		50-year								35	12.4	67	9.5
		100-year								40	12.9	67	9.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPL604	8468.2	2-year	Trapezoidal	1	30	67.7	913.72	911.00	4.016	0	0.0	611	20.4
		5-year								0	0.0	611	20.4
		10-year								0	0.0	611	20.4
		25-year								0	0.0	611	20.4
		50-year								0	0.0	611	20.4
		100-year								0	0.0	611	20.4
LIPL605	8469.1	2-year	Circular	2	0	311.3	911.63	905.30	2.034	15	9.0	30	9.5
		5-year								22	10.4	30	9.5
		10-year								26	10.7	30	9.5
		25-year								31	11.0	30	9.5
		50-year								35	11.7	30	9.5
		100-year								36	11.9	30	9.5
LIPL605	8469.2	2-year	Trapezoidal	1	30	311.3	915.55	912.72	0.909	0	0.0	291	9.7
		5-year								0	0.0	291	9.7
		10-year								0	0.0	291	9.7
		25-year								0	0.0	291	9.7
		50-year								0	0.0	291	9.7
		100-year								4	1.8	291	9.7
LIPL6A01	8393.1	2-year	Circular	2	0	84.4	906.85	904.50	2.783	33	16.4	35	11.2
		5-year								38	18.0	35	11.2
		10-year								39	18.3	35	11.2
		25-year								41	18.7	35	11.2
		50-year								43	18.9	35	11.2
		100-year								45	19.1	35	11.2
LIPL6A01	8393.2	2-year	Trapezoidal	1	30	84.4	912.43	912.00	0.509	0	0.0	218	7.3
		5-year								14	2.5	218	7.3
		10-year								23	3.0	218	7.3
		25-year								34	3.5	218	7.3
		50-year								43	3.8	218	7.3
		100-year								55	4.2	218	7.3
LIPL6A02	8223.1	2-year	Circular	2	0	231.8	907.39	906.85	0.233	16	5.2	10	3.2
		5-year								17	5.5	10	3.2
		10-year								18	5.6	10	3.2
		25-year								18	5.6	10	3.2
		50-year								18	5.6	10	3.2
		100-year								18	5.7	10	3.2
LIPL6A02	8223.2	2-year	Trapezoidal	2	30	231.8	912.66	912.43	0.100	1	0.6	293	4.9
		5-year								18	1.9	293	4.9
		10-year								23	2.1	293	4.9
		25-year								30	2.3	293	4.9
		50-year								35	2.5	293	4.9
		100-year								41	2.6	293	4.9
LIPL6A03	8222.1	2-year	Circular	2	0	43.2	908.01	907.39	1.436	15	5.1	25	8.0
		5-year								17	5.5	25	8.0
		10-year								18	5.8	25	8.0
		25-year								18	5.8	25	8.0
		50-year								18	5.8	25	8.0
		100-year								20	6.4	25	8.0
LIPL6A03	8222.2	2-year	Trapezoidal	3	30	43.2	911.34	911.31	0.069	18	1.3	464	5.2
		5-year								26	1.4	464	5.2
		10-year								31	1.4	464	5.2
		25-year								38	1.5	464	5.2
		50-year								43	1.4	464	5.2
		100-year								49	1.5	464	5.2
LIPMC02	LIPMC02	2-year	Natural	11.2	0	824.4	887.24	885.58	0.201	873	2.7	19847	4.9
		5-year								1226	2.6	19847	4.9
		10-year								1369	2.6	19847	4.9
		25-year								1506	2.6	19847	4.9
		50-year								1705	2.6	19847	4.9
		100-year								1766	2.6	19847	4.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC03	IPMC03A	2-year	User Defined	0	0	41.6	887.40	887.24	0.384	856	10.0	0	11.4
		5-year								1217	13.4	0	11.4
		10-year								1380	14.7	0	11.4
		25-year								1549	15.9	0	11.4
		50-year								1764	17.3	0	11.4
		100-year								1852	17.7	0	11.4
LIPMC03	IPMC03B	2-year	Trapezoidal	2	30	41.6	894.50	894.46	0.100	0	0.0	288	4.8
		5-year								0	0.0	288	4.8
		10-year								0	0.0	288	4.8
		25-year								1	0.6	288	4.8
		50-year								27	2.5	288	4.8
		100-year								113	4.6	288	4.8
LIPMC04	LIPMC04	2-year	Natural	8.1	0	1846.0	891.21	887.40	0.206	856	2.2	8741	4.4
		5-year								1205	2.3	8741	4.4
		10-year								1402	2.4	8741	4.4
		25-year								1638	2.5	8741	4.4
		50-year								1895	2.6	8741	4.4
		100-year								2040	2.7	8741	4.4
LIPMC05	IPMC05A	2-year	User Defined	0	0	21.6	891.75	891.21	2.501	837	6.8	0	16.0
		5-year								1195	8.6	0	16.0
		10-year								1394	9.5	0	16.0
		25-year								1642	10.2	0	16.0
		50-year								1848	11.5	0	16.0
		100-year								2045	11.8	0	16.0
LIPMC05	IPMC05B	2-year	Trapezoidal	1	30	21.6	902.00	901.98	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LIPMC06	LIPMC06	2-year	Natural	8	0	247.5	892.00	891.75	0.101	836	2.1	6538	3.3
		5-year								1194	2.0	6538	3.3
		10-year								1393	2.0	6538	3.3
		25-year								1643	2.1	6538	3.3
		50-year								1846	2.2	6538	3.3
		100-year								2046	2.2	6538	3.3
LIPMC07	IPMC07A	2-year	Rectangular	12	12	95.2	892.50	892.00	0.525	278	6.0	2304	16.0
		5-year								398	7.6	2304	16.0
		10-year								464	8.4	2304	16.0
		25-year								548	9.1	2304	16.0
		50-year								615	9.9	2304	16.0
		100-year								682	10.4	2304	16.0
LIPMC07	IPMC07B	2-year	Trapezoidal	1	30	95.2	908.00	907.90	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LIPMC08	LIPMC08	2-year	Natural	10	0	1763.3	896.15	892.50	0.207	751	2.1	25036	5.1
		5-year								1065	2.2	25036	5.1
		10-year								1246	2.3	25036	5.1
		25-year								1487	2.3	25036	5.1
		50-year								1649	2.4	25036	5.1
		100-year								1840	2.4	25036	5.1
LIPMC09	IPMC09A	2-year	Rectangular	12	8	151.3	896.30	896.15	0.099	384	11.5	575	6.0
		5-year								537	14.5	575	6.0
		10-year								627	16.2	575	6.0
		25-year								746	18.3	575	6.0
		50-year								831	19.6	575	6.0
		100-year								924	21.0	575	6.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC09	IPMC09B	2-year	Trapezoidal	1	30	151.3	912.00	911.85	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LIPMC10	LIPMC10	2-year	Trapezoidal	10	6	20.5	896.50	896.30	0.978	617	7.2	4535	12.6
		5-year								878	8.3	4535	12.6
		10-year								1027	8.8	4535	12.6
		25-year								1221	9.2	4535	12.6
		50-year								1363	9.4	4535	12.6
		100-year								1527	9.8	4535	12.6
LIPMC11	LIPMC11	2-year	Trapezoidal	8	6	26.3	897.01	896.50	1.937	580	2.0	22383	15.0
		5-year								826	1.6	22383	15.0
		10-year								975	1.6	22383	15.0
		25-year								1170	1.7	22383	15.0
		50-year								1313	1.7	22383	15.0
		100-year								1492	1.8	22383	15.0
LIPMC12	LIPMC12	2-year	Natural	6	22	1160.2	897.98	897.01	0.084	567	1.1	3599	2.5
		5-year								817	1.2	3599	2.5
		10-year								964	1.2	3599	2.5
		25-year								1153	1.3	3599	2.5
		50-year								1293	1.3	3599	2.5
		100-year								1434	1.3	3599	2.5
LIPMC13	IPMC13A	2-year	Rectangular	6	6	87.2	899.05	897.98	1.226	289	15.4	554	15.4
		5-year								417	18.1	554	15.4
		10-year								491	19.4	554	15.4
		25-year								590	21.0	554	15.4
		50-year								662	22.0	554	15.4
		100-year								727	22.9	554	15.4
LIPMC13	IPMC13B	2-year	Trapezoidal	1	30	87.2	905.00	904.91	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LIPMC14	LIPMC14	2-year	Trapezoidal	8	10	1301.8	901.49	899.05	0.187	482	4.3	1664	5.0
		5-year								706	4.7	1664	5.0
		10-year								836	5.0	1664	5.0
		25-year								1026	5.2	1664	5.0
		50-year								1161	5.4	1664	5.0
		100-year								1341	5.6	1664	5.0
LIPMC15	IPMC15A	2-year	Rectangular	5	6	35.8	902.00	901.49	1.424	245	8.7	467	15.6
		5-year								270	9.1	467	15.6
		10-year								276	9.2	467	15.6
		25-year								282	9.3	467	15.6
		50-year								285	9.4	467	15.6
		100-year								288	9.4	467	15.6
LIPMC15	IPMC15B	2-year	Trapezoidal	5	30	35.8	906.00	905.96	0.100	-10	-1.0	1284	8.6
		5-year								189	4.9	1284	8.6
		10-year								380	7.3	1284	8.6
		25-year								560	8.3	1284	8.6
		50-year								690	8.9	1284	8.6
		100-year								863	9.7	1284	8.6
LIPMC16	LIPMC16	2-year	Trapezoidal	7	10	337.3	903.73	902.00	0.513	434	4.4	1922	7.6
		5-year								635	4.7	1922	7.6
		10-year								754	4.9	1922	7.6
		25-year								920	5.1	1922	7.6
		50-year								1041	5.3	1922	7.6
		100-year								1203	5.5	1922	7.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LIPMC17	IPMC17A	2-year	Rectangular	5	8	44.7	903.90	903.73	0.381	217	7.6	349	8.7
		5-year								312	8.9	349	8.7
		10-year								337	9.1	349	8.7
		25-year								359	9.1	349	8.7
		50-year								372	9.1	349	8.7
		100-year								385	9.2	349	8.7
LIPMC17	IPMC17B	2-year	Trapezoidal	4	30	44.7	908.00	907.96	0.100	0	0.0	820	6.8
		5-year								12	1.7	820	6.8
		10-year								81	4.1	820	6.8
		25-year								203	5.7	820	6.8
		50-year								299	6.6	820	6.8
		100-year								438	7.6	820	6.8
LIPMC18	LIPMC18	2-year	Trapezoidal	7.5	22	580.4	904.00	903.90	0.017	434	1.8	1246	1.4
		5-year								635	1.9	1246	1.4
		10-year								753	1.9	1246	1.4
		25-year								919	1.9	1246	1.4
		50-year								1039	1.9	1246	1.4
		100-year								1199	2.0	1246	1.4
LIPMC19	IPMC19A	2-year	Rectangular	5	8	50.9	904.25	904.00	0.500	218	7.5	397	9.9
		5-year								319	9.0	397	9.9
		10-year								376	9.7	397	9.9
		25-year								423	10.2	397	9.9
		50-year								449	10.5	397	9.9
		100-year								474	11.4	397	9.9
LIPMC19	IPMC19B	2-year	Trapezoidal	4	30	50.9	909.00	908.95	0.100	0	0.0	860	7.2
		5-year								0	0.0	860	7.2
		10-year								7	1.5	860	7.2
		25-year								81	4.0	860	7.2
		50-year								159	5.2	860	7.2
		100-year								286	6.5	860	7.2
LIPMC20	LIPMC20	2-year	Trapezoidal	7.5	25	291.3	906.02	904.08	0.666	251	2.5	5085	9.4
		5-year								377	2.7	5085	9.4
		10-year								453	2.8	5085	9.4
		25-year								555	2.9	5085	9.4
		50-year								634	2.9	5085	9.4
		100-year								738	3.0	5085	9.4
LLWL101	LLWL101	2-year	Natural	15	0	2597.6	910.43	898.29	0.467	196	2.0	220813	9.2
		5-year								294	2.1	220813	9.2
		10-year								356	2.2	220813	9.2
		25-year								441	2.3	220813	9.2
		50-year								503	2.4	220813	9.2
		100-year								585	2.4	220813	9.2
LLWMC02	LLWMC02	2-year	Natural	12	0	791.5	866.22	862.03	0.529	1244	7.8	6650	11.2
		5-year								2044	8.9	6650	11.2
		10-year								2696	9.6	6650	11.2
		25-year								3571	10.3	6650	11.2
		50-year								4047	10.7	6650	11.2
		100-year								4896	11.2	6650	11.2
LLWMC03	LLWMC03	2-year	Trapezoidal	12	25	26.8	869.31	867.40	7.125	1234	12.7	48339	108.9
		5-year								2029	13.2	48339	108.9
		10-year								2676	14.2	48339	108.9
		25-year								3548	15.4	48339	108.9
		50-year								4019	16.0	48339	108.9
		100-year								4861	17.0	48339	108.9
LLWMC04	LLWMC04	2-year	Natural	16	0	1641.2	874.60	868.75	0.356	1234	5.8	22314	10.2
		5-year								2029	5.8	22314	10.2
		10-year								2677	6.3	22314	10.2
		25-year								3548	6.5	22314	10.2
		50-year								4020	6.5	22314	10.2
		100-year								4863	6.7	22314	10.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LLWMC05	LLWMC05	2-year	Natural	14	0	2961.7	878.13	874.60	0.119	1230	3.6	9168	3.9
		5-year								2022	4.3	9168	3.9
		10-year								2672	4.8	9168	3.9
		25-year								3541	4.8	9168	3.9
		50-year								4009	4.8	9168	3.9
		100-year								4836	4.8	9168	3.9
LLWMC06	LWMC06A	2-year	User Defined	0	0	26.0	878.42	878.13	0.695	1231	6.4	0	11.8
		5-year								2024	6.9	0	11.8
		10-year								2681	7.6	0	11.8
		25-year								3614	7.9	0	11.8
		50-year								4081	8.2	0	11.8
		100-year								4851	8.7	0	11.8
LLWMC06	LWMC06B	2-year	Trapezoidal	1	30	41.7	895.10	895.06	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LLWMC07	LLWMC07	2-year	Natural	15.2	0	706.1	879.11	878.42	0.098	1228	4.4	6225	3.3
		5-year								2019	4.7	6225	3.3
		10-year								2677	5.0	6225	3.3
		25-year								3614	5.2	6225	3.3
		50-year								4086	5.3	6225	3.3
		100-year								4845	5.4	6225	3.3
LLWMC08	LWMC08A	2-year	User Defined	0	0	66.8	879.55	879.11	0.659	1228	5.5	0	13.0
		5-year								2020	7.1	0	13.0
		10-year								2677	8.2	0	13.0
		25-year								3625	9.2	0	13.0
		50-year								4107	9.6	0	13.0
		100-year								4849	10.1	0	13.0
LLWMC08	LWMC08B	2-year	Trapezoidal	1	30	66.8	906.00	905.93	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LLWMC09	LLWMC09	2-year	Natural	14	0	1607.1	884.30	879.55	0.296	1224	4.5	25013	6.7
		5-year								2022	4.5	25013	6.7
		10-year								2696	4.5	25013	6.7
		25-year								3744	4.5	25013	6.7
		50-year								4310	4.5	25013	6.7
		100-year								4957	4.5	25013	6.7
LLWMC10	LLWMC10	2-year	Natural	14	0	923.7	887.16	884.30	0.310	196	3.0	41376	7.4
		5-year								239	3.1	41376	7.4
		10-year								289	3.1	41376	7.4
		25-year								400	3.1	41376	7.4
		50-year								493	3.0	41376	7.4
		100-year								607	2.7	41376	7.4
LLWMC11	LWMC11A	2-year	Rectangular	3	6	37.4	887.47	887.16	0.829	98	5.4	174	9.7
		5-year								120	6.7	174	9.7
		10-year								125	6.9	174	9.7
		25-year								128	7.1	174	9.7
		50-year								130	7.2	174	9.7
		100-year								131	7.3	174	9.7
LLWMC11	LWMC11B	2-year	Trapezoidal	10	30	37.4	892.00	891.96	0.100	0	0.0	3438	11.5
		5-year								57	3.0	3438	11.5
		10-year								138	4.1	3438	11.5
		25-year								228	5.3	3438	11.5
		50-year								302	6.3	3438	11.5
		100-year								402	7.4	3438	11.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LLWMC12	LLWMC12	2-year	Natural	12.2	0	3695.9	898.29	887.47	0.293	203	1.7	45913	6.3
		5-year								293	1.6	45913	6.3
		10-year								354	1.6	45913	6.3
		25-year								438	1.5	45913	6.3
		50-year								511	1.5	45913	6.3
		100-year								603	1.4	45913	6.3
LLWMC13	LLWMC13	2-year	Natural	20	0	780.1	905.80	898.29	0.963	148	0.9	541338	17.4
		5-year								230	1.0	541338	17.4
		10-year								277	1.0	541338	17.4
		25-year								340	1.0	541338	17.4
		50-year								386	1.1	541338	17.4
		100-year								447	1.1	541338	17.4
LLWMC14	LLWMC14	2-year	Natural	12	0	2122.2	911.74	905.80	0.280	81	0.5	215804	8.3
		5-year								123	0.5	215804	8.3
		10-year								148	0.5	215804	8.3
		25-year								180	0.6	215804	8.3
		50-year								204	0.6	215804	8.3
		100-year								236	0.6	215804	8.3
LNCL101	LNCL101	2-year	Natural	10	3	291.5	886.70	886.36	0.117	405	3.2	9003	5.0
		5-year								577	3.0	9003	5.0
		10-year								704	2.8	9003	5.0
		25-year								852	2.5	9003	5.0
		50-year								936	2.3	9003	5.0
		100-year								1086	2.1	9003	5.0
LNCL201	LNCL201	2-year	Natural	7	0	280.3	890.35	889.88	0.168	118	0.4	15111	5.1
		5-year								182	0.5	15111	5.1
		10-year								222	0.5	15111	5.1
		25-year								273	0.5	15111	5.1
		50-year								315	0.5	15111	5.1
		100-year								366	0.6	15111	5.1
LNCL202	LNCL202	2-year	Natural	7	0	1537.1	901.00	890.35	0.693	94	1.7	30715	10.4
		5-year								140	1.9	30715	10.4
		10-year								169	2.0	30715	10.4
		25-year								207	2.0	30715	10.4
		50-year								235	2.1	30715	10.4
		100-year								272	2.2	30715	10.4
LNCL401	LNCL401	2-year	Natural	10	0	506.1	898.00	894.65	0.662	147	0.5	92795	11.0
		5-year								223	0.6	92795	11.0
		10-year								275	0.6	92795	11.0
		25-year								341	0.7	92795	11.0
		50-year								390	0.7	92795	11.0
		100-year								453	0.7	92795	11.0
LNCL402	LNCL402	2-year	Natural	8	0	2662.6	919.70	898.00	0.815	64	1.4	74997	11.9
		5-year								91	1.5	74997	11.9
		10-year								108	1.5	74997	11.9
		25-year								133	1.5	74997	11.9
		50-year								153	1.5	74997	11.9
		100-year								176	1.6	74997	11.9
LNCL403	8717.1	2-year	Circular	3	0	100.0	920.34	919.70	0.640	61	14.4	50	7.0
		5-year								65	15.1	50	7.0
		10-year								67	15.4	50	7.0
		25-year								70	15.7	50	7.0
		50-year								71	16.0	50	7.0
		100-year								73	16.3	50	7.0
LNCL403	8717.2	2-year	Trapezoidal	2	30	100.0	924.00	923.90	0.100	17	2.0	294	4.9
		5-year								47	3.1	294	4.9
		10-year								65	3.5	294	4.9
		25-year								89	4.0	294	4.9
		50-year								107	4.3	294	4.9
		100-year								131	4.7	294	4.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCL404	8718.1	2-year	Circular	3	0	67.3	920.77	920.34	0.639	15	3.0	50	7.0
		5-year								20	3.3	50	7.0
		10-year								22	3.3	50	7.0
		25-year								23	3.5	50	7.0
		50-year								23	3.5	50	7.0
		100-year								24	3.6	50	7.0
LNCL404	8718.2	2-year	Trapezoidal	2	30	67.3	924.10	924.00	0.149	6	0.7	359	6.0
		5-year								14	0.9	359	6.0
		10-year								19	1.0	359	6.0
		25-year								24	1.1	359	6.0
		50-year								28	1.1	359	6.0
		100-year								33	1.3	359	6.0
LNCL405	8210.1	2-year	Circular	2	0	192.8	922.50	920.77	0.897	16	5.9	20	6.3
		5-year								21	6.7	20	6.3
		10-year								23	7.2	20	6.3
		25-year								24	7.7	20	6.3
		50-year								25	7.8	20	6.3
		100-year								25	7.9	20	6.3
LNCL405	8210.2	2-year	Trapezoidal	1	30	192.8	926.42	924.10	1.203	0	0.0	335	11.2
		5-year								1	0.2	335	11.2
		10-year								5	0.6	335	11.2
		25-year								11	1.5	335	11.2
		50-year								15	2.2	335	11.2
		100-year								20	2.8	335	11.2
LNCL4A01	8715.1	2-year	Circular	2	0	10.5	921.46	920.34	10.707	32	10.1	40	12.8
		5-year								32	10.3	40	12.8
		10-year								33	10.4	40	12.8
		25-year								31	9.9	40	12.8
		50-year								31	9.9	40	12.8
		100-year								31	9.8	40	12.8
LNCL4A01	8715.2	2-year	Trapezoidal	2	30	10.5	924.01	924.00	0.100	32	3.1	288	4.8
		5-year								52	3.5	288	4.8
		10-year								63	3.5	288	4.8
		25-year								76	3.5	288	4.8
		50-year								87	3.6	288	4.8
		100-year								100	3.7	288	4.8
LNCL4B01	8716.1	2-year	Circular	2	0	87.0	923.75	920.34	3.921	18	6.3	24	7.7
		5-year								18	6.2	24	7.7
		10-year								18	6.0	24	7.7
		25-year								18	5.8	24	7.7
		50-year								18	5.8	24	7.7
		100-year								18	5.9	24	7.7
LNCL4B01	8716.2	2-year	Trapezoidal	2	30	87.0	925.75	924.00	2.012	8	1.9	1319	22.0
		5-year								19	1.9	1319	22.0
		10-year								26	2.2	1319	22.0
		25-year								34	2.4	1319	22.0
		50-year								41	2.6	1319	22.0
		100-year								50	2.8	1319	22.0
LNCL4C01	LNCL4C01	2-year	Circular	2	0	43.4	921.46	920.77	1.591	-2	-0.7	26	8.4
		5-year								-3	-0.9	26	8.4
		10-year								3	1.0	26	8.4
		25-year								-3	-0.8	26	8.4
		50-year								-2	-0.8	26	8.4
		100-year								3	0.9	26	8.4
LNCL4D01	8412.1	2-year	Circular	2	0	42.3	922.56	922.50	0.142	16	6.0	8	2.5
		5-year								21	6.6	8	2.5
		10-year								22	7.0	8	2.5
		25-year								25	7.8	8	2.5
		50-year								25	7.8	8	2.5
		100-year								25	7.9	8	2.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCL4D01	8412.2	2-year	Trapezoidal	1	30	42.3	926.56	926.42	0.331	0	0.0	176	5.9
		5-year								6	1.6	176	5.9
		10-year								10	2.0	176	5.9
		25-year								15	2.3	176	5.9
		50-year								19	2.5	176	5.9
		100-year								23	2.8	176	5.9
LNCL500	LNCL500	2-year	Natural	8	0	1000.0	906.12	899.37	0.675	235	4.4	84746	9.6
		5-year								468	4.5	84746	9.6
		10-year								597	3.8	84746	9.6
		25-year								794	3.4	84746	9.6
		50-year								950	3.3	84746	9.6
		100-year								1144	3.2	84746	9.6
LNCL501	LNCL501	2-year	Natural	8	0	2354.7	922.00	906.12	0.674	153	3.9	84708	9.6
		5-year								347	4.0	84708	9.6
		10-year								464	4.0	84708	9.6
		25-year								607	4.0	84708	9.6
		50-year								733	3.9	84708	9.6
		100-year								893	3.6	84708	9.6
LNCL502	NCL502A	2-year	Rectangular	4	6	29.7	924.00	922.00	6.739	95	10.8	747	31.1
		5-year								174	16.1	747	31.1
		10-year								220	18.5	747	31.1
		25-year								291	22.0	747	31.1
		50-year								346	24.4	747	31.1
		100-year								420	27.4	747	31.1
LNCL502	NCL502B	2-year	Trapezoidal	2	30	29.7	932.00	931.97	0.100	0	0.0	296	4.9
		5-year								0	0.0	296	4.9
		10-year								0	0.0	296	4.9
		25-year								0	0.0	296	4.9
		50-year								0	0.0	296	4.9
		100-year								0	0.0	296	4.9
LNCL503	LNCL503	2-year	Natural	5	0	2978.9	961.73	924.00	1.267	87	1.9	9824	11.9
		5-year								163	2.3	9824	11.9
		10-year								212	2.4	9824	11.9
		25-year								281	2.5	9824	11.9
		50-year								335	2.5	9824	11.9
		100-year								407	2.6	9824	11.9
LNCMC02	LNCMC02	2-year	Natural	20	0	3667.0	877.70	874.00	0.101	1145	2.3	17110	5.1
		5-year								1881	2.5	17110	5.1
		10-year								2160	2.6	17110	5.1
		25-year								2901	2.9	17110	5.1
		50-year								3564	3.1	17110	5.1
		100-year								4280	3.2	17110	5.1
LNCMC03	LNCMC03	2-year	Natural	14	0	2463.1	882.76	877.70	0.205	1135	3.4	15321	5.2
		5-year								1865	3.6	15321	5.2
		10-year								2118	3.8	15321	5.2
		25-year								2837	4.0	15321	5.2
		50-year								3540	4.1	15321	5.2
		100-year								4329	4.0	15321	5.2
LNCMC04	NCMC04A	2-year	User Defined	0	0	64.1	882.89	882.76	0.205	1137	1.9	0	6.6
		5-year								1868	2.6	0	6.6
		10-year								2123	3.0	0	6.6
		25-year								2875	3.4	0	6.6
		50-year								3587	3.6	0	6.6
		100-year								4358	3.8	0	6.6
LNCMC04	NCMC04B	2-year	Trapezoidal	1	30	64.1	906.00	905.94	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCMC05	LNCMC05	2-year	Natural	11.39	0	1690.7	886.36	882.89	0.205	1105	3.3	19365	6.5
		5-year								1819	3.4	19365	6.5
		10-year								2059	3.4	19365	6.5
		25-year								2835	3.4	19365	6.5
		50-year								3622	3.4	19365	6.5
		100-year								4322	3.4	19365	6.5
LNCMC06	LNCMC06	2-year	Natural	12	0	1715.8	889.88	886.36	0.205	1035	2.5	38410	7.7
		5-year								1643	2.5	38410	7.7
		10-year								1847	2.6	38410	7.7
		25-year								2460	2.7	38410	7.7
		50-year								2983	2.7	38410	7.7
		100-year								3616	2.7	38410	7.7
LNCMC07	LNCMC07	2-year	Natural	8	0	3334.2	894.60	889.88	0.141	1206	2.1	18664	4.6
		5-year								1721	2.1	18664	4.6
		10-year								1916	2.1	18664	4.6
		25-year								2485	2.1	18664	4.6
		50-year								2997	2.1	18664	4.6
		100-year								3589	2.1	18664	4.6
LNCMC08	NCMC08A	2-year	Rectangular	7	6	38.3	894.65	894.60	0.141	507	21.5	230	5.5
		5-year								822	29.9	230	5.5
		10-year								978	31.0	230	5.5
		25-year								1182	34.8	230	5.5
		50-year								1350	36.1	230	5.5
		100-year								1544	39.1	230	5.5
LNCMC08	NCMC08B	2-year	Trapezoidal	4	30	38.3	900.00	899.96	0.100	0	0.0	864	7.2
		5-year								0	0.0	864	7.2
		10-year								52	3.5	864	7.2
		25-year								207	5.8	864	7.2
		50-year								405	7.4	864	7.2
		100-year								624	8.6	864	7.2
LNCMC09	LNCMC09	2-year	Natural	12	0	1908.5	897.35	894.65	0.141	883	4.0	43753	5.1
		5-year								1533	4.0	43753	5.1
		10-year								2000	3.8	43753	5.1
		25-year								2628	3.8	43753	5.1
		50-year								3201	3.8	43753	5.1
		100-year								3825	3.8	43753	5.1
LNCMC10	LNCMC10	2-year	Natural	10	0	1028.9	899.37	897.35	0.196	926	1.9	22377	5.0
		5-year								1558	2.1	22377	5.0
		10-year								1944	2.2	22377	5.0
		25-year								2458	2.4	22377	5.0
		50-year								2950	2.6	22377	5.0
		100-year								3552	2.8	22377	5.0
LNCMC11	LNCMC11	2-year	Natural	8	0	673.5	900.82	899.37	0.215	913	3.5	16172	4.5
		5-year								1419	3.5	16172	4.5
		10-year								1711	3.5	16172	4.5
		25-year								2144	3.5	16172	4.5
		50-year								2489	3.5	16172	4.5
		100-year								2952	3.5	16172	4.5
LNCMC12	LNCMC12	2-year	Natural	9	0	1243.9	903.48	900.82	0.214	853	2.5	30652	5.8
		5-year								1318	2.5	30652	5.8
		10-year								1581	2.5	30652	5.8
		25-year								1962	2.5	30652	5.8
		50-year								2274	2.5	30652	5.8
		100-year								2697	2.5	30652	5.8
LNCMC13	LNCMC13	2-year	Natural	6.5	0	1216.5	906.50	903.48	0.248	841	3.2	13921	4.7
		5-year								1287	3.2	13921	4.7
		10-year								1474	3.2	13921	4.7
		25-year								1812	3.2	13921	4.7
		50-year								2106	3.2	13921	4.7
		100-year								2507	3.2	13921	4.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LNCMC14	LNCMC14	2-year	Natural	17	0	1011.6	873.93	868.00	0.586	1158	9.5	9627	14.9
		5-year								1899	10.7	9627	14.9
		10-year								2188	11.0	9627	14.9
		25-year								2933	11.8	9627	14.9
		50-year								3588	12.4	9627	14.9
		100-year								4302	12.9	9627	14.9
LNCMC15	NCMC15A	2-year	Circular	3	0	70.4	874.00	873.93	0.099	123	17.2	11	1.6
		5-year								123	17.2	11	1.6
		10-year								123	17.2	11	1.6
		25-year								123	17.2	11	1.6
		50-year								123	17.2	11	1.6
		100-year								123	17.2	11	1.6
LNCMC15	NCMC15B	2-year	Trapezoidal	6	50	70.4	886.00	885.93	0.100	914	7.9	3297	9.8
		5-year								1650	9.7	3297	9.8
		10-year								1933	10.2	3297	9.8
		25-year								2669	11.2	3297	9.8
		50-year								3318	12.0	3297	9.8
		100-year								4019	12.7	3297	9.8
LPOL102	LPOL102	2-year	Natural	5	0	1464.0	919.01	899.87	1.307	43	0.8	8565	11.3
		5-year								63	0.9	8565	11.3
		10-year								74	0.9	8565	11.3
		25-year								89	0.9	8565	11.3
		50-year								101	0.9	8565	11.3
		100-year								116	1.0	8565	11.3
LPOL103	8193.1	2-year	Circular	2.5	0	50.2	920.49	919.01	2.950	21	13.4	65	13.3
		5-year								30	15.2	65	13.3
		10-year								34	15.9	65	13.3
		25-year								42	16.9	65	13.3
		50-year								48	17.6	65	13.3
		100-year								55	18.3	65	13.3
LPOL103	8193.2	2-year	Trapezoidal	1	30	50.2	925.32	924.09	2.452	0	0.0	478	15.9
		5-year								0	0.0	478	15.9
		10-year								0	0.0	478	15.9
		25-year								0	0.0	478	15.9
		50-year								0	0.0	478	15.9
		100-year								0	0.0	478	15.9
LPOL104	8194.1	2-year	Circular	2.5	0	38.8	921.92	920.49	3.684	21	10.5	73	14.9
		5-year								30	11.8	73	14.9
		10-year								34	12.3	73	14.9
		25-year								42	13.0	73	14.9
		50-year								48	13.4	73	14.9
		100-year								55	13.5	73	14.9
LPOL104	8194.2	2-year	Trapezoidal	1	30	38.8	926.00	925.32	1.752	0	0.0	404	13.5
		5-year								0	0.0	404	13.5
		10-year								0	0.0	404	13.5
		25-year								0	0.0	404	13.5
		50-year								0	0.0	404	13.5
		100-year								0	0.0	404	13.5
LPOL105	8195.1	2-year	Circular	2.5	0	324.8	927.30	921.92	1.657	21	9.8	49	10.0
		5-year								30	10.8	49	10.0
		10-year								34	11.1	49	10.0
		25-year								42	11.6	49	10.0
		50-year								48	11.8	49	10.0
		100-year								54	12.3	49	10.0
LPOL105	8195.2	2-year	Trapezoidal	1	30	324.8	931.05	926.00	1.555	0	0.0	380	12.7
		5-year								0	0.0	380	12.7
		10-year								0	0.0	380	12.7
		25-year								0	0.0	380	12.7
		50-year								0	0.0	380	12.7
		100-year								2	1.6	380	12.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL106	8196.1	2-year	Circular	2.5	0	32.2	928.38	927.30	3.359	10	6.3	70	14.2
		5-year								15	7.6	70	14.2
		10-year								16	8.3	70	14.2
		25-year								20	8.3	70	14.2
		50-year								24	8.3	70	14.2
		100-year								30	8.3	70	14.2
LPOL106	8196.2	2-year	Trapezoidal	1	30	32.2	931.55	931.05	1.555	0	0.0	380	12.7
		5-year								0	0.0	380	12.7
		10-year								0	0.0	380	12.7
		25-year								0	0.0	380	12.7
		50-year								0	0.0	380	12.7
		100-year								0	0.0	380	12.7
LPOL107	8197.1	2-year	Circular	2	0	188.4	930.49	928.38	1.120	10	7.3	22	7.1
		5-year								15	8.2	22	7.1
		10-year								16	8.4	22	7.1
		25-year								20	8.8	22	7.1
		50-year								23	9.0	22	7.1
		100-year								24	9.0	22	7.1
LPOL107	8197.2	2-year	Trapezoidal	1	30	188.4	932.28	931.55	0.387	0	0.0	190	6.3
		5-year								0	0.0	190	6.3
		10-year								0	0.0	190	6.3
		25-year								0	0.0	190	6.3
		50-year								0	0.4	190	6.3
		100-year								10	2.0	190	6.3
LPOL108	8397.1	2-year	Circular	2	0	290.8	931.07	930.49	0.199	10	4.3	9	3.0
		5-year								15	5.2	9	3.0
		10-year								15	5.4	9	3.0
		25-year								16	5.5	9	3.0
		50-year								16	5.5	9	3.0
		100-year								16	5.5	9	3.0
LPOL108	8397.2	2-year	Trapezoidal	1	30	290.8	933.57	933.28	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								1	0.6	96	3.2
		25-year								4	1.0	96	3.2
		50-year								7	1.3	96	3.2
		100-year								12	1.6	96	3.2
LPOL109	8396.1	2-year	Circular	2	0	63.0	931.69	931.07	0.985	10	4.4	21	6.6
		5-year								15	4.5	21	6.6
		10-year								17	5.4	21	6.6
		25-year								21	6.7	21	6.6
		50-year								23	7.3	21	6.6
		100-year								23	7.5	21	6.6
LPOL109	8396.2	2-year	Trapezoidal	1	30	63.0	934.52	933.57	1.509	0	0.0	375	12.5
		5-year								0	0.0	375	12.5
		10-year								0	0.0	375	12.5
		25-year								0	0.0	375	12.5
		50-year								1	0.3	375	12.5
		100-year								5	0.9	375	12.5
LPOL110	8402.1	2-year	Circular	2	0	26.5	932.35	931.69	2.491	10	7.2	33	10.6
		5-year								15	7.2	33	10.6
		10-year								17	7.3	33	10.6
		25-year								20	7.3	33	10.6
		50-year								21	7.3	33	10.6
		100-year								21	7.3	33	10.6
LPOL110	8402.2	2-year	Trapezoidal	1	30	26.5	934.55	934.52	0.100	0	0.0	103	3.4
		5-year								0	0.0	103	3.4
		10-year								0	0.0	103	3.4
		25-year								2	0.8	103	3.4
		50-year								8	1.6	103	3.4
		100-year								11	1.9	103	3.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL201	8019.1	2-year	Special	2.5	2.5	127.5	906.08	906.00	0.063	0	-0.1	5	1.7
		5-year								0	-0.1	5	1.7
		10-year								0	-0.1	5	1.7
		25-year								0	-0.1	5	1.7
		50-year								0	-0.1	5	1.7
		100-year								0	-0.1	5	1.7
LPOL201	8019.2	2-year	Trapezoidal	1	30	127.5	909.50	909.37	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPOL301	8517.1	2-year	Circular	1.25	0	139.3	913.80	911.46	1.680	8	8.1	8	6.3
		5-year								8	7.9	8	6.3
		10-year								8	7.9	8	6.3
		25-year								8	7.9	8	6.3
		50-year								8	7.9	8	6.3
		100-year								8	7.9	8	6.3
LPOL301	8517.2	2-year	Trapezoidal	2	30	139.3	917.05	917.00	0.036	57	3.1	176	2.9
		5-year								83	3.6	176	2.9
		10-year								98	3.9	176	2.9
		25-year								117	4.2	176	2.9
		50-year								132	4.4	176	2.9
		100-year								151	4.7	176	2.9
LPOL302	8516.1	2-year	Circular	1.25	0	181.6	914.77	913.80	0.534	4	3.8	4	3.6
		5-year								5	4.1	4	3.6
		10-year								5	4.2	4	3.6
		25-year								5	4.3	4	3.6
		50-year								5	4.3	4	3.6
		100-year								5	4.7	4	3.6
LPOL302	8516.2	2-year	Trapezoidal	1	30	181.6	918.77	917.05	0.947	0	0.0	297	9.9
		5-year								0	0.0	297	9.9
		10-year								0	0.0	297	9.9
		25-year								0	0.0	297	9.9
		50-year								0	0.0	297	9.9
		100-year								0	0.0	297	9.9
LPOL303	LPOL303	2-year	Natural	4	0	1275.8	931.00	914.77	1.272	23	1.0	4715	10.5
		5-year								33	1.0	4715	10.5
		10-year								39	1.1	4715	10.5
		25-year								47	1.1	4715	10.5
		50-year								53	1.1	4715	10.5
		100-year								60	1.2	4715	10.5
LPOL304	8515.1	2-year	Circular	2	0	61.6	931.41	931.00	0.666	24	13.0	17	5.5
		5-year								28	15.2	17	5.5
		10-year								29	15.5	17	5.5
		25-year								30	15.8	17	5.5
		50-year								31	16.0	17	5.5
		100-year								32	16.3	17	5.5
LPOL304	8515.2	2-year	Trapezoidal	1	30	61.6	936.24	936.18	0.100	0	0.0	95	3.2
		5-year								5	1.3	95	3.2
		10-year								10	1.7	95	3.2
		25-year								17	2.1	95	3.2
		50-year								23	2.4	95	3.2
		100-year								30	2.6	95	3.2
LPOL305	8214.1	2-year	Circular	2	0	61.2	934.27	931.41	4.672	24	9.0	45	14.5
		5-year								34	10.7	45	14.5
		10-year								40	12.5	45	14.5
		25-year								42	13.3	45	14.5
		50-year								42	13.3	45	14.5
		100-year								42	13.3	45	14.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL305	8214.2	2-year	Trapezoidal	1	30	61.2	938.94	936.24	4.411	0	0.0	641	21.4
		5-year								0	0.0	641	21.4
		10-year								0	0.0	641	21.4
		25-year								5	1.0	641	21.4
		50-year								11	1.8	641	21.4
		100-year								19	2.5	641	21.4
LPOL306	8413.1	2-year	Circular	2	0	26.7	939.07	934.27	17.957	24	18.3	89	28.3
		5-year								36	17.9	89	28.3
		10-year								40	18.0	89	28.3
		25-year								48	18.1	89	28.3
		50-year								53	22.0	89	28.3
		100-year								59	22.0	89	28.3
LPOL306	8413.2	2-year	Trapezoidal	1	30	26.7	941.07	938.94	7.969	0	0.0	861	28.7
		5-year								0	0.0	861	28.7
		10-year								0	0.0	861	28.7
		25-year								0	0.0	861	28.7
		50-year								0	0.0	861	28.7
		100-year								3	1.3	861	28.7
LPOL401	POL401A	2-year	Circular	3	0	210.7	927.31	921.14	2.929	13	10.3	106	15.0
		5-year								20	11.8	106	15.0
		10-year								25	12.5	106	15.0
		25-year								31	13.3	106	15.0
		50-year								36	13.9	106	15.0
		100-year								42	14.5	106	15.0
LPOL401	POL401B	2-year	Trapezoidal	1	30	210.7	934.00	933.79	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPOL402	LPOL402	2-year	Trapezoidal	2.69	100	10.0	927.31	927.31	0.000	32	0.5	2361	0.0
		5-year								47	0.6	2361	0.0
		10-year								55	0.6	2361	0.0
		25-year								66	0.7	2361	0.0
		50-year								75	0.7	2361	0.0
		100-year								86	0.7	2361	0.0
LPOL403	8215.1	2-year	Circular	2	0	52.2	930.70	927.31	6.498	33	18.7	54	17.0
		5-year								47	20.2	54	17.0
		10-year								55	22.1	54	17.0
		25-year								66	24.3	54	17.0
		50-year								70	24.6	54	17.0
		100-year								73	24.8	54	17.0
LPOL403	8215.2	2-year	Trapezoidal	1	30	52.2	935.12	934.53	1.131	0	0.0	324	10.8
		5-year								0	0.0	324	10.8
		10-year								0	0.0	324	10.8
		25-year								4	1.9	324	10.8
		50-year								10	2.7	324	10.8
		100-year								18	3.5	324	10.8
LPOL404	8642.1	2-year	Circular	2	0	41.6	932.17	930.70	3.537	33	14.4	40	12.6
		5-year								47	15.5	40	12.6
		10-year								55	17.3	40	12.6
		25-year								57	18.2	40	12.6
		50-year								59	18.6	40	12.6
		100-year								61	18.9	40	12.6
LPOL404	8642.2	2-year	Trapezoidal	1	30	41.6	936.42	935.12	3.128	0	0.0	539	18.0
		5-year								0	0.0	539	18.0
		10-year								5	2.8	539	18.0
		25-year								27	5.6	539	18.0
		50-year								36	6.2	539	18.0
		100-year								48	6.9	539	18.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOL405	8643.1	2-year	Circular	2	0	29.8	933.15	932.17	3.291	33	13.8	38	12.1
		5-year								47	14.6	38	12.1
		10-year								52	16.5	38	12.1
		25-year								54	17.0	38	12.1
		50-year								55	17.4	38	12.1
		100-year								55	17.4	38	12.1
LPOL405	8643.2	2-year	Trapezoidal	1	30	29.8	937.15	936.42	2.451	0	0.0	478	15.9
		5-year								0	0.0	478	15.9
		10-year								20	4.6	478	15.9
		25-year								33	5.6	478	15.9
		50-year								41	6.1	478	15.9
		100-year								52	6.7	478	15.9
LPOL406	LPOL406	2-year	Trapezoidal	2.69	100	10.0	927.31	927.31	0.000	13	0.1	2361	0.0
		5-year								21	0.2	2361	0.0
		10-year								25	0.2	2361	0.0
		25-year								31	0.2	2361	0.0
		50-year								37	0.2	2361	0.0
		100-year								42	0.3	2361	0.0
LPOL501	LPOL501	2-year	Trapezoidal	4	10	56.4	925.70	925.20	0.887	45	3.5	497	8.9
		5-year								66	4.2	497	8.9
		10-year								78	4.5	497	8.9
		25-year								95	5.0	497	8.9
		50-year								108	5.3	497	8.9
		100-year								124	5.6	497	8.9
LPOL502	8647.1	2-year	Circular	2	0	98.7	926.08	925.70	0.385	30	12.3	13	4.1
		5-year								34	12.5	13	4.1
		10-year								35	12.5	13	4.1
		25-year								36	12.5	13	4.1
		50-year								37	12.5	13	4.1
		100-year								37	12.5	13	4.1
LPOL502	8647.2	2-year	Trapezoidal	1	30	98.7	930.00	928.20	1.824	15	3.7	412	13.7
		5-year								32	5.1	412	13.7
		10-year								43	5.7	412	13.7
		25-year								59	6.4	412	13.7
		50-year								70	6.9	412	13.7
		100-year								87	7.5	412	13.7
LPOL503	8648.1	2-year	Circular	2	0	59.7	927.97	926.08	3.164	2	0.9	37	11.9
		5-year								2	0.7	37	11.9
		10-year								2	0.7	37	11.9
		25-year								1	-0.7	37	11.9
		50-year								-2	-0.8	37	11.9
		100-year								-2	-0.8	37	11.9
LPOL503	8648.2	2-year	Trapezoidal	1	30	59.7	931.80	930.00	3.014	0	0.0	530	17.7
		5-year								0	0.0	530	17.7
		10-year								0	0.0	530	17.7
		25-year								0	0.0	530	17.7
		50-year								0	0.0	530	17.7
		100-year								0	0.0	530	17.7
LPOL601	8644.1	2-year	Circular	1.25	0	83.5	930.75	930.22	0.635	0	-0.3	5	3.9
		5-year								1	1.1	5	3.9
		10-year								-2	-1.2	5	3.9
		25-year								-1	-1.1	5	3.9
		50-year								1	1.0	5	3.9
		100-year								-2	-1.3	5	3.9
LPOL601	8644.2	2-year	Trapezoidal	1	30	83.5	935.08	933.22	2.228	0	0.0	455	15.2
		5-year								0	0.0	455	15.2
		10-year								0	0.0	455	15.2
		25-year								0	0.0	455	15.2
		50-year								0	0.0	455	15.2
		100-year								0	0.0	455	15.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC01	LPOMC01	2-year	Natural	7	0	217.7	888.30	887.03	0.583	269	2.4	3692	7.1
		5-year								391	2.6	3692	7.1
		10-year								480	2.8	3692	7.1
		25-year								535	2.9	3692	7.1
		50-year								626	2.9	3692	7.1
		100-year								773	2.9	3692	7.1
LPOMC02	LPOMC02	2-year	Natural	10	0	2903.3	899.87	888.30	0.399	212	2.5	37344	8.7
		5-year								341	2.6	37344	8.7
		10-year								456	2.6	37344	8.7
		25-year								593	2.6	37344	8.7
		50-year								696	2.6	37344	8.7
		100-year								822	2.5	37344	8.7
LPOMC03	LPOMC03	2-year	Natural	10	0	463.2	902.40	899.87	0.546	224	5.8	23064	9.2
		5-year								341	5.9	23064	9.2
		10-year								435	5.9	23064	9.2
		25-year								551	5.8	23064	9.2
		50-year								635	5.8	23064	9.2
		100-year								737	5.8	23064	9.2
LPOMC04	POMC04A	2-year	Rectangular	3	10	56.1	902.90	902.40	0.891	73	2.3	331	11.0
		5-year								109	3.6	331	11.0
		10-year								141	4.7	331	11.0
		25-year								189	6.3	331	11.0
		50-year								222	7.4	331	11.0
		100-year								259	8.6	331	11.0
LPOMC04	POMC04B	2-year	Trapezoidal	2	30	56.1	908.00	907.94	0.100	0	0.0	304	5.1
		5-year								0	0.0	304	5.1
		10-year								0	0.0	304	5.1
		25-year								0	0.0	304	5.1
		50-year								0	0.0	304	5.1
		100-year								0	0.0	304	5.1
LPOMC05	LPOMC05	2-year	Natural	8	0	432.4	906.00	902.90	0.717	165	0.6	38594	11.9
		5-year								234	0.6	38594	11.9
		10-year								279	0.7	38594	11.9
		25-year								373	0.7	38594	11.9
		50-year								441	0.7	38594	11.9
		100-year								520	0.7	38594	11.9
LPOMC06	LPOMC06	2-year	Natural	5	0	493.0	908.31	906.00	0.469	169	3.0	4455	6.2
		5-year								236	3.3	4455	6.2
		10-year								281	3.4	4455	6.2
		25-year								387	3.7	4455	6.2
		50-year								462	3.9	4455	6.2
		100-year								552	4.0	4455	6.2
LPOMC07	POMC07A	2-year	Special	4.5	4.416	69.2	908.60	908.31	0.419	57	8.8	64	6.3
		5-year								79	10.2	64	6.3
		10-year								93	11.1	64	6.3
		25-year								128	13.6	64	6.3
		50-year								153	15.9	64	6.3
		100-year								182	18.5	64	6.3
LPOMC07	POMC07B	2-year	Trapezoidal	1	30	69.2	914.00	913.93	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPOMC08	LPOMC08	2-year	Natural	10	10	199.1	909.60	908.60	0.502	170	3.3	26408	10.1
		5-year								238	3.5	26408	10.1
		10-year								281	3.5	26408	10.1
		25-year								388	3.5	26408	10.1
		50-year								467	3.5	26408	10.1
		100-year								560	3.6	26408	10.1

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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC09	POMC09A	2-year	Special	4.5	4.5	86.2	910.47	910.02	0.522	57	7.9	72	7.0
		5-year								79	8.9	72	7.0
		10-year								94	9.7	72	7.0
		25-year								130	12.9	72	7.0
		50-year								148	14.4	72	7.0
		100-year								162	15.8	72	7.0
LPOMC09	POMC09B	2-year	Trapezoidal	1	30	86.2	914.30	914.21	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								32	2.7	99	3.3
		100-year								100	4.2	99	3.3
LPOMC10	LPOMC10	2-year	Natural	6	25	123.1	911.46	910.47	0.804	171	3.8	4773	7.5
		5-year								238	3.8	4773	7.5
		10-year								282	3.7	4773	7.5
		25-year								391	3.7	4773	7.5
		50-year								475	3.8	4773	7.5
		100-year								584	3.8	4773	7.5
LPOMC11	POMC11A	2-year	Rectangular	3	8	87.5	911.60	911.46	0.160	35	2.7	108	4.5
		5-year								49	3.6	108	4.5
		10-year								73	4.6	108	4.5
		25-year								103	5.0	108	4.5
		50-year								126	4.9	108	4.5
		100-year								153	6.3	108	4.5
LPOMC11	POMC11B	2-year	Trapezoidal	1	30	87.5	916.00	915.91	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LPOMC12	LPOMC12	2-year	Natural	8	15	127.3	912.00	911.60	0.314	58	2.1	5952	6.1
		5-year								113	2.9	5952	6.1
		10-year								173	3.3	5952	6.1
		25-year								239	3.6	5952	6.1
		50-year								288	3.5	5952	6.1
		100-year								350	3.5	5952	6.1
LPOMC13	POMC13A	2-year	Circular	2	3.5	27.0	912.14	912.00	0.519	29	11.4	9	2.8
		5-year								39	13.5	9	2.8
		10-year								41	13.5	9	2.8
		25-year								41	13.6	9	2.8
		50-year								41	13.6	9	2.8
		100-year								41	13.6	9	2.8
LPOMC13	POMC13B	2-year	Trapezoidal	2	30	27.0	916.00	915.97	0.100	0	0.0	310	5.2
		5-year								35	3.0	310	5.2
		10-year								90	4.4	310	5.2
		25-year								159	5.4	310	5.2
		50-year								215	6.0	310	5.2
		100-year								277	6.5	310	5.2
LPOMC14	LPOMC14	2-year	Natural	10	0	832.5	921.14	912.14	1.081	146	1.0	46836	15.1
		5-year								213	1.1	46836	15.1
		10-year								253	1.2	46836	15.1
		25-year								307	1.2	46836	15.1
		50-year								348	1.2	46836	15.1
		100-year								401	1.3	46836	15.1
LPOMC15	LPOMC15	2-year	Natural	4	0	375.7	925.20	921.14	1.081	136	3.7	3790	9.6
		5-year								196	4.1	3790	9.6
		10-year								232	4.3	3790	9.6
		25-year								280	4.5	3790	9.6
		50-year								316	4.7	3790	9.6
		100-year								364	4.8	3790	9.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPOMC16	LPOMC16	2-year	Natural	4	0	190.3	926.50	925.20	0.683	92	2.4	2154	6.7
		5-year								131	2.7	2154	6.7
		10-year								155	2.9	2154	6.7
		25-year								187	3.1	2154	6.7
		50-year								210	3.2	2154	6.7
		100-year								242	3.4	2154	6.7
LPOMC17	8645.1	2-year	Circular	3	0	82.3	930.22	926.50	4.518	92	21.9	132	18.6
		5-year								114	22.9	132	18.6
		10-year								119	22.9	132	18.6
		25-year								123	23.0	132	18.6
		50-year								125	23.3	132	18.6
		100-year								129	23.5	132	18.6
LPOMC17	8645.2	2-year	Trapezoidal	1	30	82.3	933.22	933.14	0.100	0	0.0	95	3.2
		5-year								17	2.0	95	3.2
		10-year								36	2.8	95	3.2
		25-year								64	3.5	95	3.2
		50-year								86	4.0	95	3.2
		100-year								112	4.5	95	3.2
LPOMC18	8646.1	2-year	Circular	3	0	128.4	930.58	930.22	0.283	92	13.8	33	4.7
		5-year								99	14.6	33	4.7
		10-year								99	14.6	33	4.7
		25-year								99	14.6	33	4.7
		50-year								99	14.5	33	4.7
		100-year								99	14.6	33	4.7
LPOMC18	8646.2	2-year	Trapezoidal	1	30	128.4	935.94	933.22	2.118	0	0.0	444	14.8
		5-year								41	4.9	444	14.8
		10-year								66	5.6	444	14.8
		25-year								100	6.4	444	14.8
		50-year								126	6.9	444	14.8
		100-year								158	7.5	444	14.8
LPOMC19	8414.1	2-year	Circular	3	0	55.6	931.42	930.58	1.501	-1	-0.2	76	10.7
		5-year								13	1.8	76	10.7
		10-year								5	0.8	76	10.7
		25-year								14	2.0	76	10.7
		50-year								13	1.8	76	10.7
		100-year								4	0.5	76	10.7
LPOMC19	8414.2	2-year	Trapezoidal	1	30	55.6	936.00	935.94	0.100	0	0.0	100	3.3
		5-year								0	0.2	100	3.3
		10-year								0	-0.2	100	3.3
		25-year								1	-0.2	100	3.3
		50-year								-1	0.4	100	3.3
		100-year								1	-0.2	100	3.3
LPRL101	LPRL101	2-year	Trapezoidal	10	4	107.3	878.04	875.00	2.833	8	0.6	7158	21.1
		5-year								12	0.7	7158	21.1
		10-year								27	1.1	7158	21.1
		25-year								32	1.0	7158	21.1
		50-year								32	1.0	7158	21.1
		100-year								38	1.0	7158	21.1
LPRL102	8013.1	2-year	Circular	3	0	8013.1	878.67	878.04	0.244	3	1.1	5	0.8
		5-year								5	1.4	5	0.8
		10-year								7	1.5	5	0.8
		25-year								8	1.6	5	0.8
		50-year								10	1.9	5	0.8
		100-year								20	3.2	5	0.8
LPRL102	8013.2	2-year	Trapezoidal	1	30	8013.1	890.00	889.00	0.012	0	0.0	34	1.1
		5-year								0	0.0	34	1.1
		10-year								0	0.0	34	1.1
		25-year								0	0.0	34	1.1
		50-year								0	0.0	34	1.1
		100-year								0	0.0	34	1.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL103	8249.1	2-year	Circular	2.5	0	82.4	879.50	878.67	1.008	12	6.2	38	7.8
		5-year								16	6.4	38	7.8
		10-year								19	6.7	38	7.8
		25-year								23	6.6	38	7.8
		50-year								26	6.8	38	7.8
		100-year								29	6.9	38	7.8
LPRL103	8249.2	2-year	Trapezoidal	1	30	82.4	890.08	890.00	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								1	0.6	95	3.2
LPRL104	8248.1	2-year	Circular	2.5	0	390.7	883.91	879.50	1.129	12	7.1	40	8.2
		5-year								17	7.7	40	8.2
		10-year								20	7.9	40	8.2
		25-year								23	8.2	40	8.2
		50-year								26	8.1	40	8.2
		100-year								30	8.3	40	8.2
LPRL104	8248.2	2-year	Trapezoidal	1	30	390.7	892.48	890.08	0.614	0	0.0	239	8.0
		5-year								0	0.0	239	8.0
		10-year								0	0.0	239	8.0
		25-year								0	0.0	239	8.0
		50-year								0	0.0	239	8.0
		100-year								0	0.0	239	8.0
LPRL105	8247.1	2-year	Circular	2.5	0	65.1	884.74	883.91	1.274	12	7.4	43	8.8
		5-year								17	8.5	43	8.8
		10-year								20	8.4	43	8.8
		25-year								23	8.8	43	8.8
		50-year								26	9.0	43	8.8
		100-year								30	9.2	43	8.8
LPRL105	8247.2	2-year	Trapezoidal	1	30	65.1	892.51	892.48	0.100	0	0.0	65	2.2
		5-year								0	0.0	65	2.2
		10-year								0	0.0	65	2.2
		25-year								0	0.0	65	2.2
		50-year								0	0.0	65	2.2
		100-year								0	0.0	65	2.2
LPRL106	8246.1	2-year	Circular	2	0	137.0	886.82	884.74	1.519	12	8.1	26	8.2
		5-year								17	8.9	26	8.2
		10-year								20	9.3	26	8.2
		25-year								23	9.7	26	8.2
		50-year								26	9.9	26	8.2
		100-year								30	10.1	26	8.2
LPRL106	8246.2	2-year	Trapezoidal	1	30	137.0	892.65	892.51	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								1	0.5	98	3.3
LPRL107	8245.1	2-year	Circular	2	0	62.2	887.31	886.82	0.788	12	6.9	19	5.9
		5-year								17	7.6	19	5.9
		10-year								20	8.0	19	5.9
		25-year								23	8.3	19	5.9
		50-year								26	8.6	19	5.9
		100-year								30	9.4	19	5.9
LPRL107	8245.2	2-year	Trapezoidal	1	30	62.2	892.71	892.65	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								10	1.7	95	3.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL201	LPRL201	2-year	Trapezoidal	11	8	123.5	877.77	875.00	2.242	178	4.5	12950	20.5
		5-year								267	4.8	12950	20.5
		10-year								321	5.0	12950	20.5
		25-year								392	5.2	12950	20.5
		50-year								444	5.4	12950	20.5
		100-year								514	5.4	12950	20.5
LPRL202	PRL202A	2-year	Rectangular	6	6	158.6	879.90	877.77	1.343	178	15.2	580	16.1
		5-year								267	17.8	580	16.1
		10-year								321	19.1	580	16.1
		25-year								392	20.6	580	16.1
		50-year								444	21.7	580	16.1
		100-year								514	23.0	580	16.1
LPRL202	PRL202B	2-year	Trapezoidal	1	30	158.6	888.00	887.84	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LPRL203	LPRL203	2-year	Natural	8	7	377.2	881.77	879.90	0.497	138	3.8	7278	5.9
		5-year								209	3.8	7278	5.9
		10-year								252	3.8	7278	5.9
		25-year								308	3.8	7278	5.9
		50-year								350	3.8	7278	5.9
		100-year								408	3.8	7278	5.9
LPRL204	PRL204A	2-year	Special	7	7	154.8	888.86	881.77	4.578	138	14.6	689	27.8
		5-year								209	16.6	689	27.8
		10-year								252	18.1	689	27.8
		25-year								308	20.1	689	27.8
		50-year								351	21.3	689	27.8
		100-year								409	22.8	689	27.8
LPRL204	PRL204B	2-year	Trapezoidal	1	30	154.8	893.00	892.85	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LPRL205	LPRL205	2-year	Natural	4	2	120.2	889.04	888.86	0.150	122	1.5	1370	3.2
		5-year								184	1.7	1370	3.2
		10-year								222	1.7	1370	3.2
		25-year								272	1.8	1370	3.2
		50-year								309	1.9	1370	3.2
		100-year								360	1.9	1370	3.2
LPRL206	PRL206A	2-year	User Defined	3.25	6.5	30.4	889.96	889.04	3.027	122	5.1	0	10.2
		5-year								184	6.2	0	10.2
		10-year								222	6.8	0	10.2
		25-year								272	7.5	0	10.2
		50-year								309	7.9	0	10.2
		100-year								359	8.5	0	10.2
LPRL206	PRL206B	2-year	Trapezoidal	2	30	30.4	893.21	892.29	3.027	0	0.0	1618	27.0
		5-year								0	0.0	1618	27.0
		10-year								0	0.0	1618	27.0
		25-year								0	0.0	1618	27.0
		50-year								0	0.0	1618	27.0
		100-year								0	0.0	1618	27.0
LPRL207	LPRL207	2-year	Trapezoidal	4	12	339.4	891.00	889.96	0.306	123	2.4	1137	3.9
		5-year								185	2.6	1137	3.9
		10-year								223	2.7	1137	3.9
		25-year								273	2.8	1137	3.9
		50-year								310	2.8	1137	3.9
		100-year								360	2.9	1137	3.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL208	8401.1	2-year	Rectangular	4	4	163.9	893.42	891.00	1.477	123	14.9	206	12.9
		5-year								185	17.5	206	12.9
		10-year								223	18.5	206	12.9
		25-year								256	20.0	206	12.9
		50-year								263	20.2	206	12.9
		100-year								270	20.4	206	12.9
LPRL208	8401.2	2-year	Trapezoidal	1	30	163.9	898.93	896.00	1.788	0	0.0	408	13.6
		5-year								0	0.0	408	13.6
		10-year								0	0.0	408	13.6
		25-year								17	3.9	408	13.6
		50-year								48	5.9	408	13.6
		100-year								91	7.6	408	13.6
LPRL209	8400.1	2-year	Circular	2	0	55.4	893.97	893.42	0.993	59	19.4	21	6.7
		5-year								59	19.4	21	6.7
		10-year								58	19.3	21	6.7
		25-year								58	19.3	21	6.7
		50-year								58	19.2	21	6.7
		100-year								58	19.3	21	6.7
LPRL209	8400.2	2-year	Trapezoidal	2	30	55.4	898.89	898.83	0.100	54	3.4	306	5.1
		5-year								114	4.6	306	5.1
		10-year								153	5.2	306	5.1
		25-year								211	5.8	306	5.1
		50-year								245	6.1	306	5.1
		100-year								288	6.5	306	5.1
LPRL210	8452.1	2-year	Circular	2	0	194.4	895.57	893.97	0.823	32	10.0	19	6.1
		5-year								32	10.1	19	6.1
		10-year								32	10.1	19	6.1
		25-year								33	10.2	19	6.1
		50-year								32	10.1	19	6.1
		100-year								31	9.9	19	6.1
LPRL210	8452.2	2-year	Trapezoidal	2	30	194.4	900.78	898.89	0.972	89	5.7	917	15.3
		5-year								144	6.5	917	15.3
		10-year								178	6.8	917	15.3
		25-year								222	7.2	917	15.3
		50-year								256	7.6	917	15.3
		100-year								300	8.1	917	15.3
LPRL211	8453.1	2-year	Circular	2	0	35.7	895.58	895.57	0.028	30	9.6	4	1.1
		5-year								30	9.6	4	1.1
		10-year								30	9.6	4	1.1
		25-year								30	9.6	4	1.1
		50-year								30	9.6	4	1.1
		100-year								30	9.5	4	1.1
LPRL211	8453.2	2-year	Trapezoidal	2	30	35.7	900.83	900.78	0.140	90	4.3	348	5.8
		5-year								142	5.1	348	5.8
		10-year								174	5.5	348	5.8
		25-year								217	6.0	348	5.8
		50-year								249	6.3	348	5.8
		100-year								292	6.7	348	5.8
LPRL212	8451.1	2-year	Circular	2	0	162.7	897.68	895.58	1.291	28	8.8	24	7.6
		5-year								28	9.0	24	7.6
		10-year								27	8.6	24	7.6
		25-year								27	8.6	24	7.6
		50-year								27	8.4	24	7.6
		100-year								27	8.4	24	7.6
LPRL212	8451.2	2-year	Trapezoidal	2	30	162.7	902.26	900.83	0.879	91	5.1	872	14.5
		5-year								146	6.1	872	14.5
		10-year								179	6.7	872	14.5
		25-year								224	7.3	872	14.5
		50-year								257	7.7	872	14.5
		100-year								301	8.1	872	14.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL213	8399.1	2-year	Circular	2	0	40.9	898.20	897.68	1.273	25	8.2	24	7.5
		5-year								25	8.2	24	7.5
		10-year								25	8.2	24	7.5
		25-year								25	8.2	24	7.5
		50-year								25	8.2	24	7.5
		100-year								25	8.2	24	7.5
LPRL213	8399.2	2-year	Trapezoidal	2	30	40.9	902.62	902.26	0.881	53	4.2	873	14.5
		5-year								90	5.2	873	14.5
		10-year								113	5.7	873	14.5
		25-year								144	6.2	873	14.5
		50-year								167	6.5	873	14.5
		100-year								197	6.9	873	14.5
LPRL214	8244.1	2-year	Circular	2	0	468.8	906.73	898.20	1.820	29	9.8	28	9.0
		5-year								29	9.8	28	9.0
		10-year								29	9.8	28	9.0
		25-year								29	9.9	28	9.0
		50-year								29	9.8	28	9.0
		100-year								28	9.6	28	9.0
LPRL214	8244.2	2-year	Trapezoidal	1	30	468.8	910.73	902.62	1.730	49	5.2	401	13.4
		5-year								87	6.5	401	13.4
		10-year								110	7.0	401	13.4
		25-year								140	7.7	401	13.4
		50-year								163	8.1	401	13.4
		100-year								193	8.6	401	13.4
LPRL215	8243.1	2-year	Circular	2	0	73.5	907.39	906.73	0.898	33	10.4	20	6.3
		5-year								34	10.7	20	6.3
		10-year								35	10.9	20	6.3
		25-year								35	11.1	20	6.3
		50-year								35	11.2	20	6.3
		100-year								31	9.7	20	6.3
LPRL215	8243.2	2-year	Trapezoidal	1	30	73.5	911.56	910.73	1.129	53	5.3	324	10.8
		5-year								91	6.6	324	10.8
		10-year								114	7.2	324	10.8
		25-year								144	7.9	324	10.8
		50-year								167	8.4	324	10.8
		100-year								197	8.9	324	10.8
LPRL216	8241.1	2-year	Circular	2	0	132.2	907.69	907.39	0.227	11	4.2	10	3.2
		5-year								11	4.1	10	3.2
		10-year								11	4.1	10	3.2
		25-year								11	4.1	10	3.2
		50-year								11	4.1	10	3.2
		100-year								11	4.1	10	3.2
LPRL216	8241.2	2-year	Trapezoidal	2	30	132.2	911.69	911.56	0.100	40	2.8	292	4.9
		5-year								64	3.4	292	4.9
		10-year								78	3.7	292	4.9
		25-year								98	4.1	292	4.9
		50-year								112	4.3	292	4.9
		100-year								132	4.6	292	4.9
LPRL217	8240.1	2-year	Circular	2	0	189.8	909.24	907.69	0.817	27	8.5	19	6.0
		5-year								27	8.5	19	6.0
		10-year								27	8.6	19	6.0
		25-year								27	8.6	19	6.0
		50-year								27	8.5	19	6.0
		100-year								27	8.4	19	6.0
LPRL217	8240.2	2-year	Trapezoidal	2	30	189.8	914.99	911.69	1.739	23	2.3	1226	20.4
		5-year								48	3.4	1226	20.4
		10-year								62	3.9	1226	20.4
		25-year								82	4.5	1226	20.4
		50-year								97	4.9	1226	20.4
		100-year								117	5.3	1226	20.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL218	8239.1	2-year	Circular	2	0	38.6	910.72	909.24	3.833	39	12.3	41	13.1
		5-year								39	12.4	41	13.1
		10-year								39	12.4	41	13.1
		25-year								39	12.4	41	13.1
		50-year								39	12.4	41	13.1
		100-year								39	12.4	41	13.1
LPRL218	8239.2	2-year	Trapezoidal	1	30	38.6	916.39	914.99	3.626	11	2.7	581	19.4
		5-year								35	5.2	581	19.4
		10-year								49	6.2	581	19.4
		25-year								69	7.2	581	19.4
		50-year								84	7.8	581	19.4
		100-year								103	8.5	581	19.4
LPRL2A01	8242.1	2-year	Circular	1.25	0	83.0	909.14	907.39	2.109	9	7.7	9	7.1
		5-year								9	7.7	9	7.1
		10-year								9	7.7	9	7.1
		25-year								9	7.7	9	7.1
		50-year								9	7.7	9	7.1
		100-year								9	7.7	9	7.1
LPRL2A01	8242.2	2-year	Trapezoidal	1	30	83.0	911.97	911.56	0.494	9	1.3	214	7.1
		5-year								17	1.8	214	7.1
		10-year								22	2.0	214	7.1
		25-year								29	2.2	214	7.1
		50-year								34	2.4	214	7.1
		100-year								41	2.6	214	7.1
LPRL301	8490.1	2-year	Circular	3	0	310.8	901.92	899.57	0.756	65	9.9	54	7.6
		5-year								67	9.9	54	7.6
		10-year								68	10.0	54	7.6
		25-year								68	10.1	54	7.6
		50-year								69	10.2	54	7.6
		100-year								69	10.2	54	7.6
LPRL301	8490.2	2-year	Trapezoidal	2	30	310.8	905.00	904.69	0.100	10	1.5	294	4.9
		5-year								47	2.8	294	4.9
		10-year								70	3.3	294	4.9
		25-year								101	3.9	294	4.9
		50-year								124	4.2	294	4.9
		100-year								153	4.6	294	4.9
LPRL302	PRL302A	2-year	Circular	2.5	0	49.1	902.29	901.92	0.753	53	10.7	33	6.7
		5-year								50	10.0	33	6.7
		10-year								50	10.0	33	6.7
		25-year								50	10.0	33	6.7
		50-year								51	10.1	33	6.7
		100-year								51	10.2	33	6.7
LPRL302	PRL302B	2-year	Trapezoidal	2	30	49.1	905.29	905.00	0.590	43	4.0	715	11.9
		5-year								85	4.8	715	11.9
		10-year								110	5.0	715	11.9
		25-year								141	5.2	715	11.9
		50-year								163	5.4	715	11.9
		100-year								193	5.6	715	11.9
LPRL303	8237.1	2-year	Circular	3	0	330.3	904.79	902.29	0.757	54	7.4	54	7.6
		5-year								73	10.1	54	7.6
		10-year								73	10.1	54	7.6
		25-year								73	10.1	54	7.6
		50-year								73	10.1	54	7.6
		100-year								73	10.0	54	7.6
LPRL303	8237.2	2-year	Trapezoidal	2	30	330.3	910.12	905.29	1.765	0	0.0	1125	18.7
		5-year								6	0.7	1125	18.7
		10-year								22	1.8	1125	18.7
		25-year								43	2.8	1125	18.7
		50-year								59	3.3	1125	18.7
		100-year								79	3.8	1125	18.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRL304	8236.1	2-year	Circular	2.5	0	44.3	904.94	904.79	0.339	54	11.0	22	4.5
		5-year								63	12.8	22	4.5
		10-year								63	12.8	22	4.5
		25-year								65	13.1	22	4.5
		50-year								64	13.0	22	4.5
		100-year								63	12.8	22	4.5
LPRL304	8236.2	2-year	Trapezoidal	1	30	44.3	910.16	910.12	0.100	0	0.0	92	3.1
		5-year								41	3.1	92	3.1
		10-year								56	3.5	92	3.1
		25-year								75	3.9	92	3.1
		50-year								90	4.2	92	3.1
		100-year								109	4.5	92	3.1
LPRL305	8012.1	2-year	Rectangular	2.5	4	150.4	907.35	904.94	1.602	54	6.7	113	11.3
		5-year								79	7.9	113	11.3
		10-year								84	8.3	113	11.3
		25-year								85	8.5	113	11.3
		50-year								87	8.7	113	11.3
		100-year								88	8.7	113	11.3
LPRL305	8012.2	2-year	Trapezoidal	1	30	150.4	911.93	910.16	1.177	0	0.0	331	11.0
		5-year								0	0.0	331	11.0
		10-year								10	1.1	331	11.0
		25-year								30	2.3	331	11.0
		50-year								45	3.0	331	11.0
		100-year								65	3.7	331	11.0
LPRL306	8235.1	2-year	Circular	2.5	0	37.6	908.21	907.35	2.285	5	5.8	58	11.7
		5-year								7	6.1	58	11.7
		10-year								9	6.3	58	11.7
		25-year								10	6.5	58	11.7
		50-year								12	6.9	58	11.7
		100-year								14	6.9	58	11.7
LPRL306	8235.2	2-year	Trapezoidal	1	30	37.6	912.29	911.93	0.956	0	0.0	298	9.9
		5-year								0	0.0	298	9.9
		10-year								0	0.0	298	9.9
		25-year								0	0.0	298	9.9
		50-year								0	0.0	298	9.9
		100-year								0	-0.1	298	9.9
LPRL307	8479.1	2-year	Circular	2	0	178.8	913.61	908.21	3.019	5	8.2	37	11.6
		5-year								7	9.1	37	11.6
		10-year								9	9.5	37	11.6
		25-year								10	10.0	37	11.6
		50-year								12	10.4	37	11.6
		100-year								13	10.7	37	11.6
LPRL307	8479.2	2-year	Trapezoidal	1	30	178.8	917.11	912.29	2.695	0	0.0	501	16.7
		5-year								0	0.0	501	16.7
		10-year								0	0.0	501	16.7
		25-year								0	0.0	501	16.7
		50-year								0	0.0	501	16.7
		100-year								0	0.0	501	16.7
LPRL401	8234.1	2-year	Circular	2.5	0	106.2	923.25	921.60	1.554	5	2.7	47	9.7
		5-year								7	2.7	47	9.7
		10-year								9	3.1	47	9.7
		25-year								11	3.6	47	9.7
		50-year								12	3.9	47	9.7
		100-year								14	4.4	47	9.7
LPRL401	8234.2	2-year	Trapezoidal	1	30	106.2	926.67	925.35	1.243	0	0.0	340	11.3
		5-year								0	0.0	340	11.3
		10-year								0	0.0	340	11.3
		25-year								0	0.0	340	11.3
		50-year								0	0.0	340	11.3
		100-year								0	0.0	340	11.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC01	LPRMC01	2-year	Trapezoidal	12	8	275.3	869.97	861.41	3.110	329	10.5	9702	25.3
		5-year								509	11.8	9702	25.3
		10-year								608	12.4	9702	25.3
		25-year								727	13.0	9702	25.3
		50-year								797	13.3	9702	25.3
		100-year								901	13.8	9702	25.3
LPRMC02	PRMC02A	2-year	Rectangular	7	7	81.4	871.81	869.97	2.260	329	19.7	1136	23.2
		5-year								509	23.2	1136	23.2
		10-year								608	24.8	1136	23.2
		25-year								727	26.6	1136	23.2
		50-year								797	27.6	1136	23.2
		100-year								901	29.0	1136	23.2
LPRMC02	PRMC02B	2-year	Trapezoidal	1	30	81.4	903.94	903.86	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPRMC03	PRMC03A	2-year	Rectangular	7	7	60.2	873.16	871.81	2.243	329	20.0	1131	23.1
		5-year								509	22.6	1131	23.1
		10-year								608	23.8	1131	23.1
		25-year								727	25.1	1131	23.1
		50-year								797	25.8	1131	23.1
		100-year								901	26.7	1131	23.1
LPRMC03	PRMC03B	2-year	Trapezoidal	1	30	60.2	904.00	903.94	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LPRMC04	PRMC04A	2-year	Rectangular	7	7	77.5	874.91	873.16	2.259	330	20.1	1135	23.2
		5-year								509	22.6	1135	23.2
		10-year								608	23.6	1135	23.2
		25-year								727	24.8	1135	23.2
		50-year								797	25.4	1135	23.2
		100-year								901	26.2	1135	23.2
LPRMC04	PRMC04B	2-year	Trapezoidal	1	30	77.5	904.08	904.00	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LPRMC05	LPRMC05	2-year	Trapezoidal	10	5	18.6	875.00	874.91	0.483	331	8.6	3959	8.8
		5-year								509	8.6	3959	8.8
		10-year								608	8.6	3959	8.8
		25-year								727	8.5	3959	8.8
		50-year								797	8.5	3959	8.8
		100-year								901	8.5	3959	8.8
LPRMC06	LPRMC06	2-year	Trapezoidal	12	15	32.0	876.00	875.00	3.126	148	4.1	18208	26.6
		5-year								229	4.4	18208	26.6
		10-year								279	4.6	18208	26.6
		25-year								304	4.8	18208	26.6
		50-year								317	4.9	18208	26.6
		100-year								352	4.9	18208	26.6
LPRMC07	PRMC07A	2-year	Circular	5	0	64.6	878.81	876.00	4.353	148	24.4	505	25.7
		5-year								228	26.8	505	25.7
		10-year								279	27.8	505	25.7
		25-year								304	28.8	505	25.7
		50-year								317	29.3	505	25.7
		100-year								351	30.3	505	25.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC07	PRMC07B	2-year	Trapezoidal	1	30	64.6	888.00	887.94	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LPRMC08	LPRMC08	2-year	Trapezoidal	8	12	149.9	881.40	878.81	1.728	142	3.3	9892	14.7
		5-year								211	3.7	9892	14.7
		10-year								253	3.8	9892	14.7
		25-year								272	3.9	9892	14.7
		50-year								293	3.9	9892	14.7
		100-year								339	3.9	9892	14.7
LPRMC09	PRMC09A	2-year	Rectangular	4	6	343.6	883.33	881.40	0.562	142	11.7	216	9.0
		5-year								211	13.7	216	9.0
		10-year								253	14.1	216	9.0
		25-year								272	15.3	216	9.0
		50-year								293	16.3	216	9.0
		100-year								311	17.0	216	9.0
LPRMC09	PRMC09B	2-year	Trapezoidal	1	30	343.6	890.00	889.67	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								28	2.2	95	3.2
LPRMC10	PRMC10A	2-year	Special	4.5	6	176.2	885.04	883.33	0.971	69	5.7	166	7.5
		5-year								102	6.4	166	7.5
		10-year								122	6.4	166	7.5
		25-year								132	6.4	166	7.5
		50-year								133	6.3	166	7.5
		100-year								133	6.3	166	7.5
LPRMC10	PRMC10B	2-year	Trapezoidal	2	30	176.2	890.18	890.00	0.100	0	0.0	297	5.0
		5-year								0	0.0	297	5.0
		10-year								0	0.0	297	5.0
		25-year								0	0.2	297	5.0
		50-year								50	3.0	297	5.0
		100-year								119	4.3	297	5.0
LPRMC11	LPRMC11	2-year	Natural	8	10	214.5	886.56	885.04	0.709	138	4.2	12819	6.9
		5-year								204	4.2	12819	6.9
		10-year								243	4.2	12819	6.9
		25-year								275	4.2	12819	6.9
		50-year								301	4.2	12819	6.9
		100-year								336	4.2	12819	6.9
LPRMC12	PRMC12A	2-year	Special	2.5	3	77.1	887.00	886.56	0.570	55	7.9	28	3.9
		5-year								55	8.0	28	3.9
		10-year								55	8.0	28	3.9
		25-year								57	8.1	28	3.9
		50-year								56	8.0	28	3.9
		100-year								56	8.0	28	3.9
LPRMC12	PRMC12B	2-year	Trapezoidal	2	30	77.1	890.00	889.92	0.100	29	2.6	300	5.0
		5-year								98	4.2	300	5.0
		10-year								134	4.8	300	5.0
		25-year								194	5.5	300	5.0
		50-year								241	6.0	300	5.0
		100-year								292	6.5	300	5.0
LPRMC13	LPRMC13	2-year	Natural	5	2	132.8	887.24	887.00	0.181	139	0.5	3252	3.4
		5-year								205	0.5	3252	3.4
		10-year								244	0.5	3252	3.4
		25-year								288	0.5	3252	3.4
		50-year								320	0.5	3252	3.4
		100-year								355	0.5	3252	3.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC14	PRMC14A	2-year	Circular	6	0	207.0	887.37	887.24	0.063	147	10.0	99	3.5
		5-year								210	10.6	99	3.5
		10-year								247	11.5	99	3.5
		25-year								293	12.7	99	3.5
		50-year								326	13.5	99	3.5
		100-year								347	14.0	99	3.5
LPRMC14	PRMC14B	2-year	Trapezoidal	1	30	207.0	893.00	892.79	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								14	1.7	96	3.2
LPRMC15	LPRMC15	2-year	Natural	6.5	5	195.0	889.60	887.37	1.144	147	3.7	1891	6.2
		5-year								210	3.9	1891	6.2
		10-year								248	3.9	1891	6.2
		25-year								295	4.0	1891	6.2
		50-year								329	4.0	1891	6.2
		100-year								366	4.0	1891	6.2
LPRMC16	PRMC16A	2-year	Circular	6	0	1137.4	899.57	889.60	0.877	135	12.2	368	13.0
		5-year								194	13.4	368	13.0
		10-year								225	14.0	368	13.0
		25-year								266	14.5	368	13.0
		50-year								296	14.8	368	13.0
		100-year								332	15.2	368	13.0
LPRMC16	PRMC16B	2-year	Trapezoidal	3	30	1137.4	906.00	896.00	0.879	0	0.0	1650	18.3
		5-year								0	0.0	1650	18.3
		10-year								0	0.0	1650	18.3
		25-year								0	0.0	1650	18.3
		50-year								0	0.0	1650	18.3
		100-year								0	0.0	1650	18.3
LPRMC17	LPRMC17	2-year	Natural	5	10	993.6	909.36	899.57	0.985	69	1.1	5903	7.7
		5-year								97	1.2	5903	7.7
		10-year								114	1.3	5903	7.7
		25-year								135	1.3	5903	7.7
		50-year								151	1.3	5903	7.7
		100-year								172	1.4	5903	7.7
LPRMC18	8405.1	2-year	Circular	1.67	0	44.7	909.50	909.36	0.313	28	15.9	7	3.3
		5-year								30	16.3	7	3.3
		10-year								31	16.6	7	3.3
		25-year								33	16.8	7	3.3
		50-year								34	17.0	7	3.3
		100-year								35	17.1	7	3.3
LPRMC18	8405.2	2-year	Trapezoidal	1	30	44.7	913.00	912.96	0.100	43	3.1	91	3.0
		5-year								69	3.8	91	3.0
		10-year								84	4.1	91	3.0
		25-year								105	4.5	91	3.0
		50-year								120	4.7	91	3.0
		100-year								141	5.0	91	3.0
LPRMC19	8406.1	2-year	Circular	1.67	0	94.3	909.95	909.50	0.477	17	7.6	9	4.1
		5-year								17	7.6	9	4.1
		10-year								17	7.6	9	4.1
		25-year								17	7.5	9	4.1
		50-year								17	7.5	9	4.1
		100-year								17	7.5	9	4.1
LPRMC19	8406.2	2-year	Trapezoidal	1	30	94.3	913.45	913.00	0.477	62	4.3	211	7.0
		5-year								90	4.9	211	7.0
		10-year								107	5.2	211	7.0
		25-year								129	5.5	211	7.0
		50-year								146	5.7	211	7.0
		100-year								168	6.0	211	7.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LPRMC20	8407.1	2-year	Circular	1.67	0	680.3	919.87	909.95	1.458	16	7.3	16	7.2
		5-year								16	7.3	16	7.2
		10-year								16	7.3	16	7.2
		25-year								16	7.3	16	7.2
		50-year								16	7.3	16	7.2
		100-year								16	7.3	16	7.2
LPRMC20	8407.2	2-year	Trapezoidal	1	30	680.3	924.04	913.45	1.557	11	1.3	381	12.7
		5-year								22	2.0	381	12.7
		10-year								29	2.3	381	12.7
		25-year								38	2.7	381	12.7
		50-year								45	2.9	381	12.7
		100-year								54	3.2	381	12.7
LPRMC21	8408.1	2-year	Circular	2	0	80.0	921.60	919.87	2.163	26	8.9	31	9.8
		5-year								27	9.0	31	9.8
		10-year								27	8.8	31	9.8
		25-year								27	8.8	31	9.8
		50-year								27	8.9	31	9.8
		100-year								27	8.9	31	9.8
LPRMC21	8408.2	2-year	Trapezoidal	1	30	80.0	925.35	924.04	1.638	1	0.4	390	13.0
		5-year								12	2.7	390	13.0
		10-year								19	3.4	390	13.0
		25-year								28	4.2	390	13.0
		50-year								34	4.6	390	13.0
		100-year								43	5.1	390	13.0
LPRMC22	8472.1	2-year	Circular	2	0	100.3	922.45	921.60	0.848	4	1.8	19	6.2
		5-year								6	1.9	19	6.2
		10-year								9	3.0	19	6.2
		25-year								-4	-1.7	19	6.2
		50-year								-4	-1.7	19	6.2
		100-year								11	3.5	19	6.2
LPRMC22	8472.2	2-year	Trapezoidal	1	30	100.3	925.37	925.35	0.020	0	0.1	43	1.4
		5-year								0	-0.1	43	1.4
		10-year								0	0.3	43	1.4
		25-year								1	-0.2	43	1.4
		50-year								1	-0.2	43	1.4
		100-year								-1	-0.3	43	1.4
LRCL0101	LRCL0101	2-year	Natural	20	0	956.5	882.07	873.84	0.860	118	0.8	142182	18.5
		5-year								168	0.8	142182	18.5
		10-year								194	0.8	142182	18.5
		25-year								218	0.7	142182	18.5
		50-year								-251	0.7	142182	18.5
		100-year								-288	0.7	142182	18.5
LRCL0102	RCL0102A	2-year	Circular	4	0	80.8	883.53	882.07	1.808	119	17.6	179	14.3
		5-year								169	20.1	179	14.3
		10-year								196	21.2	179	14.3
		25-year								220	21.9	179	14.3
		50-year								227	22.0	179	14.3
		100-year								247	22.7	179	14.3
LRCL0102	RCL0102B	2-year	Trapezoidal	5	30	80.8	887.53	887.45	0.100	0	0.0	1210	8.1
		5-year								0	0.0	1210	8.1
		10-year								0	0.0	1210	8.1
		25-year								-60	-2.7	1210	8.1
		50-year								98	2.8	1210	8.1
		100-year								150	3.0	1210	8.1
LRCL0103	LRCL0103	2-year	Natural	10	0	46.5	883.86	883.53	0.710	88	0.8	38517	12.3
		5-year								127	0.8	38517	12.3
		10-year								149	0.8	38517	12.3
		25-year								176	1.1	38517	12.3
		50-year								194	0.9	38517	12.3
		100-year								227	0.9	38517	12.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0104	LRCL0104	2-year	Natural	8	0	784.8	895.38	883.86	1.468	102	1.3	27985	16.5
		5-year								147	1.5	27985	16.5
		10-year								174	1.6	27985	16.5
		25-year								209	1.7	27985	16.5
		50-year								236	1.7	27985	16.5
		100-year								272	1.7	27985	16.5
LRCL0105	8653.1	2-year	Circular	2.5	0	49.1	895.91	895.38	1.079	57	19.0	40	8.1
		5-year								62	19.9	40	8.1
		10-year								65	20.4	40	8.1
		25-year								68	21.0	40	8.1
		50-year								71	21.4	40	8.1
		100-year								74	21.8	40	8.1
LRCL0105	8653.2	2-year	Trapezoidal	2	30	49.1	899.57	899.52	0.100	45	3.2	297	4.9
		5-year								85	4.1	297	4.9
		10-year								110	4.6	297	4.9
		25-year								142	5.0	297	4.9
		50-year								166	5.3	297	4.9
		100-year								199	5.7	297	4.9
LRCL0106	8654.1	2-year	Circular	2.5	0	58.7	896.55	895.91	1.091	36	7.3	40	8.1
		5-year								36	7.3	40	8.1
		10-year								35	7.1	40	8.1
		25-year								35	7.0	40	8.1
		50-year								35	7.0	40	8.1
		100-year								35	7.0	40	8.1
LRCL0106	8654.2	2-year	Trapezoidal	2	30	58.7	900.30	899.57	1.245	24	2.4	1038	17.3
		5-year								52	3.4	1038	17.3
		10-year								68	3.9	1038	17.3
		25-year								90	4.4	1038	17.3
		50-year								105	4.6	1038	17.3
		100-year								124	4.9	1038	17.3
LRCL0107	8600.1	2-year	Circular	2.5	0	114.6	898.62	896.55	1.807	52	10.5	51	10.4
		5-year								52	10.6	51	10.4
		10-year								52	10.6	51	10.4
		25-year								52	10.6	51	10.4
		50-year								53	10.7	51	10.4
		100-year								53	10.7	51	10.4
LRCL0107	8600.2	2-year	Trapezoidal	1	30	114.6	902.54	900.30	1.955	5	1.2	427	14.2
		5-year								28	3.7	427	14.2
		10-year								42	4.6	427	14.2
		25-year								60	5.5	427	14.2
		50-year								74	5.9	427	14.2
		100-year								93	6.3	427	14.2
LRCL0108	8601.1	2-year	Circular	2.5	0	70.4	899.48	898.62	1.222	41	9.4	42	8.6
		5-year								42	9.7	42	8.6
		10-year								42	9.8	42	8.6
		25-year								42	9.8	42	8.6
		50-year								46	9.8	42	8.6
		100-year								43	9.8	42	8.6
LRCL0108	8601.2	2-year	Trapezoidal	1	30	70.4	902.40	902.54	-0.199	-29	-2.3	136	4.5
		5-year								-51	-3.0	136	4.5
		10-year								-64	-3.3	136	4.5
		25-year								-81	-3.7	136	4.5
		50-year								-94	-3.9	136	4.5
		100-year								-111	-4.3	136	4.5
LRCL0109	8602.1	2-year	Circular	1.5	0	189.1	906.10	899.48	3.501	24	13.5	18	10.3
		5-year								24	13.6	18	10.3
		10-year								24	13.6	18	10.3
		25-year								24	13.5	18	10.3
		50-year								24	13.5	18	10.3
		100-year								24	13.5	18	10.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0109	8602.2	2-year	Trapezoidal	2	30	189.1	910.93	902.40	4.511	36	6.2	1975	32.9
		5-year								59	6.7	1975	32.9
		10-year								73	7.1	1975	32.9
		25-year								92	7.5	1975	32.9
		50-year								105	7.4	1975	32.9
		100-year								123	7.8	1975	32.9
LRCL0110	8603.1	2-year	Circular	2.5	0	170.5	907.15	906.10	0.616	30	6.0	30	6.1
		5-year								28	5.8	30	6.1
		10-year								28	5.6	30	6.1
		25-year								25	5.1	30	6.1
		50-year								25	5.0	30	6.1
		100-year								25	5.1	30	6.1
LRCL0110	8603.2	2-year	Trapezoidal	2	30	170.5	911.65	909.93	1.009	5	1.2	934	15.6
		5-year								15	1.0	934	15.6
		10-year								22	1.1	934	15.6
		25-year								30	1.4	934	15.6
		50-year								37	1.6	934	15.6
		100-year								45	1.9	934	15.6
LRCL0111	8604.1	2-year	Circular	2	0	225.1	908.81	907.15	0.737	21	6.7	18	5.7
		5-year								21	6.8	18	5.7
		10-year								21	6.7	18	5.7
		25-year								21	6.7	18	5.7
		50-year								21	6.8	18	5.7
		100-year								21	6.8	18	5.7
LRCL0111	8604.2	2-year	Trapezoidal	1	30	225.1	912.81	911.65	0.515	12	2.4	219	7.3
		5-year								23	3.0	219	7.3
		10-year								30	3.4	219	7.3
		25-year								39	3.7	219	7.3
		50-year								45	3.9	219	7.3
		100-year								54	4.2	219	7.3
LRCL0112	8605.1	2-year	Circular	2	0	183.6	914.23	908.81	2.952	28	9.2	36	11.5
		5-year								36	11.3	36	11.5
		10-year								36	11.3	36	11.5
		25-year								36	11.4	36	11.5
		50-year								36	11.4	36	11.5
		100-year								36	11.4	36	11.5
LRCL0112	8605.2	2-year	Trapezoidal	1	30	183.6	918.23	912.81	2.952	0	0.0	524	17.5
		5-year								4	0.8	524	17.5
		10-year								10	1.8	524	17.5
		25-year								19	2.7	524	17.5
		50-year								25	3.3	524	17.5
		100-year								34	3.8	524	17.5
LRCL0113	8606.1	2-year	Circular	2	0	38.9	914.81	914.23	1.492	28	10.4	26	8.2
		5-year								34	10.8	26	8.2
		10-year								34	10.9	26	8.2
		25-year								34	10.8	26	8.2
		50-year								34	10.9	26	8.2
		100-year								34	10.8	26	8.2
LRCL0113	8606.2	2-year	Trapezoidal	1	30	38.9	918.81	918.23	1.492	0	0.0	373	12.4
		5-year								12	3.2	373	12.4
		10-year								18	3.8	373	12.4
		25-year								27	4.5	373	12.4
		50-year								34	4.8	373	12.4
		100-year								42	5.3	373	12.4
LRCL01A01	LRCL01A01	2-year	Trapezoidal	7	40	634.1	890.65	883.53	1.123	38	0.5	17951	13.0
		5-year								52	0.5	17951	13.0
		10-year								60	0.6	17951	13.0
		25-year								68	0.6	17951	13.0
		50-year								71	0.6	17951	13.0
		100-year								77	0.6	17951	13.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01A02	8481.1	2-year	Circular	3	0	52.7	890.82	890.65	0.322	39	13.5	35	5.0
		5-year								54	15.3	35	5.0
		10-year								62	16.2	35	5.0
		25-year								69	16.7	35	5.0
		50-year								72	16.8	35	5.0
		100-year								78	17.6	35	5.0
LRCL01A02	8481.2	2-year	Trapezoidal	1	30	52.7	897.24	897.00	0.455	0	0.0	206	6.9
		5-year								0	0.0	206	6.9
		10-year								0	0.0	206	6.9
		25-year								0	0.0	206	6.9
		50-year								0	0.0	206	6.9
		100-year								0	0.0	206	6.9
LRCL01A03	8599.1	2-year	Circular	3	0	50.8	890.98	890.82	0.315	32	6.7	35	4.9
		5-year								42	7.5	35	4.9
		10-year								47	7.8	35	4.9
		25-year								52	8.2	35	4.9
		50-year								56	8.5	35	4.9
		100-year								63	8.8	35	4.9
LRCL01A03	8599.2	2-year	Trapezoidal	1	30	50.8	897.90	897.24	1.299	0	0.0	348	11.6
		5-year								0	0.0	348	11.6
		10-year								0	0.0	348	11.6
		25-year								0	0.0	348	11.6
		50-year								0	0.0	348	11.6
		100-year								0	0.0	348	11.6
LRCL01A04	8598.1	2-year	Circular	3	0	161.0	891.03	890.98	0.031	32	5.5	11	1.5
		5-year								42	6.4	11	1.5
		10-year								47	6.8	11	1.5
		25-year								52	7.5	11	1.5
		50-year								56	8.0	11	1.5
		100-year								63	8.7	11	1.5
LRCL01A04	8598.2	2-year	Trapezoidal	1	30	161.0	898.06	897.90	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL01A05	LRCL01A05	2-year	Trapezoidal	6	6	166.3	891.08	891.03	0.030	32	0.2	1773	1.8
		5-year								43	0.2	1773	1.8
		10-year								48	0.2	1773	1.8
		25-year								53	0.2	1773	1.8
		50-year								59	0.2	1773	1.8
		100-year								95	0.2	1773	1.8
LRCL01A06	RCL01A06A	2-year	Circular	2	0	40.8	891.18	891.08	0.245	36	11.3	10	3.3
		5-year								48	15.2	10	3.3
		10-year								53	16.7	10	3.3
		25-year								58	18.3	10	3.3
		50-year								61	19.2	10	3.3
		100-year								62	19.6	10	3.3
LRCL01A06	RCL01A06B	2-year	Trapezoidal	1	30	40.8	898.10	897.50	1.472	0	0.0	370	12.3
		5-year								0	0.0	370	12.3
		10-year								0	0.0	370	12.3
		25-year								0	0.0	370	12.3
		50-year								0	0.0	370	12.3
		100-year								76	6.7	370	12.3
LRCL01A07	LRCL01A07	2-year	Natural	11	20	337.8	900.00	891.18	2.611	55	0.7	102186	24.0
		5-year								89	0.5	102186	24.0
		10-year								106	0.6	102186	24.0
		25-year								129	0.7	102186	24.0
		50-year								146	0.7	102186	24.0
		100-year								168	0.7	102186	24.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01A08	8597.1	2-year	Circular	2	0	55.4	900.09	900.00	0.162	31	15.1	8	2.7
		5-year								34	15.9	8	2.7
		10-year								36	16.2	8	2.7
		25-year								37	16.6	8	2.7
		50-year								39	16.8	8	2.7
		100-year								40	17.0	8	2.7
LRCL01A08	8597.2	2-year	Trapezoidal	1	30	55.4	903.78	903.72	0.100	26	2.5	100	3.3
		5-year								56	3.5	100	3.3
		10-year								72	3.9	100	3.3
		25-year								94	4.3	100	3.3
		50-year								110	4.6	100	3.3
		100-year								133	4.9	100	3.3
LRCL01A09	8483.1	2-year	Circular	2	0	175.3	900.39	900.09	0.171	35	10.9	9	2.8
		5-year								35	10.9	9	2.8
		10-year								35	10.9	9	2.8
		25-year								35	10.9	9	2.8
		50-year								35	10.9	9	2.8
		100-year								35	10.9	9	2.8
LRCL01A09	8483.2	2-year	Trapezoidal	1	30	175.3	908.66	903.78	2.784	14	2.0	509	17.0
		5-year								43	3.7	509	17.0
		10-year								59	4.4	509	17.0
		25-year								80	5.1	509	17.0
		50-year								96	5.5	509	17.0
		100-year								117	6.0	509	17.0
LRCL01A10	8596.1	2-year	Circular	2	0	192.2	900.72	900.39	0.172	25	7.7	9	2.8
		5-year								24	7.7	9	2.8
		10-year								24	7.6	9	2.8
		25-year								24	7.7	9	2.8
		50-year								24	7.7	9	2.8
		100-year								24	7.6	9	2.8
LRCL01A10	8596.2	2-year	Trapezoidal	10	30	192.2	906.30	908.66	-1.228	-41	-0.9	11652	38.8
		5-year								-69	-1.4	11652	38.8
		10-year								-85	-1.7	11652	38.8
		25-year								-105	-2.0	11652	38.8
		50-year								-120	-2.1	11652	38.8
		100-year								-140	-2.4	11652	38.8
LRCL01A11	8592.1	2-year	Circular	2	0	33.2	901.66	900.72	2.834	29	9.2	35	11.3
		5-year								21	6.6	35	11.3
		10-year								21	6.5	35	11.3
		25-year								22	7.1	35	11.3
		50-year								22	7.1	35	11.3
		100-year								22	7.0	35	11.3
LRCL01A11	8592.2	2-year	Trapezoidal	4	30	33.2	906.66	906.30	1.085	81	3.5	2856	23.8
		5-year								97	4.0	2856	23.8
		10-year								113	3.9	2856	23.8
		25-year								140	3.9	2856	23.8
		50-year								165	3.6	2856	23.8
		100-year								193	3.7	2856	23.8
LRCL01A12	8448.1	2-year	Circular	2	0	131.0	904.88	901.66	2.459	17	5.4	33	10.5
		5-year								17	5.6	33	10.5
		10-year								19	6.1	33	10.5
		25-year								22	6.8	33	10.5
		50-year								22	6.9	33	10.5
		100-year								22	7.1	33	10.5
LRCL01A12	8448.2	2-year	Trapezoidal	3	30	131.0	908.88	906.66	1.695	13	0.8	2291	25.5
		5-year								34	0.9	2291	25.5
		10-year								53	1.3	2291	25.5
		25-year								70	1.7	2291	25.5
		50-year								83	1.8	2291	25.5
		100-year								99	2.1	2291	25.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL01B01	8482.1	2-year	Circular	1.5	0	42.6	906.86	906.10	1.786	18	10.0	13	7.4
		5-year								18	10.2	13	7.4
		10-year								17	9.8	13	7.4
		25-year								15	8.2	13	7.4
		50-year								16	8.8	13	7.4
		100-year								15	8.6	13	7.4
LRCL01B01	8482.2	2-year	Trapezoidal	3	30	42.6	909.36	910.93	-3.689	-24	-0.8	3380	37.6
		5-year								-35	-1.1	3380	37.6
		10-year								-42	-1.3	3380	37.6
		25-year								-51	-1.5	3380	37.6
		50-year								-58	-1.6	3380	37.6
		100-year								-67	-1.8	3380	37.6
LRCL0201	LRCL0201	2-year	Natural	14	0	411.2	881.83	877.37	1.085	102	4.1	84463	17.0
		5-year								136	3.7	84463	17.0
		10-year								164	3.2	84463	17.0
		25-year								221	2.7	84463	17.0
		50-year								257	2.3	84463	17.0
		100-year								301	2.0	84463	17.0
LRCL0202	8568.1	2-year	Rectangular	4	6	408.5	892.34	881.83	2.573	87	11.0	461	19.2
		5-year								115	11.8	461	19.2
		10-year								140	12.6	461	19.2
		25-year								190	14.6	461	19.2
		50-year								216	15.4	461	19.2
		100-year								252	16.7	461	19.2
LRCL0202	8568.2	2-year	Trapezoidal	1	30	408.5	898.34	888.00	2.531	0	0.0	485	16.2
		5-year								0	0.0	485	16.2
		10-year								0	0.0	485	16.2
		25-year								0	0.0	485	16.2
		50-year								0	0.0	485	16.2
		100-year								0	0.0	485	16.2
LRCL0203	8567.1	2-year	Rectangular	4	6	209.9	894.76	892.34	1.153	68	10.2	309	12.9
		5-year								88	11.1	309	12.9
		10-year								111	12.2	309	12.9
		25-year								154	13.4	309	12.9
		50-year								175	13.9	309	12.9
		100-year								203	14.5	309	12.9
LRCL0203	8567.2	2-year	Trapezoidal	1	30	209.9	900.26	898.34	0.915	0	0.0	292	9.7
		5-year								0	0.0	292	9.7
		10-year								0	0.0	292	9.7
		25-year								0	0.0	292	9.7
		50-year								0	0.0	292	9.7
		100-year								0	0.0	292	9.7
LRCL0204	8566.1	2-year	Circular	2.5	0	534.3	907.00	894.76	2.291	49	13.0	58	11.7
		5-year								53	13.3	58	11.7
		10-year								58	13.6	58	11.7
		25-year								64	13.9	58	11.7
		50-year								66	13.9	58	11.7
		100-year								66	13.9	58	11.7
LRCL0204	8566.2	2-year	Trapezoidal	1	30	534.3	911.50	900.26	2.104	11	3.4	442	14.7
		5-year								22	4.5	442	14.7
		10-year								41	5.8	442	14.7
		25-year								69	7.1	442	14.7
		50-year								86	7.8	442	14.7
		100-year								112	8.6	442	14.7
LRCL0205	8435.1	2-year	Circular	2.5	0	54.9	907.51	907.00	0.930	48	9.7	37	7.5
		5-year								52	10.5	37	7.5
		10-year								54	10.9	37	7.5
		25-year								55	11.2	37	7.5
		50-year								56	11.3	37	7.5
		100-year								55	11.2	37	7.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0205	8435.2	2-year	Trapezoidal	1	30	54.9	911.90	911.50	0.729	23	3.3	260	8.7
		5-year								37	4.0	260	8.7
		10-year								60	4.9	260	8.7
		25-year								93	5.8	260	8.7
		50-year								111	6.2	260	8.7
		100-year								135	6.7	260	8.7
LRCL0206	8436.1	2-year	Circular	2.5	0	35.0	908.35	907.51	2.390	48	9.9	59	12.0
		5-year								52	10.6	59	12.0
		10-year								54	11.0	59	12.0
		25-year								55	11.2	59	12.0
		50-year								55	11.3	59	12.0
		100-year								55	11.2	59	12.0
LRCL0206	8436.2	2-year	Trapezoidal	1	30	35.0	911.93	911.90	0.086	30	2.8	89	3.0
		5-year								44	3.2	89	3.0
		10-year								67	3.8	89	3.0
		25-year								99	4.4	89	3.0
		50-year								117	4.7	89	3.0
		100-year								140	5.1	89	3.0
LRCL0207	8607.1	2-year	Circular	2.5	0	100.8	908.61	908.35	0.261	40	8.1	19	4.0
		5-year								46	9.4	19	4.0
		10-year								47	9.4	19	4.0
		25-year								46	9.4	19	4.0
		50-year								46	9.4	19	4.0
		100-year								46	9.4	19	4.0
LRCL0207	8607.2	2-year	Trapezoidal	1	30	100.8	913.77	911.93	1.825	0	0.0	412	13.7
		5-year								0	0.1	412	13.7
		10-year								24	2.2	412	13.7
		25-year								43	3.0	412	13.7
		50-year								55	3.4	412	13.7
		100-year								71	3.9	412	13.7
LRCL0208	8608.1	2-year	Circular	2.5	0	562.9	916.73	908.61	1.442	40	8.5	46	9.3
		5-year								48	9.6	46	9.3
		10-year								54	10.9	46	9.3
		25-year								54	10.9	46	9.3
		50-year								54	10.9	46	9.3
		100-year								54	10.9	46	9.3
LRCL0208	8608.2	2-year	Trapezoidal	1	30	562.9	924.98	913.77	1.991	0	0.0	430	14.3
		5-year								0	0.0	430	14.3
		10-year								16	3.5	430	14.3
		25-year								33	4.8	430	14.3
		50-year								44	5.4	430	14.3
		100-year								59	6.2	430	14.3
LRCL0209	8610.1	2-year	Circular	2	0	233.5	919.13	916.73	1.028	30	9.5	21	6.8
		5-year								34	10.6	21	6.8
		10-year								34	10.5	21	6.8
		25-year								34	10.5	21	6.8
		50-year								34	10.4	21	6.8
		100-year								33	10.4	21	6.8
LRCL0209	8610.2	2-year	Trapezoidal	3	30	233.5	923.46	924.98	-0.651	0	0.0	1420	15.8
		5-year								-13	-0.5	1420	15.8
		10-year								-44	-1.3	1420	15.8
		25-year								-56	-1.6	1420	15.8
		50-year								-64	-1.7	1420	15.8
		100-year								-75	-1.9	1420	15.8
LRCL0210	8609.1	2-year	Circular	2	0	37.7	919.50	919.13	0.982	30	9.5	21	6.6
		5-year								34	10.8	21	6.6
		10-year								33	10.6	21	6.6
		25-year								37	11.6	21	6.6
		50-year								37	11.7	21	6.6
		100-year								38	11.9	21	6.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0210	8609.2	2-year	Trapezoidal	3	30	37.7	923.25	923.46	-0.558	-13	-1.5	1314	14.6
		5-year								-39	-2.2	1314	14.6
		10-year								-51	-2.3	1314	14.6
		25-year								-63	-2.4	1314	14.6
		50-year								-71	-2.5	1314	14.6
		100-year								-82	-2.5	1314	14.6
LRCL0211	8429.1	2-year	Circular	1.5	0	23.9	921.00	919.50	6.284	24	13.7	24	13.8
		5-year								24	13.7	24	13.8
		10-year								24	13.8	24	13.8
		25-year								24	13.8	24	13.8
		50-year								24	13.8	24	13.8
		100-year								24	13.8	24	13.8
LRCL0211	8429.2	2-year	Trapezoidal	3	30	23.9	923.00	923.25	-1.047	-27	-2.1	1801	20.0
		5-year								-43	-2.1	1801	20.0
		10-year								-52	-2.1	1801	20.0
		25-year								-63	-2.2	1801	20.0
		50-year								-72	-2.2	1801	20.0
		100-year								-82	-2.2	1801	20.0
LRCL02A01	8614.1	2-year	Circular	2	0	248.0	893.67	892.34	0.536	15	6.5	15	4.9
		5-year								21	7.9	15	4.9
		10-year								25	8.8	15	4.9
		25-year								28	9.2	15	4.9
		50-year								28	9.4	15	4.9
		100-year								29	9.5	15	4.9
LRCL02A01	8614.2	2-year	Trapezoidal	1	30	248.0	897.67	898.34	-0.270	0	0.0	159	5.3
		5-year								0	0.0	159	5.3
		10-year								0	0.0	159	5.3
		25-year								0	0.0	159	5.3
		50-year								-3	-0.3	159	5.3
		100-year								-10	-0.7	159	5.3
LRCL02A02	8613.1	2-year	Circular	2	0	61.3	896.09	893.67	3.950	15	7.6	42	13.3
		5-year								21	8.0	42	13.3
		10-year								25	8.5	42	13.3
		25-year								29	9.3	42	13.3
		50-year								33	10.4	42	13.3
		100-year								36	11.5	42	13.3
LRCL02A02	8613.2	2-year	Trapezoidal	1	30	61.3	900.09	897.67	3.950	0	0.0	606	20.2
		5-year								0	0.0	606	20.2
		10-year								0	0.0	606	20.2
		25-year								0	0.0	606	20.2
		50-year								0	0.0	606	20.2
		100-year								3	0.3	606	20.2
LRCL02B01	8615.1	2-year	Circular	2	0	182.5	893.72	892.34	0.756	4	4.3	18	5.8
		5-year								6	5.0	18	5.8
		10-year								7	5.3	18	5.8
		25-year								9	5.6	18	5.8
		50-year								10	5.8	18	5.8
		100-year								12	6.1	18	5.8
LRCL02B01	8615.2	2-year	Trapezoidal	1	30	182.5	897.72	898.34	-0.340	0	0.0	178	5.9
		5-year								0	0.0	178	5.9
		10-year								0	0.0	178	5.9
		25-year								0	0.0	178	5.9
		50-year								0	0.0	178	5.9
		100-year								0	0.0	178	5.9
LRCL02B02	8616.1	2-year	Circular	1.25	0	63.6	894.65	893.72	1.463	4	6.3	7	5.9
		5-year								6	6.9	7	5.9
		10-year								7	7.3	7	5.9
		25-year								9	7.6	7	5.9
		50-year								10	8.6	7	5.9
		100-year								12	9.4	7	5.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL02B02	8616.2	2-year	Trapezoidal	1	30	63.6	897.90	897.72	0.283	0	0.0	162	5.4
		5-year								0	0.0	162	5.4
		10-year								0	0.0	162	5.4
		25-year								0	0.0	162	5.4
		50-year								0	0.0	162	5.4
		100-year								0	0.0	162	5.4
LRCL02C01	LRCL02C01	2-year	Circular	2	0	36.0	909.35	908.61	2.057	3	1.1	30	9.6
		5-year								3	1.3	30	9.6
		10-year								5	1.7	30	9.6
		25-year								5	1.6	30	9.6
		50-year								5	1.5	30	9.6
		100-year								4	1.4	30	9.6
LRCL02C02	LRCL02C02	2-year	Circular	2	0	36.5	909.73	909.35	1.041	2	0.7	21	6.8
		5-year								2	1.0	21	6.8
		10-year								4	1.3	21	6.8
		25-year								4	1.3	21	6.8
		50-year								4	1.2	21	6.8
		100-year								4	1.1	21	6.8
LRCL02D01	8430.1	2-year	Circular	2	0	71.9	921.20	916.73	6.216	12	6.9	52	16.7
		5-year								18	9.2	52	16.7
		10-year								20	9.2	52	16.7
		25-year								23	9.5	52	16.7
		50-year								25	9.6	52	16.7
		100-year								28	9.7	52	16.7
LRCL02D01	8430.2	2-year	Trapezoidal	1	30	71.9	925.20	924.98	0.306	0	0.0	169	5.6
		5-year								0	0.0	169	5.6
		10-year								7	1.6	169	5.6
		25-year								12	2.0	169	5.6
		50-year								15	2.1	169	5.6
		100-year								20	2.3	169	5.6
LRCL02D02	8431.1	2-year	Circular	2	0	32.5	921.90	921.20	2.151	12	10.4	31	9.8
		5-year								17	12.0	31	9.8
		10-year								20	12.1	31	9.8
		25-year								24	12.1	31	9.8
		50-year								26	12.1	31	9.8
		100-year								28	12.1	31	9.8
LRCL02D02	8431.2	2-year	Trapezoidal	1	30	32.5	925.90	925.20	2.151	0	0.0	447	14.9
		5-year								0	0.0	447	14.9
		10-year								0	0.0	447	14.9
		25-year								0	0.0	447	14.9
		50-year								1	0.2	447	14.9
		100-year								4	1.0	447	14.9
LRCL02D03	8432.1	2-year	Circular	2	0	28.4	922.04	921.90	0.493	12	7.5	15	4.7
		5-year								17	8.5	15	4.7
		10-year								20	8.9	15	4.7
		25-year								24	9.2	15	4.7
		50-year								25	9.4	15	4.7
		100-year								28	9.5	15	4.7
LRCL02D03	8432.2	2-year	Trapezoidal	1	30	28.4	926.04	925.90	0.493	0	0.0	214	7.1
		5-year								0	0.0	214	7.1
		10-year								0	0.0	214	7.1
		25-year								2	1.2	214	7.1
		50-year								7	1.9	214	7.1
		100-year								11	2.2	214	7.1
LRCL0300	LRCL0300	2-year	Natural	16	0	121.4	890.05	878.97	9.124	60	2.4	331778	65.1
		5-year								88	2.0	331778	65.1
		10-year								105	1.8	331778	65.1
		25-year								128	1.6	331778	65.1
		50-year								145	1.5	331778	65.1
		100-year								167	1.3	331778	65.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0301	LRCL0301	2-year	Natural	3.6	0	373.3	903.38	890.05	3.571	58	5.7	1732	14.5
		5-year								84	6.3	1732	14.5
		10-year								99	6.7	1732	14.5
		25-year								120	7.1	1732	14.5
		50-year								136	7.3	1732	14.5
		100-year								156	7.6	1732	14.5
LRCL0302	8395.1	2-year	Circular	2	0	42.2	903.61	903.38	0.545	41	16.9	16	4.9
		5-year								45	17.4	16	4.9
		10-year								46	17.6	16	4.9
		25-year								48	17.9	16	4.9
		50-year								49	18.1	16	4.9
		100-year								51	18.3	16	4.9
LRCL0302	8395.2	2-year	Trapezoidal	1	30	42.2	906.86	906.82	0.095	16	2.1	94	3.1
		5-year								39	3.1	94	3.1
		10-year								53	3.5	94	3.1
		25-year								72	3.9	94	3.1
		50-year								87	4.2	94	3.1
		100-year								106	4.5	94	3.1
LRCL0303	8612.1	2-year	Circular	2	0	29.3	904.24	903.61	2.149	33	10.4	31	9.8
		5-year								33	10.4	31	9.8
		10-year								33	10.4	31	9.8
		25-year								33	10.4	31	9.8
		50-year								33	10.4	31	9.8
		100-year								33	10.4	31	9.8
LRCL0303	8612.2	2-year	Trapezoidal	1	30	29.3	907.07	906.86	0.716	39	4.1	258	8.6
		5-year								67	4.9	258	8.6
		10-year								83	5.2	258	8.6
		25-year								105	5.5	258	8.6
		50-year								121	5.8	258	8.6
		100-year								142	6.0	258	8.6
LRCL0304	8611.1	2-year	Circular	2	0	406.3	911.12	904.24	1.694	30	9.5	27	8.7
		5-year								30	9.5	27	8.7
		10-year								30	9.5	27	8.7
		25-year								30	9.5	27	8.7
		50-year								30	9.5	27	8.7
		100-year								30	9.4	27	8.7
LRCL0304	8611.2	2-year	Trapezoidal	1	30	406.3	915.29	907.07	2.023	20	3.1	434	14.5
		5-year								41	4.3	434	14.5
		10-year								54	4.8	434	14.5
		25-year								71	5.4	434	14.5
		50-year								83	5.8	434	14.5
		100-year								100	6.2	434	14.5
LRCL0305	8437.1	2-year	Circular	2	0	37.3	911.56	911.12	1.181	30	9.7	23	7.3
		5-year								30	9.6	23	7.3
		10-year								30	9.6	23	7.3
		25-year								30	9.5	23	7.3
		50-year								30	9.5	23	7.3
		100-year								30	9.6	23	7.3
LRCL0305	8437.2	2-year	Trapezoidal	1	30	37.3	915.56	915.29	0.725	29	3.7	260	8.7
		5-year								49	4.5	260	8.7
		10-year								62	4.9	260	8.7
		25-year								78	5.4	260	8.7
		50-year								90	5.7	260	8.7
		100-year								106	6.1	260	8.7
LRCL0401	LRCL0401	2-year	Natural	20	0	749.3	891.42	878.62	1.708	116	1.3	194040	33.6
		5-year								168	1.4	194040	33.6
		10-year								202	1.4	194040	33.6
		25-year								245	1.5	194040	33.6
		50-year								277	1.6	194040	33.6
		100-year								318	1.6	194040	33.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0402	RCL0402A	2-year	Circular	2	0	49.7	893.68	891.42	4.550	39	17.5	45	14.3
		5-year								48	18.7	45	14.3
		10-year								51	19.1	45	14.3
		25-year								55	19.6	45	14.3
		50-year								57	19.8	45	14.3
		100-year								59	20.0	45	14.3
LRCL0402	RCL0402B	2-year	Trapezoidal	1	30	49.7	896.00	895.95	0.100	0	0.0	97	3.2
		5-year								26	2.6	97	3.2
		10-year								50	3.3	97	3.2
		25-year								82	4.1	97	3.2
		50-year								108	4.5	97	3.2
		100-year								141	5.0	97	3.2
LRCL0403	LRCL0403	2-year	Natural	10	0	855.5	915.74	893.68	2.579	96	5.7	18051	20.7
		5-year								138	5.6	18051	20.7
		10-year								164	5.6	18051	20.7
		25-year								197	5.6	18051	20.7
		50-year								223	5.6	18051	20.7
		100-year								257	5.7	18051	20.7
LRCL0404	8384.1	2-year	Circular	2	0	226.2	920.74	915.74	2.210	14	7.7	31	9.9
		5-year								20	9.5	31	9.9
		10-year								24	10.3	31	9.9
		25-year								29	11.0	31	9.9
		50-year								32	11.3	31	9.9
		100-year								36	11.4	31	9.9
LRCL0404	8384.2	2-year	Trapezoidal	1	30	226.2	924.91	918.00	3.054	0	0.0	533	17.8
		5-year								0	0.0	533	17.8
		10-year								0	0.0	533	17.8
		25-year								0	0.0	533	17.8
		50-year								0	0.0	533	17.8
		100-year								0	0.0	533	17.8
LRCL0405	8617.1	2-year	Circular	2	0	48.2	921.99	920.74	2.596	14	9.9	34	10.8
		5-year								20	11.0	34	10.8
		10-year								24	11.4	34	10.8
		25-year								29	12.0	34	10.8
		50-year								33	11.9	34	10.8
		100-year								36	11.3	34	10.8
LRCL0405	8617.2	2-year	Circular	1	30	48.2	925.99	924.91	2.243	0	0.0	5	6.3
		5-year								0	0.0	5	6.3
		10-year								0	0.0	5	6.3
		25-year								0	0.0	5	6.3
		50-year								0	0.0	5	6.3
		100-year								0	0.0	5	6.3
LRCL0406	8655.1	2-year	Circular	4	0	49.5	922.78	921.99	1.603	14	7.3	169	13.4
		5-year								20	8.1	169	13.4
		10-year								24	8.4	169	13.4
		25-year								29	8.5	169	13.4
		50-year								33	8.6	169	13.4
		100-year								36	8.4	169	13.4
LRCL0406	8655.2	2-year	Trapezoidal	1	30	49.5	925.78	925.99	-0.418	0	0.0	197	6.6
		5-year								0	0.0	197	6.6
		10-year								0	0.0	197	6.6
		25-year								0	0.0	197	6.6
		50-year								0	0.0	197	6.6
		100-year								0	0.0	197	6.6
LRCL0407	LRCL0407	2-year	Trapezoidal	4	8	101.4	924.69	922.78	1.880	14	2.3	1062	12.1
		5-year								20	2.7	1062	12.1
		10-year								24	2.9	1062	12.1
		25-year								29	3.0	1062	12.1
		50-year								33	3.0	1062	12.1
		100-year								38	3.1	1062	12.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0408	8466.1	2-year	Circular	2	0	69.1	927.85	924.69	4.576	14	13.1	45	14.3
		5-year								20	14.6	45	14.3
		10-year								24	15.3	45	14.3
		25-year								29	16.1	45	14.3
		50-year								33	16.6	45	14.3
		100-year								37	17.3	45	14.3
LRCL0408	8466.2	2-year	Trapezoidal	1	30	69.1	930.00	927.69	3.345	0	0.0	558	18.6
		5-year								0	0.0	558	18.6
		10-year								0	0.0	558	18.6
		25-year								0	0.0	558	18.6
		50-year								0	0.0	558	18.6
		100-year								1	1.4	558	18.6
LRCL0501	LRCL0501	2-year	Natural	22	0	561.6	898.15	880.54	3.136	132	3.1	164012	44.0
		5-year								192	2.5	164012	44.0
		10-year								229	2.4	164012	44.0
		25-year								277	2.3	164012	44.0
		50-year								312	2.3	164012	44.0
		100-year								358	2.3	164012	44.0
LRCL0502	8382.1	2-year	Circular	5	0	78.1	901.23	898.15	3.944	111	21.2	480	24.5
		5-year								162	24.0	480	24.5
		10-year								192	25.4	480	24.5
		25-year								232	27.0	480	24.5
		50-year								262	28.1	480	24.5
		100-year								299	29.4	480	24.5
LRCL0502	8382.2	2-year	Trapezoidal	1	30	78.1	910.00	909.92	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LRCL0503	8192.1	2-year	Circular	4	0	419.7	909.98	901.23	2.085	87	15.0	193	15.3
		5-year								126	16.4	193	15.3
		10-year								150	17.1	193	15.3
		25-year								180	17.7	193	15.3
		50-year								204	18.1	193	15.3
		100-year								219	18.6	193	15.3
LRCL0503	8192.2	2-year	Trapezoidal	1	30	419.7	915.65	910.00	1.346	0	0.0	354	11.8
		5-year								0	0.0	354	11.8
		10-year								0	0.0	354	11.8
		25-year								0	0.0	354	11.8
		50-year								0	0.0	354	11.8
		100-year								14	3.3	354	11.8
LRCL0504	8383.1	2-year	Circular	2	0	216.5	917.49	909.98	3.469	47	15.3	39	12.5
		5-year								47	15.3	39	12.5
		10-year								47	15.3	39	12.5
		25-year								47	15.3	39	12.5
		50-year								47	15.3	39	12.5
		100-year								47	15.3	39	12.5
LRCL0504	8383.2	2-year	Trapezoidal	1	30	216.5	921.57	915.65	2.735	19	4.7	504	16.8
		5-year								50	6.8	504	16.8
		10-year								68	7.7	504	16.8
		25-year								92	8.7	504	16.8
		50-year								112	9.3	504	16.8
		100-year								138	10.2	504	16.8
LRCL0505	8189.1	2-year	Circular	2	0	370.8	917.58	917.49	0.024	22	7.3	3	1.0
		5-year								22	7.3	3	1.0
		10-year								22	7.3	3	1.0
		25-year								22	7.3	3	1.0
		50-year								22	7.3	3	1.0
		100-year								22	7.3	3	1.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0505	8189.2	2-year	Trapezoidal	1	30	370.8	922.75	921.57	0.318	47	3.5	172	5.7
		5-year								73	4.1	172	5.7
		10-year								89	4.5	172	5.7
		25-year								109	4.8	172	5.7
		50-year								124	5.1	172	5.7
		100-year								144	5.4	172	5.7
LRCL05A01	8191.1	2-year	Circular	2.5	0	201.7	913.40	909.98	1.695	22	7.8	50	10.1
		5-year								32	8.9	50	10.1
		10-year								38	9.6	50	10.1
		25-year								46	10.2	50	10.1
		50-year								52	10.6	50	10.1
		100-year								58	11.7	50	10.1
LRCL05A01	8191.2	2-year	Trapezoidal	1	30	201.7	918.82	915.65	1.571	0	0.0	382	12.7
		5-year								0	0.0	382	12.7
		10-year								0	0.0	382	12.7
		25-year								0	0.0	382	12.7
		50-year								0	0.0	382	12.7
		100-year								12	3.3	382	12.7
LRCL05A02	8190.1	2-year	Circular	2.5	0	210.6	919.68	913.40	2.982	22	11.0	66	13.4
		5-year								32	12.1	66	13.4
		10-year								39	12.4	66	13.4
		25-year								47	12.8	66	13.4
		50-year								52	13.0	66	13.4
		100-year								61	13.2	66	13.4
LRCL05A02	8190.2	2-year	Trapezoidal	1	30	210.6	924.76	918.82	2.820	0	0.0	512	17.1
		5-year								0	0.0	512	17.1
		10-year								0	0.0	512	17.1
		25-year								0	0.0	512	17.1
		50-year								0	0.0	512	17.1
		100-year								0	0.0	512	17.1
LRCL05B01	8464.1	2-year	Circular	2	0	17.3	918.86	917.58	7.390	2	0.6	57	18.2
		5-year								10	3.2	57	18.2
		10-year								10	3.1	57	18.2
		25-year								6	2.1	57	18.2
		50-year								7	2.3	57	18.2
		100-year								6	1.9	57	18.2
LRCL05B01	8464.2	2-year	Trapezoidal	1	30	17.3	922.86	922.75	0.635	0	-0.1	243	8.1
		5-year								2	1.3	243	8.1
		10-year								2	1.5	243	8.1
		25-year								0	0.3	243	8.1
		50-year								1	1.2	243	8.1
		100-year								1	1.2	243	8.1
LRCL05C01	8465.1	2-year	Circular	2	0	27.5	919.07	917.58	5.416	7	2.2	49	15.6
		5-year								9	2.7	49	15.6
		10-year								9	2.9	49	15.6
		25-year								9	2.9	49	15.6
		50-year								9	2.8	49	15.6
		100-year								8	2.6	49	15.6
LRCL05C01	8465.2	2-year	Trapezoidal	1	30	27.5	923.07	922.75	1.163	3	1.3	329	11.0
		5-year								2	1.4	329	11.0
		10-year								2	1.6	329	11.0
		25-year								3	1.5	329	11.0
		50-year								3	1.6	329	11.0
		100-year								3	1.5	329	11.0
LRCL0601	LRCL0601	2-year	Natural	14	0	970.5	930.25	883.93	4.773	14	1.0	99089	37.5
		5-year								20	0.8	99089	37.5
		10-year								24	0.7	99089	37.5
		25-year								29	0.7	99089	37.5
		50-year								33	0.7	99089	37.5
		100-year								38	0.7	99089	37.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0602	8188.1	2-year	Circular	2	0	199.2	932.84	930.25	1.300	14	8.4	24	7.6
		5-year								18	9.7	24	7.6
		10-year								19	9.9	24	7.6
		25-year								20	10.1	24	7.6
		50-year								20	10.2	24	7.6
		100-year								21	10.3	24	7.6
LRCL0602	8188.2	2-year	Trapezoidal	1	30	199.2	936.76	936.56	0.100	0	0.0	297	2.3
		5-year								2	0.6	297	2.3
		10-year								5	0.9	297	2.3
		25-year								10	1.1	297	2.3
		50-year								13	1.2	297	2.3
		100-year								18	1.3	297	2.3
LRCL0603	8187.1	2-year	Circular	2	0	32.4	933.72	932.84	2.717	15	6.3	35	11.0
		5-year								19	6.3	35	11.0
		10-year								19	6.3	35	11.0
		25-year								19	6.3	35	11.0
		50-year								19	6.4	35	11.0
		100-year								20	6.4	35	11.0
LRCL0603	8187.2	2-year	Trapezoidal	1	30	32.4	936.97	936.76	0.648	0	0.0	246	8.2
		5-year								5	1.6	246	8.2
		10-year								9	2.0	246	8.2
		25-year								15	2.4	246	8.2
		50-year								19	2.7	246	8.2
		100-year								24	3.0	246	8.2
LRCL0701	LRCL0701	2-year	Natural	14.5	0	1532.4	923.99	887.50	2.381	42	0.3	168194	29.2
		5-year								62	0.3	168194	29.2
		10-year								74	0.3	168194	29.2
		25-year								89	0.3	168194	29.2
		50-year								101	0.3	168194	29.2
		100-year								117	0.3	168194	29.2
LRCL0702	RCL0702A	2-year	Circular	2	0	37.0	926.03	923.99	5.521	33	18.2	49	15.7
		5-year								36	18.3	49	15.7
		10-year								37	18.3	49	15.7
		25-year								39	18.6	49	15.7
		50-year								40	18.8	49	15.7
		100-year								41	19.1	49	15.7
LRCL0702	RCL0702B	2-year	Trapezoidal	1	30	37.0	928.03	925.99	5.521	17	5.4	717	23.9
		5-year								35	7.3	717	23.9
		10-year								46	8.1	717	23.9
		25-year								61	9.1	717	23.9
		50-year								72	9.7	717	23.9
		100-year								87	10.5	717	23.9
LRCL0703	LRCL0703	2-year	Natural	3	0	385.5	933.09	926.03	1.831	23	0.7	1334	7.9
		5-year								32	1.3	1334	7.9
		10-year								38	0.9	1334	7.9
		25-year								46	1.7	1334	7.9
		50-year								51	1.2	1334	7.9
		100-year								58	1.2	1334	7.9
LRCL0704	RCL0704A	2-year	Special	4	4	31.5	933.40	933.09	0.985	23	10.8	64	8.6
		5-year								32	12.2	64	8.6
		10-year								38	13.1	64	8.6
		25-year								46	14.0	64	8.6
		50-year								51	14.6	64	8.6
		100-year								59	15.4	64	8.6
LRCL0704	RCL0704B	2-year	Trapezoidal	1	30	31.5	935.09	935.06	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0705	LRCL0705	2-year	Natural	2.6	0	326.5	937.17	933.40	1.155	13	0.3	2928	7.9
		5-year								18	0.3	2928	7.9
		10-year								21	0.3	2928	7.9
		25-year								25	0.4	2928	7.9
		50-year								28	0.4	2928	7.9
		100-year								32	0.4	2928	7.9
LRCL0706	8015.1	2-year	Special	3.5	3.5	86.9	938.17	937.17	1.151	13	8.4	56	8.9
		5-year								18	9.4	56	8.9
		10-year								21	9.9	56	8.9
		25-year								25	10.5	56	8.9
		50-year								28	10.9	56	8.9
		100-year								32	11.4	56	8.9
LRCL0706	8015.2	2-year	Trapezoidal	1	30	86.9	943.84	943.33	0.587	0	0.0	234	7.8
		5-year								0	0.0	234	7.8
		10-year								0	0.0	234	7.8
		25-year								0	0.0	234	7.8
		50-year								0	0.0	234	7.8
		100-year								0	0.0	234	7.8
LRCL0707	8297.1	2-year	Special	3.83	3.83	53.3	939.50	938.17	2.498	13	6.4	101	13.7
		5-year								18	7.0	101	13.7
		10-year								21	7.5	101	13.7
		25-year								25	7.9	101	13.7
		50-year								28	8.1	101	13.7
		100-year								32	8.4	101	13.7
LRCL0707	8297.2	2-year	Trapezoidal	1	30	53.3	944.83	943.84	1.859	0	0.0	416	13.9
		5-year								0	0.0	416	13.9
		10-year								0	0.0	416	13.9
		25-year								0	0.0	416	13.9
		50-year								0	0.0	416	13.9
		100-year								0	0.0	416	13.9
LRCL0800	LRCL0800	2-year	Natural	16	0	350.0	897.63	895.30	0.667	194	2.5	199155	14.5
		5-year								311	2.7	199155	14.5
		10-year								399	2.8	199155	14.5
		25-year								503	2.8	199155	14.5
		50-year								578	2.7	199155	14.5
		100-year								680	2.5	199155	14.5
LRCL0801	LRCL0801	2-year	Natural	16	0	752.1	902.65	897.63	0.667	182	4.0	199421	14.5
		5-year								283	4.3	199421	14.5
		10-year								360	4.5	199421	14.5
		25-year								452	4.7	199421	14.5
		50-year								516	4.8	199421	14.5
		100-year								602	4.9	199421	14.5
LRCL0802	LRCL0802	2-year	Natural	10	0	1090.3	907.39	902.65	0.435	149	0.7	44801	7.6
		5-year								210	0.8	44801	7.6
		10-year								248	0.8	44801	7.6
		25-year								299	0.8	44801	7.6
		50-year								333	0.8	44801	7.6
		100-year								376	0.8	44801	7.6
LRCL0803	RCL0803A	2-year	Rectangular	3	8	52.2	907.62	907.39	0.441	131	14.8	179	7.5
		5-year								182	17.3	179	7.5
		10-year								213	18.6	179	7.5
		25-year								253	20.1	179	7.5
		50-year								283	21.2	179	7.5
		100-year								324	22.6	179	7.5
LRCL0803	RCL0803B	2-year	Trapezoidal	1	30	52.2	911.00	910.95	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0804	LRCL0804	2-year	Natural	4	0	337.1	907.67	907.62	0.015	131	1.0	433	0.9
		5-year								182	1.0	433	0.9
		10-year								213	1.0	433	0.9
		25-year								254	1.1	433	0.9
		50-year								283	1.1	433	0.9
		100-year								324	1.1	433	0.9
LRCL0805	RCL0805A	2-year	Rectangular	3	8	48.8	907.68	907.67	0.021	131	6.1	39	1.6
		5-year								183	7.4	39	1.6
		10-year								214	8.3	39	1.6
		25-year								254	9.9	39	1.6
		50-year								284	11.4	39	1.6
		100-year								325	13.1	39	1.6
LRCL0805	RCL0805B	2-year	Trapezoidal	1	30	48.8	912.00	911.95	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LRCL0806	RCL0806A	2-year	Rectangular	3	8	109.8	908.89	907.68	1.102	128	7.3	283	11.8
		5-year								179	8.2	283	11.8
		10-year								209	8.9	283	11.8
		25-year								249	9.7	283	11.8
		50-year								251	10.1	283	11.8
		100-year								250	10.4	283	11.8
LRCL0806	RCL0806B	2-year	Trapezoidal	2	30	109.8	912.11	912.00	0.100	0	0.0	294	4.9
		5-year								0	0.0	294	4.9
		10-year								0	0.0	294	4.9
		25-year								0	0.1	294	4.9
		50-year								30	2.5	294	4.9
		100-year								73	3.7	294	4.9
LRCL0807	LRCL0807	2-year	Trapezoidal	5	6	140.9	909.44	908.89	0.390	126	4.0	1006	6.0
		5-year								175	4.0	1006	6.0
		10-year								205	4.0	1006	6.0
		25-year								245	3.9	1006	6.0
		50-year								275	3.9	1006	6.0
		100-year								313	3.9	1006	6.0
LRCL0808	RCL0808A	2-year	Rectangular	3	8	46.6	909.62	909.44	0.386	126	7.8	168	7.0
		5-year								175	9.2	168	7.0
		10-year								205	9.9	168	7.0
		25-year								245	10.1	168	7.0
		50-year								275	10.5	168	7.0
		100-year								313	12.6	168	7.0
LRCL0808	RCL0808B	2-year	Trapezoidal	1	30	46.6	914.00	913.95	0.100	0	0.0	100	3.3
		5-year								0	0.0	100	3.3
		10-year								0	0.0	100	3.3
		25-year								0	0.0	100	3.3
		50-year								0	0.0	100	3.3
		100-year								0	0.0	100	3.3
LRCL0809	LRCL0809	2-year	Trapezoidal	5	2	127.9	909.88	909.62	0.203	125	4.4	612	5.0
		5-year								174	4.8	612	5.0
		10-year								203	4.9	612	5.0
		25-year								242	4.9	612	5.0
		50-year								272	4.9	612	5.0
		100-year								310	4.8	612	5.0
LRCL0810	RCL0810A	2-year	Rectangular	3.5	6	80.9	910.32	909.88	0.544	125	8.6	176	8.4
		5-year								174	10.2	176	8.4
		10-year								203	11.1	176	8.4
		25-year								242	11.6	176	8.4
		50-year								272	12.2	176	8.4
		100-year								310	14.1	176	8.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0810	RCL0810B	2-year	Trapezoidal	1	30	80.9	916.00	915.92	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL0811	LRCL0811	2-year	Trapezoidal	5.5	5	77.3	911.15	910.32	1.073	125	6.8	1015	10.6
		5-year								174	6.0	1015	10.6
		10-year								203	6.2	1015	10.6
		25-year								242	6.2	1015	10.6
		50-year								272	6.2	1015	10.6
		100-year								310	6.2	1015	10.6
LRCL0812	RCL0812A	2-year	Rectangular	3.5	6	47.0	911.54	911.15	0.829	125	10.1	217	10.3
		5-year								174	11.7	217	10.3
		10-year								203	12.5	217	10.3
		25-year								242	13.2	217	10.3
		50-year								272	13.1	217	10.3
		100-year								310	13.9	217	10.3
LRCL0812	RCL0812B	2-year	Trapezoidal	1	30	47.0	916.00	915.95	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LRCL0813	LRCL0813	2-year	Trapezoidal	6	2	60.5	911.90	911.54	0.595	113	5.3	1102	8.0
		5-year								157	5.5	1102	8.0
		10-year								181	5.6	1102	8.0
		25-year								216	5.7	1102	8.0
		50-year								245	5.7	1102	8.0
		100-year								276	5.7	1102	8.0
LRCL0814	LRCL0814	2-year	Trapezoidal	5	2	129.6	913.31	911.90	1.088	90	4.6	937	9.6
		5-year								127	5.0	937	9.6
		10-year								149	5.2	937	9.6
		25-year								178	5.4	937	9.6
		50-year								200	5.6	937	9.6
		100-year								230	5.6	937	9.6
LRCL0815	RCL0815A	2-year	Rectangular	3	5	128.5	913.50	913.31	0.148	63	6.1	59	3.9
		5-year								90	7.4	59	3.9
		10-year								104	7.7	59	3.9
		25-year								127	8.7	59	3.9
		50-year								145	9.8	59	3.9
		100-year								163	11.2	59	3.9
LRCL0815	RCL0815B	2-year	Trapezoidal	1	30	128.5	918.77	918.64	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LRCL0817	LRCL0817	2-year	Natural	4	8	206.0	917.36	913.50	1.874	2	0.2	3976	11.4
		5-year								3	0.2	3976	11.4
		10-year								4	0.2	3976	11.4
		25-year								4	0.2	3976	11.4
		50-year								5	0.2	3976	11.4
		100-year								5	0.2	3976	11.4
LRCL0818	8484.1	2-year	Circular	4	0	42.1	917.40	917.36	0.095	1	3.3	41	3.3
		5-year								2	3.3	41	3.3
		10-year								2	3.5	41	3.3
		25-year								2	3.8	41	3.3
		50-year								2	4.0	41	3.3
		100-year								3	4.2	41	3.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL0818	8484.2	2-year	Trapezoidal	1	30	42.1	922.00	921.96	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LRCL0821	RCL0821A	2-year	Circular	3	0	52.8	913.39	913.31	0.151	27	5.4	24	3.4
		5-year								37	6.3	24	3.4
		10-year								45	7.1	24	3.4
		25-year								51	7.6	24	3.4
		50-year								54	8.1	24	3.4
		100-year								66	9.3	24	3.4
LRCL0821	RCL0821B	2-year	Trapezoidal	1	30	52.8	918.69	918.64	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LRCL08A01	LRCL08A01	2-year	Natural	11	0	41.0	903.90	902.65	3.047	70	3.8	161855	26.4
		5-year								143	1.0	161855	26.4
		10-year								183	1.0	161855	26.4
		25-year								231	1.1	161855	26.4
		50-year								267	1.1	161855	26.4
		100-year								318	3.3	161855	26.4
LRCL08A02	LRCL08A02	2-year	Natural	5	0	1453.0	915.00	903.90	0.764	51	0.5	20147	9.7
		5-year								63	0.4	20147	9.7
		10-year								71	0.4	20147	9.7
		25-year								86	0.4	20147	9.7
		50-year								99	0.4	20147	9.7
		100-year								118	0.5	20147	9.7
LRCL08A03	8011.1	2-year	Special	4	4	286.2	915.76	915.00	0.266	27	7.0	33	4.5
		5-year								33	7.8	33	4.5
		10-year								35	8.2	33	4.5
		25-year								36	8.4	33	4.5
		50-year								37	8.6	33	4.5
		100-year								38	8.8	33	4.5
LRCL08A03	8011.2	2-year	Trapezoidal	1	30	286.2	919.76	919.47	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								5	1.1	96	3.2
		25-year								21	2.0	96	3.2
		50-year								34	2.5	96	3.2
		100-year								52	3.0	96	3.2
LRCL08A04	8639.1	2-year	Special	4	4	79.9	916.17	915.76	0.513	27	4.3	46	6.2
		5-year								33	4.4	46	6.2
		10-year								39	5.2	46	6.2
		25-year								47	6.3	46	6.2
		50-year								54	7.2	46	6.2
		100-year								64	8.6	46	6.2
LRCL08A04	8639.2	2-year	Trapezoidal	3	30	79.9	922.00	919.76	2.805	0	0.0	2947	32.7
		5-year								0	0.0	2947	32.7
		10-year								0	0.0	2947	32.7
		25-year								0	0.0	2947	32.7
		50-year								0	0.0	2947	32.7
		100-year								0	0.0	2947	32.7
LRCL08A05	8638.1	2-year	Rectangular	3	5	50.1	916.42	916.17	0.499	55	6.4	108	7.2
		5-year								65	6.5	108	7.2
		10-year								78	6.6	108	7.2
		25-year								94	6.6	108	7.2
		50-year								108	7.2	108	7.2
		100-year								127	8.5	108	7.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08A05	8638.2	2-year	Circular	1	30	50.1	922.42	922.00	0.838	0	0.0	3	3.9
		5-year								0	0.0	3	3.9
		10-year								0	0.0	3	3.9
		25-year								0	0.0	3	3.9
		50-year								0	0.0	3	3.9
		100-year								0	0.0	3	3.9
LRCL08A06	LRCL08A06	2-year	Trapezoidal	6	8	290.5	924.35	916.42	2.729	22	1.2	15432	37.8
		5-year								30	1.3	15432	37.8
		10-year								33	1.3	15432	37.8
		25-year								36	1.3	15432	37.8
		50-year								45	1.3	15432	37.8
		100-year								56	1.2	15432	37.8
LRCL08A07	RCL08A07A	2-year	Circular	2.67	0	38.7	924.60	924.35	0.646	22	8.7	21	3.8
		5-year								30	9.9	21	3.8
		10-year								33	10.1	21	3.8
		25-year								36	10.8	21	3.8
		50-year								38	11.4	21	3.8
		100-year								40	11.7	21	3.8
LRCL08A07	RCL08A07B	2-year	Trapezoidal	3	30	38.7	928.00	927.96	0.100	0	0.0	566	6.3
		5-year								0	0.0	566	6.3
		10-year								0	0.0	566	6.3
		25-year								0	0.0	566	6.3
		50-year								9	1.7	566	6.3
		100-year								18	2.2	566	6.3
LRCL08A08	LRCL08A08	2-year	Trapezoidal	4	12	240.0	926.00	924.60	0.583	23	1.1	2078	14.4
		5-year								36	1.2	2078	14.4
		10-year								45	1.3	2078	14.4
		25-year								52	1.3	2078	14.4
		50-year								62	1.4	2078	14.4
		100-year								66	1.4	2078	14.4
LRCL08A09	RCL08A09A	2-year	Circular	2.5	0	62.6	928.00	926.00	3.197	23	9.5	40	8.1
		5-year								32	10.3	40	8.1
		10-year								36	10.5	40	8.1
		25-year								41	10.5	40	8.1
		50-year								42	10.6	40	8.1
		100-year								43	10.6	40	8.1
LRCL08A09	RCL08A09B	2-year	Trapezoidal	1	30	62.6	930.00	929.94	0.100	0	0.0	94	3.1
		5-year								1	0.6	94	3.1
		10-year								4	1.1	94	3.1
		25-year								7	1.4	94	3.1
		50-year								10	1.7	94	3.1
		100-year								14	1.9	94	3.1
LRCL08B01	8216.1	2-year	Circular	2	0	181.4	907.71	907.68	0.017	4	6.6	3	0.9
		5-year								5	7.7	3	0.9
		10-year								6	1.9	3	0.9
		25-year								7	2.2	3	0.9
		50-year								9	2.7	3	0.9
		100-year								9	2.8	3	0.9
LRCL08B01	8216.2	2-year	Trapezoidal	1	30	181.4	912.18	912.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LRCL08B02	8394.1	2-year	Circular	2	0	172.4	908.33	907.71	0.360	4	2.2	13	4.0
		5-year								5	1.6	13	4.0
		10-year								6	4.0	13	4.0
		25-year								7	2.2	13	4.0
		50-year								8	3.0	13	4.0
		100-year								9	2.8	13	4.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08B02	8394.2	2-year	Trapezoidal	1	30	172.4	914.00	911.38	1.520	0	0.0	376	12.5
		5-year								0	0.0	376	12.5
		10-year								0	0.0	376	12.5
		25-year								0	0.0	376	12.5
		50-year								0	0.0	376	12.5
		100-year								0	0.0	376	12.5
LRCL08B03	8221.1	2-year	Circular	2	0	133.4	911.45	908.33	2.340	4	3.1	32	10.2
		5-year								5	3.2	32	10.2
		10-year								6	3.3	32	10.2
		25-year								7	3.7	32	10.2
		50-year								8	4.0	32	10.2
		100-year								9	4.6	32	10.2
LRCL08B03	8221.2	2-year	Trapezoidal	1	30	133.4	915.70	914.00	1.275	0	0.0	344	11.5
		5-year								0	0.0	344	11.5
		10-year								0	0.0	344	11.5
		25-year								0	0.0	344	11.5
		50-year								0	0.0	344	11.5
		100-year								0	0.0	344	11.5
LRCL08C01	8010.1	2-year	Rectangular	4	6	137.6	912.08	911.54	0.392	31	3.4	180	7.5
		5-year								43	3.7	180	7.5
		10-year								50	3.9	180	7.5
		25-year								60	4.1	180	7.5
		50-year								67	4.2	180	7.5
		100-year								76	4.3	180	7.5
LRCL08C01	8010.2	2-year	Trapezoidal	1	30	137.6	918.72	916.00	1.977	0	0.0	429	14.3
		5-year								0	0.0	429	14.3
		10-year								0	0.0	429	14.3
		25-year								0	0.0	429	14.3
		50-year								0	0.0	429	14.3
		100-year								0	0.0	429	14.3
LRCL08C02	8569.1	2-year	Special	4	2.5	74.8	912.38	912.08	0.401	31	9.6	41	5.5
		5-year								43	10.2	41	5.5
		10-year								51	10.5	41	5.5
		25-year								60	10.8	41	5.5
		50-year								67	11.1	41	5.5
		100-year								76	11.3	41	5.5
LRCL08C02	8569.2	2-year	Trapezoidal	1	30	74.8	916.38	918.72	-3.127	0	0.0	539	18.0
		5-year								0	0.0	539	18.0
		10-year								0	0.0	539	18.0
		25-year								0	0.0	539	18.0
		50-year								0	0.0	539	18.0
		100-year								0	0.0	539	18.0
LRCL08C03	8570.1	2-year	Special	4	2.5	260.5	914.88	912.38	0.960	31	8.2	63	8.5
		5-year								43	8.9	63	8.5
		10-year								51	9.1	63	8.5
		25-year								60	9.5	63	8.5
		50-year								67	9.6	63	8.5
		100-year								76	10.3	63	8.5
LRCL08C03	8570.2	2-year	Trapezoidal	1	30	260.5	921.00	916.38	1.774	0	0.0	406	13.5
		5-year								0	0.0	406	13.5
		10-year								0	0.0	406	13.5
		25-year								0	0.0	406	13.5
		50-year								0	0.0	406	13.5
		100-year								0	0.0	406	13.5
LRCL08C04	RCL08C04A	2-year	Special	4	2.5	106.3	917.77	914.88	2.718	31	10.4	106	14.3
		5-year								43	11.2	106	14.3
		10-year								50	11.5	106	14.3
		25-year								60	11.7	106	14.3
		50-year								67	12.0	106	14.3
		100-year								76	11.9	106	14.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08C04	RCL08C04B	2-year	Trapezoidal	1	30	106.3	921.77	921.00	0.724	0	0.0	260	8.7
		5-year								0	0.0	260	8.7
		10-year								0	0.0	260	8.7
		25-year								0	0.0	260	8.7
		50-year								0	0.0	260	8.7
		100-year								0	0.0	260	8.7
LRCL08D01	8009.1	2-year	Special	4.17	4.17	124.0	912.34	911.90	0.355	43	5.7	48	5.5
		5-year								60	7.0	48	5.5
		10-year								70	8.0	48	5.5
		25-year								84	9.5	48	5.5
		50-year								94	10.6	48	5.5
		100-year								98	11.1	48	5.5
LRCL08D01	8009.2	2-year	Trapezoidal	1	30	124.0	917.09	916.07	0.823	0	0.0	277	9.2
		5-year								0	0.0	277	9.2
		10-year								0	0.0	277	9.2
		25-year								0	0.0	277	9.2
		50-year								0	0.0	277	9.2
		100-year								16	3.0	277	9.2
LRCL08D02	8220.1	2-year	Circular	2	0	73.3	913.31	912.34	1.323	43	13.5	24	7.7
		5-year								45	14.0	24	7.7
		10-year								45	13.9	24	7.7
		25-year								44	13.7	24	7.7
		50-year								44	13.6	24	7.7
		100-year								43	13.4	24	7.7
LRCL08D02	8220.2	2-year	Trapezoidal	1	30	73.3	917.64	917.09	0.750	0	0.0	264	8.8
		5-year								18	3.1	264	8.8
		10-year								32	3.8	264	8.8
		25-year								50	4.6	264	8.8
		50-year								65	5.1	264	8.8
		100-year								83	5.6	264	8.8
LRCL08D03	8219.1	2-year	Circular	2	0	18.9	914.03	913.31	3.801	42	13.2	41	13.0
		5-year								41	13.0	41	13.0
		10-year								41	12.9	41	13.0
		25-year								41	12.9	41	13.0
		50-year								40	12.8	41	13.0
		100-year								40	12.7	41	13.0
LRCL08D03	8219.2	2-year	Trapezoidal	1	30	18.9	917.86	917.64	1.162	5	2.2	329	11.0
		5-year								34	4.5	329	11.0
		10-year								45	5.1	329	11.0
		25-year								60	5.6	329	11.0
		50-year								71	5.8	329	11.0
		100-year								85	6.1	329	11.0
LRCL08D04	8218.1	2-year	Circular	2	0	44.2	914.17	914.03	0.317	36	11.4	12	3.8
		5-year								36	11.3	12	3.8
		10-year								35	11.2	12	3.8
		25-year								35	11.0	12	3.8
		50-year								34	10.9	12	3.8
		100-year								34	10.9	12	3.8
LRCL08D04	8218.2	2-year	Trapezoidal	1	30	44.2	918.00	917.86	0.317	24	2.8	172	5.7
		5-year								42	3.4	172	5.7
		10-year								52	3.7	172	5.7
		25-year								65	4.0	172	5.7
		50-year								74	4.2	172	5.7
		100-year								87	4.5	172	5.7
LRCL08D05	8217.1	2-year	Circular	2	0	308.2	915.51	914.17	0.435	19	6.5	14	4.4
		5-year								19	6.5	14	4.4
		10-year								19	6.5	14	4.4
		25-year								19	6.5	14	4.4
		50-year								19	6.5	14	4.4
		100-year								19	6.5	14	4.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL08D05	8217.2	2-year	Trapezoidal	2	30	308.2	918.18	918.00	0.058	34	2.3	225	3.7
		5-year								51	2.8	225	3.7
		10-year								61	3.0	225	3.7
		25-year								74	3.2	225	3.7
		50-year								84	3.4	225	3.7
		100-year								96	3.6	225	3.7
LRCL1001	LRCL1001	2-year	Natural	10	0	807.4	915.58	907.50	1.001	182	1.5	119790	14.9
		5-year								272	1.5	119790	14.9
		10-year								327	1.5	119790	14.9
		25-year								401	1.4	119790	14.9
		50-year								456	1.4	119790	14.9
		100-year								528	1.4	119790	14.9
LRCL1101	LRCL1101	2-year	Natural	10	0	2722.9	938.00	915.00	0.845	139	2.2	102271	14.0
		5-year								222	2.4	102271	14.0
		10-year								274	2.5	102271	14.0
		25-year								343	2.5	102271	14.0
		50-year								397	2.6	102271	14.0
		100-year								471	2.6	102271	14.0
LRCL1201	LRCL1201	2-year	Natural	12	0	587.1	918.00	916.50	0.255	291	1.5	41938	7.4
		5-year								431	1.3	41938	7.4
		10-year								521	1.2	41938	7.4
		25-year								633	1.1	41938	7.4
		50-year								712	1.0	41938	7.4
		100-year								843	0.9	41938	7.4
LRCL1202	LRCL1202	2-year	Natural	10	0	2002.6	930.00	918.00	0.599	185	2.2	30483	11.5
		5-year								281	2.5	30483	11.5
		10-year								341	2.6	30483	11.5
		25-year								424	2.7	30483	11.5
		50-year								488	2.7	30483	11.5
		100-year								572	2.8	30483	11.5
LRCL1203	LRCL1203	2-year	Natural	10	0	2722.2	946.61	930.00	0.610	260	1.4	91364	13.3
		5-year								369	1.5	91364	13.3
		10-year								435	1.6	91364	13.3
		25-year								523	1.6	91364	13.3
		50-year								588	1.7	91364	13.3
		100-year								675	1.8	91364	13.3
LRCL1300	LRCL1300	2-year	Natural	10	0	1000.0	922.15	918.00	0.415	552	2.2	44713	10.6
		5-year								1016	2.7	44713	10.6
		10-year								1305	3.0	44713	10.6
		25-year								1706	3.3	44713	10.6
		50-year								2023	3.5	44713	10.6
		100-year								2438	3.7	44713	10.6
LRCL1301	LRCL1301	2-year	Natural	10	0	4057.7	939.00	922.15	0.415	472	2.6	70062	10.1
		5-year								879	3.1	70062	10.1
		10-year								1153	3.4	70062	10.1
		25-year								1539	3.7	70062	10.1
		50-year								1841	3.9	70062	10.1
		100-year								2245	4.1	70062	10.1
LRCL1302	LRCL1302	2-year	Natural	13	0	2557.4	950.00	939.00	0.430	188	2.7	84153	10.6
		5-year								385	3.2	84153	10.6
		10-year								519	3.5	84153	10.6
		25-year								704	3.7	84153	10.6
		50-year								854	3.9	84153	10.6
		100-year								1049	4.1	84153	10.6
LRCL1303	LRCL1303	2-year	Natural	20	0	1326.8	960.00	950.00	0.754	206	1.2	273046	18.7
		5-year								357	1.4	273046	18.7
		10-year								454	1.5	273046	18.7
		25-year								589	1.7	273046	18.7
		50-year								692	1.8	273046	18.7
		100-year								831	1.9	273046	18.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL13A01	LRCL13A01	2-year	Natural	12	0	2253.8	950.00	939.00	0.488	170	2.4	80668	11.5
		5-year								305	2.8	80668	11.5
		10-year								391	3.0	80668	11.5
		25-year								510	3.2	80668	11.5
		50-year								600	3.3	80668	11.5
		100-year								720	3.5	80668	11.5
LRCL1400	LRCL1400	2-year	Natural	12	0	1000.0	926.46	921.00	0.546	403	2.2	138382	13.7
		5-year								614	2.3	138382	13.7
		10-year								756	2.3	138382	13.7
		25-year								947	2.3	138382	13.7
		50-year								1085	2.3	138382	13.7
		100-year								1265	2.3	138382	13.7
LRCL1401	LRCL1401	2-year	Natural	12	0	2111.9	938.00	926.46	0.546	336	2.5	172980	12.7
		5-year								548	2.8	172980	12.7
		10-year								672	3.0	172980	12.7
		25-year								845	3.1	172980	12.7
		50-year								980	3.3	172980	12.7
		100-year								1157	3.4	172980	12.7
LRCL1402	LRCL1402	2-year	Natural	12	0	1428.5	940.00	938.00	0.140	252	1.6	66469	6.1
		5-year								412	1.9	66469	6.1
		10-year								508	2.0	66469	6.1
		25-year								639	2.1	66469	6.1
		50-year								738	2.2	66469	6.1
		100-year								873	2.3	66469	6.1
LRCL1501	LRCL1501	2-year	Natural	10	0	3017.4	940.00	923.53	0.546	226	3.8	8602	12.7
		5-year								326	4.1	8602	12.7
		10-year								385	4.3	8602	12.7
		25-year								465	4.5	8602	12.7
		50-year								524	4.6	8602	12.7
		100-year								602	4.8	8602	12.7
LRCL1601	LRCL1601	2-year	Natural	12	0	1865.7	937.17	932.00	0.277	775	2.7	107754	7.9
		5-year								1214	2.9	107754	7.9
		10-year								1487	3.0	107754	7.9
		25-year								1859	3.2	107754	7.9
		50-year								1954	3.0	107754	7.9
		100-year								2304	3.0	107754	7.9
LRCL1602	LRCL1602	2-year	Natural	10	0	1416.4	940.00	937.17	0.200	387	1.7	45272	6.6
		5-year								591	2.0	45272	6.6
		10-year								714	2.2	45272	6.6
		25-year								888	2.3	45272	6.6
		50-year								1018	2.1	45272	6.6
		100-year								1187	2.2	45272	6.6
LRCL1603	LRCL1603	2-year	Natural	10	0	3567.4	954.00	940.00	0.392	305	1.7	119848	8.9
		5-year								454	1.8	119848	8.9
		10-year								551	1.9	119848	8.9
		25-year								679	2.0	119848	8.9
		50-year								773	2.0	119848	8.9
		100-year								897	2.1	119848	8.9
LRCL1604	LRCL1604	2-year	Natural	15	0	2654.6	966.72	954.00	0.479	181	2.9	71432	12.7
		5-year								266	3.2	71432	12.7
		10-year								318	3.4	71432	12.7
		25-year								388	3.6	71432	12.7
		50-year								441	3.7	71432	12.7
		100-year								510	3.9	71432	12.7
LRCL16A00	LRCL16A00	2-year	Natural	12	0	896.0	938.63	937.17	0.163	180	1.7	82118	6.1
		5-year								288	2.0	82118	6.1
		10-year								345	2.1	82118	6.1
		25-year								419	2.2	82118	6.1
		50-year								514	1.9	82118	6.1
		100-year								621	1.9	82118	6.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCL16A01	LRCL16A01	2-year	Natural	12	0	4868.5	960.00	938.63	0.439	123	1.3	164395	10.8
		5-year								184	1.3	164395	10.8
		10-year								229	1.4	164395	10.8
		25-year								287	1.4	164395	10.8
		50-year								330	1.4	164395	10.8
		100-year								385	1.5	164395	10.8
LRCL1701	LRCL1701	2-year	Natural	12	0	3961.1	950.00	938.00	0.303	301	1.2	92670	9.0
		5-year								458	1.3	92670	9.0
		10-year								609	1.2	92670	9.0
		25-year								745	1.1	92670	9.0
		50-year								850	1.1	92670	9.0
		100-year								994	1.1	92670	9.0
LRCL1702	LRCL1702	2-year	Natural	16	0	1452.0	956.00	950.00	0.413	207	2.2	247849	11.4
		5-year								340	2.6	247849	11.4
		10-year								388	2.7	247849	11.4
		25-year								476	2.8	247849	11.4
		50-year								547	2.9	247849	11.4
		100-year								639	3.0	247849	11.4
LRCL1703	LRCL1703	2-year	Natural	13	0	1226.0	960.69	956.00	0.383	195	1.6	239234	12.2
		5-year								313	1.8	239234	12.2
		10-year								306	1.6	239234	12.2
		25-year								382	1.7	239234	12.2
		50-year								439	1.7	239234	12.2
		100-year								522	1.8	239234	12.2
LRCL1801	LRCL1801	2-year	Natural	10	0	1029.7	954.00	948.00	0.583	182	0.3	64927	14.0
		5-year								273	0.4	64927	14.0
		10-year								328	0.4	64927	14.0
		25-year								401	0.4	64927	14.0
		50-year								456	0.5	64927	14.0
		100-year								529	0.5	64927	14.0
LRCL1901	LRCL1901	2-year	Natural	20	0	1524.2	974.66	960.93	0.901	286	3.3	525958	19.2
		5-year								429	3.5	525958	19.2
		10-year								517	3.5	525958	19.2
		25-year								636	3.6	525958	19.2
		50-year								723	3.7	525958	19.2
		100-year								840	3.7	525958	19.2
LRCL2001	LRCL2001	2-year	Natural	15	0	1942.7	976.00	971.06	0.254	480	2.4	159572	8.8
		5-year								748	2.6	159572	8.8
		10-year								914	2.7	159572	8.8
		25-year								1133	2.8	159572	8.8
		50-year								1137	2.7	159572	8.8
		100-year								1339	2.7	159572	8.8
LRCL2002	LRCL2002	2-year	Natural	20	0	2622.4	990.00	976.00	0.534	232	3.9	76289	13.1
		5-year								357	4.7	76289	13.1
		10-year								430	4.9	76289	13.1
		25-year								529	5.3	76289	13.1
		50-year								619	5.5	76289	13.1
		100-year								723	5.8	76289	13.1
LRCL901	LRCL901	2-year	Natural	20	0	854.1	912.00	904.72	0.852	238	2.0	650262	17.7
		5-year								341	2.0	650262	17.7
		10-year								402	1.9	650262	17.7
		25-year								482	1.8	650262	17.7
		50-year								543	1.7	650262	17.7
		100-year								622	1.7	650262	17.7
LRCMC01	LRCMC01	2-year	Natural	20	0	1662.4	873.76	871.75	0.121	2375	5.7	42622	5.3
		5-year								4136	6.1	42622	5.3
		10-year								5218	6.4	42622	5.3
		25-year								6791	6.5	42622	5.3
		50-year								7906	6.5	42622	5.3
		100-year								9511	6.5	42622	5.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC02	RCMC02A	2-year	User Defined	0	0	44.0	873.80	873.76	0.091	2370	4.7	0	3.7
		5-year								4131	6.2	0	3.7
		10-year								5207	7.1	0	3.7
		25-year								6786	7.5	0	3.7
		50-year								7893	8.0	0	3.7
		100-year								9496	9.0	0	3.7
LRCMC02	RCMC02B	2-year	Trapezoidal	1	30	44.0	890.00	889.96	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LRCMC03	LRCMC03	2-year	Natural	18	0	50.1	873.84	873.80	0.080	2370	4.3	10966	6.9
		5-year								4131	5.2	10966	6.9
		10-year								5206	5.7	10966	6.9
		25-year								6785	6.0	10966	6.9
		50-year								7892	6.4	10966	6.9
		100-year								9495	6.8	10966	6.9
LRCMC04	LRCMC04	2-year	Natural	18	0	261.5	874.54	873.84	0.267	2364	5.5	30384	10.9
		5-year								4149	5.5	30384	10.9
		10-year								5259	5.5	30384	10.9
		25-year								6830	5.5	30384	10.9
		50-year								7939	5.5	30384	10.9
		100-year								9573	5.5	30384	10.9
LRCMC05	RCMC05A	2-year	Rectangular	4	6	59.2	874.70	874.54	0.267	169	6.5	150	6.2
		5-year								172	6.7	150	6.2
		10-year								173	6.7	150	6.2
		25-year								174	6.7	150	6.2
		50-year								174	6.8	150	6.2
		100-year								172	6.8	150	6.2
LRCMC05	RCMC05B	2-year	Trapezoidal	15	50	59.2	878.70	878.54	0.100	2249	8.2	25883	26.5
		5-year								4089	9.6	25883	26.5
		10-year								5167	10.9	25883	26.5
		25-year								6672	12.8	25883	26.5
		50-year								7740	14.0	25883	26.5
		100-year								9319	15.6	25883	26.5
LRCMC06	LRCMC06	2-year	Natural	16	0	1000.0	877.37	874.70	0.267	2370	3.9	44453	9.9
		5-year								4157	3.9	44453	9.9
		10-year								5263	3.9	44453	9.9
		25-year								6833	4.1	44453	9.9
		50-year								7942	4.2	44453	9.9
		100-year								9577	4.3	44453	9.9
LRCMC07	LRCMC07	2-year	Natural	16	0	751.4	878.62	877.37	0.166	2373	5.1	27086	6.3
		5-year								4154	5.1	27086	6.3
		10-year								5258	5.2	27086	6.3
		25-year								6827	5.4	27086	6.3
		50-year								7934	5.5	27086	6.3
		100-year								9568	5.6	27086	6.3
LRCMC08	LRCMC08	2-year	Natural	14	0	215.2	878.97	878.62	0.163	2370	3.6	34648	6.7
		5-year								4153	3.7	34648	6.7
		10-year								5256	3.7	34648	6.7
		25-year								6822	3.6	34648	6.7
		50-year								7928	3.6	34648	6.7
		100-year								9562	3.6	34648	6.7
LRCMC09	LRCMC09	2-year	Natural	16	0	948.3	880.54	878.97	0.166	2365	5.2	36388	8.6
		5-year								4144	5.2	36388	8.6
		10-year								5244	5.2	36388	8.6
		25-year								6807	5.2	36388	8.6
		50-year								7910	5.2	36388	8.6
		100-year								9541	5.2	36388	8.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC10	LRCMC10	2-year	Natural	18	0	1046.4	882.37	880.54	0.175	2364	3.5	51705	10.4
		5-year								4142	3.6	51705	10.4
		10-year								5241	3.7	51705	10.4
		25-year								6802	4.1	51705	10.4
		50-year								7904	4.3	51705	10.4
		100-year								9534	4.6	51705	10.4
LRCMC13	RCMC13A	2-year	User Defined	0	0	53.7	882.77	882.37	0.745	2365	8.1	0	10.9
		5-year								4143	10.9	0	10.9
		10-year								5242	12.2	0	10.9
		25-year								6803	13.8	0	10.9
		50-year								7905	14.8	0	10.9
		100-year								9535	16.2	0	10.9
LRCMC13	RCMC13B	2-year	Trapezoidal	1	30	53.7	902.00	901.95	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LRCMC14	LRCMC14	2-year	Natural	16	0	388.3	883.93	882.77	0.299	2365	6.1	29996	11.9
		5-year								4143	6.1	29996	11.9
		10-year								5242	6.1	29996	11.9
		25-year								6804	6.2	29996	11.9
		50-year								7905	6.5	29996	11.9
		100-year								9536	6.8	29996	11.9
LRCMC15	LRCMC15	2-year	Natural	30	0	1684.2	885.75	883.93	0.108	2366	4.4	89890	10.8
		5-year								4144	4.9	89890	10.8
		10-year								5244	5.2	89890	10.8
		25-year								6806	5.6	89890	10.8
		50-year								7908	5.8	89890	10.8
		100-year								9540	6.2	89890	10.8
LRCMC16	RCMC16A	2-year	Rectangular	6	6	26.6	885.80	885.75	0.200	25	3.4	217	6.0
		5-year								28	3.4	217	6.0
		10-year								31	3.4	217	6.0
		25-year								34	3.4	217	6.0
		50-year								36	3.4	217	6.0
		100-year								39	3.4	217	6.0
LRCMC16	RCMC16B	2-year	Trapezoidal	20	100	26.6	886.72	886.67	0.100	2340	2.9	63238	26.3
		5-year								4117	4.0	63238	26.3
		10-year								5216	4.6	63238	26.3
		25-year								6775	5.4	63238	26.3
		50-year								7875	5.9	63238	26.3
		100-year								9505	6.7	63238	26.3
LRCMC17	LRCMC17	2-year	Natural	30	0	480.7	887.50	885.80	0.354	2368	6.0	141156	15.9
		5-year								4147	6.6	141156	15.9
		10-year								5247	6.8	141156	15.9
		25-year								6809	7.1	141156	15.9
		50-year								7912	7.4	141156	15.9
		100-year								9543	7.6	141156	15.9
LRCMC18	LRCMC18	2-year	Natural	18	0	503.2	890.00	887.50	0.497	2373	7.1	26219	17.0
		5-year								4151	8.2	26219	17.0
		10-year								5249	8.8	26219	17.0
		25-year								6809	9.5	26219	17.0
		50-year								7911	10.0	26219	17.0
		100-year								9540	10.7	26219	17.0
LRCMC19	RCMC19A	2-year	Circular	8	0	65.9	890.33	890.00	0.500	1144	22.9	599	11.9
		5-year								1391	27.1	599	11.9
		10-year								1458	28.9	599	11.9
		25-year								1551	30.8	599	11.9
		50-year								1611	31.9	599	11.9
		100-year								1690	33.5	599	11.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC19	RCMC19B	2-year	Trapezoidal	8	50	65.9	898.00	897.93	0.100	86	3.4	5525	11.9
		5-year								1370	9.1	5525	11.9
		10-year								2333	10.8	5525	11.9
		25-year								3708	12.4	5525	11.9
		50-year								4691	13.3	5525	11.9
		100-year								6161	14.5	5525	11.9
LRCMC20	LRCMC20	2-year	Natural	18	0	2590.7	893.50	890.33	0.122	2374	3.6	26463	6.8
		5-year								4154	3.8	26463	6.8
		10-year								5254	3.9	26463	6.8
		25-year								6815	4.0	26463	6.8
		50-year								7916	4.1	26463	6.8
		100-year								9547	4.2	26463	6.8
LRCMC23	RCMC23A	2-year	Circular	8.5	0	67.7	893.59	893.50	0.132	630	11.3	212	3.7
		5-year								802	13.7	212	3.7
		10-year								849	14.6	212	3.7
		25-year								851	14.7	212	3.7
		50-year								858	15.1	212	3.7
		100-year								888	15.6	212	3.7
LRCMC23	RCMC23B	2-year	Trapezoidal	10	50	67.7	900.00	899.93	0.100	860	7.8	7961	13.3
		5-year								2346	10.8	7961	13.3
		10-year								3412	12.1	7961	13.3
		25-year								4897	13.5	7961	13.3
		50-year								5956	14.3	7961	13.3
		100-year								7548	15.3	7961	13.3
LRCMC23	RCMC23C	2-year	Circular	7.833	0	67.7	893.59	893.50	0.132	894	18.2	292	6.1
		5-year								1042	21.2	292	6.1
		10-year								1092	22.6	292	6.1
		25-year								1154	23.9	292	6.1
		50-year								1185	24.5	292	6.1
		100-year								1227	25.3	292	6.1
LRCMC24	LRCMC24	2-year	Natural	18	0	1301.4	895.30	893.59	0.132	2370	3.2	28889	8.6
		5-year								4156	3.8	28889	8.6
		10-year								5262	4.0	28889	8.6
		25-year								6830	4.1	28889	8.6
		50-year								7934	4.2	28889	8.6
		100-year								9577	4.3	28889	8.6
LRCMC25	LRCMC25	2-year	Natural	14.5	0	249.1	895.94	895.30	0.257	2349	3.6	37894	7.9
		5-year								4129	3.7	37894	7.9
		10-year								5235	3.7	37894	7.9
		25-year								6801	3.6	37894	7.9
		50-year								7895	3.6	37894	7.9
		100-year								9538	3.5	37894	7.9
LRCMC26	LRCMC26	2-year	Natural	14	0	1717.9	900.75	895.94	0.280	2362	2.4	112015	9.7
		5-year								4148	2.3	112015	9.7
		10-year								5260	2.4	112015	9.7
		25-year								6835	2.4	112015	9.7
		50-year								7930	2.4	112015	9.7
		100-year								9579	2.5	112015	9.7
LRCMC27	RCMC27A	2-year	Rectangular	10	14	22.1	900.77	900.75	0.090	789	11.3	912	6.5
		5-year								1385	16.9	912	6.5
		10-year								1756	20.0	912	6.5
		25-year								2282	24.0	912	6.5
		50-year								2647	26.6	912	6.5
		100-year								3198	30.3	912	6.5
LRCMC27	RCMC27B	2-year	Trapezoidal	10	30	22.1	912.00	911.98	0.100	0	0.0	3162	10.5
		5-year								0	0.0	3162	10.5
		10-year								0	0.0	3162	10.5
		25-year								0	0.0	3162	10.5
		50-year								0	0.0	3162	10.5
		100-year								0	0.0	3162	10.5

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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC28	LRCMC28	2-year	Natural	14.5	0	615.6	901.35	900.77	0.094	2367	2.5	47186	5.8
		5-year								4154	3.0	47186	5.8
		10-year								5266	3.2	47186	5.8
		25-year								6844	3.5	47186	5.8
		50-year								7938	3.6	47186	5.8
		100-year								9587	3.8	47186	5.8
LRCMC29	RCMC29A	2-year	User Defined	0	0	35.6	901.38	901.35	0.084	2367	5.3	0	3.7
		5-year								4155	7.4	0	3.7
		10-year								5268	8.5	0	3.7
		25-year								6846	9.8	0	3.7
		50-year								7940	10.5	0	3.7
		100-year								9590	11.6	0	3.7
LRCMC29	RCMC29B	2-year	Trapezoidal	2	30	35.6	914.80	914.76	0.100	0	0.0	312	5.2
		5-year								0	0.0	312	5.2
		10-year								0	0.0	312	5.2
		25-year								0	0.0	312	5.2
		50-year								0	0.0	312	5.2
		100-year								0	0.0	312	5.2
LRCMC30	LRCMC30	2-year	Natural	14	0	51.4	901.43	901.38	0.097	2367	5.0	7027	2.5
		5-year								4155	6.8	7027	2.5
		10-year								5268	7.7	7027	2.5
		25-year								6846	8.7	7027	2.5
		50-year								7940	9.3	7027	2.5
		100-year								9590	10.2	7027	2.5
LRCMC31	RCMC31A	2-year	User Defined	0	0	34.3	901.46	901.43	0.088	2367	5.0	0	3.8
		5-year								4155	6.7	0	3.8
		10-year								5268	7.6	0	3.8
		25-year								6846	8.6	0	3.8
		50-year								7940	9.2	0	3.8
		100-year								9590	10.1	0	3.8
LRCMC31	RCMC31B	2-year	Trapezoidal	2	30	34.3	914.80	914.77	0.100	0	0.0	275	4.6
		5-year								0	0.0	275	4.6
		10-year								0	0.0	275	4.6
		25-year								0	0.0	275	4.6
		50-year								0	0.0	275	4.6
		100-year								0	0.0	275	4.6
LRCMC32	LRCMC32	2-year	Natural	16	0	212.7	901.66	901.46	0.094	2346	1.3	123674	6.0
		5-year								4121	1.4	123674	6.0
		10-year								5224	1.5	123674	6.0
		25-year								6789	1.5	123674	6.0
		50-year								7874	1.6	123674	6.0
		100-year								9509	1.6	123674	6.0
LRCMC34	LRCMC34	2-year	Natural	18	0	1949.1	903.60	901.66	0.100	2347	1.6	155911	6.0
		5-year								4124	2.1	155911	6.0
		10-year								5222	2.3	155911	6.0
		25-year								6784	2.5	155911	6.0
		50-year								7868	2.7	155911	6.0
		100-year								9498	2.9	155911	6.0
LRCMC35	LRCMC35	2-year	Natural	17	0	1120.6	904.72	903.60	0.100	2340	2.8	114045	5.8
		5-year								4111	3.3	114045	5.8
		10-year								5203	3.5	114045	5.8
		25-year								6758	3.8	114045	5.8
		50-year								7840	3.9	114045	5.8
		100-year								9460	4.1	114045	5.8
LRCMC36	LRCMC36	2-year	Natural	16	0	939.4	905.00	904.72	0.030	2347	1.2	90597	4.1
		5-year								4123	1.4	90597	4.1
		10-year								5210	1.5	90597	4.1
		25-year								6767	1.6	90597	4.1
		50-year								7846	1.7	90597	4.1
		100-year								9474	1.8	90597	4.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC37	LRCMC37	2-year	Natural	14	0	1434.8	907.50	905.00	0.174	2343	3.3	77888	7.9
		5-year								4114	3.8	77888	7.9
		10-year								5198	4.1	77888	7.9
		25-year								6752	4.3	77888	7.9
		50-year								7827	4.5	77888	7.9
		100-year								9448	4.7	77888	7.9
LRCMC38	LRCMC38	2-year	Natural	12	0	1500.0	909.00	907.50	0.100	2307	2.7	45319	5.5
		5-year								4064	3.1	45319	5.5
		10-year								5137	3.3	45319	5.5
		25-year								6675	3.6	45319	5.5
		50-year								7737	3.7	45319	5.5
		100-year								9339	3.9	45319	5.5
LRCMC39	LRCMC39	2-year	Natural	19	0	2230.4	913.00	909.00	0.179	2304	2.7	265043	8.8
		5-year								4053	3.1	265043	8.8
		10-year								5116	3.3	265043	8.8
		25-year								6645	3.5	265043	8.8
		50-year								7698	3.6	265043	8.8
		100-year								9288	3.6	265043	8.8
LRCMC40	LRCMC40	2-year	Natural	16	0	1501.5	915.00	913.00	0.133	2267	1.8	229978	7.8
		5-year								4018	2.2	229978	7.8
		10-year								5073	2.3	229978	7.8
		25-year								6597	2.5	229978	7.8
		50-year								7637	2.6	229978	7.8
		100-year								9245	2.7	229978	7.8
LRCMC41	LRCMC41	2-year	Natural	15	0	1543.0	916.50	915.00	0.097	2262	5.3	57821	4.7
		5-year								4014	5.4	57821	4.7
		10-year								5066	5.3	57821	4.7
		25-year								6593	5.3	57821	4.7
		50-year								7626	5.3	57821	4.7
		100-year								9240	5.3	57821	4.7
LRCMC42	LRCMC42	2-year	Natural	13	0	1500.0	918.00	916.50	0.100	2144	1.1	106655	6.0
		5-year								3771	1.2	106655	6.0
		10-year								4764	1.2	106655	6.0
		25-year								6202	1.2	106655	6.0
		50-year								7134	1.2	106655	6.0
		100-year								8634	1.3	106655	6.0
LRCMC43	LRCMC43	2-year	Natural	10	0	2364.7	921.00	918.00	0.127	2042	2.9	34144	5.5
		5-year								3603	3.4	34144	5.5
		10-year								4611	3.7	34144	5.5
		25-year								5954	4.0	34144	5.5
		50-year								6843	4.1	34144	5.5
		100-year								8281	4.3	34144	5.5
LRCMC44	LRCMC44	2-year	Natural	16	0	1651.9	923.53	921.00	0.153	1966	3.9	113728	6.3
		5-year								3476	4.4	113728	6.3
		10-year								4457	4.7	113728	6.3
		25-year								5745	4.9	113728	6.3
		50-year								6596	5.1	113728	6.3
		100-year								7979	5.3	113728	6.3
LRCMC45	LRCMC45	2-year	Natural	15	0	1251.9	925.44	923.53	0.153	1970	1.5	171646	8.3
		5-year								3484	1.8	171646	8.3
		10-year								4472	1.9	171646	8.3
		25-year								5756	2.0	171646	8.3
		50-year								6589	2.1	171646	8.3
		100-year								7979	2.2	171646	8.3
LRCMC46	LRCMC46	2-year	Natural	13	0	1672.5	928.00	925.44	0.153	1950	2.8	97895	6.9
		5-year								3457	3.2	97895	6.9
		10-year								4441	3.4	97895	6.9
		25-year								5704	3.7	97895	6.9
		50-year								6524	3.8	97895	6.9
		100-year								7898	4.0	97895	6.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC47	LRCMC47	2-year	Natural	20	0	1948.2	932.00	928.00	0.205	1881	2.8	341212	10.1
		5-year								3362	3.3	341212	10.1
		10-year								4330	3.5	341212	10.1
		25-year								5563	3.7	341212	10.1
		50-year								6351	3.8	341212	10.1
		100-year								7701	4.1	341212	10.1
LRCMC48	LRCMC48	2-year	Natural	13	0	2200.2	938.00	932.00	0.273	1349	3.7	90280	8.0
		5-year								2414	4.0	90280	8.0
		10-year								3104	4.2	90280	8.0
		25-year								4005	4.3	90280	8.0
		50-year								4659	4.4	90280	8.0
		100-year								5640	4.5	90280	8.0
LRCMC49	LRCMC49	2-year	Natural	21	0	1337.0	940.00	938.00	0.150	1376	1.8	313858	8.2
		5-year								2291	2.0	313858	8.2
		10-year								2896	2.1	313858	8.2
		25-year								3698	2.2	313858	8.2
		50-year								4192	2.3	313858	8.2
		100-year								5039	2.4	313858	8.2
LRCMC50	LRCMC50	2-year	Natural	20	0	3736.0	946.00	940.00	0.161	1475	2.2	448377	9.2
		5-year								2440	2.5	448377	9.2
		10-year								3042	2.6	448377	9.2
		25-year								3851	2.8	448377	9.2
		50-year								4315	2.9	448377	9.2
		100-year								5165	3.0	448377	9.2
LRCMC51	LRCMC51	2-year	Natural	13	0	1951.2	948.00	946.00	0.103	1308	2.9	47509	5.2
		5-year								2166	3.2	47509	5.2
		10-year								2695	3.4	47509	5.2
		25-year								3429	3.5	47509	5.2
		50-year								3845	3.6	47509	5.2
		100-year								4590	3.7	47509	5.2
LRCMC52	LRCMC52	2-year	Natural	10	0	1080.4	952.00	948.00	0.370	1122	3.3	28683	8.6
		5-year								1858	3.4	28683	8.6
		10-year								2316	3.5	28683	8.6
		25-year								2958	3.7	28683	8.6
		50-year								3296	3.7	28683	8.6
		100-year								3942	3.9	28683	8.6
LRCMC53	LRCMC53	2-year	Natural	10	0	1582.8	960.93	952.00	0.564	970	5.2	26471	8.9
		5-year								1611	5.9	26471	8.9
		10-year								2000	6.2	26471	8.9
		25-year								2561	6.6	26471	8.9
		50-year								2840	6.4	26471	8.9
		100-year								3400	6.8	26471	8.9
LRCMC54	LRCMC54	2-year	Natural	10	0	2092.7	971.06	960.93	0.484	850	4.3	40477	7.8
		5-year								1403	4.7	40477	7.8
		10-year								1721	4.9	40477	7.8
		25-year								2196	5.2	40477	7.8
		50-year								2425	4.9	40477	7.8
		100-year								2896	5.1	40477	7.8
LRCMC55	LRCMC55	2-year	Natural	15	0	2936.7	976.00	971.06	0.168	551	1.6	130380	7.6
		5-year								919	1.8	130380	7.6
		10-year								1107	1.8	130380	7.6
		25-year								1421	2.0	130380	7.6
		50-year								1658	2.1	130380	7.6
		100-year								1974	2.2	130380	7.6
LRCMC56	LRCMC56	2-year	Natural	13	0	2083.0	979.00	976.00	0.144	487	2.3	33556	7.1
		5-year								780	2.7	33556	7.1
		10-year								917	2.8	33556	7.1
		25-year								1154	3.0	33556	7.1
		50-year								1341	3.1	33556	7.1
		100-year								1588	3.3	33556	7.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LRCMC57	LRCMC57	2-year	Natural	20	0	3009.5	994.00	979.00	0.498	365	3.0	115012	16.6
		5-year								562	3.3	115012	16.6
		10-year								624	3.4	115012	16.6
		25-year								772	3.6	115012	16.6
		50-year								888	3.7	115012	16.6
		100-year								1038	3.9	115012	16.6
LRCMC58	LRCMC58	2-year	Natural	14	0	1952.7	1008.00	994.00	0.717	286	3.5	93620	16.1
		5-year								424	3.8	93620	16.1
		10-year								440	3.4	93620	16.1
		25-year								537	3.6	93620	16.1
		50-year								611	3.6	93620	16.1
		100-year								709	3.7	93620	16.1
LSCL101	LSCL101	2-year	Natural	4	6	85.0	903.43	902.36	1.258	81	7.5	425	6.4
		5-year								118	8.4	425	6.4
		10-year								140	8.9	425	6.4
		25-year								169	9.3	425	6.4
		50-year								192	9.3	425	6.4
		100-year								220	9.4	425	6.4
LSCL102	LSCL102	2-year	Natural	4.5	6	18.3	903.91	903.43	2.630	48	2.5	1279	11.0
		5-year								69	2.8	1279	11.0
		10-year								82	3.0	1279	11.0
		25-year								99	3.3	1279	11.0
		50-year								112	3.4	1279	11.0
		100-year								128	3.4	1279	11.0
LSCL103	8362.1	2-year	Circular	3	0	189.6	904.26	903.91	0.185	48	8.0	27	3.8
		5-year								69	10.9	27	3.8
		10-year								82	12.5	27	3.8
		25-year								88	13.1	27	3.8
		50-year								88	13.2	27	3.8
		100-year								88	13.2	27	3.8
LSCL103	8362.2	2-year	Trapezoidal	1	30	189.6	910.00	907.00	1.582	0	0.0	384	12.8
		5-year								0	0.0	384	12.8
		10-year								0	0.0	384	12.8
		25-year								11	3.2	384	12.8
		50-year								24	4.3	384	12.8
		100-year								42	5.4	384	12.8
LSCL104	8512.1	2-year	Circular	3	0	63.9	908.17	904.26	6.122	38	8.9	153	21.7
		5-year								55	11.3	153	21.7
		10-year								65	11.6	153	21.7
		25-year								78	11.6	153	21.7
		50-year								87	12.1	153	21.7
		100-year								100	14.0	153	21.7
LSCL104	8512.2	2-year	Trapezoidal	1	30	63.9	912.00	910.00	3.131	0	0.0	540	18.0
		5-year								0	0.0	540	18.0
		10-year								0	0.0	540	18.0
		25-year								0	0.0	540	18.0
		50-year								0	0.0	540	18.0
		100-year								0	0.0	540	18.0
LSCL105	LSCL105	2-year	Trapezoidal	4	10	72.6	908.47	908.17	0.413	38	3.2	340	6.1
		5-year								55	3.6	340	6.1
		10-year								64	3.6	340	6.1
		25-year								78	3.6	340	6.1
		50-year								87	3.6	340	6.1
		100-year								100	3.5	340	6.1
LSCL106	SCL106A	2-year	Circular	2	0	35.6	908.74	908.47	0.758	27	10.7	11	3.4
		5-year								30	10.8	11	3.4
		10-year								31	10.8	11	3.4
		25-year								31	10.8	11	3.4
		50-year								31	10.8	11	3.4
		100-year								31	10.8	11	3.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL106	SCL106B	2-year	Trapezoidal	1	30	35.6	912.00	911.96	0.100	11	1.8	102	3.4
		5-year								24	2.6	102	3.4
		10-year								36	3.0	102	3.4
		25-year								53	3.5	102	3.4
		50-year								65	3.8	102	3.4
		100-year								82	4.2	102	3.4
LSCL107	LSCL107	2-year	Trapezoidal	4	10	27.9	908.94	908.74	0.716	38	0.8	447	8.0
		5-year								55	1.2	447	8.0
		10-year								64	1.3	447	8.0
		25-year								78	1.5	447	8.0
		50-year								87	1.7	447	8.0
		100-year								100	1.9	447	8.0
LSCL108	SCL108A	2-year	Circular	2	0	39.1	909.11	908.94	0.435	20	6.3	8	2.6
		5-year								21	6.6	8	2.6
		10-year								21	6.7	8	2.6
		25-year								21	6.7	8	2.6
		50-year								21	6.8	8	2.6
		100-year								21	6.8	8	2.6
LSCL108	SCL108B	2-year	Trapezoidal	2	30	39.1	912.00	911.96	0.100	30	2.8	298	5.0
		5-year								47	3.3	298	5.0
		10-year								57	3.6	298	5.0
		25-year								71	3.8	298	5.0
		50-year								81	3.9	298	5.0
		100-year								94	4.1	298	5.0
LSCL109	LSCL109	2-year	Trapezoidal	4	10	58.6	909.30	909.11	0.324	38	0.9	301	5.4
		5-year								55	1.2	301	5.4
		10-year								64	1.4	301	5.4
		25-year								78	1.7	301	5.4
		50-year								87	1.8	301	5.4
		100-year								100	2.1	301	5.4
LSCL110	SCL110A	2-year	Circular	2	0	38.4	909.43	909.30	0.339	19	6.1	7	2.3
		5-year								20	6.3	7	2.3
		10-year								20	6.4	7	2.3
		25-year								20	6.4	7	2.3
		50-year								20	6.4	7	2.3
		100-year								20	6.3	7	2.3
LSCL110	SCL110B	2-year	Trapezoidal	2	30	38.4	912.00	911.96	0.100	33	2.4	300	5.0
		5-year								49	2.9	300	5.0
		10-year								59	3.1	300	5.0
		25-year								72	3.3	300	5.0
		50-year								82	3.4	300	5.0
		100-year								95	3.6	300	5.0
LSCL111	LSCL111	2-year	Trapezoidal	4	10	34.2	909.50	909.43	0.204	38	1.0	239	4.3
		5-year								55	1.3	239	4.3
		10-year								64	1.5	239	4.3
		25-year								78	1.8	239	4.3
		50-year								87	2.0	239	4.3
		100-year								100	2.2	239	4.3
LSCL112	SCL112A	2-year	Circular	2	0	36.3	909.69	909.50	0.523	16	5.1	9	2.8
		5-year								17	5.2	9	2.8
		10-year								17	5.2	9	2.8
		25-year								17	5.2	9	2.8
		50-year								17	5.2	9	2.8
		100-year								16	5.1	9	2.8
LSCL112	SCL112B	2-year	Trapezoidal	2	30	36.3	912.00	911.96	0.100	34	2.3	309	5.1
		5-year								50	2.6	309	5.1
		10-year								60	2.8	309	5.1
		25-year								73	3.1	309	5.1
		50-year								83	3.2	309	5.1
		100-year								96	3.4	309	5.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL113	LSCL113	2-year	Trapezoidal	4	10	28.6	909.77	909.69	0.280	38	1.1	279	5.0
		5-year								55	1.5	279	5.0
		10-year								64	1.7	279	5.0
		25-year								78	1.9	279	5.0
		50-year								87	2.1	279	5.0
		100-year								100	2.4	279	5.0
LSCL114	SCL114A	2-year	Circular	2	0	38.4	910.07	909.77	0.781	14	4.6	11	3.4
		5-year								14	4.7	11	3.4
		10-year								14	4.7	11	3.4
		25-year								14	4.7	11	3.4
		50-year								14	4.6	11	3.4
		100-year								13	4.3	11	3.4
LSCL114	SCL114B	2-year	Trapezoidal	2	30	38.4	912.00	911.96	0.100	34	2.1	300	5.0
		5-year								51	2.5	300	5.0
		10-year								61	2.7	300	5.0
		25-year								74	2.9	300	5.0
		50-year								84	3.0	300	5.0
		100-year								97	3.2	300	5.0
LSCL115	LSCL115	2-year	Trapezoidal	4	10	118.6	910.76	910.07	0.582	38	1.5	403	7.2
		5-year								55	2.0	403	7.2
		10-year								65	2.2	403	7.2
		25-year								78	2.5	403	7.2
		50-year								87	2.8	403	7.2
		100-year								101	3.0	403	7.2
LSCL116	8474.1	2-year	Circular	2	0	47.7	911.00	910.76	0.503	27	8.7	15	4.7
		5-year								27	8.9	15	4.7
		10-year								28	9.0	15	4.7
		25-year								28	9.1	15	4.7
		50-year								28	9.1	15	4.7
		100-year								28	9.0	15	4.7
LSCL116	8474.2	2-year	Trapezoidal	2	30	47.7	913.00	912.95	0.100	12	1.8	301	5.0
		5-year								29	2.7	301	5.0
		10-year								39	3.0	301	5.0
		25-year								53	3.4	301	5.0
		50-year								63	3.7	301	5.0
		100-year								77	4.0	301	5.0
LSCL1A01	SCL1A01A	2-year	Circular	3	0	19.9	906.00	903.43	12.928	33	8.5	130	18.4
		5-year								49	10.7	130	18.4
		10-year								58	11.9	130	18.4
		25-year								71	12.9	130	18.4
		50-year								80	13.5	130	18.4
		100-year								92	14.4	130	18.4
LSCL1A01	SCL1A01B	2-year	Trapezoidal	1	30	19.9	909.00	908.98	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSCL1A02	LSCL1A02	2-year	Natural	6	10	134.4	906.89	906.00	0.662	33	2.8	7393	7.2
		5-year								49	3.0	7393	7.2
		10-year								58	3.1	7393	7.2
		25-year								71	3.2	7393	7.2
		50-year								80	3.2	7393	7.2
		100-year								93	3.2	7393	7.2
LSCL1A03	8361.1	2-year	Circular	2	0	196.7	907.60	906.89	0.361	22	9.2	13	4.0
		5-year								24	9.3	13	4.0
		10-year								25	9.4	13	4.0
		25-year								26	9.4	13	4.0
		50-year								27	9.5	13	4.0
		100-year								28	9.5	13	4.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL1A03	8361.2	2-year	Trapezoidal	1	30	196.7	911.60	909.00	1.322	11	3.0	351	11.7
		5-year								25	4.1	351	11.7
		10-year								33	4.6	351	11.7
		25-year								45	5.2	351	11.7
		50-year								53	5.6	351	11.7
		100-year								65	6.0	351	11.7
LSCL1A04	8340.1	2-year	Circular	2	0	26.5	907.90	907.60	1.132	23	7.2	22	7.1
		5-year								23	7.3	22	7.1
		10-year								23	7.4	22	7.1
		25-year								23	7.4	22	7.1
		50-year								24	7.4	22	7.1
		100-year								24	7.5	22	7.1
LSCL1A04	8340.2	2-year	Trapezoidal	1	30	26.5	911.90	911.60	1.132	11	2.8	325	10.8
		5-year								26	4.0	325	10.8
		10-year								35	4.5	325	10.8
		25-year								48	5.1	325	10.8
		50-year								57	5.5	325	10.8
		100-year								69	5.9	325	10.8
LSCL1B01	8511.1	2-year	Circular	2	0	28.7	904.31	904.26	0.174	0	-0.3	9	2.8
		5-year								0	-0.3	9	2.8
		10-year								-1	-0.3	9	2.8
		25-year								4	1.4	9	2.8
		50-year								5	1.5	9	2.8
		100-year								-5	-1.7	9	2.8
LSCL1B01	8511.2	2-year	Trapezoidal	1	30	28.7	910.48	910.00	1.670	0	0.0	394	13.1
		5-year								0	0.0	394	13.1
		10-year								0	0.0	394	13.1
		25-year								0	0.0	394	13.1
		50-year								0	0.0	394	13.1
		100-year								0	0.0	394	13.1
LSCL201	8341.1	2-year	Circular	2	0	140.8	907.85	905.45	1.704	14	5.2	27	8.7
		5-year								16	4.9	27	8.7
		10-year								23	7.2	27	8.7
		25-year								24	7.5	27	8.7
		50-year								21	6.5	27	8.7
		100-year								21	6.6	27	8.7
LSCL201	8341.2	2-year	Trapezoidal	2	30	140.8	911.85	910.70	0.817	0	0.0	840	14.0
		5-year								6	0.6	840	14.0
		10-year								10	1.5	840	14.0
		25-year								15	1.7	840	14.0
		50-year								20	1.6	840	14.0
		100-year								25	1.8	840	14.0
LSCL301	8409.1	2-year	Circular	2	0	181.5	909.30	906.66	1.454	11	5.0	25	8.1
		5-year								12	5.3	25	8.1
		10-year								11	5.5	25	8.1
		25-year								11	5.6	25	8.1
		50-year								12	5.7	25	8.1
		100-year								14	5.7	25	8.1
LSCL301	8409.2	2-year	Trapezoidal	1	30	181.5	912.30	911.83	0.259	3	0.9	155	5.2
		5-year								11	1.4	155	5.2
		10-year								15	1.6	155	5.2
		25-year								21	1.8	155	5.2
		50-year								25	2.0	155	5.2
		100-year								30	2.1	155	5.2
LSCL401	8533.1	2-year	Special	3	3	183.8	914.36	908.86	2.992	15	4.5	50	12.3
		5-year								21	5.2	50	12.3
		10-year								25	6.1	50	12.3
		25-year								29	7.0	50	12.3
		50-year								33	8.0	50	12.3
		100-year								39	9.3	50	12.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCL401	8533.2	2-year	Trapezoidal	1	30	183.8	919.11	915.25	2.100	0	0.0	442	14.7
		5-year								0	0.0	442	14.7
		10-year								0	0.0	442	14.7
		25-year								0	0.0	442	14.7
		50-year								0	0.0	442	14.7
		100-year								0	0.0	442	14.7
LSCL402	8532.1	2-year	Special	3	3	293.9	916.52	914.36	0.735	15	6.2	25	6.1
		5-year								21	6.5	25	6.1
		10-year								25	6.6	25	6.1
		25-year								29	7.0	25	6.1
		50-year								30	7.2	25	6.1
		100-year								30	7.2	25	6.1
LSCL402	8532.2	2-year	Trapezoidal	1	30	293.9	920.44	919.11	0.452	0	0.0	205	6.8
		5-year								0	0.0	205	6.8
		10-year								0	0.0	205	6.8
		25-year								0	0.0	205	6.8
		50-year								5	1.6	205	6.8
		100-year								16	2.5	205	6.8
LSCMC01	SCMC01A	2-year	Rectangular	7	7	67.1	887.03	886.70	0.492	203	5.4	530	10.8
		5-year								289	7.2	530	10.8
		10-year								352	8.4	530	10.8
		25-year								427	9.9	530	10.8
		50-year								469	10.7	530	10.8
		100-year								543	11.9	530	10.8
LSCMC01	SCMC01B	2-year	Trapezoidal	1	30	67.1	894.00	893.93	0.100	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3
LSCMC02	LSCMC02	2-year	Natural	8	10	557.1	891.66	887.03	0.831	86	0.6	9623	10.0
		5-year								128	0.7	9623	10.0
		10-year								155	0.8	9623	10.0
		25-year								190	0.9	9623	10.0
		50-year								218	0.9	9623	10.0
		100-year								252	1.0	9623	10.0
LSCMC03	LSCMC03	2-year	Natural	5	0	1701.4	902.36	891.66	0.629	121	1.9	14109	8.4
		5-year								180	2.0	14109	8.4
		10-year								217	2.1	14109	8.4
		25-year								264	2.1	14109	8.4
		50-year								298	2.2	14109	8.4
		100-year								344	2.2	14109	8.4
LSCMC04	LSCMC04	2-year	Trapezoidal	2	4	24.9	903.36	902.36	4.016	54	8.3	265	11.0
		5-year								79	9.3	265	11.0
		10-year								94	9.8	265	11.0
		25-year								112	10.4	265	11.0
		50-year								126	10.8	265	11.0
		100-year								143	11.3	265	11.0
LSCMC05	SCMC05A	2-year	Circular	4	0	31.3	903.85	903.36	1.568	54	11.6	97	7.8
		5-year								79	13.5	97	7.8
		10-year								94	14.5	97	7.8
		25-year								112	15.6	97	7.8
		50-year								126	16.3	97	7.8
		100-year								143	17.2	97	7.8
LSCMC05	SCMC05B	2-year	Trapezoidal	1	30	31.3	908.00	907.97	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC06	LSCMC06	2-year	Natural	8	4	480.8	904.60	903.85	0.156	63	0.6	16338	5.5
		5-year								98	0.6	16338	5.5
		10-year								116	0.6	16338	5.5
		25-year								137	0.6	16338	5.5
		50-year								153	0.6	16338	5.5
		100-year								178	0.6	16338	5.5
LSCMC07	8520.1	2-year	Special	2.83	2.83	163.3	905.45	904.60	0.520	39	12.8	16	4.8
		5-year								42	13.1	16	4.8
		10-year								42	13.2	16	4.8
		25-year								42	13.3	16	4.8
		50-year								43	13.3	16	4.8
		100-year								43	13.4	16	4.8
LSCMC07	8520.2	2-year	Trapezoidal	2	30	163.3	910.70	910.00	0.429	45	3.7	609	10.1
		5-year								95	5.0	609	10.1
		10-year								123	5.5	609	10.1
		25-year								154	6.0	609	10.1
		50-year								178	6.4	609	10.1
		100-year								214	6.8	609	10.1
LSCMC08	8526.1	2-year	Special	2.83	2.83	183.8	906.06	905.45	0.332	21	6.4	13	3.8
		5-year								25	7.5	13	3.8
		10-year								21	6.4	13	3.8
		25-year								28	8.4	13	3.8
		50-year								28	8.3	13	3.8
		100-year								26	7.8	13	3.8
LSCMC08	8526.2	2-year	Trapezoidal	3	30	183.8	911.56	909.70	1.012	54	2.2	1770	19.7
		5-year								103	3.4	1770	19.7
		10-year								126	3.8	1770	19.7
		25-year								152	4.3	1770	19.7
		50-year								173	4.6	1770	19.7
		100-year								204	5.0	1770	19.7
LSCMC09	8527.1	2-year	Special	2.83	2.83	31.5	906.66	906.06	1.907	34	10.3	30	9.1
		5-year								34	10.3	30	9.1
		10-year								34	10.3	30	9.1
		25-year								34	10.3	30	9.1
		50-year								34	10.3	30	9.1
		100-year								34	10.3	30	9.1
LSCMC09	8527.2	2-year	Trapezoidal	1	30	31.5	911.83	911.56	0.858	21	2.6	283	9.4
		5-year								56	4.2	283	9.4
		10-year								72	4.7	283	9.4
		25-year								90	5.1	283	9.4
		50-year								105	5.5	283	9.4
		100-year								128	6.0	283	9.4
LSCMC10	8528.1	2-year	Special	3.33	3.33	173.8	907.68	906.66	0.587	40	7.7	30	5.9
		5-year								45	8.7	30	5.9
		10-year								45	8.7	30	5.9
		25-year								45	8.7	30	5.9
		50-year								45	8.7	30	5.9
		100-year								45	8.7	30	5.9
LSCMC10	8528.2	2-year	Trapezoidal	1	30	173.8	914.25	911.83	1.392	0	0.0	360	12.0
		5-year								22	2.7	360	12.0
		10-year								35	3.4	360	12.0
		25-year								48	4.0	360	12.0
		50-year								60	4.4	360	12.0
		100-year								78	5.0	360	12.0
LSCMC11	8529.1	2-year	Special	3.33	3.33	58.4	908.02	907.68	0.582	40	7.7	30	5.8
		5-year								42	8.2	30	5.8
		10-year								42	8.1	30	5.8
		25-year								41	8.0	30	5.8
		50-year								43	8.3	30	5.8
		100-year								41	8.0	30	5.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC11	8529.2	2-year	Trapezoidal	1	30	58.4	914.54	914.25	0.497	0	0.0	215	7.2
		5-year								33	3.4	215	7.2
		10-year								45	3.9	215	7.2
		25-year								58	4.3	215	7.2
		50-year								69	4.6	215	7.2
		100-year								86	5.0	215	7.2
LSCMC12	8530.1	2-year	Special	3.33	3.33	126.7	908.76	908.02	0.584	34	6.9	30	5.9
		5-year								34	7.0	30	5.9
		10-year								35	7.0	30	5.9
		25-year								35	7.0	30	5.9
		50-year								35	7.0	30	5.9
		100-year								36	7.1	30	5.9
LSCMC12	8530.2	2-year	Trapezoidal	2	30	126.7	914.18	914.54	-0.284	-17	-1.4	496	8.3
		5-year								-49	-2.5	496	8.3
		10-year								-61	-2.8	496	8.3
		25-year								-74	-3.1	496	8.3
		50-year								-85	-3.3	496	8.3
		100-year								-102	-3.6	496	8.3
LSCMC13	8531.1	2-year	Special	3	1.5	50.9	908.86	908.76	0.196	38	10.0	13	3.1
		5-year								39	10.1	13	3.1
		10-year								40	10.1	13	3.1
		25-year								41	10.1	13	3.1
		50-year								41	10.2	13	3.1
		100-year								42	10.2	13	3.1
LSCMC13	8531.2	2-year	Trapezoidal	2	30	50.9	915.25	914.18	2.101	11	1.1	1348	22.5
		5-year								42	2.5	1348	22.5
		10-year								55	3.0	1348	22.5
		25-year								69	3.5	1348	22.5
		50-year								82	3.8	1348	22.5
		100-year								102	4.3	1348	22.5
LSCMC14	8389.1	2-year	Circular	2	0	26.3	908.91	908.86	0.190	10	3.4	9	2.9
		5-year								10	3.3	9	2.9
		10-year								10	3.3	9	2.9
		25-year								10	3.3	9	2.9
		50-year								10	3.3	9	2.9
		100-year								10	3.3	9	2.9
LSCMC14	8389.2	2-year	Trapezoidal	2	30	26.3	914.16	914.25	-0.343	-10	1.7	545	9.1
		5-year								15	2.0	545	9.1
		10-year								19	2.3	545	9.1
		25-year								22	2.5	545	9.1
		50-year								24	2.5	545	9.1
		100-year								26	2.9	545	9.1
LSCMC15	8590.1	2-year	Circular	2	0	170.5	913.74	908.91	2.832	12	5.8	35	11.3
		5-year								16	5.8	35	11.3
		10-year								19	5.9	35	11.3
		25-year								22	6.8	35	11.3
		50-year								25	7.8	35	11.3
		100-year								28	8.7	35	11.3
LSCMC15	8590.2	2-year	Trapezoidal	1	30	170.5	918.49	914.16	2.539	0	0.0	486	16.2
		5-year								0	0.0	486	16.2
		10-year								0	0.0	486	16.2
		25-year								0	0.0	486	16.2
		50-year								0	0.0	486	16.2
		100-year								2	0.1	486	16.2
LSCMC16	8591.1	2-year	Circular	2	0	150.3	913.95	913.74	0.140	12	5.6	8	2.5
		5-year								16	5.6	8	2.5
		10-year								19	5.9	8	2.5
		25-year								21	6.5	8	2.5
		50-year								21	6.5	8	2.5
		100-year								21	6.6	8	2.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSCMC16	8591.2	2-year	Trapezoidal	1	30	150.3	918.37	918.49	-0.080	0	0.0	86	2.9
		5-year								0	0.0	86	2.9
		10-year								0	0.0	86	2.9
		25-year								-2	-0.5	86	2.9
		50-year								-8	-1.1	86	2.9
		100-year								-19	-1.8	86	2.9
LSCMC17	8403.1	2-year	Circular	2	0	117.7	916.38	913.95	2.065	12	6.0	30	9.6
		5-year								16	6.3	30	9.6
		10-year								19	6.6	30	9.6
		25-year								24	7.5	30	9.6
		50-year								26	8.1	30	9.6
		100-year								26	8.3	30	9.6
LSCMC17	8403.2	2-year	Trapezoidal	1	30	117.7	920.46	918.37	1.776	0	0.0	406	13.5
		5-year								0	0.0	406	13.5
		10-year								0	0.0	406	13.5
		25-year								0	0.0	406	13.5
		50-year								0	0.0	406	13.5
		100-year								5	0.6	406	13.5
LSCMC18	8505.1	2-year	Circular	2	0	14.2	916.52	916.38	0.988	12	8.4	21	6.6
		5-year								16	9.4	21	6.6
		10-year								19	9.1	21	6.6
		25-year								24	9.1	21	6.6
		50-year								26	9.2	21	6.6
		100-year								31	9.8	21	6.6
LSCMC18	8505.2	2-year	Trapezoidal	1	30	14.2	920.44	920.46	-0.141	0	0.0	115	3.8
		5-year								0	0.0	115	3.8
		10-year								0	0.0	115	3.8
		25-year								0	0.0	115	3.8
		50-year								-3	-1.1	115	3.8
		100-year								-10	-1.8	115	3.8
LSCMC19	8119.1	2-year	Special	3	3	41.4	916.67	916.52	0.362	26	9.3	18	4.3
		5-year								37	10.0	18	4.3
		10-year								44	10.6	18	4.3
		25-year								53	12.7	18	4.3
		50-year								60	14.4	18	4.3
		100-year								69	16.6	18	4.3
LSCMC19	8119.2	2-year	Circular	0.16	0	41.4	920.25	920.44	0.000	0	0.0	0	0.8
		5-year								0	0.0	0	0.8
		10-year								0	0.0	0	0.8
		25-year								0	-2.0	0	0.8
		50-year								0	-2.6	0	0.8
		100-year								0	-2.9	0	0.8
LSCMC20	8625.1	2-year	Special	3	3	23.2	916.75	916.67	0.345	26	7.4	17	4.2
		5-year								37	9.1	17	4.2
		10-year								43	10.4	17	4.2
		25-year								44	10.7	17	4.2
		50-year								47	11.3	17	4.2
		100-year								47	11.4	17	4.2
LSCMC20	8625.2	2-year	Trapezoidal	3	30	23.2	920.27	920.25	0.100	0	0.0	517	5.7
		5-year								0	0.0	517	5.7
		10-year								5	1.4	517	5.7
		25-year								50	3.0	517	5.7
		50-year								58	3.0	517	5.7
		100-year								68	3.1	517	5.7
LSRL0101	8440.1	2-year	Circular	4.5	0	118.8	875.33	871.15	3.519	99	11.4	343	21.5
		5-year								125	12.1	343	21.5
		10-year								136	12.3	343	21.5
		25-year								148	12.8	343	21.5
		50-year								155	13.0	343	21.5
		100-year								163	13.1	343	21.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0101	8440.2	2-year	Trapezoidal	1	30	118.8	893.12	893.00	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0102	8439.1	2-year	Circular	4.5	0	296.0	877.75	875.33	0.818	98	12.3	165	10.4
		5-year								125	13.2	165	10.4
		10-year								135	13.3	165	10.4
		25-year								146	13.4	165	10.4
		50-year								153	13.4	165	10.4
		100-year								162	13.5	165	10.4
LSRL0102	8439.2	2-year	Trapezoidal	1	30	296.0	888.00	887.70	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL0103	8256.1	2-year	Circular	4.5	0	128.0	879.08	877.75	1.041	98	10.6	186	11.7
		5-year								125	11.3	186	11.7
		10-year								135	11.8	186	11.7
		25-year								146	12.1	186	11.7
		50-year								153	12.2	186	11.7
		100-year								162	12.3	186	11.7
LSRL0103	8256.2	2-year	Trapezoidal	1	30	128.0	889.00	888.00	0.781	0	0.0	270	9.0
		5-year								0	0.0	270	9.0
		10-year								0	0.0	270	9.0
		25-year								0	0.0	270	9.0
		50-year								0	0.0	270	9.0
		100-year								0	0.0	270	9.0
LSRL0104	8442.1	2-year	Circular	4.5	0	317.6	879.68	879.08	0.188	94	8.6	79	5.0
		5-year								121	9.4	79	5.0
		10-year								132	9.8	79	5.0
		25-year								144	10.1	79	5.0
		50-year								151	10.3	79	5.0
		100-year								159	10.6	79	5.0
LSRL0104	8442.2	2-year	Trapezoidal	1	30	317.6	891.01	888.00	0.948	0	0.0	297	9.9
		5-year								0	0.0	297	9.9
		10-year								0	0.0	297	9.9
		25-year								0	0.0	297	9.9
		50-year								0	0.0	297	9.9
		100-year								0	0.0	297	9.9
LSRL0105	8441.1	2-year	Circular	4.5	0	275.1	879.89	879.68	0.076	94	6.6	50	3.2
		5-year								121	7.6	50	3.2
		10-year								132	8.2	50	3.2
		25-year								144	8.9	50	3.2
		50-year								151	9.3	50	3.2
		100-year								158	9.7	50	3.2
LSRL0105	8441.2	2-year	Trapezoidal	1	30	275.1	890.47	890.01	0.167	0	0.0	125	4.2
		5-year								0	0.0	125	4.2
		10-year								0	0.0	125	4.2
		25-year								0	0.0	125	4.2
		50-year								0	0.0	125	4.2
		100-year								0	0.0	125	4.2
LSRL0106	8444.1	2-year	Circular	4.5	0	387.1	880.17	879.89	0.072	80	5.1	49	3.1
		5-year								98	6.0	49	3.1
		10-year								101	6.2	49	3.1
		25-year								104	6.4	49	3.1
		50-year								105	6.4	49	3.1
		100-year								105	6.4	49	3.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0106	8444.2	2-year	Trapezoidal	1	30	387.1	888.76	888.00	0.196	0	0.0	135	4.5
		5-year								0	0.0	135	4.5
		10-year								0	0.0	135	4.5
		25-year								0	0.0	135	4.5
		50-year								0	0.0	135	4.5
		100-year								0	0.0	135	4.5
LSRL0107	8443.1	2-year	Circular	4.5	0	193.8	880.42	880.17	0.129	80	5.0	66	4.1
		5-year								98	6.1	66	4.1
		10-year								101	6.4	66	4.1
		25-year								104	6.5	66	4.1
		50-year								105	6.6	66	4.1
		100-year								105	6.6	66	4.1
LSRL0107	8443.2	2-year	Trapezoidal	1	30	193.8	888.95	888.76	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL0108	8255.1	2-year	Circular	4.5	0	54.5	882.98	880.42	4.706	80	7.9	396	24.9
		5-year								98	8.0	396	24.9
		10-year								101	8.1	396	24.9
		25-year								104	8.1	396	24.9
		50-year								105	8.1	396	24.9
		100-year								105	8.0	396	24.9
LSRL0108	8255.2	2-year	Trapezoidal	1	30	54.5	889.00	888.95	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LSRL0109	LSRL0109	2-year	Natural	6	12	258.1	883.01	882.98	0.012	61	1.8	446	0.5
		5-year								75	1.7	446	0.5
		10-year								78	1.6	446	0.5
		25-year								78	1.6	446	0.5
		50-year								79	1.6	446	0.5
		100-year								82	1.6	446	0.5
LSRL0110	SRL0110A	2-year	Circular	4.5	0	89.0	883.52	883.01	0.573	61	8.6	138	8.7
		5-year								77	8.6	138	8.7
		10-year								81	8.7	138	8.7
		25-year								85	8.7	138	8.7
		50-year								92	8.7	138	8.7
		100-year								96	8.7	138	8.7
LSRL0110	SRL0110B	2-year	Trapezoidal	1	30	89.0	890.00	889.91	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0111	LSRL0111	2-year	Natural	7	3	311.7	884.00	883.52	0.154	62	2.3	1406	2.5
		5-year								80	2.3	1406	2.5
		10-year								86	2.4	1406	2.5
		25-year								90	2.4	1406	2.5
		50-year								98	2.4	1406	2.5
		100-year								103	2.4	1406	2.5
LSRL0112	SRL0112A	2-year	Circular	4.5	0	93.1	884.10	884.00	0.107	62	7.0	60	3.8
		5-year								81	7.9	60	3.8
		10-year								89	8.1	60	3.8
		25-year								96	8.3	60	3.8
		50-year								103	8.5	60	3.8
		100-year								109	8.7	60	3.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0112	SRL0112B	2-year	Trapezoidal	1	30	93.1	890.00	889.91	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LSRL0113	LSRL0113	2-year	Natural	6	1.5	201.4	884.20	884.10	0.050	45	2.2	370	1.1
		5-year								57	2.3	370	1.1
		10-year								60	2.2	370	1.1
		25-year								68	1.8	370	1.1
		50-year								73	1.8	370	1.1
		100-year								85	1.7	370	1.1
LSRL0114	SRL0114A	2-year	Circular	4	0	195.9	885.20	884.20	0.510	45	5.6	95	7.6
		5-year								56	6.1	95	7.6
		10-year								59	6.0	95	7.6
		25-year								68	6.1	95	7.6
		50-year								73	6.1	95	7.6
		100-year								86	6.7	95	7.6
LSRL0114	SRL0114B	2-year	Trapezoidal	1	30	195.9	892.00	891.80	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRL0115	LSRL0115	2-year	Natural	6.5	5	305.8	885.83	885.20	0.206	45	2.2	1414	2.2
		5-year								56	2.2	1414	2.2
		10-year								59	2.2	1414	2.2
		25-year								68	2.2	1414	2.2
		50-year								73	2.2	1414	2.2
		100-year								89	2.3	1414	2.2
LSRL0116	SRL0116A	2-year	Circular	2.5	0	89.7	886.58	885.83	0.836	45	9.4	35	7.1
		5-year								56	11.5	35	7.1
		10-year								59	12.1	35	7.1
		25-year								68	13.6	35	7.1
		50-year								74	14.7	35	7.1
		100-year								74	14.9	35	7.1
LSRL0116	SRL0116B	2-year	Trapezoidal	1	30	89.7	892.00	891.91	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								1	0.5	97	3.2
		100-year								23	2.3	97	3.2
LSRL0117	LSRL0117	2-year	Natural	6	10	109.7	887.25	886.58	0.611	27	2.2	1323	4.0
		5-year								37	2.0	1323	4.0
		10-year								40	2.0	1323	4.0
		25-year								48	2.0	1323	4.0
		50-year								52	1.9	1323	4.0
		100-year								63	1.9	1323	4.0
LSRL0118	8259.1	2-year	Circular	2.5	0	340.6	887.31	887.25	0.018	26	5.6	5	1.0
		5-year								35	7.5	5	1.0
		10-year								38	7.9	5	1.0
		25-year								36	7.4	5	1.0
		50-year								34	7.0	5	1.0
		100-year								32	6.6	5	1.0
LSRL0118	8259.2	2-year	Trapezoidal	1	30	340.6	892.89	892.00	0.261	0	0.0	156	5.2
		5-year								0	0.0	156	5.2
		10-year								2	1.0	156	5.2
		25-year								17	2.2	156	5.2
		50-year								29	2.7	156	5.2
		100-year								40	3.1	156	5.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0119	8387.1	2-year	Circular	2	0	356.0	893.82	887.31	1.829	26	8.4	28	9.0
		5-year								30	9.4	28	9.0
		10-year								30	9.4	28	9.0
		25-year								30	9.4	28	9.0
		50-year								30	9.4	28	9.0
		100-year								30	9.4	28	9.0
LSRL0119	8387.2	2-year	Trapezoidal	2	30	356.0	898.90	891.89	1.969	0	0.0	1305	21.8
		5-year								6	2.2	1305	21.8
		10-year								13	2.5	1305	21.8
		25-year								21	2.4	1305	21.8
		50-year								27	2.5	1305	21.8
		100-year								34	3.0	1305	21.8
LSRL0120	8404.1	2-year	Circular	2	0	33.7	894.02	893.82	0.593	26	9.5	16	5.1
		5-year								31	9.9	16	5.1
		10-year								32	10.2	16	5.1
		25-year								33	10.4	16	5.1
		50-year								33	10.4	16	5.1
		100-year								33	10.5	16	5.1
LSRL0120	8404.2	2-year	Trapezoidal	2	30	33.7	898.87	897.90	2.876	0	0.0	1577	26.3
		5-year								26	1.5	1577	26.3
		10-year								33	1.8	1577	26.3
		25-year								42	2.2	1577	26.3
		50-year								49	2.4	1577	26.3
		100-year								57	2.7	1577	26.3
LSRL0121	8260.1	2-year	Circular	1.25	0	76.5	894.48	894.02	0.602	14	11.3	5	3.8
		5-year								14	11.2	5	3.8
		10-year								14	11.2	5	3.8
		25-year								14	11.2	5	3.8
		50-year								14	11.2	5	3.8
		100-year								14	11.2	5	3.8
LSRL0121	8260.2	2-year	Trapezoidal	2	30	76.5	898.95	898.87	0.100	13	1.9	301	5.0
		5-year								31	2.7	301	5.0
		10-year								37	2.9	301	5.0
		25-year								44	3.1	301	5.0
		50-year								50	3.2	301	5.0
		100-year								57	3.4	301	5.0
LSRL01401	8428.1	2-year	Circular	2.5	0	84.7	904.16	904.11	0.059	10	2.3	9	1.9
		5-year								10	2.3	9	1.9
		10-year								10	2.3	9	1.9
		25-year								10	2.3	9	1.9
		50-year								10	2.2	9	1.9
		100-year								10	2.1	9	1.9
LSRL01401	8428.2	2-year	Trapezoidal	1	30	84.7	907.92	907.84	0.100	5	1.2	94	3.1
		5-year								12	1.8	94	3.1
		10-year								17	2.0	94	3.1
		25-year								22	2.2	94	3.1
		50-year								25	2.4	94	3.1
		100-year								32	2.6	94	3.1
LSRL01402	8380.1	2-year	Circular	2.5	0	238.9	904.32	904.16	0.067	11	2.2	10	2.0
		5-year								11	2.2	10	2.0
		10-year								11	2.2	10	2.0
		25-year								11	2.2	10	2.0
		50-year								11	2.2	10	2.0
		100-year								11	2.2	10	2.0
LSRL01402	8380.2	2-year	Trapezoidal	3	30	238.9	908.05	907.92	0.054	-1	-0.2	410	4.6
		5-year								5	0.7	410	4.6
		10-year								8	0.9	410	4.6
		25-year								12	1.1	410	4.6
		50-year								15	1.2	410	4.6
		100-year								21	1.4	410	4.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL01403	8379.1	2-year	Circular	2	0	23.1	904.33	904.32	0.043	11	3.4	4	1.4
		5-year								13	4.2	4	1.4
		10-year								15	4.7	4	1.4
		25-year								15	4.9	4	1.4
		50-year								17	5.2	4	1.4
		100-year								18	5.7	4	1.4
LSRL01403	8379.2	2-year	Trapezoidal	3	30	23.1	908.00	907.05	4.109	0	0.0	3567	39.6
		5-year								35	1.7	3567	39.6
		10-year								44	2.0	3567	39.6
		25-year								55	2.3	3567	39.6
		50-year								71	2.6	3567	39.6
		100-year								89	3.0	3567	39.6
LSRL01501	8427.1	2-year	Circular	2.5	0	42.8	904.95	904.51	1.029	41	8.6	39	7.9
		5-year								41	8.6	39	7.9
		10-year								41	8.6	39	7.9
		25-year								41	8.6	39	7.9
		50-year								41	8.6	39	7.9
		100-year								41	8.6	39	7.9
LSRL01501	8427.2	2-year	Trapezoidal	3	30	42.8	910.00	908.00	4.675	5	1.8	3805	42.3
		5-year								27	2.6	3805	42.3
		10-year								40	2.6	3805	42.3
		25-year								57	2.9	3805	42.3
		50-year								69	3.0	3805	42.3
		100-year								86	3.3	3805	42.3
LSRL01502	8331.1	2-year	Circular	2.5	0	315.0	909.83	904.95	1.550	43	10.0	47	9.7
		5-year								44	10.1	47	9.7
		10-year								44	10.1	47	9.7
		25-year								45	10.2	47	9.7
		50-year								45	10.2	47	9.7
		100-year								45	10.2	47	9.7
LSRL01502	8331.2	2-year	Trapezoidal	4	30	315.0	914.00	910.00	1.270	1	1.0	3089	25.7
		5-year								22	3.9	3089	25.7
		10-year								35	4.7	3089	25.7
		25-year								52	5.5	3089	25.7
		50-year								64	6.0	3089	25.7
		100-year								81	6.5	3089	25.7
LSRL01503	8330.1	2-year	Circular	2.5	0	23.7	910.00	909.83	0.706	43	10.5	32	6.5
		5-year								46	10.6	32	6.5
		10-year								48	10.7	32	6.5
		25-year								49	10.8	32	6.5
		50-year								49	10.8	32	6.5
		100-year								49	10.7	32	6.5
LSRL01503	8330.2	2-year	Trapezoidal	2	30	23.7	914.02	914.00	0.100	10	1.8	296	4.9
		5-year								30	2.9	296	4.9
		10-year								42	3.3	296	4.9
		25-year								57	3.7	296	4.9
		50-year								68	3.9	296	4.9
		100-year								83	4.3	296	4.9
LSRL0201	8286.1	2-year	Circular	2.5	0	39.8	884.28	879.65	11.630	40	9.7	76	15.4
		5-year								54	11.2	76	15.4
		10-year								58	11.4	76	15.4
		25-year								58	11.7	76	15.4
		50-year								57	11.6	76	15.4
		100-year								57	11.5	76	15.4
LSRL0201	8286.2	2-year	Trapezoidal	1	30	39.8	887.28	887.00	0.703	0	0.0	256	8.5
		5-year								0	0.0	256	8.5
		10-year								0	0.0	256	8.5
		25-year								16	2.9	256	8.5
		50-year								31	3.7	256	8.5
		100-year								49	4.5	256	8.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0202	LSRL0202	2-year	Natural	4	5	407.2	885.30	884.28	0.250	36	1.5	929	2.7
		5-year								50	1.4	929	2.7
		10-year								58	1.4	929	2.7
		25-year								67	1.4	929	2.7
		50-year								79	1.4	929	2.7
		100-year								93	1.4	929	2.7
LSRL0203	8651.1	2-year	Circular	2	0	66.5	885.68	885.30	0.571	36	11.8	16	5.1
		5-year								50	16.3	16	5.1
		10-year								53	16.9	16	5.1
		25-year								53	17.2	16	5.1
		50-year								53	17.0	16	5.1
		100-year								53	17.1	16	5.1
LSRL0203	8651.2	2-year	Trapezoidal	1	30	66.5	890.93	889.00	2.902	0	0.0	520	17.3
		5-year								0	0.0	520	17.3
		10-year								8	3.4	520	17.3
		25-year								23	5.1	520	17.3
		50-year								32	5.8	520	17.3
		100-year								46	6.7	520	17.3
LSRL0204	8287.1	2-year	Circular	2	0	27.2	885.86	885.68	0.662	36	11.3	17	5.4
		5-year								38	12.0	17	5.4
		10-year								38	12.0	17	5.4
		25-year								38	12.0	17	5.4
		50-year								38	12.0	17	5.4
		100-year								38	12.0	17	5.4
LSRL0204	8287.2	2-year	Trapezoidal	2	30	27.2	889.94	889.93	0.037	0	0.0	178	3.0
		5-year								45	3.0	178	3.0
		10-year								57	3.0	178	3.0
		25-year								69	2.9	178	3.0
		50-year								78	2.9	178	3.0
		100-year								90	2.9	178	3.0
LSRL0301	8658.1	2-year	Circular	2.5	0	14.3	880.64	880.54	0.698	78	15.8	32	6.5
		5-year								108	21.7	32	6.5
		10-year								125	25.3	32	6.5
		25-year								147	29.5	32	6.5
		50-year								156	31.4	32	6.5
		100-year								158	31.9	32	6.5
LSRL0301	8658.2	2-year	Trapezoidal	1	30	14.3	888.64	888.35	2.025	0	0.0	434	14.5
		5-year								0	0.0	434	14.5
		10-year								0	0.0	434	14.5
		25-year								0	0.0	434	14.5
		50-year								11	3.4	434	14.5
		100-year								40	5.7	434	14.5
LSRL0302	8290.1	2-year	Circular	2.5	0	327.7	882.82	880.64	0.665	52	10.5	31	6.3
		5-year								52	10.5	31	6.3
		10-year								51	10.4	31	6.3
		25-year								51	10.3	31	6.3
		50-year								51	10.2	31	6.3
		100-year								50	10.1	31	6.3
LSRL0302	8290.2	2-year	Trapezoidal	2	30	327.7	890.32	887.64	0.818	29	3.8	841	14.0
		5-year								64	5.2	841	14.0
		10-year								85	5.8	841	14.0
		25-year								114	6.5	841	14.0
		50-year								134	6.6	841	14.0
		100-year								158	6.8	841	14.0
LSRL0303	8657.1	2-year	Circular	2	0	60.2	883.52	882.82	1.164	44	13.7	23	7.2
		5-year								43	13.6	23	7.2
		10-year								43	13.5	23	7.2
		25-year								43	13.5	23	7.2
		50-year								43	13.4	23	7.2
		100-year								42	13.3	23	7.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0303	8657.2	2-year	Trapezoidal	2	30	60.2	890.85	889.32	2.543	58	4.9	1483	24.7
		5-year								89	5.1	1483	24.7
		10-year								107	5.3	1483	24.7
		25-year								131	5.0	1483	24.7
		50-year								149	5.4	1483	24.7
		100-year								173	5.4	1483	24.7
LSRL0304	8486.1	2-year	Circular	2	0	154.3	885.02	883.52	0.972	35	11.0	21	6.6
		5-year								35	11.1	21	6.6
		10-year								35	11.1	21	6.6
		25-year								35	11.1	21	6.6
		50-year								35	11.0	21	6.6
		100-year								34	10.7	21	6.6
LSRL0304	8486.2	2-year	Trapezoidal	2	30	154.3	892.02	889.85	1.406	59	4.7	1103	18.4
		5-year								89	4.7	1103	18.4
		10-year								106	4.9	1103	18.4
		25-year								130	4.7	1103	18.4
		50-year								147	5.0	1103	18.4
		100-year								170	5.5	1103	18.4
LSRL0305	8485.1	2-year	Circular	2	0	241.7	885.63	885.02	0.252	25	8.0	11	3.4
		5-year								25	7.8	11	3.4
		10-year								24	7.6	11	3.4
		25-year								24	7.5	11	3.4
		50-year								23	7.4	11	3.4
		100-year								23	7.4	11	3.4
LSRL0305	8485.2	2-year	Trapezoidal	2	30	241.7	893.05	891.02	0.840	41	1.8	852	14.2
		5-year								61	2.4	852	14.2
		10-year								73	2.7	852	14.2
		25-year								89	3.1	852	14.2
		50-year								101	3.4	852	14.2
		100-year								117	3.7	852	14.2
LSRL0306	8289.1	2-year	Circular	2	0	325.5	890.88	885.63	1.613	23	7.1	27	8.5
		5-year								22	7.5	27	8.5
		10-year								23	7.4	27	8.5
		25-year								23	7.2	27	8.5
		50-year								23	7.1	27	8.5
		100-year								23	7.1	27	8.5
LSRL0306	8289.2	2-year	Trapezoidal	2	30	325.5	895.88	892.05	1.177	35	1.7	1009	16.8
		5-year								55	2.3	1009	16.8
		10-year								68	2.6	1009	16.8
		25-year								83	3.1	1009	16.8
		50-year								95	3.4	1009	16.8
		100-year								111	3.7	1009	16.8
LSRL0307	8288.1	2-year	Circular	2	0	69.1	891.55	890.88	0.969	21	8.2	21	6.6
		5-year								20	8.3	21	6.6
		10-year								21	8.3	21	6.6
		25-year								20	8.2	21	6.6
		50-year								21	8.1	21	6.6
		100-year								21	8.2	21	6.6
LSRL0307	8288.2	2-year	Trapezoidal	2	30	69.1	895.55	894.88	0.969	61	2.4	916	15.3
		5-year								81	2.9	916	15.3
		10-year								93	3.2	916	15.3
		25-year								109	3.5	916	15.3
		50-year								121	3.8	916	15.3
		100-year								137	4.1	916	15.3
LSRL03A01	LSRL03A01	2-year	Circular	2.5	0	23.8	883.12	880.64	10.416	0	0.1	123	25.0
		5-year								0	-0.1	123	25.0
		10-year								1	0.1	123	25.0
		25-year								2	0.5	123	25.0
		50-year								8	1.6	123	25.0
		100-year								9	1.8	123	25.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL03B01	LSRL03B01	2-year	Circular	2	0	32.2	885.85	882.82	9.410	6	3.1	64	20.5
		5-year								5	1.9	64	20.5
		10-year								4	1.4	64	20.5
		25-year								3	1.0	64	20.5
		50-year								3	1.1	64	20.5
		100-year								4	1.2	64	20.5
LSRL0401	8291.1	2-year	Circular	2.5	0	172.2	890.03	884.43	3.252	85	17.8	69	14.0
		5-year								85	17.8	69	14.0
		10-year								85	17.8	69	14.0
		25-year								85	17.7	69	14.0
		50-year								85	17.6	69	14.0
		100-year								85	17.5	69	14.0
LSRL0401	8291.2	2-year	Trapezoidal	2	30	172.2	894.53	892.00	1.469	102	7.5	1127	18.8
		5-year								191	9.5	1127	18.8
		10-year								245	10.5	1127	18.8
		25-year								316	11.6	1127	18.8
		50-year								369	12.3	1127	18.8
		100-year								440	13.2	1127	18.8
LSRL0402	8292.1	2-year	Circular	2.5	0	42.4	890.32	890.03	0.683	79	16.0	31	6.4
		5-year								79	16.0	31	6.4
		10-year								79	16.0	31	6.4
		25-year								80	16.2	31	6.4
		50-year								80	16.3	31	6.4
		100-year								80	16.3	31	6.4
LSRL0402	8292.2	2-year	Trapezoidal	3	30	42.4	895.82	894.53	3.040	115	9.1	3068	34.1
		5-year								203	11.2	3068	34.1
		10-year								256	12.2	3068	34.1
		25-year								327	13.3	3068	34.1
		50-year								380	14.1	3068	34.1
		100-year								450	15.0	3068	34.1
LSRL0403	8293.1	2-year	Circular	2.5	0	527.2	893.56	890.32	0.615	41	8.6	30	6.1
		5-year								41	8.6	30	6.1
		10-year								40	8.5	30	6.1
		25-year								40	8.5	30	6.1
		50-year								40	8.4	30	6.1
		100-year								40	8.5	30	6.1
LSRL0403	8293.2	2-year	Trapezoidal	2	30	527.2	898.06	895.82	0.425	120	5.4	606	10.1
		5-year								187	6.5	606	10.1
		10-year								227	7.0	606	10.1
		25-year								280	7.6	606	10.1
		50-year								320	8.0	606	10.1
		100-year								373	8.4	606	10.1
LSRL0404	8294.1	2-year	Circular	2.5	0	517.7	900.60	893.56	1.360	44	9.0	44	9.0
		5-year								45	9.0	44	9.0
		10-year								44	9.0	44	9.0
		25-year								44	9.0	44	9.0
		50-year								44	9.0	44	9.0
		100-year								44	9.0	44	9.0
LSRL0404	8294.2	2-year	Trapezoidal	1	30	517.7	905.10	899.06	1.167	79	6.3	329	11.0
		5-year								134	7.7	329	11.0
		10-year								166	8.4	329	11.0
		25-year								210	9.2	329	11.0
		50-year								242	9.8	329	11.0
		100-year								285	10.4	329	11.0
LSRL0405	8295.1	2-year	Circular	2.5	0	643.8	905.59	900.60	0.775	37	7.5	34	6.8
		5-year								38	7.7	34	6.8
		10-year								38	7.7	34	6.8
		25-year								38	7.6	34	6.8
		50-year								37	7.6	34	6.8
		100-year								37	7.6	34	6.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0405	8295.2	2-year	Trapezoidal	1	30	643.8	910.51	906.10	0.685	65	5.0	252	8.4
		5-year								110	6.1	252	8.4
		10-year								136	6.6	252	8.4
		25-year								171	7.3	252	8.4
		50-year								198	7.7	252	8.4
		100-year								232	8.2	252	8.4
LSRL0406	8661.1	2-year	Circular	2	0	27.2	905.63	905.59	0.147	42	13.3	8	2.6
		5-year								44	14.0	8	2.6
		10-year								42	13.3	8	2.6
		25-year								38	12.0	8	2.6
		50-year								36	11.4	8	2.6
		100-year								37	11.6	8	2.6
LSRL0406	8661.2	2-year	Trapezoidal	3	30	27.2	910.55	910.51	0.147	80	4.2	675	7.5
		5-year								124	4.9	675	7.5
		10-year								149	5.3	675	7.5
		25-year								183	5.7	675	7.5
		50-year								209	6.0	675	7.5
		100-year								243	6.3	675	7.5
LSRL0407	8662.1	2-year	Circular	2	0	122.9	906.72	905.63	0.887	25	8.0	20	6.3
		5-year								25	8.0	20	6.3
		10-year								25	8.0	20	6.3
		25-year								26	8.0	20	6.3
		50-year								25	8.0	20	6.3
		100-year								25	8.0	20	6.3
LSRL0407	8662.2	2-year	Trapezoidal	2	30	122.9	912.55	910.55	1.627	43	3.4	1186	19.8
		5-year								72	4.2	1186	19.8
		10-year								89	4.7	1186	19.8
		25-year								112	5.1	1186	19.8
		50-year								129	5.4	1186	19.8
		100-year								152	5.8	1186	19.8
LSRL0408	8316.1	2-year	Circular	2	0	677.9	916.21	906.72	1.400	23	7.9	25	7.9
		5-year								23	7.9	25	7.9
		10-year								23	7.9	25	7.9
		25-year								23	7.7	25	7.9
		50-year								23	8.2	25	7.9
		100-year								23	8.2	25	7.9
LSRL0408	8316.2	2-year	Trapezoidal	1	30	677.9	920.46	912.55	1.167	44	5.0	329	11.0
		5-year								72	6.1	329	11.0
		10-year								89	6.6	329	11.0
		25-year								112	7.2	329	11.0
		50-year								128	7.6	329	11.0
		100-year								150	8.1	329	11.0
LSRL0501	8037.1	2-year	Rectangular	5	6	744.7	891.11	885.10	0.807	151	8.4	352	11.7
		5-year								198	9.4	352	11.7
		10-year								237	10.0	352	11.7
		25-year								312	11.2	352	11.7
		50-year								333	11.4	352	11.7
		100-year								332	11.4	352	11.7
LSRL0501	8037.2	2-year	Trapezoidal	1	30	744.7	898.11	893.60	0.606	0	0.0	237	7.9
		5-year								0	0.0	237	7.9
		10-year								0	0.0	237	7.9
		25-year								0	0.0	237	7.9
		50-year								0	0.0	237	7.9
		100-year								0	0.0	237	7.9
LSRL0502	8043.1	2-year	Rectangular	5	6	178.1	891.84	891.11	0.410	151	10.2	251	8.4
		5-year								198	11.1	251	8.4
		10-year								237	11.7	251	8.4
		25-year								312	12.3	251	8.4
		50-year								332	12.3	251	8.4
		100-year								329	12.3	251	8.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0502	8043.2	2-year	Trapezoidal	1	30	178.1	899.00	898.11	0.500	0	0.0	216	7.2
		5-year								0	0.0	216	7.2
		10-year								0	0.0	216	7.2
		25-year								0	0.0	216	7.2
		50-year								0	0.0	216	7.2
		100-year								0	0.0	216	7.2
LSRL0601	8342.1	2-year	Circular	2.5	0	369.1	894.08	891.84	0.607	44	9.0	30	6.0
		5-year								48	9.9	30	6.0
		10-year								48	9.9	30	6.0
		25-year								48	9.9	30	6.0
		50-year								48	9.8	30	6.0
		100-year								47	9.7	30	6.0
LSRL0601	8342.2	2-year	Trapezoidal	1	30	369.1	899.58	899.00	0.157	0	0.0	121	4.0
		5-year								28	2.4	121	4.0
		10-year								45	2.9	121	4.0
		25-year								64	3.4	121	4.0
		50-year								78	3.7	121	4.0
		100-year								97	4.0	121	4.0
LSRL0602	8666.1	2-year	Circular	2.5	0	259.4	895.08	894.08	0.385	39	7.8	24	4.8
		5-year								36	7.3	24	4.8
		10-year								34	7.0	24	4.8
		25-year								34	6.8	24	4.8
		50-year								34	6.9	24	4.8
		100-year								34	6.8	24	4.8
LSRL0602	8666.2	2-year	Trapezoidal	2	30	259.4	900.58	898.58	0.771	16	2.6	817	13.6
		5-year								46	3.1	817	13.6
		10-year								59	3.4	817	13.6
		25-year								76	3.0	817	13.6
		50-year								89	3.9	817	13.6
		100-year								105	3.8	817	13.6
LSRL0603	8282.1	2-year	Circular	1.75	0	73.5	896.62	895.08	2.096	28	11.4	21	8.9
		5-year								22	9.2	21	8.9
		10-year								22	9.0	21	8.9
		25-year								21	8.8	21	8.9
		50-year								21	8.7	21	8.9
		100-year								21	8.7	21	8.9
LSRL0603	8282.2	2-year	Trapezoidal	2	30	73.5	902.04	899.58	3.348	9	0.5	1702	28.4
		5-year								22	1.1	1702	28.4
		10-year								30	1.4	1702	28.4
		25-year								40	1.7	1702	28.4
		50-year								47	2.0	1702	28.4
		100-year								57	2.3	1702	28.4
LSRL0604	8281.1	2-year	Circular	1.75	0	176.8	898.83	896.62	1.250	18	8.2	16	6.8
		5-year								18	8.2	16	6.8
		10-year								18	8.2	16	6.8
		25-year								18	8.2	16	6.8
		50-year								18	8.3	16	6.8
		100-year								18	8.1	16	6.8
LSRL0604	8281.2	2-year	Trapezoidal	2	30	176.8	905.08	901.04	2.285	13	2.6	1406	23.4
		5-year								25	2.9	1406	23.4
		10-year								33	3.0	1406	23.4
		25-year								42	4.2	1406	23.4
		50-year								49	4.3	1406	23.4
		100-year								59	4.1	1406	23.4
LSRL0605	8665.1	2-year	Circular	1.25	0	54.2	900.07	898.83	2.290	18	14.4	9	7.4
		5-year								18	14.5	9	7.4
		10-year								18	14.5	9	7.4
		25-year								18	14.5	9	7.4
		50-year								18	14.5	9	7.4
		100-year								18	14.5	9	7.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0605	8665.2	2-year	Trapezoidal	2	30	54.2	905.74	904.08	3.065	23	3.7	1628	27.1
		5-year								35	3.4	1628	27.1
		10-year								42	3.9	1628	27.1
		25-year								52	4.3	1628	27.1
		50-year								59	4.5	1628	27.1
		100-year								69	4.3	1628	27.1
LSRL0606	8664.1	2-year	Circular	1.25	0	77.4	901.59	900.07	1.964	13	10.8	8	6.9
		5-year								13	10.8	8	6.9
		10-year								13	10.8	8	6.9
		25-year								13	10.8	8	6.9
		50-year								13	10.8	8	6.9
		100-year								13	10.8	8	6.9
LSRL0606	8664.2	2-year	Trapezoidal	2	30	77.4	906.34	904.74	2.067	24	3.2	1337	22.3
		5-year								37	3.7	1337	22.3
		10-year								44	3.2	1337	22.3
		25-year								53	3.3	1337	22.3
		50-year								61	4.0	1337	22.3
		100-year								70	4.0	1337	22.3
LSRL0607	8663.1	2-year	Circular	1.25	0	40.2	903.02	901.59	3.556	12	9.7	11	9.2
		5-year								12	9.8	11	9.2
		10-year								12	9.9	11	9.2
		25-year								12	10.0	11	9.2
		50-year								12	9.9	11	9.2
		100-year								12	9.6	11	9.2
LSRL0607	8663.2	2-year	Trapezoidal	2	30	40.2	906.35	905.34	2.512	29	2.2	1474	24.6
		5-year								41	2.3	1474	24.6
		10-year								48	2.3	1474	24.6
		25-year								58	2.7	1474	24.6
		50-year								65	2.9	1474	24.6
		100-year								75	3.2	1474	24.6
LSRL0701	8333.1	2-year	Circular	2.5	0	298.9	898.32	893.82	1.505	36	7.9	47	9.5
		5-year								46	9.2	47	9.5
		10-year								48	9.8	47	9.5
		25-year								49	9.9	47	9.5
		50-year								49	9.9	47	9.5
		100-year								49	9.9	47	9.5
LSRL0701	8333.2	2-year	Trapezoidal	1	30	298.9	903.65	902.00	0.552	0	0.0	227	7.6
		5-year								0	0.0	227	7.6
		10-year								4	1.5	227	7.6
		25-year								27	3.3	227	7.6
		50-year								42	3.9	227	7.6
		100-year								59	4.5	227	7.6
LSRL0702	8334.1	2-year	Circular	2.5	0	255.2	901.89	898.32	1.399	32	8.7	45	9.2
		5-year								44	8.8	45	9.2
		10-year								51	10.4	45	9.2
		25-year								51	10.3	45	9.2
		50-year								50	10.1	45	9.2
		100-year								50	10.1	45	9.2
LSRL0702	8334.2	2-year	Trapezoidal	3	30	255.2	907.89	902.65	2.053	0	0.0	2521	28.0
		5-year								0	0.0	2521	28.0
		10-year								3	0.2	2521	28.0
		25-year								22	1.1	2521	28.0
		50-year								33	1.5	2521	28.0
		100-year								45	1.9	2521	28.0
LSRL0703	8335.1	2-year	Circular	2	0	219.5	907.52	901.89	2.566	32	12.2	34	10.7
		5-year								41	13.0	34	10.7
		10-year								40	12.6	34	10.7
		25-year								40	12.6	34	10.7
		50-year								40	12.5	34	10.7
		100-year								39	12.4	34	10.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0703	8335.2	2-year	Trapezoidal	2	30	219.5	913.52	906.89	3.021	0	0.0	1617	26.9
		5-year								4	2.6	1617	26.9
		10-year								22	4.4	1617	26.9
		25-year								38	5.1	1617	26.9
		50-year								47	4.8	1617	26.9
		100-year								60	5.5	1617	26.9
LSRL0704	8336.1	2-year	Circular	2	0	307.8	912.46	907.52	1.605	32	10.9	27	8.5
		5-year								36	11.6	27	8.5
		10-year								36	11.5	27	8.5
		25-year								34	11.0	27	8.5
		50-year								34	10.9	27	8.5
		100-year								34	10.9	27	8.5
LSRL0704	8336.2	2-year	Trapezoidal	2	30	307.8	918.38	912.52	1.904	0	0.0	1283	21.4
		5-year								21	3.7	1283	21.4
		10-year								32	3.8	1283	21.4
		25-year								45	4.4	1283	21.4
		50-year								54	4.5	1283	21.4
		100-year								67	4.4	1283	21.4
LSRL0705	8337.1	2-year	Circular	2	0	136.2	914.05	912.46	1.167	31	9.9	23	7.2
		5-year								31	9.9	23	7.2
		10-year								31	9.9	23	7.2
		25-year								32	9.9	23	7.2
		50-year								31	9.8	23	7.2
		100-year								31	9.7	23	7.2
LSRL0705	8337.2	2-year	Trapezoidal	2	30	136.2	919.22	917.38	1.351	1	1.3	1081	18.0
		5-year								32	3.4	1081	18.0
		10-year								42	3.4	1081	18.0
		25-year								55	3.3	1081	18.0
		50-year								64	3.2	1081	18.0
		100-year								77	3.1	1081	18.0
LSRL0706	8338.1	2-year	Circular	2	0	297.6	917.90	914.05	1.294	26	8.3	24	7.6
		5-year								25	8.0	24	7.6
		10-year								23	8.0	24	7.6
		25-year								24	7.9	24	7.6
		50-year								24	7.9	24	7.6
		100-year								24	8.0	24	7.6
LSRL0706	8338.2	2-year	Trapezoidal	1	30	297.6	922.23	920.22	0.675	9	2.3	251	8.4
		5-year								25	3.4	251	8.4
		10-year								34	3.8	251	8.4
		25-year								45	4.3	251	8.4
		50-year								54	4.6	251	8.4
		100-year								65	4.9	251	8.4
LSRL0707	8339.1	2-year	Circular	2	0	321.3	919.80	917.90	0.591	24	7.8	16	5.1
		5-year								24	8.0	16	5.1
		10-year								24	7.9	16	5.1
		25-year								24	7.9	16	5.1
		50-year								23	7.8	16	5.1
		100-year								23	7.2	16	5.1
LSRL0707	8339.2	2-year	Trapezoidal	1	30	321.3	923.88	923.23	0.202	16	2.0	137	4.6
		5-year								30	2.6	137	4.6
		10-year								39	2.9	137	4.6
		25-year								50	3.2	137	4.6
		50-year								59	3.4	137	4.6
		100-year								70	3.7	137	4.6
LSRL0801	SRL0801A	2-year	Circular	2	0	37.5	898.04	896.70	3.571	45	16.9	23	7.4
		5-year								55	17.5	23	7.4
		10-year								58	18.2	23	7.4
		25-year								58	18.3	23	7.4
		50-year								58	18.3	23	7.4
		100-year								58	18.4	23	7.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0801	SRL0801B	2-year	Trapezoidal	10	30	37.5	903.04	903.00	0.100	0	0.0	3433	11.4
		5-year								0	0.0	3433	11.4
		10-year								20	2.7	3433	11.4
		25-year								53	3.5	3433	11.4
		50-year								78	4.2	3433	11.4
		100-year								107	4.6	3433	11.4
LSRL0802	LSRL0802	2-year	Natural	7	6	252.5	900.00	898.04	0.776	40	4.4	3965	5.8
		5-year								65	5.1	3965	5.8
		10-year								83	4.1	3965	5.8
		25-year								110	4.2	3965	5.8
		50-year								130	3.9	3965	5.8
		100-year								153	3.9	3965	5.8
LSRL0803	SRL0803A	2-year	Circular	2	0	43.3	900.56	900.00	1.292	40	12.6	24	7.6
		5-year								42	13.3	24	7.6
		10-year								42	13.3	24	7.6
		25-year								42	13.4	24	7.6
		50-year								42	13.4	24	7.6
		100-year								43	13.4	24	7.6
LSRL0803	SRL0803B	2-year	Trapezoidal	5	30	43.3	904.00	903.96	0.100	0	0.0	1168	7.8
		5-year								27	2.6	1168	7.8
		10-year								51	3.4	1168	7.8
		25-year								79	4.0	1168	7.8
		50-year								99	4.4	1168	7.8
		100-year								123	4.8	1168	7.8
LSRL0804	LSRL0804	2-year	Natural	5	5	337.4	905.73	900.56	1.532	22	1.4	8619	7.6
		5-year								32	1.4	8619	7.6
		10-year								38	1.4	8619	7.6
		25-year								46	1.4	8619	7.6
		50-year								52	1.4	8619	7.6
		100-year								60	1.4	8619	7.6
LSRL0901	8372.1	2-year	Circular	2	0	163.5	899.70	896.81	1.767	3	4.5	28	8.9
		5-year								4	9.1	28	8.9
		10-year								4	4.6	28	8.9
		25-year								5	4.8	28	8.9
		50-year								6	3.5	28	8.9
		100-year								6	3.3	28	8.9
LSRL0901	8372.2	2-year	Trapezoidal	1	30	163.5	906.05	905.89	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LSRL0902	8371.1	2-year	Circular	1	0	54.9	901.05	899.70	2.460	3	8.2	5	6.6
		5-year								4	12.6	5	6.6
		10-year								4	8.7	5	6.6
		25-year								5	11.4	5	6.6
		50-year								6	8.6	5	6.6
		100-year								6	8.9	5	6.6
LSRL0902	8371.2	2-year	Trapezoidal	1	30	54.9	906.10	906.05	0.100	0	0.0	92	3.1
		5-year								0	0.0	92	3.1
		10-year								0	0.0	92	3.1
		25-year								0	0.0	92	3.1
		50-year								0	0.0	92	3.1
		100-year								0	0.0	92	3.1
LSRL0903	8370.1	2-year	Circular	1	0	100.8	902.30	901.05	1.240	3	5.3	4	4.7
		5-year								4	10.6	4	4.7
		10-year								4	7.3	4	4.7
		25-year								5	7.1	4	4.7
		50-year								6	7.2	4	4.7
		100-year								6	17.9	4	4.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL0903	8370.2	2-year	Trapezoidal	1	30	100.8	906.30	906.10	0.198	0	0.0	136	4.5
		5-year								0	0.0	136	4.5
		10-year								0	0.0	136	4.5
		25-year								0	0.0	136	4.5
		50-year								0	0.0	136	4.5
		100-year								0	0.0	136	4.5
LSRL0904	8369.1	2-year	Circular	1	0	65.0	903.98	902.30	2.587	3	12.4	5	6.8
		5-year								4	7.9	5	6.8
		10-year								4	9.3	5	6.8
		25-year								5	6.4	5	6.8
		50-year								6	7.2	5	6.8
		100-year								6	7.3	5	6.8
LSRL0904	8369.2	2-year	Trapezoidal	1	30	65.0	906.98	905.30	2.587	0	0.0	491	16.4
		5-year								0	0.0	491	16.4
		10-year								0	0.0	491	16.4
		25-year								0	0.0	491	16.4
		50-year								0	0.9	491	16.4
		100-year								2	1.4	491	16.4
LSRL09A01	SRL09A01A	2-year	Circular	2.5	0	94.6	899.65	896.81	3.003	36	8.6	66	13.4
		5-year								48	9.8	66	13.4
		10-year								50	9.9	66	13.4
		25-year								52	10.6	66	13.4
		50-year								55	11.1	66	13.4
		100-year								59	11.9	66	13.4
LSRL09A01	SRL09A01B	2-year	Trapezoidal	3	30	94.6	906.00	905.89	0.116	0	0.0	600	6.7
		5-year								0	0.0	600	6.7
		10-year								0	0.0	600	6.7
		25-year								0	0.0	600	6.7
		50-year								0	0.0	600	6.7
		100-year								0	0.0	600	6.7
LSRL09A02	LSRL09A02	2-year	Natural	4.8	10	1257.0	916.18	899.65	1.315	18	1.7	1545	8.2
		5-year								26	1.9	1545	8.2
		10-year								30	2.0	1545	8.2
		25-year								37	2.1	1545	8.2
		50-year								42	2.1	1545	8.2
		100-year								48	2.1	1545	8.2
LSRL09A03	SRL09A03A	2-year	Circular	2	0	103.7	917.18	916.18	0.964	18	9.2	21	6.6
		5-year								25	11.0	21	6.6
		10-year								27	11.2	21	6.6
		25-year								28	11.3	21	6.6
		50-year								29	11.4	21	6.6
		100-year								30	11.5	21	6.6
LSRL09A03	SRL09A03B	2-year	Trapezoidal	1	30	103.7	920.00	919.90	0.100	0	0.0	95	3.2
		5-year								0	0.4	95	3.2
		10-year								4	1.1	95	3.2
		25-year								10	1.6	95	3.2
		50-year								14	1.8	95	3.2
		100-year								19	2.1	95	3.2
LSRL09B01	LSRL09B01	2-year	Circular	1	0	42.3	901.05	899.70	3.193	0	0.0	6	7.5
		5-year								0	0.0	6	7.5
		10-year								0	-0.1	6	7.5
		25-year								0	-0.2	6	7.5
		50-year								0	-0.4	6	7.5
		100-year								0	0.6	6	7.5
LSRL1001	8368.1	2-year	Circular	2.67	0	243.0	899.92	896.81	1.280	9	3.7	51	9.2
		5-year								13	3.9	51	9.2
		10-year								15	4.2	51	9.2
		25-year								19	5.1	51	9.2
		50-year								21	5.5	51	9.2
		100-year								25	6.1	51	9.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1001	8368.2	2-year	Trapezoidal	1	30	243.0	906.13	905.89	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL1002	8446.1	2-year	Circular	1.25	0	41.9	900.50	899.92	1.385	7	7.7	7	5.8
		5-year								10	9.3	7	5.8
		10-year								12	10.1	7	5.8
		25-year								15	12.5	7	5.8
		50-year								17	13.8	7	5.8
		100-year								20	15.6	7	5.8
LSRL1002	8446.2	2-year	Trapezoidal	2	30	41.9	906.17	906.13	0.100	0	0.0	287	4.8
		5-year								0	0.0	287	4.8
		10-year								0	0.0	287	4.8
		25-year								0	0.0	287	4.8
		50-year								0	0.0	287	4.8
		100-year								0	0.0	287	4.8
LSRL1003	8445.1	2-year	Circular	1.25	0	110.4	902.11	900.50	1.458	7	6.8	7	5.9
		5-year								10	8.4	7	5.9
		10-year								11	9.2	7	5.9
		25-year								11	9.2	7	5.9
		50-year								11	9.2	7	5.9
		100-year								11	9.2	7	5.9
LSRL1003	8445.2	2-year	Trapezoidal	2	30	110.4	906.36	906.17	0.172	0	0.0	386	6.4
		5-year								0	0.0	386	6.4
		10-year								0	0.4	386	6.4
		25-year								5	1.3	386	6.4
		50-year								8	1.6	386	6.4
		100-year								13	1.9	386	6.4
LSRL1004	8367.1	2-year	Circular	1.25	0	59.3	903.32	902.11	2.040	7	7.4	9	7.0
		5-year								10	7.9	9	7.0
		10-year								10	8.1	9	7.0
		25-year								10	8.1	9	7.0
		50-year								10	8.1	9	7.0
		100-year								10	8.1	9	7.0
LSRL1004	8367.2	2-year	Trapezoidal	2	30	59.3	906.57	905.36	2.040	0	0.0	1328	22.1
		5-year								2	1.7	1328	22.1
		10-year								8	1.9	1328	22.1
		25-year								12	2.2	1328	22.1
		50-year								14	2.2	1328	22.1
		100-year								17	2.3	1328	22.1
LSRL1101	8351.1	2-year	Circular	2.5	0	240.5	899.25	897.00	0.935	40	8.1	37	7.5
		5-year								48	9.7	37	7.5
		10-year								57	11.6	37	7.5
		25-year								58	11.7	37	7.5
		50-year								58	11.8	37	7.5
		100-year								59	11.9	37	7.5
LSRL1101	8351.2	2-year	Trapezoidal	3	30	240.5	906.24	906.00	0.100	0	0.0	556	6.2
		5-year								0	0.0	556	6.2
		10-year								1	0.5	556	6.2
		25-year								11	1.6	556	6.2
		50-year								30	2.4	556	6.2
		100-year								51	3.0	556	6.2
LSRL1102	8350.1	2-year	Circular	2.5	0	240.6	902.72	899.25	1.442	40	9.4	46	9.3
		5-year								48	9.7	46	9.3
		10-year								49	9.9	46	9.3
		25-year								49	10.0	46	9.3
		50-year								50	10.0	46	9.3
		100-year								50	10.0	46	9.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1102	8350.2	2-year	Trapezoidal	4	30	240.6	908.64	906.24	0.998	0	0.0	2738	22.8
		5-year								0	0.0	2738	22.8
		10-year								20	3.5	2738	22.8
		25-year								31	4.2	2738	22.8
		50-year								51	4.4	2738	22.8
		100-year								71	4.8	2738	22.8
LSRL1103	8347.1	2-year	Circular	2.5	0	155.0	904.87	902.72	1.387	40	10.2	45	9.1
		5-year								52	10.5	45	9.1
		10-year								54	10.9	45	9.1
		25-year								55	11.0	45	9.1
		50-year								55	11.1	45	9.1
		100-year								55	11.2	45	9.1
LSRL1103	8347.2	2-year	Trapezoidal	2	30	155.0	911.04	907.64	2.193	0	0.0	1377	23.0
		5-year								0	0.0	1377	23.0
		10-year								13	0.8	1377	23.0
		25-year								22	1.1	1377	23.0
		50-year								42	1.9	1377	23.0
		100-year								61	2.6	1377	23.0
LSRL1104	8346.1	2-year	Circular	2	0	122.2	907.85	904.87	2.439	18	7.9	33	10.4
		5-year								26	8.1	33	10.4
		10-year								28	9.0	33	10.4
		25-year								30	9.4	33	10.4
		50-year								31	9.6	33	10.4
		100-year								30	9.6	33	10.4
LSRL1104	8346.2	2-year	Trapezoidal	2	30	122.2	913.52	910.04	2.848	0	0.0	1570	26.2
		5-year								0	0.0	1570	26.2
		10-year								0	0.0	1570	26.2
		25-year								0	0.0	1570	26.2
		50-year								13	0.7	1570	26.2
		100-year								20	1.0	1570	26.2
LSRL1105	8353.1	2-year	Circular	2	0	222.7	912.61	907.85	2.137	18	10.2	31	9.8
		5-year								25	10.4	31	9.8
		10-year								25	10.5	31	9.8
		25-year								31	10.4	31	9.8
		50-year								32	10.5	31	9.8
		100-year								32	10.5	31	9.8
LSRL1105	8353.2	2-year	Trapezoidal	2	30	222.7	917.94	912.52	2.433	0	0.0	1451	24.2
		5-year								0	0.0	1451	24.2
		10-year								0	0.0	1451	24.2
		25-year								0	0.0	1451	24.2
		50-year								12	0.9	1451	24.2
		100-year								20	1.3	1451	24.2
LSRL1106	8357.1	2-year	Circular	1.75	0	152.7	915.38	912.61	1.814	18	9.6	20	8.2
		5-year								25	10.3	20	8.2
		10-year								25	10.6	20	8.2
		25-year								26	10.8	20	8.2
		50-year								27	11.1	20	8.2
		100-year								27	11.2	20	8.2
LSRL1106	8357.2	2-year	Trapezoidal	2	30	152.7	920.46	916.94	2.305	0	0.0	1412	23.5
		5-year								0	0.0	1412	23.5
		10-year								0	0.0	1412	23.5
		25-year								16	3.4	1412	23.5
		50-year								23	3.5	1412	23.5
		100-year								30	3.6	1412	23.5
LSRL1107	8365.1	2-year	Circular	1.5	0	236.5	918.03	915.38	1.120	4	4.7	10	5.8
		5-year								6	5.3	10	5.8
		10-year								7	5.5	10	5.8
		25-year								8	5.8	10	5.8
		50-year								9	5.9	10	5.8
		100-year								11	6.3	10	5.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1107	8365.2	2-year	Trapezoidal	1	30	236.5	922.53	919.46	1.298	0	0.0	348	11.6
		5-year								0	0.0	348	11.6
		10-year								0	0.0	348	11.6
		25-year								0	0.0	348	11.6
		50-year								0	0.0	348	11.6
		100-year								0	0.0	348	11.6
LSRL1108	8360.1	2-year	Circular	1.5	0	38.4	918.40	918.03	0.963	4	5.2	10	5.4
		5-year								6	5.8	10	5.4
		10-year								7	6.0	10	5.4
		25-year								8	6.3	10	5.4
		50-year								9	6.5	10	5.4
		100-year								11	6.6	10	5.4
LSRL1108	8360.2	2-year	Trapezoidal	1	30	38.4	921.90	921.53	0.963	0	0.0	299	10.0
		5-year								0	0.0	299	10.0
		10-year								0	0.0	299	10.0
		25-year								0	0.0	299	10.0
		50-year								0	0.0	299	10.0
		100-year								0	0.0	299	10.0
LSRL1109	LSRL1109	2-year	Circular	1.25	0	160.1	919.99	918.40	0.993	4	5.2	6	4.9
		5-year								6	5.8	6	4.9
		10-year								7	5.9	6	4.9
		25-year								8	6.9	6	4.9
		50-year								9	7.6	6	4.9
		100-year								11	8.4	6	4.9
LSRL1110	LSRL1110	2-year	Circular	1.25	0	46.4	920.49	919.99	1.077	4	5.1	6	5.1
		5-year								6	5.4	6	5.1
		10-year								7	5.5	6	5.1
		25-year								8	6.5	6	5.1
		50-year								9	7.4	6	5.1
		100-year								11	8.4	6	5.1
LSRL11A01	LSRL11A01	2-year	Circular	1.25	0	31.0	904.14	902.72	4.582	1	1.5	13	10.5
		5-year								8	6.3	13	10.5
		10-year								8	6.2	13	10.5
		25-year								7	6.0	13	10.5
		50-year								8	6.3	13	10.5
		100-year								8	6.1	13	10.5
LSRL11A02	LSRL11A02	2-year	Circular	1.25	0	25.1	904.65	904.14	2.036	0	0.9	9	7.0
		5-year								6	5.4	9	7.0
		10-year								6	5.1	9	7.0
		25-year								6	5.0	9	7.0
		50-year								6	5.4	9	7.0
		100-year								6	5.0	9	7.0
LSRL11B01	LSRL11B01	2-year	Circular	1.25	0	33.8	907.47	904.87	7.692	0	0.0	17	13.6
		5-year								7	6.1	17	13.6
		10-year								7	6.3	17	13.6
		25-year								6	5.3	17	13.6
		50-year								6	5.6	17	13.6
		100-year								6	5.2	17	13.6
LSRL11C01	LSRL11C01	2-year	Circular	1.25	0	57.2	909.82	907.85	3.443	0	0.0	11	9.1
		5-year								3	3.7	11	9.1
		10-year								-3	3.3	11	9.1
		25-year								5	3.9	11	9.1
		50-year								5	4.0	11	9.1
		100-year								4	4.8	11	9.1
LSRL11C02	LSRL11C02	2-year	Circular	1.25	0	31.3	910.25	909.82	1.373	0	0.0	7	5.7
		5-year								-1	1.9	7	5.7
		10-year								-2	-2.5	7	5.7
		25-year								3	3.5	7	5.7
		50-year								3	3.2	7	5.7
		100-year								3	2.8	7	5.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL11D01	LSRL11D01	2-year	Circular	1.25	0	35.2	913.98	912.61	3.898	0	0.0	12	9.6
		5-year								1	1.2	12	9.6
		10-year								2	1.6	12	9.6
		25-year								2	1.8	12	9.6
		50-year								2	1.6	12	9.6
		100-year								2	2.0	12	9.6
LSRL11E01	LSRL11E01	2-year	Circular	1.25	0	30.1	913.35	912.61	2.458	0	-0.1	9	7.7
		5-year								1	0.9	9	7.7
		10-year								1	1.0	9	7.7
		25-year								2	2.0	9	7.7
		50-year								2	1.7	9	7.7
		100-year								2	1.6	9	7.7
LSRL11F01	LSRL11F01	2-year	Circular	1.25	0	48.5	916.54	915.38	2.394	0	0.3	9	7.6
		5-year								4	3.4	9	7.6
		10-year								6	5.0	9	7.6
		25-year								5	4.3	9	7.6
		50-year								6	4.6	9	7.6
		100-year								6	5.1	9	7.6
LSRL11F02	LSRL11F02	2-year	Circular	1.25	0	42.3	917.47	916.54	2.199	0	0.0	9	7.2
		5-year								4	4.1	9	7.2
		10-year								4	4.9	9	7.2
		25-year								5	4.8	9	7.2
		50-year								5	4.9	9	7.2
		100-year								5	5.1	9	7.2
LSRL1201	8332.1	2-year	Circular	2	0	173.5	899.29	897.45	1.061	12	5.1	22	6.9
		5-year								23	7.5	22	6.9
		10-year								23	7.6	22	6.9
		25-year								23	7.5	22	6.9
		50-year								23	7.5	22	6.9
		100-year								23	7.6	22	6.9
LSRL1201	8332.2	2-year	Trapezoidal	2	30	173.5	902.00	901.83	0.100	0	-0.2	291	4.9
		5-year								-27	-1.8	291	4.9
		10-year								-22	-1.3	291	4.9
		25-year								-21	-1.2	291	4.9
		50-year								-21	-1.1	291	4.9
		100-year								-21	1.5	291	4.9
LSRL1202	8374.1	2-year	Circular	1.25	0	27.0	899.55	899.29	0.963	12	10.3	6	4.8
		5-year								15	12.0	6	4.8
		10-year								15	12.1	6	4.8
		25-year								15	12.1	6	4.8
		50-year								15	12.1	6	4.8
		100-year								15	12.1	6	4.8
LSRL1202	8374.2	2-year	Trapezoidal	4	30	27.0	902.03	902.00	0.100	0	0.0	914	7.6
		5-year								4	1.4	914	7.6
		10-year								14	2.1	914	7.6
		25-year								23	2.5	914	7.6
		50-year								26	2.6	914	7.6
		100-year								31	2.8	914	7.6
LSRL1601	8329.1	2-year	Circular	2	0	159.6	910.07	908.44	1.022	13	5.9	21	6.8
		5-year								18	6.6	21	6.8
		10-year								21	6.9	21	6.8
		25-year								25	7.6	21	6.8
		50-year								26	8.1	21	6.8
		100-year								26	8.2	21	6.8
LSRL1601	8329.2	2-year	Trapezoidal	1	30	159.6	913.97	913.81	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								2	0.7	96	3.2
		100-year								12	1.7	96	3.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1602	8328.1	2-year	Circular	1	0	284.8	916.46	910.07	2.244	6	7.7	5	6.3
		5-year								6	7.7	5	6.3
		10-year								6	7.7	5	6.3
		25-year								6	7.6	5	6.3
		50-year								6	7.7	5	6.3
		100-year								6	7.6	5	6.3
LSRL1602	8328.2	2-year	Trapezoidal	2	30	284.8	919.21	912.74	2.272	7	3.0	1402	23.4
		5-year								13	3.8	1402	23.4
		10-year								20	4.4	1402	23.4
		25-year								28	5.0	1402	23.4
		50-year								25	4.5	1402	23.4
		100-year								30	4.6	1402	23.4
LSRL1701	8375.1	2-year	Circular	2	0	125.5	910.56	909.33	0.980	22	7.3	21	6.6
		5-year								22	7.3	21	6.6
		10-year								22	7.3	21	6.6
		25-year								22	7.3	21	6.6
		50-year								22	7.3	21	6.6
		100-year								22	7.3	21	6.6
LSRL1701	8375.2	2-year	Trapezoidal	4	30	125.5	915.39	915.26	0.100	13	1.8	869	7.2
		5-year								40	2.8	869	7.2
		10-year								52	3.2	869	7.2
		25-year								68	3.5	869	7.2
		50-year								80	3.8	869	7.2
		100-year								95	4.1	869	7.2
LSRL1702	8327.1	2-year	Circular	2	0	138.9	916.09	910.56	3.982	34	10.8	42	13.3
		5-year								39	12.4	42	13.3
		10-year								39	12.4	42	13.3
		25-year								39	12.4	42	13.3
		50-year								39	12.4	42	13.3
		100-year								39	12.4	42	13.3
LSRL1702	8327.2	2-year	Trapezoidal	5	30	138.9	920.42	914.39	4.343	0	0.0	8008	53.4
		5-year								22	1.0	8008	53.4
		10-year								35	1.4	8008	53.4
		25-year								51	1.9	8008	53.4
		50-year								62	2.2	8008	53.4
		100-year								78	2.6	8008	53.4
LSRL1703	8326.1	2-year	Circular	2	0	74.6	917.45	916.09	1.824	34	11.3	28	9.0
		5-year								36	11.3	28	9.0
		10-year								37	11.4	28	9.0
		25-year								36	11.4	28	9.0
		50-year								36	11.4	28	9.0
		100-year								36	11.4	28	9.0
LSRL1703	8326.2	2-year	Trapezoidal	2	30	74.6	921.53	919.42	2.830	0	0.0	1565	26.1
		5-year								34	2.3	1565	26.1
		10-year								47	2.8	1565	26.1
		25-year								62	3.2	1565	26.1
		50-year								74	3.4	1565	26.1
		100-year								90	3.9	1565	26.1
LSRL1704	8325.1	2-year	Circular	2	0	291.3	924.48	917.45	2.414	26	9.3	33	10.4
		5-year								32	10.0	33	10.4
		10-year								32	10.0	33	10.4
		25-year								32	10.0	33	10.4
		50-year								32	10.0	33	10.4
		100-year								32	10.0	33	10.4
LSRL1704	8325.2	2-year	Trapezoidal	2	30	291.3	928.15	920.53	2.616	0	0.0	1504	25.1
		5-year								7	0.4	1504	25.1
		10-year								14	0.8	1504	25.1
		25-year								24	1.2	1504	25.1
		50-year								31	1.5	1504	25.1
		100-year								41	1.9	1504	25.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1705	8324.1	2-year	Circular	2	0	61.4	925.58	924.48	1.790	26	10.6	28	8.9
		5-year								31	10.6	28	8.9
		10-year								31	10.6	28	8.9
		25-year								32	10.6	28	8.9
		50-year								32	10.6	28	8.9
		100-year								32	10.5	28	8.9
LSRL1705	8324.2	2-year	Trapezoidal	2	30	61.4	928.16	927.15	1.644	0	0.0	1192	19.9
		5-year								28	2.4	1192	19.9
		10-year								36	2.0	1192	19.9
		25-year								46	2.3	1192	19.9
		50-year								53	2.5	1192	19.9
		100-year								63	2.9	1192	19.9
LSRL17A01	LSRL17A01	2-year	Circular	2	0	29.9	916.81	916.09	2.406	2	0.9	33	10.4
		5-year								2	1.0	33	10.4
		10-year								2	0.8	33	10.4
		25-year								2	0.7	33	10.4
		50-year								2	0.8	33	10.4
		100-year								2	0.7	33	10.4
LSRL17B01	LSRL17B01	2-year	Circular	2	0	64.4	918.18	917.45	1.134	5	1.8	22	7.1
		5-year								5	1.9	22	7.1
		10-year								5	1.8	22	7.1
		25-year								5	1.7	22	7.1
		50-year								5	1.8	22	7.1
		100-year								5	1.8	22	7.1
LSRL1801	LSRL1801	2-year	Natural	6	10	246.8	916.74	912.78	1.605	103	2.5	4937	11.8
		5-year								144	2.7	4937	11.8
		10-year								172	2.8	4937	11.8
		25-year								202	2.8	4937	11.8
		50-year								228	2.9	4937	11.8
		100-year								253	2.9	4937	11.8
LSRL1802	SRL1802A	2-year	Circular	3.5	0	74.3	918.60	916.74	2.504	52	11.0	86	9.0
		5-year								72	12.2	86	9.0
		10-year								86	12.9	86	9.0
		25-year								101	14.4	86	9.0
		50-year								114	15.9	86	9.0
		100-year								127	17.3	86	9.0
LSRL1802	SRL1802B	2-year	Trapezoidal	1	30	74.3	928.00	927.93	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRL1803	LSRL1803	2-year	Natural	8	10	416.4	924.00	918.60	1.297	83	4.3	3344	8.4
		5-year								118	4.6	3344	8.4
		10-year								142	4.5	3344	8.4
		25-year								174	4.4	3344	8.4
		50-year								198	4.3	3344	8.4
		100-year								227	4.2	3344	8.4
LSRL1804	LSRL1804	2-year	Natural	8	12	227.5	924.20	924.00	0.088	62	1.8	997	2.1
		5-year								89	2.1	997	2.1
		10-year								105	2.2	997	2.1
		25-year								129	2.4	997	2.1
		50-year								146	2.6	997	2.1
		100-year								167	2.7	997	2.1
LSRL1805	8321.1	2-year	Circular	2.5	0	315.6	925.00	924.20	0.254	36	7.9	19	3.9
		5-year								38	8.1	19	3.9
		10-year								38	8.0	19	3.9
		25-year								38	8.0	19	3.9
		50-year								38	8.0	19	3.9
		100-year								38	8.1	19	3.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL1805	8321.2	2-year	Trapezoidal	4	30	315.6	929.00	928.68	0.100	0	0.4	873	7.3
		5-year								15	1.7	873	7.3
		10-year								26	2.2	873	7.3
		25-year								44	2.7	873	7.3
		50-year								55	3.0	873	7.3
		100-year								69	3.3	873	7.3
LSRL1806	8320.1	2-year	Circular	2.5	0	206.3	930.09	925.00	2.468	42	10.0	60	12.2
		5-year								54	11.0	60	12.2
		10-year								64	12.9	60	12.2
		25-year								66	13.4	60	12.2
		50-year								67	13.5	60	12.2
		100-year								67	13.5	60	12.2
LSRL1806	8320.2	2-year	Trapezoidal	5	30	206.3	935.59	928.00	3.680	0	0.0	7372	49.1
		5-year								0	0.0	7372	49.1
		10-year								0	0.0	7372	49.1
		25-year								16	0.7	7372	49.1
		50-year								26	1.0	7372	49.1
		100-year								40	1.4	7372	49.1
LSRL1807	8319.1	2-year	Circular	2.5	0	160.4	930.70	930.09	0.380	32	7.7	23	4.8
		5-year								45	9.2	23	4.8
		10-year								46	9.2	23	4.8
		25-year								46	9.1	23	4.8
		50-year								45	9.1	23	4.8
		100-year								45	9.0	23	4.8
LSRL1807	8319.2	2-year	Trapezoidal	2	30	160.4	935.02	934.59	0.268	0	0.0	482	8.0
		5-year								2	1.1	482	8.0
		10-year								36	2.8	482	8.0
		25-year								55	2.8	482	8.0
		50-year								62	2.8	482	8.0
		100-year								71	2.8	482	8.0
LSRL1808	8318.1	2-year	Circular	2.5	0	54.8	930.91	930.70	0.383	31	6.5	24	4.8
		5-year								50	10.1	24	4.8
		10-year								50	10.2	24	4.8
		25-year								53	10.6	24	4.8
		50-year								53	10.7	24	4.8
		100-year								53	10.7	24	4.8
LSRL1808	8318.2	2-year	Trapezoidal	2	30	54.8	936.41	934.02	4.361	0	0.0	1942	32.4
		5-year								0	0.0	1942	32.4
		10-year								0	0.0	1942	32.4
		25-year								15	0.6	1942	32.4
		50-year								23	0.9	1942	32.4
		100-year								33	1.2	1942	32.4
LSRL1809	8017.1	2-year	Special	2.5	1.58	68.2	932.40	930.91	2.183	31	9.9	32	9.7
		5-year								35	10.5	32	9.7
		10-year								35	10.4	32	9.7
		25-year								34	10.3	32	9.7
		50-year								34	10.3	32	9.7
		100-year								33	10.1	32	9.7
LSRL1809	8017.2	2-year	Trapezoidal	2	30	68.2	935.57	935.41	0.234	0	0.0	450	7.5
		5-year								32	2.8	450	7.5
		10-year								47	2.9	450	7.5
		25-year								58	2.9	450	7.5
		50-year								65	3.0	450	7.5
		100-year								74	3.0	450	7.5
LSRL18A01	8322.1	2-year	Circular	2	0	388.9	926.26	924.00	0.581	23	7.3	16	5.1
		5-year								27	8.5	16	5.1
		10-year								28	8.9	16	5.1
		25-year								28	9.0	16	5.1
		50-year								28	9.1	16	5.1
		100-year								28	9.1	16	5.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL18A01	8322.2	2-year	Trapezoidal	1	30	388.9	932.26	932.00	0.067	0	0.0	79	2.6
		5-year								2	0.7	79	2.6
		10-year								9	1.3	79	2.6
		25-year								19	1.8	79	2.6
		50-year								26	2.0	79	2.6
		100-year								34	2.3	79	2.6
LSRL18A02	8425.1	2-year	Circular	2	0	47.4	927.66	926.26	2.954	23	7.9	36	11.5
		5-year								29	9.2	36	11.5
		10-year								30	9.6	36	11.5
		25-year								31	9.9	36	11.5
		50-year								32	10.1	36	11.5
		100-year								32	10.1	36	11.5
LSRL18A02	8425.2	2-year	Trapezoidal	2	30	47.4	932.66	931.26	2.954	0	0.0	1598	26.6
		5-year								12	0.8	1598	26.6
		10-year								23	1.2	1598	26.6
		25-year								35	1.5	1598	26.6
		50-year								44	1.8	1598	26.6
		100-year								55	2.1	1598	26.6
LSRL18A03	8424.1	2-year	Circular	2	0	44.1	927.85	927.66	0.431	23	8.5	14	4.4
		5-year								24	8.5	14	4.4
		10-year								24	8.6	14	4.4
		25-year								23	8.6	14	4.4
		50-year								24	8.7	14	4.4
		100-year								24	8.8	14	4.4
LSRL18A03	8424.2	2-year	Trapezoidal	2	30	44.1	931.85	931.66	0.431	0	0.0	610	10.2
		5-year								33	2.2	610	10.2
		10-year								40	2.2	610	10.2
		25-year								48	2.2	610	10.2
		50-year								54	2.2	610	10.2
		100-year								63	2.2	610	10.2
LSRL1901	LSRL1901	2-year	Trapezoidal	2	5	228.2	925.02	915.47	4.185	13	4.0	221	10.1
		5-year								19	4.6	221	10.1
		10-year								22	4.9	221	10.1
		25-year								27	5.3	221	10.1
		50-year								30	5.5	221	10.1
		100-year								34	5.9	221	10.1
LSRL1902	8378.1	2-year	Circular	2	0	254.0	925.17	925.02	0.059	13	6.8	5	1.6
		5-year								15	7.5	5	1.6
		10-year								16	7.6	5	1.6
		25-year								17	7.7	5	1.6
		50-year								17	7.8	5	1.6
		100-year								18	7.8	5	1.6
LSRL1902	8378.2	2-year	Trapezoidal	1	30	254.0	929.50	927.02	0.976	0	0.0	301	10.0
		5-year								3	1.7	301	10.0
		10-year								6	2.2	301	10.0
		25-year								10	2.6	301	10.0
		50-year								13	2.9	301	10.0
		100-year								17	3.2	301	10.0
LSRL1903	8323.1	2-year	Circular	2	0	61.2	927.67	925.17	4.086	13	5.8	42	13.5
		5-year								19	6.1	42	13.5
		10-year								22	7.1	42	13.5
		25-year								27	8.5	42	13.5
		50-year								30	9.5	42	13.5
		100-year								32	10.0	42	13.5
LSRL1903	8323.2	2-year	Trapezoidal	2	30	61.2	931.00	929.50	2.452	0	0.0	1456	24.3
		5-year								0	0.0	1456	24.3
		10-year								0	0.0	1456	24.3
		25-year								0	0.0	1456	24.3
		50-year								0	0.0	1456	24.3
		100-year								3	0.9	1456	24.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL2001	LSRL2001	2-year	Trapezoidal	8	15	137.0	922.92	921.32	1.168	37	2.2	9989	12.1
		5-year								55	2.2	9989	12.1
		10-year								65	2.4	9989	12.1
		25-year								78	2.6	9989	12.1
		50-year								88	2.8	9989	12.1
		100-year								102	2.9	9989	12.1
LSRL2002	8016.1	2-year	Special	2.33	2.67	314.9	926.16	922.92	1.029	31	7.1	33	5.1
		5-year								34	7.5	33	5.1
		10-year								36	7.6	33	5.1
		25-year								37	7.7	33	5.1
		50-year								38	7.8	33	5.1
		100-year								39	7.9	33	5.1
LSRL2002	8016.2	2-year	Trapezoidal	1	30	314.9	931.58	931.00	0.184	6	1.4	131	4.4
		5-year								21	2.2	131	4.4
		10-year								29	2.6	131	4.4
		25-year								41	2.9	131	4.4
		50-year								50	3.2	131	4.4
		100-year								62	3.5	131	4.4
LSRL2003	8317.1	2-year	Circular	2	0	65.9	926.92	926.16	1.153	28	8.9	23	7.2
		5-year								32	10.0	23	7.2
		10-year								32	10.2	23	7.2
		25-year								33	10.5	23	7.2
		50-year								33	10.6	23	7.2
		100-year								32	10.1	23	7.2
LSRL2003	8317.2	2-year	Trapezoidal	2	30	65.9	931.65	931.58	0.100	25	2.4	294	4.9
		5-year								43	3.1	294	4.9
		10-year								53	3.4	294	4.9
		25-year								67	3.7	294	4.9
		50-year								77	3.9	294	4.9
		100-year								91	4.1	294	4.9
LSRL2101	8377.1	2-year	Circular	2	0	240.7	934.45	927.61	2.842	26	10.2	35	11.3
		5-year								38	12.0	35	11.3
		10-year								45	14.2	35	11.3
		25-year								48	15.2	35	11.3
		50-year								48	15.2	35	11.3
		100-year								49	15.3	35	11.3
LSRL2101	8377.2	2-year	Trapezoidal	3	30	240.7	942.74	942.50	0.100	0	0.0	557	6.2
		5-year								0	0.0	557	6.2
		10-year								0	0.0	557	6.2
		25-year								8	1.3	557	6.2
		50-year								16	1.8	557	6.2
		100-year								27	2.3	557	6.2
LSRL2102	8363.1	2-year	Circular	2	0	119.6	935.90	934.45	1.213	27	9.7	23	7.4
		5-year								38	12.0	23	7.4
		10-year								40	12.6	23	7.4
		25-year								40	12.7	23	7.4
		50-year								40	12.7	23	7.4
		100-year								40	12.7	23	7.4
LSRL2102	8363.2	2-year	Trapezoidal	4	30	119.6	942.86	942.74	0.100	0	0.0	869	7.2
		5-year								0	0.0	869	7.2
		10-year								20	2.1	869	7.2
		25-year								42	2.9	869	7.2
		50-year								50	3.1	869	7.2
		100-year								61	3.4	869	7.2
LSRL2103	8364.1	2-year	Circular	2	0	80.5	936.72	935.90	1.019	27	8.3	21	6.8
		5-year								36	11.3	21	6.8
		10-year								36	11.4	21	6.8
		25-year								36	11.5	21	6.8
		50-year								37	11.6	21	6.8
		100-year								37	11.5	21	6.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRL2103	8364.2	2-year	Trapezoidal	3	30	80.5	942.94	942.86	0.100	0	0.0	558	6.2
		5-year								13	1.8	558	6.2
		10-year								35	2.7	558	6.2
		25-year								47	2.8	558	6.2
		50-year								54	2.9	558	6.2
		100-year								64	3.0	558	6.2
LSRL3C01	LSRL3C01	2-year	Circular	2	0	26.7	887.03	885.02	7.531	5	2.7	58	18.3
		5-year								5	2.7	58	18.3
		10-year								5	2.5	58	18.3
		25-year								4	2.5	58	18.3
		50-year								4	2.1	58	18.3
		100-year								4	2.1	58	18.3
LSRMC01	LSRMC01	2-year	Natural	12	15	95.6	866.00	860.95	5.281	962	14.0	38439	35.3
		5-year								1273	15.2	38439	35.3
		10-year								1452	15.8	38439	35.3
		25-year								1676	16.5	38439	35.3
		50-year								1850	17.0	38439	35.3
		100-year								2061	17.5	38439	35.3
LSRMC04	SRMC04A	2-year	Rectangular	10	10	260.3	871.15	866.00	1.979	899	27.2	2750	27.5
		5-year								1210	30.3	2750	27.5
		10-year								1388	31.9	2750	27.5
		25-year								1613	33.7	2750	27.5
		50-year								1787	35.0	2750	27.5
		100-year								1998	36.5	2750	27.5
LSRMC04	SRMC04B	2-year	Trapezoidal	1	30	260.3	893.26	893.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC05	LSRMC05	2-year	Natural	14	10	499.4	871.87	871.15	0.144	936	1.8	27197	7.4
		5-year								1250	1.9	27197	7.4
		10-year								1425	1.9	27197	7.4
		25-year								1654	1.9	27197	7.4
		50-year								1839	2.0	27197	7.4
		100-year								2067	2.0	27197	7.4
LSRMC06	LSRMC06	2-year	Natural	7	5	1289.2	879.65	871.87	0.603	924	6.1	2883	7.8
		5-year								1249	6.5	2883	7.8
		10-year								1417	6.7	2883	7.8
		25-year								1633	6.8	2883	7.8
		50-year								1811	6.9	2883	7.8
		100-year								2024	7.1	2883	7.8
LSRMC07	SRMC07A	2-year	Rectangular	6.5	9	83.3	880.54	879.65	1.069	441	10.5	980	16.8
		5-year								592	12.5	980	16.8
		10-year								673	13.5	980	16.8
		25-year								776	15.0	980	16.8
		50-year								857	16.0	980	16.8
		100-year								939	17.2	980	16.8
LSRMC07	SRMC07B	2-year	Trapezoidal	2	30	83.3	887.35	886.00	1.621	0	0.0	1184	19.7
		5-year								0	0.0	1184	19.7
		10-year								0	0.0	1184	19.7
		25-year								0	0.0	1184	19.7
		50-year								0	0.0	1184	19.7
		100-year								0	0.0	1184	19.7
LSRMC08	SRMC08A	2-year	Rectangular	6.5	9	34.1	880.90	880.54	1.056	405	10.9	974	16.7
		5-year								544	12.4	974	16.7
		10-year								616	13.3	974	16.7
		25-year								710	14.6	974	16.7
		50-year								780	15.6	974	16.7
		100-year								863	17.1	974	16.7

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC08	SRMC08B	2-year	Trapezoidal	1	30	34.1	887.38	887.35	0.100	0	0.0	90	3.0
		5-year								0	0.0	90	3.0
		10-year								0	0.0	90	3.0
		25-year								0	0.0	90	3.0
		50-year								0	0.0	90	3.0
		100-year								0	0.0	90	3.0
LSRMC09	LSRMC09	2-year	Natural	7	15	446.4	882.68	880.90	0.399	760	11.3	2243	8.8
		5-year								1012	12.2	2243	8.8
		10-year								1137	12.6	2243	8.8
		25-year								1306	13.0	2243	8.8
		50-year								1428	13.3	2243	8.8
		100-year								1579	13.7	2243	8.8
LSRMC10	SRMC10A	2-year	Rectangular	6.5	8.5	108.4	883.69	882.68	0.932	380	12.7	851	15.4
		5-year								506	14.2	851	15.4
		10-year								568	14.9	851	15.4
		25-year								653	15.8	851	15.4
		50-year								714	16.5	851	15.4
		100-year								785	17.3	851	15.4
LSRMC10	SRMC10B	2-year	Trapezoidal	1	30	108.4	890.00	889.89	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRMC11	LSRMC11	2-year	Natural	8	15	300.3	884.43	883.69	0.246	760	10.0	3843	7.9
		5-year								1011	10.7	3843	7.9
		10-year								1137	10.9	3843	7.9
		25-year								1305	11.0	3843	7.9
		50-year								1428	11.1	3843	7.9
		100-year								1568	11.2	3843	7.9
LSRMC12	SRMC12A	2-year	Rectangular	6.5	7.5	291.8	885.10	884.43	0.230	298	11.0	359	7.4
		5-year								381	12.3	359	7.4
		10-year								447	13.2	359	7.4
		25-year								537	14.0	359	7.4
		50-year								589	14.4	359	7.4
		100-year								682	14.7	359	7.4
LSRMC12	SRMC12B	2-year	Trapezoidal	1	30	291.8	893.60	892.00	0.548	0	0.0	226	7.5
		5-year								0	0.0	226	7.5
		10-year								0	0.0	226	7.5
		25-year								0	0.0	226	7.5
		50-year								0	0.0	226	7.5
		100-year								0	0.0	226	7.5
LSRMC13	SRMC13A	2-year	Rectangular	5.33	9	81.9	889.71	885.10	5.632	294	13.1	1703	35.5
		5-year								379	14.3	1703	35.5
		10-year								430	15.0	1703	35.5
		25-year								491	16.0	1703	35.5
		50-year								524	15.7	1703	35.5
		100-year								723	18.6	1703	35.5
LSRMC13	SRMC13B	2-year	Trapezoidal	1	30	81.9	895.04	893.60	1.759	0	0.0	405	13.5
		5-year								0	0.0	405	13.5
		10-year								0	0.0	405	13.5
		25-year								0	0.0	405	13.5
		50-year								0	0.0	405	13.5
		100-year								0	0.0	405	13.5
LSRMC14	LSRMC14	2-year	Natural	6	9	133.3	890.00	889.71	0.217	234	11.2	6259	7.8
		5-year								303	11.3	6259	7.8
		10-year								366	11.3	6259	7.8
		25-year								418	11.3	6259	7.8
		50-year								453	11.3	6259	7.8
		100-year								615	11.3	6259	7.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC15	SRMC15A	2-year	Rectangular	5	10.5	266.0	890.15	890.00	0.056	234	7.6	188	3.6
		5-year								303	9.0	188	3.6
		10-year								366	10.2	188	3.6
		25-year								413	10.9	188	3.6
		50-year								452	10.9	188	3.6
		100-year								616	12.0	188	3.6
LSRMC15	SRMC15B	2-year	Trapezoidal	1	30	266.0	896.00	895.73	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LSRMC16	LSRMC16	2-year	Natural	6	9	134.9	891.05	890.15	0.667	234	9.0	3161	9.4
		5-year								303	10.1	3161	9.4
		10-year								366	11.3	3161	9.4
		25-year								414	11.7	3161	9.4
		50-year								453	11.7	3161	9.4
		100-year								609	11.9	3161	9.4
LSRMC18	SRMC18A	2-year	Rectangular	5	9	56.7	891.24	891.05	0.335	234	9.7	379	8.4
		5-year								303	10.5	379	8.4
		10-year								366	11.5	379	8.4
		25-year								412	11.9	379	8.4
		50-year								452	11.9	379	8.4
		100-year								609	12.5	379	8.4
LSRMC18	SRMC18B	2-year	Trapezoidal	1	30	56.7	898.00	897.94	0.100	0	0.0	99	3.3
		5-year								0	0.0	99	3.3
		10-year								0	0.0	99	3.3
		25-year								0	0.0	99	3.3
		50-year								0	0.0	99	3.3
		100-year								0	0.0	99	3.3
LSRMC19	SRMC19A	2-year	Rectangular	4.75	6	179.5	891.84	891.24	0.334	117	7.3	211	7.4
		5-year								151	7.9	211	7.4
		10-year								183	8.6	211	7.4
		25-year								205	8.8	211	7.4
		50-year								226	8.8	211	7.4
		100-year								304	10.3	211	7.4
LSRMC19	SRMC19B	2-year	Trapezoidal	1	30	179.5	899.00	898.00	0.557	0	0.0	228	7.6
		5-year								0	0.0	228	7.6
		10-year								0	0.0	228	7.6
		25-year								0	0.0	228	7.6
		50-year								0	0.0	228	7.6
		100-year								0	0.0	228	7.6
LSRMC20	LSRMC20	2-year	Natural	10	1.833	508.2	893.82	891.84	0.390	467	12.2	44121	17.2
		5-year								643	12.2	44121	17.2
		10-year								784	12.2	44121	17.2
		25-year								942	12.2	44121	17.2
		50-year								1085	12.2	44121	17.2
		100-year								1239	12.2	44121	17.2
LSRMC22	SRMC22A	2-year	Rectangular	6	6	530.6	896.70	893.82	0.543	145	7.2	369	10.2
		5-year								201	8.5	369	10.2
		10-year								247	9.2	369	10.2
		25-year								294	9.7	369	10.2
		50-year								330	10.3	369	10.2
		100-year								368	11.2	369	10.2
LSRMC22	SRMC22B	2-year	Trapezoidal	1	30	530.6	903.00	902.00	0.188	0	0.0	132	4.4
		5-year								0	0.0	132	4.4
		10-year								0	0.0	132	4.4
		25-year								0	0.0	132	4.4
		50-year								0	0.0	132	4.4
		100-year								0	0.0	132	4.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC23	LSRMC23	2-year	Natural	10	18	172.8	896.81	896.70	0.064	395	4.4	24982	6.8
		5-year								550	4.5	24982	6.8
		10-year								673	4.5	24982	6.8
		25-year								798	4.4	24982	6.8
		50-year								877	4.4	24982	6.8
		100-year								1001	4.4	24982	6.8
LSRMC24	SRMC24A	2-year	Rectangular	6	8	111.1	897.00	896.81	0.171	178	6.3	302	6.3
		5-year								254	7.7	302	6.3
		10-year								313	8.8	302	6.3
		25-year								371	9.7	302	6.3
		50-year								408	10.2	302	6.3
		100-year								469	11.2	302	6.3
LSRMC24	SRMC24B	2-year	Trapezoidal	1	30	111.1	906.00	905.89	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC25	LSRMC25	2-year	Natural	10	10	386.8	897.45	897.00	0.116	320	3.3	7210	3.7
		5-year								469	3.3	7210	3.7
		10-year								577	3.3	7210	3.7
		25-year								689	3.3	7210	3.7
		50-year								747	3.3	7210	3.7
		100-year								885	3.3	7210	3.7
LSRMC26	LSRMC26	2-year	Natural	7	10	411.5	899.89	897.45	0.593	330	4.3	3421	5.5
		5-year								485	4.3	3421	5.5
		10-year								597	4.4	3421	5.5
		25-year								698	4.3	3421	5.5
		50-year								771	4.3	3421	5.5
		100-year								886	4.2	3421	5.5
LSRMC27	SRMC27A	2-year	Rectangular	4	14	96.3	900.69	899.89	0.830	353	7.2	727	13.0
		5-year								381	7.3	727	13.0
		10-year								431	7.5	727	13.0
		25-year								523	9.3	727	13.0
		50-year								572	10.2	727	13.0
		100-year								632	11.3	727	13.0
LSRMC27	SRMC27B	2-year	Trapezoidal	2	30	96.3	905.69	905.59	0.100	0	0.0	300	5.0
		5-year								0	0.0	300	5.0
		10-year								0	0.0	300	5.0
		25-year								5	1.2	300	5.0
		50-year								21	2.2	300	5.0
		100-year								60	3.4	300	5.0
LSRMC27	SRMC27C	2-year	Rectangular	5	4	96.3	900.69	899.89	0.830	-29	3.1	208	10.4
		5-year								139	7.2	208	10.4
		10-year								162	8.0	208	10.4
		25-year								172	8.2	208	10.4
		50-year								184	8.5	208	10.4
		100-year								197	9.0	208	10.4
LSRMC28	LSRMC28	2-year	Natural	6	9	467.6	904.00	900.69	0.708	366	4.6	4476	6.4
		5-year								495	4.6	4476	6.4
		10-year								591	4.6	4476	6.4
		25-year								699	4.6	4476	6.4
		50-year								773	4.6	4476	6.4
		100-year								890	4.6	4476	6.4
LSRMC29	8167.1	2-year	Rectangular	3.5	6	35.8	904.11	904.00	0.308	177	8.5	132	6.3
		5-year								237	10.6	132	6.3
		10-year								253	11.1	132	6.3
		25-year								262	11.5	132	6.3
		50-year								265	11.9	132	6.3
		100-year								268	12.3	132	6.3

Table B.8
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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC29	8167.2	2-year	Trapezoidal	3	30	35.8	907.84	907.00	2.349	0	0.0	2697	30.0
		5-year								26	2.1	2697	30.0
		10-year								91	5.1	2697	30.0
		25-year								190	8.0	2697	30.0
		50-year								263	9.7	2697	30.0
		100-year								371	11.5	2697	30.0
LSRMC30	8168.1	2-year	Rectangular	3.5	6	123.1	904.51	904.11	0.325	166	7.8	136	6.5
		5-year								205	9.1	136	6.5
		10-year								217	9.9	136	6.5
		25-year								221	10.3	136	6.5
		50-year								226	10.7	136	6.5
		100-year								238	11.3	136	6.5
LSRMC30	8168.2	2-year	Trapezoidal	3	30	123.1	908.00	907.84	0.130	10	1.6	634	7.0
		5-year								75	3.7	634	7.0
		10-year								150	4.9	634	7.0
		25-year								244	6.0	634	7.0
		50-year								305	6.5	634	7.0
		100-year								407	7.2	634	7.0
LSRMC31	8634.1	2-year	Rectangular	4	11	288.5	905.43	904.51	0.319	298	7.7	340	7.7
		5-year								421	8.9	340	7.7
		10-year								452	9.7	340	7.7
		25-year								467	10.1	340	7.7
		50-year								467	10.1	340	7.7
		100-year								466	10.1	340	7.7
LSRMC31	8634.2	2-year	Trapezoidal	3	30	288.5	910.00	908.00	0.693	0	0.0	1465	16.3
		5-year								0	0.0	1465	16.3
		10-year								53	2.5	1465	16.3
		25-year								173	5.3	1465	16.3
		50-year								240	6.3	1465	16.3
		100-year								389	8.2	1465	16.3
LSRMC32	LSRMC32	2-year	Natural	12	12	550.9	908.00	905.43	0.467	245	7.7	45848	17.6
		5-year								351	8.4	45848	17.6
		10-year								422	8.6	45848	17.6
		25-year								518	8.6	45848	17.6
		50-year								602	8.2	45848	17.6
		100-year								749	8.3	45848	17.6
LSRMC33	SRMC33A	2-year	Rectangular	4	5.5	51.1	908.44	908.00	0.862	122	10.7	239	10.9
		5-year								175	11.4	239	10.9
		10-year								210	11.6	239	10.9
		25-year								261	12.2	239	10.9
		50-year								287	12.5	239	10.9
		100-year								296	12.7	239	10.9
LSRMC33	SRMC33B	2-year	Trapezoidal	1	30	51.1	912.81	912.76	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								132	4.9	96	3.2
		100-year								257	8.6	96	3.2
LSRMC34	SRMC34A	2-year	Rectangular	4	5.5	64.2	909.00	908.44	0.873	117	10.5	241	10.9
		5-year								169	11.2	241	10.9
		10-year								201	11.5	241	10.9
		25-year								256	12.2	241	10.9
		50-year								262	11.9	241	10.9
		100-year								263	12.0	241	10.9
LSRMC34	SRMC34B	2-year	Trapezoidal	2	30	64.2	912.87	912.81	0.100	0	0.0	294	4.9
		5-year								0	0.0	294	4.9
		10-year								0	0.0	294	4.9
		25-year								4	1.2	294	4.9
		50-year								205	5.7	294	4.9
		100-year								329	6.8	294	4.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC35	LSRMC35	2-year	Natural	6	7	649.5	909.33	909.00	0.051	190	2.7	619	1.9
		5-year								275	2.9	619	1.9
		10-year								337	2.9	619	1.9
		25-year								488	2.9	619	1.9
		50-year								567	2.8	619	1.9
		100-year								700	2.8	619	1.9
LSRMC36	SRMC36A	2-year	Rectangular	4	5	166.6	911.95	909.33	1.573	79	7.0	286	14.3
		5-year								110	7.8	286	14.3
		10-year								150	9.1	286	14.3
		25-year								224	11.5	286	14.3
		50-year								262	12.6	286	14.3
		100-year								286	14.3	286	14.3
LSRMC36	SRMC36B	2-year	Trapezoidal	1	30	166.6	917.00	916.83	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								68	3.5	97	3.2
LSRMC37	LSRMC37	2-year	Natural	6	10	238.8	912.78	911.95	0.348	131	3.9	2638	4.6
		5-year								181	4.0	2638	4.6
		10-year								283	3.9	2638	4.6
		25-year								425	3.9	2638	4.6
		50-year								513	3.9	2638	4.6
		100-year								610	3.9	2638	4.6
LSRMC38	LSRMC38	2-year	Natural	7	7	446.8	915.47	912.78	0.602	34	1.1	6739	7.5
		5-year								96	1.3	6739	7.5
		10-year								171	1.5	6739	7.5
		25-year								258	1.7	6739	7.5
		50-year								315	1.8	6739	7.5
		100-year								375	1.9	6739	7.5
LSRMC39	LSRMC39	2-year	Natural	8	8	128.3	915.91	915.47	0.343	26	2.3	5351	6.2
		5-year								92	3.4	5351	6.2
		10-year								165	3.9	5351	6.2
		25-year								245	4.2	5351	6.2
		50-year								298	4.3	5351	6.2
		100-year								354	4.4	5351	6.2
LSRMC40	SRMC40A	2-year	Circular	2	0	113.7	918.64	915.91	2.402	26	10.5	19	6.0
		5-year								36	11.7	19	6.0
		10-year								36	11.7	19	6.0
		25-year								36	11.7	19	6.0
		50-year								36	11.7	19	6.0
		100-year								36	11.7	19	6.0
LSRMC40	SRMC40B	2-year	Trapezoidal	1	30	113.7	926.00	925.89	0.100	0	0.0	95	3.2
		5-year								56	3.3	95	3.2
		10-year								129	4.7	95	3.2
		25-year								210	7.0	95	3.2
		50-year								263	8.8	95	3.2
		100-year								319	10.6	95	3.2
LSRMC41	LSRMC41	2-year	Natural	12	0	724.6	921.32	918.64	0.370	159	0.9	22460	7.0
		5-year								230	0.9	22460	7.0
		10-year								271	0.9	22460	7.0
		25-year								326	0.8	22460	7.0
		50-year								369	0.8	22460	7.0
		100-year								428	0.8	22460	7.0
LSRMC42	LSRMC42	2-year	Natural	8	0	990.2	927.46	921.32	0.620	96	3.1	5371	8.3
		5-year								135	3.4	5371	8.3
		10-year								158	3.6	5371	8.3
		25-year								188	3.7	5371	8.3
		50-year								214	3.9	5371	8.3
		100-year								246	4.0	5371	8.3

Table B.8
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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSRMC43	SRMC43A	2-year	Rectangular	3	5.17	110.0	927.61	927.46	0.136	97	8.1	59	3.8
		5-year								135	9.6	59	3.8
		10-year								158	10.6	59	3.8
		25-year								189	12.9	59	3.8
		50-year								215	14.4	59	3.8
		100-year								247	16.3	59	3.8
LSRMC43	SRMC43B	2-year	Trapezoidal	1	30	110.0	942.50	942.39	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LSRMC44	SRMC44A	2-year	Rectangular	3	5.17	41.2	927.67	927.61	0.146	71	5.5	61	3.9
		5-year								99	6.3	61	3.9
		10-year								116	6.8	61	3.9
		25-year								138	8.9	61	3.9
		50-year								155	9.9	61	3.9
		100-year								177	11.3	61	3.9
LSRMC44	SRMC44B	2-year	Trapezoidal	1	30	41.2	941.54	941.50	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LSYMC00	LSYMC00	2-year	Circular	0.05	0.0001	10.0	0.05	0.00	0.000	#N/A	#N/A	#N/A	#N/A
		5-year								#N/A	#N/A	#N/A	#N/A
		10-year								#N/A	#N/A	#N/A	#N/A
		25-year								#N/A	#N/A	#N/A	#N/A
		50-year								#N/A	#N/A	#N/A	#N/A
		100-year								#N/A	#N/A	#N/A	#N/A
LSYMC01	LSYMC01	2-year	Circular	2.5	0	135.5	900.61	870.86	21.954	17	22.9	178	36.4
		5-year								25	25.7	178	36.4
		10-year								30	27.1	178	36.4
		25-year								37	28.7	178	36.4
		50-year								42	29.7	178	36.4
		100-year								49	31.0	178	36.4
LSYMC02	8460.1	2-year	Circular	2.5	0	61.0	900.87	900.61	0.426	17	9.1	25	5.1
		5-year								25	10.7	25	5.1
		10-year								30	11.4	25	5.1
		25-year								37	12.4	25	5.1
		50-year								42	13.0	25	5.1
		100-year								49	13.8	25	5.1
LSYMC02	8460.2	2-year	Trapezoidal	1	30	61.0	906.20	905.94	0.426	0	0.0	199	6.6
		5-year								0	0.0	199	6.6
		10-year								0	0.0	199	6.6
		25-year								0	0.0	199	6.6
		50-year								0	0.0	199	6.6
		100-year								0	0.0	199	6.6
LSYMC03	8461.1	2-year	Circular	2.5	0	232.3	906.71	900.87	2.515	13	6.5	60	12.3
		5-year								19	7.5	60	12.3
		10-year								22	8.0	60	12.3
		25-year								27	8.6	60	12.3
		50-year								31	9.0	60	12.3
		100-year								36	9.4	60	12.3
LSYMC03	8461.2	2-year	Trapezoidal	1	30	232.3	911.79	906.20	2.407	0	0.0	473	15.8
		5-year								0	0.0	473	15.8
		10-year								0	0.0	473	15.8
		25-year								0	0.0	473	15.8
		50-year								0	0.0	473	15.8
		100-year								0	0.0	473	15.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LSYMC04	8296.1	2-year	Special	3	3	63.6	910.66	906.71	6.216	13	8.5	42	10.3
		5-year								19	9.4	42	10.3
		10-year								22	9.8	42	10.3
		25-year								27	10.3	42	10.3
		50-year								31	10.7	42	10.3
		100-year								36	11.2	42	10.3
LSYMC04	8296.2	2-year	Trapezoidal	1	30	63.6	915.08	911.79	5.177	0	0.0	694	23.1
		5-year								0	0.0	694	23.1
		10-year								0	0.0	694	23.1
		25-year								0	0.0	694	23.1
		50-year								0	0.0	694	23.1
		100-year								0	0.0	694	23.1
LSYMC05	8462.1	2-year	Special	3	3	53.3	911.21	910.66	1.033	13	5.7	17	4.2
		5-year								19	6.7	17	4.2
		10-year								22	7.1	17	4.2
		25-year								27	8.1	17	4.2
		50-year								31	8.9	17	4.2
		100-year								36	9.9	17	4.2
LSYMC05	8462.2	2-year	Trapezoidal	1	30	53.3	915.13	915.08	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1
LUWL101	LUWL101	2-year	Natural	10	0	1052.6	902.91	893.90	0.856	244	2.2	166246	10.4
		5-year								322	2.1	166246	10.4
		10-year								383	2.0	166246	10.4
		25-year								465	1.9	166246	10.4
		50-year								530	1.8	166246	10.4
		100-year								613	1.8	166246	10.4
LUWL201	LUWL201	2-year	Natural	12	0	3039.0	908.00	902.70	0.174	475	1.5	112604	5.3
		5-year								699	1.3	112604	5.3
		10-year								836	1.1	112604	5.3
		25-year								1013	1.0	112604	5.3
		50-year								1141	1.0	112604	5.3
		100-year								1333	1.0	112604	5.3
LUWL301	LUWL301	2-year	Natural	15	0	1619.9	915.78	907.00	0.542	354	1.7	408518	11.8
		5-year								567	1.9	408518	11.8
		10-year								700	1.9	408518	11.8
		25-year								886	1.9	408518	11.8
		50-year								1036	2.0	408518	11.8
		100-year								1227	2.0	408518	11.8
LUWL302	LUWL302	2-year	Natural	12	0	3250.9	946.34	915.78	0.940	176	3.0	102728	12.9
		5-year								309	3.5	102728	12.9
		10-year								395	3.6	102728	12.9
		25-year								507	3.8	102728	12.9
		50-year								603	3.9	102728	12.9
		100-year								723	4.1	102728	12.9
LUWMC00	LUWMC00	2-year	Natural	11.6	0	186.2	884.53	884.30	0.124	1082	3.2	16261	3.8
		5-year								1812	3.1	16261	3.8
		10-year								2393	3.1	16261	3.8
		25-year								3309	3.1	16261	3.8
		50-year								3851	3.1	16261	3.8
		100-year								4491	3.1	16261	3.8
LUWMC01	LUWMC01	2-year	Natural	11	0	981.7	885.58	884.53	0.107	1100	2.7	15072	3.5
		5-year								1826	2.7	15072	3.5
		10-year								2375	2.7	15072	3.5
		25-year								3269	2.7	15072	3.5
		50-year								3846	2.7	15072	3.5
		100-year								4549	2.8	15072	3.5

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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LUWMC02	LUWMC02	2-year	Natural	11.4	0	254.9	886.00	885.58	0.165	967	-2.5	22772	4.4
		5-year								1517	-2.6	22772	4.4
		10-year								1915	-2.6	22772	4.4
		25-year								2569	2.6	22772	4.4
		50-year								2975	2.6	22772	4.4
		100-year								3474	2.6	22772	4.4
LUWMC03	UWMC03A	2-year	Rectangular	6	12	48.1	886.32	886.00	0.666	487	6.3	990	13.7
		5-year								761	10.5	990	13.7
		10-year								944	13.1	990	13.7
		25-year								1206	16.7	990	13.7
		50-year								1348	18.7	990	13.7
		100-year								1500	20.8	990	13.7
LUWMC03	UWMC03B	2-year	Trapezoidal	6	30	48.1	894.00	893.95	0.100	0	0.0	1626	9.0
		5-year								0	0.0	1626	9.0
		10-year								26	2.6	1626	9.0
		25-year								155	5.2	1626	9.0
		50-year								276	6.4	1626	9.0
		100-year								476	7.8	1626	9.0
LUWMC04	LUWMC04	2-year	Natural	13.6	0	5583.2	893.90	886.32	0.136	1069	0.9	53750	4.6
		5-year								1722	1.0	53750	4.6
		10-year								2151	1.0	53750	4.6
		25-year								2747	1.1	53750	4.6
		50-year								3217	1.2	53750	4.6
		100-year								3850	1.3	53750	4.6
LUWMC05	LUWMC05	2-year	Natural	16	0	1613.0	895.00	893.90	0.068	1076	1.6	96235	4.6
		5-year								1736	1.8	96235	4.6
		10-year								2171	1.9	96235	4.6
		25-year								2769	2.0	96235	4.6
		50-year								3234	2.1	96235	4.6
		100-year								3867	2.2	96235	4.6
LUWMC06	LUWMC06	2-year	Natural	10	0	2304.8	901.39	895.00	0.277	957	1.5	88655	6.7
		5-year								1549	1.6	88655	6.7
		10-year								1940	1.7	88655	6.7
		25-year								2477	1.8	88655	6.7
		50-year								2898	1.9	88655	6.7
		100-year								3467	2.0	88655	6.7
LUWMC07	LUWMC07	2-year	Natural	8	0	2190.2	902.70	901.39	0.060	883	2.2	6749	2.6
		5-year								1428	2.6	6749	2.6
		10-year								1783	2.7	6749	2.6
		25-year								2278	3.0	6749	2.6
		50-year								2660	3.1	6749	2.6
		100-year								3181	3.3	6749	2.6
LUWMC08	LUWMC08	2-year	Natural	15	0	1312.5	907.00	902.70	0.328	584	1.0	294534	7.8
		5-year								990	1.4	294534	7.8
		10-year								1278	1.5	294534	7.8
		25-year								1665	1.7	294534	7.8
		50-year								1976	1.9	294534	7.8
		100-year								2402	2.0	294534	7.8
LUWMC09	LUWMC09	2-year	Natural	10	0	5593.4	924.05	907.00	0.305	572	1.8	78406	7.0
		5-year								973	2.0	78406	7.0
		10-year								1242	2.1	78406	7.0
		25-year								1608	2.3	78406	7.0
		50-year								1895	2.4	78406	7.0
		100-year								2276	2.5	78406	7.0
LUWMC10	LUWMC10	2-year	Natural	20	0	3120.2	935.70	924.05	0.373	399	2.8	171892	10.2
		5-year								705	3.2	171892	10.2
		10-year								919	3.4	171892	10.2
		25-year								1202	3.7	171892	10.2
		50-year								1431	3.9	171892	10.2
		100-year								1725	4.1	171892	10.2

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Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LUWMC11	LUWMC11	2-year	Natural	20	0	1782.7	945.11	935.70	0.528	375	1.7	238422	16.1
		5-year								620	1.8	238422	16.1
		10-year								785	2.0	238422	16.1
		25-year								999	2.1	238422	16.1
		50-year								1159	2.2	238422	16.1
		100-year								1377	2.3	238422	16.1
LUWMC12	LUWMC12	2-year	Natural	17	0	3249.4	984.56	945.11	1.214	200	4.4	94269	16.4
		5-year								342	5.1	94269	16.4
		10-year								434	5.5	94269	16.4
		25-year								555	5.8	94269	16.4
		50-year								648	6.1	94269	16.4
		100-year								776	6.3	94269	16.4
LVCL102	LVCL102	2-year	Natural	10	0	2910.5	891.74	873.67	0.621	153	2.4	28188	6.7
		5-year								232	2.4	28188	6.7
		10-year								279	2.4	28188	6.7
		25-year								342	2.5	28188	6.7
		50-year								389	2.4	28188	6.7
		100-year								452	2.4	28188	6.7
LVCL201	LVCL201	2-year	Natural	9	0	827.6	926.49	908.57	2.165	79	1.8	33221	17.3
		5-year								114	1.9	33221	17.3
		10-year								135	2.1	33221	17.3
		25-year								163	2.0	33221	17.3
		50-year								183	2.3	33221	17.3
		100-year								211	2.1	33221	17.3
LVCMC02	LVCMC02	2-year	Natural	16	0	2269.3	873.67	860.79	0.568	656	7.6	13351	12.9
		5-year								1018	8.7	13351	12.9
		10-year								1238	9.2	13351	12.9
		25-year								1411	9.2	13351	12.9
		50-year								1524	9.2	13351	12.9
		100-year								1657	9.2	13351	12.9
LVCMC03	LVCMC03	2-year	Natural	12.5	0	2262.7	882.12	873.67	0.373	582	3.7	24985	6.2
		5-year								888	4.2	24985	6.2
		10-year								1070	4.4	24985	6.2
		25-year								1293	4.6	24985	6.2
		50-year								1537	4.8	24985	6.2
		100-year								1729	4.9	24985	6.2
LVCMC04	LVCMC04	2-year	Natural	16	0	2893.5	908.57	882.12	0.914	348	4.2	45060	17.2
		5-year								507	4.6	45060	17.2
		10-year								607	4.9	45060	17.2
		25-year								730	5.1	45060	17.2
		50-year								922	6.1	45060	17.2
		100-year								1060	6.3	45060	17.2
LVCMC05	LVCMC05	2-year	Natural	6	0	968.3	925.16	908.57	1.713	261	3.7	8951	12.2
		5-year								372	3.9	8951	12.2
		10-year								437	4.0	8951	12.2
		25-year								525	4.0	8951	12.2
		50-year								590	4.2	8951	12.2
		100-year								677	4.2	8951	12.2
LVCMC06	VCMC06A	2-year	Rectangular	4	6	152.9	926.96	925.16	1.177	112	11.9	312	13.0
		5-year								143	13.0	312	13.0
		10-year								160	13.5	312	13.0
		25-year								181	14.2	312	13.0
		50-year								197	14.6	312	13.0
		100-year								217	15.2	312	13.0
LVCMC06	VCMC06B	2-year	Trapezoidal	5	30	152.9	928.00	927.85	0.100	39	2.8	1204	8.0
		5-year								88	3.9	1204	8.0
		10-year								120	4.4	1204	8.0
		25-year								164	5.0	1204	8.0
		50-year								198	5.4	1204	8.0
		100-year								244	5.8	1204	8.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LVCMC07	LVCMC07	2-year	Natural	6	0	924.8	933.88	926.96	0.748	166	2.5	7969	8.6
		5-year								234	2.5	7969	8.6
		10-year								274	2.5	7969	8.6
		25-year								328	2.5	7969	8.6
		50-year								368	2.5	7969	8.6
		100-year								421	2.6	7969	8.6
LVCMC08	LVCMC08	2-year	Natural	6	0	378.9	939.98	933.88	1.610	77	2.6	8313	10.5
		5-year								109	2.9	8313	10.5
		10-year								128	3.0	8313	10.5
		25-year								153	3.2	8313	10.5
		50-year								172	3.3	8313	10.5
		100-year								197	3.4	8313	10.5
LW13L101	8621.1	2-year	Special	5	5	182.6	901.29	901.00	0.159	25	4.8	31	2.4
		5-year								37	5.6	31	2.4
		10-year								42	5.9	31	2.4
		25-year								53	6.6	31	2.4
		50-year								60	7.0	31	2.4
		100-year								69	7.9	31	2.4
LW13L101	8621.2	2-year	Trapezoidal	1	30	182.6	905.79	905.61	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.2	96	3.2
LW13L102	8201.1	2-year	Circular	2	0	114.6	903.74	901.29	2.138	25	9.5	31	9.8
		5-year								37	11.4	31	9.8
		10-year								42	13.2	31	9.8
		25-year								44	13.9	31	9.8
		50-year								44	13.9	31	9.8
		100-year								44	14.0	31	9.8
LW13L102	8201.2	2-year	Trapezoidal	1	30	114.6	908.74	905.79	2.575	0	0.0	489	16.3
		5-year								0	0.0	489	16.3
		10-year								0	0.0	489	16.3
		25-year								10	3.5	489	16.3
		50-year								21	4.7	489	16.3
		100-year								34	5.7	489	16.3
LW13L103	8199.1	2-year	Circular	1.25	0	310.3	911.48	903.74	2.495	6	5.8	9	7.7
		5-year								8	7.6	9	7.7
		10-year								9	7.7	9	7.7
		25-year								12	9.2	9	7.7
		50-year								10	8.0	9	7.7
		100-year								12	9.5	9	7.7
LW13L103	8199.2	2-year	Trapezoidal	1	30	310.3	915.97	908.74	2.330	0	0.0	466	15.5
		5-year								0	0.0	466	15.5
		10-year								0	0.0	466	15.5
		25-year								2	1.9	466	15.5
		50-year								4	1.3	466	15.5
		100-year								13	3.9	466	15.5
LW13L1A01	LW13L1A01	2-year	Circular	2	0	38.6	902.63	901.29	3.469	0	-0.1	39	12.5
		5-year								0	-0.2	39	12.5
		10-year								1	0.5	39	12.5
		25-year								1	0.4	39	12.5
		50-year								1	0.6	39	12.5
		100-year								1	0.5	39	12.5
LW13L1B01	8200.1	2-year	Circular	2	0	38.6	903.98	903.74	0.621	19	7.9	17	5.3
		5-year								29	9.1	17	5.3
		10-year								33	10.6	17	5.3
		25-year								32	10.2	17	5.3
		50-year								32	10.2	17	5.3
		100-year								33	10.5	17	5.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LW13L1B01	8200.2	2-year	Trapezoidal	2	30	38.6	907.56	908.74	-3.055	0	0.0	1625	27.1
		5-year								0	0.0	1625	27.1
		10-year								-6	-0.3	1625	27.1
		25-year								-26	-1.1	1625	27.1
		50-year								-32	-1.2	1625	27.1
		100-year								-39	-1.4	1625	27.1
LW13L1C01	8198.1	2-year	Circular	2	0	30.9	911.97	911.48	1.585	6	6.2	26	8.4
		5-year								8	7.1	26	8.4
		10-year								9	6.9	26	8.4
		25-year								40	12.8	26	8.4
		50-year								30	9.4	26	8.4
		100-year								38	11.9	26	8.4
LW13L1C01	8198.2	2-year	Trapezoidal	1	30	30.9	915.48	915.97	-1.585	0	0.0	384	12.8
		5-year								0	0.0	384	12.8
		10-year								0	0.0	384	12.8
		25-year								-4	1.6	384	12.8
		50-year								-5	-0.5	384	12.8
		100-year								-15	2.5	384	12.8
LW13L201	8209.1	2-year	Circular	3.5	0	90.0	903.95	903.31	0.711	12	6.6	79	8.2
		5-year								18	7.7	79	8.2
		10-year								21	8.3	79	8.2
		25-year								26	8.9	79	8.2
		50-year								29	9.4	79	8.2
		100-year								33	10.0	79	8.2
LW13L201	8209.2	2-year	Trapezoidal	1	30	90.0	907.89	908.00	-0.122	0	0.0	107	3.6
		5-year								0	0.0	107	3.6
		10-year								0	0.0	107	3.6
		25-year								0	0.0	107	3.6
		50-year								0	0.0	107	3.6
		100-year								0	0.0	107	3.6
LW13L202	8208.1	2-year	Circular	3	0	109.8	904.00	903.95	0.046	8	3.3	13	1.9
		5-year								11	3.8	13	1.9
		10-year								13	4.0	13	1.9
		25-year								16	4.3	13	1.9
		50-year								18	4.6	13	1.9
		100-year								21	4.8	13	1.9
LW13L202	8208.2	2-year	Trapezoidal	1	30	109.8	908.00	907.89	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								0	0.0	97	3.2
LW13L301	LW13L301	2-year	Circular	4	0	189.0	908.38	907.25	0.598	-1	-0.4	103	8.2
		5-year								-1	-0.5	103	8.2
		10-year								-1	-0.4	103	8.2
		25-year								-1	-0.4	103	8.2
		50-year								-1	-0.4	103	8.2
		100-year								-1	-0.4	103	8.2
LW13L401	8652.1	2-year	Circular	1	0	60.0	915.34	907.25	13.490	4	8.4	12	15.5
		5-year								6	11.0	12	15.5
		10-year								8	12.4	12	15.5
		25-year								9	14.0	12	15.5
		50-year								10	15.0	12	15.5
		100-year								12	16.3	12	15.5
LW13L401	8652.2	2-year	Trapezoidal	1	30	60.0	917.00	914.08	4.869	0	0.0	673	22.4
		5-year								0	0.0	673	22.4
		10-year								0	0.0	673	22.4
		25-year								0	0.0	673	22.4
		50-year								0	0.0	673	22.4
		100-year								0	0.0	673	22.4

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LW13MC01	LW13MC01	2-year	Natural	4	0	128.2	903.31	901.00	1.802	55	3.5	4543	10.8
		5-year								80	3.8	4543	10.8
		10-year								95	4.0	4543	10.8
		25-year								114	4.2	4543	10.8
		50-year								129	4.3	4543	10.8
		100-year								148	4.5	4543	10.8
LW13MC02	LW13MC02	2-year	Natural	4	0	588.0	907.00	903.31	0.628	44	1.1	4478	7.2
		5-year								62	1.3	4478	7.2
		10-year								74	1.4	4478	7.2
		25-year								89	1.5	4478	7.2
		50-year								100	1.6	4478	7.2
		100-year								115	1.7	4478	7.2
LW13MC03	8513.1	2-year	Circular	4	0	68.2	907.25	907.00	0.367	44	12.7	81	6.4
		5-year								63	14.6	81	6.4
		10-year								74	15.6	81	6.4
		25-year								89	16.8	81	6.4
		50-year								101	17.6	81	6.4
		100-year								115	18.6	81	6.4
LW13MC03	8513.2	2-year	Trapezoidal	1	30	68.2	914.08	914.00	0.117	0	0.0	104	3.5
		5-year								0	0.0	104	3.5
		10-year								0	0.0	104	3.5
		25-year								0	0.0	104	3.5
		50-year								0	0.0	104	3.5
		100-year								0	0.0	104	3.5
LW13MC04	8415.1	2-year	Circular	4	0	431.0	913.59	907.25	1.471	40	8.6	162	12.9
		5-year								57	9.7	162	12.9
		10-year								67	10.3	162	12.9
		25-year								80	11.0	162	12.9
		50-year								91	11.4	162	12.9
		100-year								104	11.9	162	12.9
LW13MC04	8415.2	2-year	Trapezoidal	1	30	431.0	918.00	914.08	0.909	0	0.0	291	9.7
		5-year								0	0.0	291	9.7
		10-year								0	0.0	291	9.7
		25-year								0	0.0	291	9.7
		50-year								0	0.0	291	9.7
		100-year								0	0.0	291	9.7
LWLL101	8261.1	2-year	Circular	4.5	0	618.4	881.28	874.16	1.151	95	8.6	196	12.3
		5-year								133	10.2	196	12.3
		10-year								157	10.8	196	12.3
		25-year								179	11.1	196	12.3
		50-year								192	12.1	196	12.3
		100-year								199	12.4	196	12.3
LWLL101	8261.2	2-year	Trapezoidal	1	30	618.4	896.24	911.00	-2.387	0	0.0	471	15.7
		5-year								0	0.0	471	15.7
		10-year								0	0.0	471	15.7
		25-year								0	0.0	471	15.7
		50-year								0	0.0	471	15.7
		100-year								0	0.0	471	15.7
LWLL102	8262.1	2-year	Circular	4.5	0	222.7	883.84	881.28	1.149	96	12.3	196	12.3
		5-year								134	13.3	196	12.3
		10-year								158	13.4	196	12.3
		25-year								181	13.6	196	12.3
		50-year								194	13.6	196	12.3
		100-year								199	13.6	196	12.3
LWLL102	8262.2	2-year	Trapezoidal	1	30	222.7	895.59	895.24	0.157	0	0.0	121	4.0
		5-year								0	0.0	121	4.0
		10-year								0	0.0	121	4.0
		25-year								0	0.0	121	4.0
		50-year								0	0.0	121	4.0
		100-year								0	0.0	121	4.0

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL103	8263.1	2-year	Circular	4.5	0	182.4	885.94	883.84	1.151	95	12.2	196	12.3
		5-year								133	13.2	196	12.3
		10-year								158	13.6	196	12.3
		25-year								184	13.7	196	12.3
		50-year								195	13.7	196	12.3
		100-year								199	13.8	196	12.3
LWLL103	8263.2	2-year	Trapezoidal	1	30	182.4	894.77	894.59	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LWLL104	8265.1	2-year	Circular	4.5	0	428.5	886.50	885.94	0.131	54	6.4	66	4.2
		5-year								76	7.2	66	4.2
		10-year								89	7.5	66	4.2
		25-year								107	8.0	66	4.2
		50-year								133	8.2	66	4.2
		100-year								118	7.3	66	4.2
LWLL104	8265.2	2-year	Trapezoidal	2	30	428.5	893.00	892.44	0.131	0	0.0	336	5.6
		5-year								0	0.0	336	5.6
		10-year								0	0.0	336	5.6
		25-year								0	0.0	336	5.6
		50-year								38	2.6	336	5.6
		100-year								125	2.9	336	5.6
LWLL105	8266.1	2-year	Circular	4.5	0	38.7	887.10	886.50	1.549	53	6.0	227	14.3
		5-year								74	6.5	227	14.3
		10-year								87	6.8	227	14.3
		25-year								104	7.1	227	14.3
		50-year								124	10.1	227	14.3
		100-year								134	8.4	227	14.3
LWLL105	8266.2	2-year	Trapezoidal	1	30	38.7	895.68	894.00	4.337	0	0.0	635	21.2
		5-year								0	0.0	635	21.2
		10-year								0	0.0	635	21.2
		25-year								0	0.0	635	21.2
		50-year								0	0.0	635	21.2
		100-year								0	0.0	635	21.2
LWLL106	8267.1	2-year	Circular	2.5	0	341.7	888.84	887.10	0.509	13	5.4	27	5.5
		5-year								17	5.7	27	5.5
		10-year								20	14.0	27	5.5
		25-year								25	6.0	27	5.5
		50-year								26	6.0	27	5.5
		100-year								29	6.1	27	5.5
LWLL106	8267.2	2-year	Trapezoidal	1	30	341.7	900.03	895.68	1.273	0	0.0	344	11.5
		5-year								0	0.0	344	11.5
		10-year								0	0.0	344	11.5
		25-year								0	0.0	344	11.5
		50-year								0	0.0	344	11.5
		100-year								0	0.0	344	11.5
LWLL107	8268.1	2-year	Circular	2.5	0	64.9	889.17	888.84	0.509	13	5.4	27	5.5
		5-year								17	5.9	27	5.5
		10-year								20	6.1	27	5.5
		25-year								25	15.0	27	5.5
		50-year								26	6.4	27	5.5
		100-year								31	6.5	27	5.5
LWLL107	8268.2	2-year	Trapezoidal	1	30	64.9	896.17	896.11	0.100	0	0.0	93	3.1
		5-year								0	0.0	93	3.1
		10-year								0	0.0	93	3.1
		25-year								0	0.0	93	3.1
		50-year								0	0.0	93	3.1
		100-year								0	0.0	93	3.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL108	8270.1	2-year	Circular	2	0	140.6	895.14	889.17	4.245	13	8.6	43	13.8
		5-year								17	9.4	43	13.8
		10-year								20	9.8	43	13.8
		25-year								25	14.3	43	13.8
		50-year								27	11.6	43	13.8
		100-year								30	12.2	43	13.8
LWLL108	8270.2	2-year	Trapezoidal	1	30	140.6	899.14	897.17	1.401	0	0.0	361	12.0
		5-year								0	0.0	361	12.0
		10-year								0	0.0	361	12.0
		25-year								0	0.0	361	12.0
		50-year								0	0.0	361	12.0
		100-year								0	0.0	361	12.0
LWLL109	8269.1	2-year	Circular	2	0	128.5	895.31	895.14	0.132	13	6.3	8	2.4
		5-year								17	7.1	8	2.4
		10-year								20	8.3	8	2.4
		25-year								24	9.9	8	2.4
		50-year								26	10.5	8	2.4
		100-year								30	11.4	8	2.4
LWLL109	8269.2	2-year	Trapezoidal	1	30	128.5	900.27	900.14	0.100	0	0.0	97	3.2
		5-year								0	0.0	97	3.2
		10-year								0	0.0	97	3.2
		25-year								0	0.0	97	3.2
		50-year								0	0.0	97	3.2
		100-year								3	0.9	97	3.2
LWLL1A01	8264.1	2-year	Circular	2	0	458.5	892.17	885.94	1.359	29	9.6	24	7.8
		5-year								29	9.5	24	7.8
		10-year								29	9.4	24	7.8
		25-year								29	9.3	24	7.8
		50-year								28	9.1	24	7.8
		100-year								28	8.8	24	7.8
LWLL1A01	8264.2	2-year	Trapezoidal	1	30	458.5	895.84	893.44	0.523	14	2.5	221	7.4
		5-year								35	3.6	221	7.4
		10-year								47	4.0	221	7.4
		25-year								63	4.5	221	7.4
		50-year								80	5.0	221	7.4
		100-year								101	5.4	221	7.4
LWLL1A02	8391.1	2-year	Circular	2	0	87.9	892.93	892.17	0.864	19	5.9	20	6.2
		5-year								22	7.0	20	6.2
		10-year								22	7.1	20	6.2
		25-year								23	7.1	20	6.2
		50-year								22	7.1	20	6.2
		100-year								25	8.0	20	6.2
LWLL1A02	8391.2	2-year	Trapezoidal	1	30	87.9	896.93	896.84	0.100	0	0.0	98	3.3
		5-year								5	1.2	98	3.3
		10-year								10	1.6	98	3.3
		25-year								17	2.0	98	3.3
		50-year								22	2.3	98	3.3
		100-year								29	2.6	98	3.3
LWLL1B01	8271.1	2-year	Circular	2	0	305.5	893.42	887.10	2.069	38	12.3	30	9.6
		5-year								38	12.3	30	9.6
		10-year								38	12.3	30	9.6
		25-year								38	12.3	30	9.6
		50-year								38	12.3	30	9.6
		100-year								38	12.3	30	9.6
LWLL1B01	8271.2	2-year	Trapezoidal	1	30	305.5	898.00	894.68	1.087	14	3.1	318	10.6
		5-year								36	4.5	318	10.6
		10-year								49	5.1	318	10.6
		25-year								67	5.8	318	10.6
		50-year								85	6.3	318	10.6
		100-year								104	6.9	318	10.6

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL201	LWLL201	2-year	Natural	10	3	167.5	877.86	875.25	1.559	20	1.5	10476	15.3
		5-year								28	1.4	10476	15.3
		10-year								32	1.3	10476	15.3
		25-year								37	1.2	10476	15.3
		50-year								58	1.2	10476	15.3
		100-year								-134	1.1	10476	15.3
LWLL202	8478.1	2-year	Circular	4	0	146.5	883.34	877.86	3.741	20	9.3	258	20.5
		5-year								28	10.6	258	20.5
		10-year								33	11.2	258	20.5
		25-year								40	12.0	258	20.5
		50-year								45	12.4	258	20.5
		100-year								52	12.8	258	20.5
LWLL202	8478.2	2-year	Trapezoidal	1	30	146.5	889.34	888.00	0.915	0	0.0	292	9.7
		5-year								0	0.0	292	9.7
		10-year								0	0.0	292	9.7
		25-year								0	0.0	292	9.7
		50-year								0	0.0	292	9.7
		100-year								0	0.0	292	9.7
LWLL301	8307.1	2-year	Rectangular	5	7	149.5	882.59	882.28	0.207	121	5.8	218	6.2
		5-year								189	6.6	218	6.2
		10-year								229	7.1	218	6.2
		25-year								239	7.5	218	6.2
		50-year								239	7.6	218	6.2
		100-year								239	7.6	218	6.2
LWLL301	8307.2	2-year	Trapezoidal	3	30	149.5	889.59	888.00	1.063	0	0.0	1815	20.2
		5-year								0	0.0	1815	20.2
		10-year								0	0.0	1815	20.2
		25-year								41	4.1	1815	20.2
		50-year								86	6.1	1815	20.2
		100-year								129	6.8	1815	20.2
LWLL302	8306.1	2-year	Rectangular	5	7	231.3	886.75	882.59	1.799	121	9.1	641	18.3
		5-year								189	10.3	641	18.3
		10-year								230	10.8	641	18.3
		25-year								259	11.0	641	18.3
		50-year								304	11.1	641	18.3
		100-year								347	11.1	641	18.3
LWLL302	8306.2	2-year	Trapezoidal	1	30	231.3	914.00	890.59	10.121	0	0.0	970	32.3
		5-year								0	0.0	970	32.3
		10-year								0	0.0	970	32.3
		25-year								0	0.0	970	32.3
		50-year								0	0.0	970	32.3
		100-year								0	0.0	970	32.3
LWLL303	LWLL303	2-year	Natural	5	3	216.7	890.36	886.75	1.666	106	5.2	1428	6.3
		5-year								170	5.9	1428	6.3
		10-year								206	6.2	1428	6.3
		25-year								252	6.3	1428	6.3
		50-year								283	6.3	1428	6.3
		100-year								325	6.4	1428	6.3
LWLL304	WLL304A	2-year	Special	7.08	7.08	24.0	890.22	890.18	0.166	106	11.6	131	5.3
		5-year								170	14.4	131	5.3
		10-year								205	15.8	131	5.3
		25-year								246	19.1	131	5.3
		50-year								284	19.4	131	5.3
		100-year								326	19.4	131	5.3
LWLL304	WLL304B	2-year	Trapezoidal	1	30	24.0	894.00	893.98	0.100	0	0.0	88	2.9
		5-year								0	0.0	88	2.9
		10-year								0	0.0	88	2.9
		25-year								0	0.0	88	2.9
		50-year								0	0.0	88	2.9
		100-year								0	0.0	88	2.9

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL305	WLL305A	2-year	Special	7.08	7.08	77.4	890.36	890.22	0.181	91	8.6	137	5.5
		5-year								147	10.4	137	5.5
		10-year								177	11.4	137	5.5
		25-year								214	12.7	137	5.5
		50-year								245	13.1	137	5.5
		100-year								282	14.1	137	5.5
LWLL305	WLL305B	2-year	Trapezoidal	2	30	77.4	894.08	894.00	0.100	0	0.0	299	5.0
		5-year								0	0.0	299	5.0
		10-year								0	0.0	299	5.0
		25-year								0	0.0	299	5.0
		50-year								0	0.0	299	5.0
		100-year								0	0.0	299	5.0
LWLL306	LWLL306	2-year	Natural	5	6	46.1	892.10	890.36	3.771	88	10.2	4396	22.0
		5-year								135	12.3	4396	22.0
		10-year								162	13.1	4396	22.0
		25-year								197	14.2	4396	22.0
		50-year								222	14.8	4396	22.0
		100-year								257	14.8	4396	22.0
LWLL307	WLL307A	2-year	Circular	2	0	44.4	893.74	892.10	3.697	25	10.8	24	7.5
		5-year								30	11.2	24	7.5
		10-year								33	11.3	24	7.5
		25-year								34	11.3	24	7.5
		50-year								34	11.3	24	7.5
		100-year								34	11.3	24	7.5
LWLL307	WLL307B	2-year	Trapezoidal	2	30	44.4	896.00	895.96	0.100	62	3.7	279	4.7
		5-year								105	4.5	279	4.7
		10-year								129	4.9	279	4.7
		25-year								163	5.3	279	4.7
		50-year								189	5.6	279	4.7
		100-year								226	6.0	279	4.7
LWLL308	LWLL308	2-year	Natural	5	6	162.4	896.11	893.74	1.459	89	7.5	6816	16.7
		5-year								135	8.9	6816	16.7
		10-year								162	8.8	6816	16.7
		25-year								197	8.8	6816	16.7
		50-year								221	8.8	6816	16.7
		100-year								258	8.8	6816	16.7
LWLL309	WLL309A	2-year	Circular	2	0	15.7	896.41	896.11	1.913	40	14.8	17	5.4
		5-year								43	15.0	17	5.4
		10-year								44	14.9	17	5.4
		25-year								44	14.9	17	5.4
		50-year								44	14.8	17	5.4
		100-year								44	14.8	17	5.4
LWLL309	WLL309B	2-year	Trapezoidal	2	30	15.7	899.00	898.98	0.100	52	4.0	332	5.5
		5-year								92	4.5	332	5.5
		10-year								119	4.9	332	5.5
		25-year								156	5.4	332	5.5
		50-year								182	5.7	332	5.5
		100-year								223	6.1	332	5.5
LWLL310	LWLL310	2-year	Natural	5	6	33.7	897.07	896.41	1.958	124	5.8	12122	22.3
		5-year								135	5.6	12122	22.3
		10-year								165	5.8	12122	22.3
		25-year								197	5.7	12122	22.3
		50-year								236	5.6	12122	22.3
		100-year								259	5.7	12122	22.3
LWLL311	WLL311A	2-year	Circular	2.5	0	16.3	897.36	897.07	1.776	90	19.1	51	10.3
		5-year								91	19.0	51	10.3
		10-year								91	19.2	51	10.3
		25-year								91	19.0	51	10.3
		50-year								91	19.1	51	10.3
		100-year								91	19.2	51	10.3

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL311	WLL311B	2-year	Trapezoidal	2	30	16.3	900.00	899.98	0.100	10	1.9	325	5.4
		5-year								52	3.6	325	5.4
		10-year								75	4.2	325	5.4
		25-year								117	4.9	325	5.4
		50-year								149	5.3	325	5.4
		100-year								182	5.7	325	5.4
LWLL312	LWLL312	2-year	Natural	5	6	78.8	897.52	897.36	0.203	89	3.8	7629	9.2
		5-year								135	3.9	7629	9.2
		10-year								163	3.9	7629	9.2
		25-year								198	3.8	7629	9.2
		50-year								223	3.8	7629	9.2
		100-year								260	3.8	7629	9.2
LWLL313	8503.1	2-year	Circular	2	0	75.4	897.68	897.52	0.212	25	9.2	10	3.1
		5-year								25	9.1	10	3.1
		10-year								25	9.1	10	3.1
		25-year								25	9.1	10	3.1
		50-year								25	9.0	10	3.1
		100-year								25	9.1	10	3.1
LWLL313	8503.2	2-year	Trapezoidal	2	30	75.4	899.97	899.89	0.100	75	3.8	303	5.0
		5-year								122	4.6	303	5.0
		10-year								149	5.0	303	5.0
		25-year								185	5.5	303	5.0
		50-year								212	5.7	303	5.0
		100-year								248	6.1	303	5.0
LWLL314	8278.1	2-year	Circular	2	0	26.5	897.73	897.68	0.188	30	9.3	9	2.9
		5-year								30	9.3	9	2.9
		10-year								30	9.3	9	2.9
		25-year								29	9.1	9	2.9
		50-year								29	9.1	9	2.9
		100-year								29	9.0	9	2.9
LWLL314	8278.2	2-year	Trapezoidal	2	30	26.5	900.58	899.97	2.299	73	4.9	1410	23.5
		5-year								121	5.9	1410	23.5
		10-year								149	6.3	1410	23.5
		25-year								185	6.6	1410	23.5
		50-year								212	6.9	1410	23.5
		100-year								247	7.2	1410	23.5
LWLL315	8422.2	2-year	Trapezoidal	3	30	161.5	900.74	900.58	0.100	75	3.6	554	6.2
		5-year								114	4.3	554	6.2
		10-year								137	4.6	554	6.2
		25-year								168	5.0	554	6.2
		50-year								192	5.3	554	6.2
		100-year								222	5.6	554	6.2
LWLL316	8423.1	2-year	Circular	2	0	320.0	901.44	898.07	1.053	26	8.1	22	6.9
		5-year								26	8.1	22	6.9
		10-year								26	8.1	22	6.9
		25-year								26	8.1	22	6.9
		50-year								26	8.1	22	6.9
		100-year								26	8.1	22	6.9
LWLL316	8423.2	2-year	Trapezoidal	3	30	320.0	905.69	901.74	1.234	60	5.7	1955	21.7
		5-year								99	7.0	1955	21.7
		10-year								122	7.6	1955	21.7
		25-year								153	8.3	1955	21.7
		50-year								177	8.8	1955	21.7
		100-year								208	9.4	1955	21.7
LWLL317	8279.1	2-year	Circular	2	0	63.5	901.73	901.44	0.456	24	7.5	14	4.5
		5-year								24	7.6	14	4.5
		10-year								24	7.5	14	4.5
		25-year								24	7.5	14	4.5
		50-year								24	7.5	14	4.5
		100-year								24	7.5	14	4.5

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL317	8279.2	2-year	Trapezoidal	3	30	63.5	905.75	905.69	0.100	69	3.7	541	6.0
		5-year								106	4.4	541	6.0
		10-year								129	4.8	541	6.0
		25-year								159	5.2	541	6.0
		50-year								182	5.4	541	6.0
		100-year								212	5.8	541	6.0
LWLL318	8421.1	2-year	Circular	2	0	56.9	901.99	901.73	0.457	23	7.3	14	4.5
		5-year								22	6.9	14	4.5
		10-year								22	7.0	14	4.5
		25-year								22	7.0	14	4.5
		50-year								22	6.9	14	4.5
		100-year								22	7.0	14	4.5
LWLL318	8421.2	2-year	Trapezoidal	3	30	56.9	905.81	905.75	0.100	75	3.5	571	6.3
		5-year								114	4.2	571	6.3
		10-year								137	4.6	571	6.3
		25-year								168	5.0	571	6.3
		50-year								191	5.2	571	6.3
		100-year								222	5.6	571	6.3
LWLL3A01	LWLL3A01	2-year	Natural	5.5	10	480.5	889.49	886.75	0.570	5	1.6	936	4.6
		5-year								6	1.7	936	4.6
		10-year								7	1.7	936	4.6
		25-year								8	1.7	936	4.6
		50-year								9	1.6	936	4.6
		100-year								11	1.6	936	4.6
LWLL3A02	WLL3A02A	2-year	Circular	2.5	0	113.2	890.59	889.49	0.972	4	4.5	38	7.6
		5-year								6	5.3	38	7.6
		10-year								7	5.6	38	7.6
		25-year								8	6.0	38	7.6
		50-year								9	6.2	38	7.6
		100-year								11	6.5	38	7.6
LWLL3A02	WLL3A02B	2-year	Trapezoidal	1	30	113.2	894.11	894.00	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2
LWLL3B01	8633.1	2-year	Special	4.5	4.5	89.0	890.50	890.22	0.315	17	3.1	56	5.4
		5-year								24	3.6	56	5.4
		10-year								29	3.8	56	5.4
		25-year								36	4.3	56	5.4
		50-year								40	4.6	56	5.4
		100-year								45	5.0	56	5.4
LWLL3B01	8633.2	2-year	Trapezoidal	1	30	89.0	894.63	894.00	0.708	0	0.0	257	8.6
		5-year								0	0.0	257	8.6
		10-year								0	0.0	257	8.6
		25-year								0	0.0	257	8.6
		50-year								0	0.0	257	8.6
		100-year								0	0.0	257	8.6
LWLL3B02	8632.1	2-year	Special	4.5	4.5	38.8	890.62	890.50	0.310	17	3.8	55	5.4
		5-year								24	4.1	55	5.4
		10-year								29	4.3	55	5.4
		25-year								36	4.7	55	5.4
		50-year								40	4.9	55	5.4
		100-year								45	5.2	55	5.4
LWLL3B02	8632.2	2-year	Trapezoidal	1	30	38.8	894.87	893.63	3.198	0	0.0	545	18.2
		5-year								0	0.0	545	18.2
		10-year								0	0.0	545	18.2
		25-year								0	0.0	545	18.2
		50-year								0	0.0	545	18.2
		100-year								0	0.0	545	18.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL3B03	8631.1	2-year	Special	4.5	4.5	43.0	890.76	890.62	0.326	17	4.2	57	5.5
		5-year								24	4.4	57	5.5
		10-year								29	4.7	57	5.5
		25-year								35	5.0	57	5.5
		50-year								40	5.2	57	5.5
		100-year								45	5.4	57	5.5
LWLL3B03	8631.2	2-year	Trapezoidal	1	30	43.0	895.19	893.87	3.072	0	0.0	535	17.8
		5-year								0	0.0	535	17.8
		10-year								0	0.0	535	17.8
		25-year								0	0.0	535	17.8
		50-year								0	0.0	535	17.8
		100-year								0	0.0	535	17.8
LWLL3B04	8630.1	2-year	Special	4.5	4.5	52.0	890.92	890.76	0.308	17	4.4	55	5.4
		5-year								25	4.7	55	5.4
		10-year								29	4.9	55	5.4
		25-year								35	5.2	55	5.4
		50-year								39	5.4	55	5.4
		100-year								44	5.5	55	5.4
LWLL3B04	8630.2	2-year	Trapezoidal	1	30	52.0	896.00	894.19	3.479	0	0.0	569	19.0
		5-year								0	0.0	569	19.0
		10-year								0	0.0	569	19.0
		25-year								0	0.0	569	19.0
		50-year								0	0.0	569	19.0
		100-year								0	0.0	569	19.0
LWLL3B05	8629.1	2-year	Special	4.5	4.5	39.5	891.04	890.92	0.304	17	4.5	55	5.4
		5-year								24	4.9	55	5.4
		10-year								29	5.1	55	5.4
		25-year								35	5.4	55	5.4
		50-year								39	5.5	55	5.4
		100-year								44	5.6	55	5.4
LWLL3B05	8629.2	2-year	Trapezoidal	2	30	39.5	895.04	895.00	0.100	0	0.0	296	4.9
		5-year								0	0.0	296	4.9
		10-year								0	0.0	296	4.9
		25-year								0	0.0	296	4.9
		50-year								0	0.0	296	4.9
		100-year								0	0.0	296	4.9
LWLL401	8277.1	2-year	Circular	2	0	166.3	891.50	885.32	3.717	21	8.9	40	12.9
		5-year								29	11.7	40	12.9
		10-year								34	12.4	40	12.9
		25-year								41	13.0	40	12.9
		50-year								44	14.0	40	12.9
		100-year								46	14.4	40	12.9
LWLL401	8277.2	2-year	Trapezoidal	1	30	166.3	895.50	892.00	2.105	0	0.0	443	14.8
		5-year								0	0.0	443	14.8
		10-year								0	0.0	443	14.8
		25-year								0	0.0	443	14.8
		50-year								6	2.7	443	14.8
		100-year								14	3.8	443	14.8
LWLL501	WLL501A	2-year	Circular	2	0	110.2	887.97	886.55	1.289	26	7.8	24	7.6
		5-year								26	7.9	24	7.6
		10-year								26	7.9	24	7.6
		25-year								26	8.0	24	7.6
		50-year								26	7.9	24	7.6
		100-year								26	8.0	24	7.6
LWLL501	WLL501B	2-year	Trapezoidal	6	30	110.2	890.11	890.00	0.100	29	2.5	1593	8.8
		5-year								57	3.3	1593	8.8
		10-year								75	3.7	1593	8.8
		25-year								102	4.2	1593	8.8
		50-year								122	4.4	1593	8.8
		100-year								145	4.4	1593	8.8

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLL601	8420.1	2-year	Circular	1.5	0	22.1	887.95	887.33	2.811	18	10.1	16	9.3
		5-year								18	10.4	16	9.3
		10-year								18	10.1	16	9.3
		25-year								18	10.1	16	9.3
		50-year								18	10.1	16	9.3
		100-year								18	10.5	16	9.3
LWLL601	8420.2	2-year	Trapezoidal	6	30	22.1	893.89	893.87	0.100	9	2.0	1518	8.4
		5-year								19	2.4	1518	8.4
		10-year								24	2.7	1518	8.4
		25-year								32	3.0	1518	8.4
		50-year								39	3.2	1518	8.4
		100-year								46	3.4	1518	8.4
LWLL701	8419.1	2-year	Circular	1.5	0	21.6	890.11	888.58	7.083	28	16.0	26	14.7
		5-year								28	16.0	26	14.7
		10-year								28	16.0	26	14.7
		25-year								28	16.0	26	14.7
		50-year								28	16.0	26	14.7
		100-year								28	16.0	26	14.7
LWLL701	8419.2	2-year	Trapezoidal	2	30	21.6	895.02	895.00	0.100	-21	-2.2	283	4.7
		5-year								32	2.7	283	4.7
		10-year								43	2.9	283	4.7
		25-year								58	3.2	283	4.7
		50-year								69	3.4	283	4.7
		100-year								84	3.5	283	4.7
LWLMC01	LWLMC01	2-year	Circular	6	0	109.1	873.21	871.99	1.118	341	16.4	416	14.7
		5-year								440	16.8	416	14.7
		10-year								489	17.5	416	14.7
		25-year								582	20.1	416	14.7
		50-year								680	24.0	416	14.7
		100-year								753	26.6	416	14.7
LWLMC02	WLMC02A	2-year	Circular	6	0	85.0	874.16	873.21	1.118	341	16.4	416	14.7
		5-year								440	16.8	416	14.7
		10-year								489	17.1	416	14.7
		25-year								582	20.2	416	14.7
		50-year								680	24.0	416	14.7
		100-year								753	26.5	416	14.7
LWLMC02	WLMC02B	2-year	Trapezoidal	1	30	85.0	910.00	909.92	0.100	0	0.0	94	3.1
		5-year								0	0.0	94	3.1
		10-year								0	0.0	94	3.1
		25-year								0	0.0	94	3.1
		50-year								0	0.0	94	3.1
		100-year								0	0.0	94	3.1
LWLMC03	WLMC03A	2-year	Circular	6	0	70.4	874.95	874.16	1.122	263	14.2	417	14.7
		5-year								330	15.3	417	14.7
		10-year								388	16.2	417	14.7
		25-year								510	18.0	417	14.7
		50-year								597	21.0	417	14.7
		100-year								660	23.2	417	14.7
LWLMC03	WLMC03B	2-year	Trapezoidal	1	30	70.4	910.07	910.00	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								0	0.0	96	3.2
		25-year								0	0.0	96	3.2
		50-year								0	0.0	96	3.2
		100-year								0	0.0	96	3.2
LWLMC04	LWLMC04	2-year	Trapezoidal	10	4	18.2	875.25	874.95	1.650	266	4.6	7100	16.1
		5-year								351	4.6	7100	16.1
		10-year								411	4.6	7100	16.1
		25-year								511	4.6	7100	16.1
		50-year								597	4.6	7100	16.1
		100-year								660	4.6	7100	16.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC05	LWLMC05	2-year	Natural	18	4	321.2	880.50	875.25	1.634	235	7.1	53939	18.8
		5-year								293	7.3	53939	18.8
		10-year								346	7.3	53939	18.8
		25-year								477	7.3	53939	18.8
		50-year								569	7.3	53939	18.8
		100-year								608	7.3	53939	18.8
LWLMC06	WLMC06A	2-year	Circular	4	0	40.4	882.00	880.50	3.711	235	19.9	150	11.9
		5-year								293	24.1	150	11.9
		10-year								316	25.5	150	11.9
		25-year								319	25.6	150	11.9
		50-year								319	25.6	150	11.9
		100-year								320	25.6	150	11.9
LWLMC06	WLMC06B	2-year	Trapezoidal	1	30	40.4	890.00	889.96	0.100	0	0.0	96	3.2
		5-year								0	0.0	96	3.2
		10-year								29	2.7	96	3.2
		25-year								164	5.5	96	3.2
		50-year								260	8.7	96	3.2
		100-year								338	11.3	96	3.2
LWLMC07	LWLMC07	2-year	Natural	9	30	195.7	882.28	882.00	0.143	214	1.2	5617	3.8
		5-year								275	1.2	5617	3.8
		10-year								321	1.2	5617	3.8
		25-year								456	1.2	5617	3.8
		50-year								597	1.2	5617	3.8
		100-year								682	1.2	5617	3.8
LWLMC08	LWLMC08	2-year	Natural	10	10	329.5	882.76	882.28	0.146	168	1.7	10491	4.8
		5-year								259	1.7	10491	4.8
		10-year								312	1.7	10491	4.8
		25-year								377	1.7	10491	4.8
		50-year								422	1.7	10491	4.8
		100-year								475	1.7	10491	4.8
LWLMC09	WLMC09A	2-year	User Defined	0	0	16.9	882.84	882.76	0.473	169	1.4	0	8.1
		5-year								261	1.9	0	8.1
		10-year								314	2.2	0	8.1
		25-year								378	2.4	0	8.1
		50-year								423	2.5	0	8.1
		100-year								477	2.6	0	8.1
LWLMC09	WLMC09B	2-year	Trapezoidal	1	30	16.9	898.00	897.98	0.100	0	0.0	105	3.5
		5-year								0	0.0	105	3.5
		10-year								0	0.0	105	3.5
		25-year								0	0.0	105	3.5
		50-year								0	0.0	105	3.5
		100-year								0	0.0	105	3.5
LWLMC10	LWLMC10	2-year	Natural	10	12	628.0	884.21	882.84	0.218	114	2.6	9285	5.5
		5-year								172	2.8	9285	5.5
		10-year								207	2.9	9285	5.5
		25-year								243	3.0	9285	5.5
		50-year								267	3.1	9285	5.5
		100-year								293	3.1	9285	5.5
LWLMC11	WLMC11A	2-year	Rectangular	3	6	134.0	884.94	884.21	0.545	115	6.8	141	7.8
		5-year								172	9.3	141	7.8
		10-year								207	11.5	141	7.8
		25-year								244	13.5	141	7.8
		50-year								267	14.8	141	7.8
		100-year								293	16.2	141	7.8
LWLMC11	WLMC11B	2-year	Trapezoidal	1	30	134.0	894.00	893.87	0.100	0	0.0	95	3.2
		5-year								0	0.0	95	3.2
		10-year								0	0.0	95	3.2
		25-year								0	0.0	95	3.2
		50-year								0	0.0	95	3.2
		100-year								0	0.0	95	3.2

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC12	LWLMC12	2-year	Natural	8	10	137.9	885.32	884.94	0.276	111	2.0	2168	5.5
		5-year								171	2.1	2168	5.5
		10-year								204	2.1	2168	5.5
		25-year								240	2.1	2168	5.5
		50-year								264	2.1	2168	5.5
		100-year								290	2.1	2168	5.5
LWLMC13	LWLMC13	2-year	Natural	7	5	446.7	886.55	885.32	0.275	101	2.4	2827	5.0
		5-year								180	2.4	2827	5.0
		10-year								223	2.4	2827	5.0
		25-year								255	2.4	2827	5.0
		50-year								280	2.4	2827	5.0
		100-year								312	2.4	2827	5.0
LWLMC14	8276.1	2-year	Circular	2	0	79.9	887.33	886.55	0.976	48	15.2	21	6.6
		5-year								57	17.9	21	6.6
		10-year								57	17.9	21	6.6
		25-year								57	18.0	21	6.6
		50-year								57	18.1	21	6.6
		100-year								57	18.1	21	6.6
LWLMC14	8276.2	2-year	Trapezoidal	2	30	79.9	894.87	891.00	4.842	0	0.0	2046	34.1
		5-year								51	8.1	2046	34.1
		10-year								91	10.2	2046	34.1
		25-year								129	11.8	2046	34.1
		50-year								157	12.7	2046	34.1
		100-year								193	13.8	2046	34.1
LWLMC15	8275.1	2-year	Circular	2.5	0	635.5	888.58	887.33	0.197	33	6.7	17	3.4
		5-year								34	6.8	17	3.4
		10-year								33	6.8	17	3.4
		25-year								33	6.8	17	3.4
		50-year								33	6.8	17	3.4
		100-year								33	6.7	17	3.4
LWLMC15	8275.2	2-year	Trapezoidal	3	30	635.5	896.00	892.87	0.493	15	2.0	1235	13.7
		5-year								68	1.9	1235	13.7
		10-year								96	2.3	1235	13.7
		25-year								125	2.8	1235	13.7
		50-year								144	3.2	1235	13.7
		100-year								170	3.6	1235	13.7
LWLMC16	8274.1	2-year	Circular	2	0	429.9	894.42	888.58	1.358	18	5.6	24	7.8
		5-year								17	5.4	24	7.8
		10-year								17	5.4	24	7.8
		25-year								17	5.4	24	7.8
		50-year								17	5.4	24	7.8
		100-year								17	5.6	24	7.8
LWLMC16	8274.2	2-year	Trapezoidal	3	30	429.9	898.75	894.00	1.105	0	0.0	1850	20.6
		5-year								30	0.8	1850	20.6
		10-year								39	1.0	1850	20.6
		25-year								51	1.3	1850	20.6
		50-year								60	1.4	1850	20.6
		100-year								72	1.6	1850	20.6
LWLMC17	8273.1	2-year	Circular	2	0	603.9	906.62	894.42	2.020	30	9.5	30	9.5
		5-year								31	9.8	30	9.5
		10-year								31	9.8	30	9.5
		25-year								31	9.9	30	9.5
		50-year								31	9.9	30	9.5
		100-year								31	9.9	30	9.5
LWLMC17	8273.2	2-year	Trapezoidal	2	30	603.9	911.12	897.75	2.214	0	0.0	1384	23.1
		5-year								16	0.9	1384	23.1
		10-year								25	1.3	1384	23.1
		25-year								37	1.7	1384	23.1
		50-year								46	2.1	1384	23.1
		100-year								58	2.5	1384	23.1

Table B.8
Hydraulic Modeling - Conduit Results for Future Conditions

Link Name	Conduit Name	Return Period	Shape	Diam./ Height (feet)	Bottom Width (feet)	Length (feet)	U/S Invert (feet)	D/S Invert (feet)	Conduit Slope (%)	Max Flow (cfs)	Max Velocity (fps)	Design Full Flow (cfs)	Design Velocity (fps)
LWLMC18	8417.1	2-year	Circular	2	0	51.3	908.89	906.62	4.428	32	13.1	44	14.1
		5-year								36	13.0	44	14.1
		10-year								36	13.0	44	14.1
		25-year								37	13.2	44	14.1
		50-year								37	13.0	44	14.1
		100-year								37	13.0	44	14.1
LWLMC18	8417.2	2-year	Trapezoidal	2	30	51.3	911.89	910.12	3.453	0	0.0	1728	28.8
		5-year								21	1.2	1728	28.8
		10-year								30	1.6	1728	28.8
		25-year								42	2.1	1728	28.8
		50-year								51	2.5	1728	28.8
		100-year								63	2.9	1728	28.8
RCL0820	RCL0820A	2-year	Circular	3	0	77.3	913.50	913.39	0.142	27	11.6	23	3.3
		5-year								37	5.9	23	3.3
		10-year								45	6.6	23	3.3
		25-year								51	7.1	23	3.3
		50-year								54	7.5	23	3.3
		100-year								66	9.2	23	3.3
RCL0820	RCL0820B	2-year	Trapezoidal	1	30	77.3	918.77	918.69	0.104	0	0.0	98	3.3
		5-year								0	0.0	98	3.3
		10-year								0	0.0	98	3.3
		25-year								0	0.0	98	3.3
		50-year								0	0.0	98	3.3
		100-year								0	0.0	98	3.3

Appendix C
HEC-RAS Model Results

Country Club

Table C.1
Country Club Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	5999.805	2-YEAR	108.38	929.07	935.34		935.34	0.000001	0.14	847.19	262.24
1	5999.805	5-YEAR	161.31	929.07	935.69		935.69	0.000002	0.19	942	280.17
1	5999.805	10-YEAR	193.64	929.07	935.82		935.82	0.000003	0.22	980.3	287.01
1	5999.805	25-YEAR	236.65	929.07	935.89		935.89	0.000004	0.27	999.33	291.61
1	5999.805	50-YEAR	269.64	929.07	935.97		935.98	0.000005	0.3	1024.77	297.86
1	5999.805	100-YEAR	313.79	929.07	936.06		936.06	0.000007	0.34	1050.74	304.11
1	5973.188	2-YEAR	108.38	928.54	935.34	930.32	935.34	0.000002	0.16	787.02	268.74
1	5973.188	5-YEAR	161.31	928.54	935.69	930.56	935.69	0.000003	0.21	884.9	293.26
1	5973.188	10-YEAR	193.64	928.54	935.82	930.69	935.82	0.000004	0.25	925.2	303.62
1	5973.188	25-YEAR	236.65	928.54	935.89	930.85	935.89	0.000006	0.3	945.3	308.48
1	5973.188	50-YEAR	269.64	928.54	935.97	930.96	935.98	0.000007	0.33	972.17	314.85
1	5973.188	100-YEAR	313.79	928.54	936.06	931.09	936.06	0.000009	0.38	999.58	321.11
1	5928.188		Culvert								
1	5889.01	2-YEAR	108.38	928.15	929.6	929.58	930.03	0.018049	5.28	20.53	34.64
1	5889.01	5-YEAR	161.31	928.15	929.87	929.87	930.42	0.01763	5.98	26.96	42.94
1	5889.01	10-YEAR	193.64	928.15	930.03	930.03	930.63	0.016644	6.23	31.09	49.25
1	5889.01	25-YEAR	236.65	928.15	930.21	930.21	930.89	0.016278	6.65	35.6	55.92
1	5889.01	50-YEAR	269.64	928.15	930.33	930.33	931.08	0.015699	6.93	38.92	60.79
1	5889.01	100-YEAR	313.79	928.15	930.49	930.49	931.32	0.01527	7.3	42.98	72.26
1	5845.319	2-YEAR	108.38	927.74	929.31	928.99	929.43	0.006442	2.81	38.56	51.38
1	5845.319	5-YEAR	161.31	927.74	929.52	929.2	929.68	0.006801	3.22	50.33	62.62
1	5845.319	10-YEAR	193.64	927.74	929.61	929.32	929.8	0.007011	3.5	56.58	74.23
1	5845.319	25-YEAR	236.65	927.74	929.72	929.44	929.95	0.007166	3.8	65.9	90.02
1	5845.319	50-YEAR	269.64	927.74	929.8	929.53	930.05	0.007257	4.01	73.36	99.82
1	5845.319	100-YEAR	313.79	927.74	929.9	929.63	930.17	0.007401	4.26	83.11	106.03
1	5607.176	2-YEAR	108.38	925.5	926.51	926.51	926.77	0.023565	4.06	26.68	54.15
1	5607.176	5-YEAR	161.31	925.5	926.68	926.68	926.99	0.021856	4.48	36.01	59.66
1	5607.176	10-YEAR	193.64	925.5	926.76	926.76	927.1	0.021137	4.68	41.38	62.62
1	5607.176	25-YEAR	236.65	925.5	926.87	926.87	927.24	0.02035	4.9	48.28	66.22
1	5607.176	50-YEAR	269.64	925.5	926.94	926.94	927.34	0.019869	5.07	53.19	68.69
1	5607.176	100-YEAR	313.79	925.5	927.03	927.03	927.47	0.019264	5.32	59.14	71.63
1	5344.232	2-YEAR	108.38	922.46	923.43		923.5	0.00485	2.18	49.8	78.79
1	5344.232	5-YEAR	161.31	922.46	923.57		923.68	0.005671	2.63	61.29	81.96
1	5344.232	10-YEAR	193.64	922.46	923.65		923.78	0.005935	2.85	68.05	83.77
1	5344.232	25-YEAR	236.65	922.46	923.75		923.9	0.006253	3.1	76.34	85.93
1	5344.232	50-YEAR	269.64	922.46	923.82		923.98	0.006496	3.28	82.18	87.43
1	5344.232	100-YEAR	313.79	922.46	923.9		924.09	0.006662	3.49	89.96	89.41
1	5167.427	2-YEAR	108.38	920.89	921.7	921.68	921.88	0.023111	3.48	31.1	78.35
1	5167.427	5-YEAR	161.31	920.89	921.86	921.81	922.07	0.016789	3.61	44.66	83.88
1	5167.427	10-YEAR	193.64	920.89	921.94	921.87	922.16	0.015599	3.75	51.6	86.58
1	5167.427	25-YEAR	236.65	920.89	922.04	921.96	922.28	0.014251	3.92	60.42	89.85
1	5167.427	50-YEAR	269.64	920.89	922.11	922.02	922.37	0.013525	4.06	66.51	92.01
1	5167.427	100-YEAR	313.79	920.89	922.19	922.09	922.47	0.013124	4.28	73.81	94.54
1	5009.304	2-YEAR	108.38	919.4	920.33	920.04	920.4	0.004875	2.19	49.48	181.81
1	5009.304	5-YEAR	161.31	919.4	920.48	920.19	920.58	0.005788	2.62	61.66	202.21
1	5009.304	10-YEAR	193.64	919.4	920.57	920.26	920.69	0.006015	2.8	69.26	214.16
1	5009.304	25-YEAR	236.65	919.4	920.67	920.36	920.81	0.006324	3.01	78.51	227
1	5009.304	50-YEAR	269.64	919.4	920.73	920.42	920.89	0.006616	3.18	84.77	232.83
1	5009.304	100-YEAR	313.79	919.4	920.81	920.51	920.99	0.006857	3.42	91.97	237.77
1	4894.661	2-YEAR	108.38	918.22	919.11	919.11	919.3	0.025995	3.5	30.97	113.38
1	4894.661	5-YEAR	161.31	918.22	919.23	919.23	919.43	0.020744	3.66	48.64	129.46
1	4894.661	10-YEAR	193.64	918.22	919.28	919.28	919.51	0.020677	3.89	55.48	131.94
1	4894.661	25-YEAR	236.65	918.22	919.35	919.35	919.6	0.020084	4.12	64.58	135.15
1	4894.661	50-YEAR	269.64	918.22	919.41	919.41	919.67	0.019273	4.25	71.79	137.65
1	4894.661	100-YEAR	313.79	918.22	919.46	919.46	919.75	0.018942	4.48	80.04	146.01
1	4615.427	2-YEAR	179.64	914.57	915.45	915.13	915.53	0.004409	2.24	80.22	113.24
1	4615.427	5-YEAR	264.89	914.57	915.71	915.28	915.8	0.003683	2.39	110.9	124.17
1	4615.427	10-YEAR	316.29	914.57	915.83	915.36	915.93	0.003496	2.49	126.79	128.08
1	4615.427	25-YEAR	386.21	914.57	915.98	915.45	916.09	0.003405	2.66	145.15	134.98
1	4615.427	50-YEAR	439.64	914.57	916.08		916.2	0.003323	2.77	160.15	156.01
1	4615.427	100-YEAR	509.39	914.57	916.21		916.34	0.003167	2.9	180.75	166.02

Table C.1
Country Club Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	4308.532	2-YEAR	179.64	910.96	913.37	913.32	913.71	0.008493	4.87	50.57	76.8
1	4308.532	5-YEAR	264.89	910.96	913.57	913.57	914.02	0.010284	5.85	66.51	83.07
1	4308.532	10-YEAR	316.29	910.96	913.69	913.69	914.19	0.010752	6.27	76.35	86.71
1	4308.532	25-YEAR	386.21	910.96	913.85	913.85	914.39	0.0108	6.66	90.57	91.71
1	4308.532	50-YEAR	439.64	910.96	913.97	913.97	914.53	0.01072	6.91	101.4	95.35
1	4308.532	100-YEAR	509.39	910.96	914.08	914.08	914.7	0.011169	7.32	112.74	99.02
1	4024.775	2-YEAR	179.64	909.38	910.37	910.28	910.6	0.014215	3.83	46.86	71.04
1	4024.775	5-YEAR	264.89	909.38	910.65	910.48	910.89	0.010477	3.87	68.45	81.39
1	4024.775	10-YEAR	316.29	909.38	910.84	910.58	911.06	0.008644	3.78	83.72	89.33
1	4024.775	25-YEAR	386.21	909.38	911.04	910.69	911.26	0.00706	3.75	104.8	120.77
1	4024.775	50-YEAR	439.64	909.38	911.18	910.8	911.39	0.006041	3.76	121.87	126.24
1	4024.775	100-YEAR	509.39	909.38	911.34	910.91	911.56	0.005255	3.81	142.71	132.6
1	3792.729	2-YEAR	21.19	906.18	906.92	906.92	907.09	0.024643	3.37	6.3	17.47
1	3792.729	5-YEAR	112.32	906.18	907.59	907.59	907.94	0.020523	4.76	23.57	33.87
1	3792.729	10-YEAR	195.67	906.18	907.94	907.94	908.38	0.019007	5.32	36.79	42.33
1	3792.729	25-YEAR	320.63	906.18	908.3	908.3	908.86	0.016259	6.05	54.11	51.8
1	3792.729	50-YEAR	411.95	906.18	908.51	908.51	909.17	0.015379	6.56	65.42	55.92
1	3792.729	100-YEAR	528.31	906.18	908.77	908.77	909.52	0.013897	6.99	80.83	61.11
1	3638.729		Culvert								
1	3524.657	2-YEAR	21.19	902.87	905.58	903.28	905.58	0.00003	0.35	60.53	31.41
1	3524.657	5-YEAR	112.32	902.87	907.28	904.04	907.29	0.0001	0.87	146.28	90.5
1	3524.657	10-YEAR	195.67	902.87	907.67	904.49	907.69	0.000191	1.29	185.43	110.95
1	3524.657	25-YEAR	320.63	902.87	907.95	905.04	908.01	0.00037	1.9	219.11	125.3
1	3524.657	50-YEAR	411.95	902.87	908.12	905.37	908.19	0.000509	2.3	240.31	132.35
1	3524.657	100-YEAR	528.31	902.87	908.25	905.75	908.36	0.000724	2.8	258.02	136.98
1	3493.204	2-YEAR	21.19	902.48	905.58	902.87	905.58	0.000022	0.32	66.03	30.04
1	3493.204	5-YEAR	112.32	902.48	907.28	903.62	907.29	0.000095	0.87	131.66	99.65
1	3493.204	10-YEAR	195.67	902.48	907.66	904.12	907.69	0.000172	1.26	199.8	120.18
1	3493.204	25-YEAR	320.63	902.48	907.94	904.68	907.99	0.000336	1.86	235.38	133.83
1	3493.204	50-YEAR	411.95	902.48	908.11	905.07	908.17	0.000466	2.25	257.56	141.68
1	3493.204	100-YEAR	528.31	902.48	908.23	905.49	908.33	0.000671	2.76	275.78	147.81
1	3463.204		Culvert								
1	3449.118	2-YEAR	21.19	902.04	905.53	902.78	905.54	0.000021	0.57	37.39	18.29
1	3449.118	5-YEAR	112.32	902.04	906.13	903.81	906.23	0.000324	2.52	44.6	35.88
1	3449.118	10-YEAR	195.67	902.04	906.52	904.44	906.61	0.000999	2.52	77.58	47.47
1	3449.118	25-YEAR	320.63	902.04	906.81	905.23	907	0.002125	3.41	93.96	65.18
1	3449.118	50-YEAR	411.95	902.04	906.92	905.74	907.18	0.003164	4.06	101.35	73.17
1	3449.118	100-YEAR	528.31	902.04	907.06	906.41	907.4	0.004405	4.71	112.13	83.48
1	3292.877	2-YEAR	21.19	902.04	905.53		905.53	0	0.04	544.28	164.63
1	3292.877	5-YEAR	112.32	902.04	906.18		906.18	0.000001	0.17	653.41	173.17
1	3292.877	10-YEAR	195.67	902.04	906.56		906.56	0.000003	0.27	720.72	178.25
1	3292.877	25-YEAR	320.63	902.04	906.9		906.9	0.000007	0.41	781.53	182.58
1	3292.877	50-YEAR	411.95	902.04	907.04		907.05	0.000011	0.51	807.57	184.39
1	3292.877	100-YEAR	528.31	902.04	907.22		907.23	0.000015	0.63	840.68	190.59
1	2837.428	2-YEAR	48.9	902.04	905.53	902.27	905.53	0.000002	0.17	283.27	257.85
1	2837.428	5-YEAR	122.11	902.04	906.18	902.45	906.18	0.000002	0.18	686.3	277.55
1	2837.428	10-YEAR	205.15	902.04	906.56	902.63	906.56	0.000003	0.27	760.81	285.68
1	2837.428	25-YEAR	328.92	902.04	906.9	902.84	906.9	0.000007	0.4	828.95	294.49
1	2837.428	50-YEAR	398.93	902.04	907.04	902.96	907.04	0.000009	0.46	858.23	296.58
1	2837.428	100-YEAR	500.19	902.04	907.21	903.1	907.22	0.000013	0.56	895.13	299.18
1	2805.428		Inl Struct								
1	2670.083	2-YEAR	79.38	902.32	902.9	902.9	903.07	0.025406	3.29	24.11	71.06
1	2670.083	5-YEAR	127.85	902.32	903.05	903.05	903.24	0.024121	3.55	36.02	91.17
1	2670.083	10-YEAR	216.56	902.32	903.23	903.23	903.47	0.02235	3.96	54.75	111.26
1	2670.083	25-YEAR	343.63	902.32	903.42	903.42	903.73	0.020664	4.47	76.95	125.35
1	2670.083	50-YEAR	417.47	902.32	903.51	903.51	903.86	0.019542	4.75	88.36	130.15
1	2670.083	100-YEAR	521.09	902.32	903.62	903.62	904.02	0.018634	5.11	103.37	136.2
1	2610.083		Culvert								

Table C.1
Country Club Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	2522.469	2-YEAR	79.38	891.69	893.34	892.96	893.44	0.005007	2.59	30.6	37.97
1	2522.469	5-YEAR	127.85	891.69	893.66	893.21	893.79	0.004904	2.9	44.07	45.54
1	2522.469	10-YEAR	216.56	891.69	894.03	893.56	894.22	0.004766	3.46	66.66	74.98
1	2522.469	25-YEAR	343.63	891.69	894.38	893.95	894.64	0.005012	4.16	94.9	90.93
1	2522.469	50-YEAR	417.47	891.69	894.54	894.13	894.84	0.005167	4.5	108.64	98.54
1	2522.469	100-YEAR	521.09	891.69	894.74	894.35	895.09	0.005406	4.94	125.48	108.78
1	2476.745	2-YEAR	79.38	891.45	892.99		893.14	0.007873	3.16	25.14	32.6
1	2476.745	5-YEAR	127.85	891.45	893.29		893.48	0.008615	3.53	36.25	42.64
1	2476.745	10-YEAR	216.56	891.45	893.69		893.91	0.00958	3.76	57.62	66.8
1	2476.745	25-YEAR	343.63	891.45	894.11		894.33	0.008205	3.73	92.08	96.12
1	2476.745	50-YEAR	417.47	891.45	894.32		894.53	0.006391	3.69	114.03	107.46
1	2476.745	100-YEAR	521.09	891.45	894.57		894.79	0.005179	3.78	141.2	116.89
1	2236.323	2-YEAR	67.81	889.6	891.26		891.4	0.006635	3.07	22.07	26.15
1	2236.323	5-YEAR	118.98	889.6	891.75		891.89	0.005083	3.05	38.95	38.11
1	2236.323	10-YEAR	202.95	889.6	892.29		892.46	0.003961	3.3	61.48	44.38
1	2236.323	25-YEAR	328.52	889.6	892.9		893.1	0.003391	3.66	89.88	49.44
1	2236.323	50-YEAR	416.74	889.6	893.24		893.47	0.00323	3.89	107.17	52.04
1	2236.323	100-YEAR	520.82	889.6	893.58		893.85	0.003027	4.17	125.44	54.79
1	2016.047	2-YEAR	67.81	887.94	890.21	889.58	890.33	0.003673	2.8	24.23	20.87
1	2016.047	5-YEAR	118.98	887.94	890.65	890.01	890.84	0.004497	3.48	34.2	24.72
1	2016.047	10-YEAR	202.95	887.94	891.1	890.52	891.4	0.005811	4.38	46.34	28.73
1	2016.047	25-YEAR	328.52	887.94	891.61	891.08	892.05	0.006991	5.3	62.01	33.19
1	2016.047	50-YEAR	416.74	887.94	891.86	891.39	892.41	0.007515	5.91	70.64	35.31
1	2016.047	100-YEAR	520.82	887.94	892.12	891.7	892.79	0.007935	6.57	80.05	37.46
1	974.9855	2-YEAR	169.05	881.77	884.19	883.81	884.46	0.006889	4.15	40.74	50.9
1	974.9855	5-YEAR	266.93	881.77	884.63	884.2	884.85	0.00647	3.77	70.84	60.44
1	974.9855	10-YEAR	324.83	881.77	884.8	884.4	885.05	0.006269	4	81.14	61.71
1	974.9855	25-YEAR	470.54	881.77	885.19	884.69	885.49	0.005806	4.45	105.7	64.65
1	974.9855	50-YEAR	592.15	881.77	885.47	884.9	885.82	0.005568	4.76	124.53	66.82
1	974.9855	100-YEAR	750.44	881.77	885.79	885.16	886.2	0.00539	5.14	146.08	69.32
1	426.5397	2-YEAR	169.05	875.2	878.05	878.05	878.76	0.01709	6.78	24.94	17.54
1	426.5397	5-YEAR	266.93	875.2	878.62	878.62	879.48	0.016093	7.42	35.95	21.08
1	426.5397	10-YEAR	324.83	875.2	878.9	878.9	879.82	0.015678	7.72	42.07	22.81
1	426.5397	25-YEAR	470.54	875.2	879.49	879.49	880.56	0.015204	8.31	56.6	26.86
1	426.5397	50-YEAR	592.15	875.2	879.92	879.92	881.06	0.014741	8.58	69	30.58
1	426.5397	100-YEAR	750.44	875.2	880.34	880.34	881.63	0.013815	9.12	82.65	34.45
1	180.664	2-YEAR	169.05	870.69	873.98	873.85	874.65	0.013953	6.6	25.6	15.59
1	180.664	5-YEAR	266.93	870.69	874.59	874.48	875.44	0.013967	7.4	36.05	18.5
1	180.664	10-YEAR	324.83	870.69	874.89	874.79	875.83	0.013962	7.78	41.78	19.91
1	180.664	25-YEAR	470.54	870.69	875.51	875.44	876.64	0.013956	8.53	55.17	22.88
1	180.664	50-YEAR	592.15	870.69	875.95	875.91	877.21	0.013972	9.04	65.52	24.93
1	180.664	100-YEAR	750.44	870.69	876.37	876.36	877.87	0.01396	9.81	76.63	26.97

Table C.2
Country Club Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	5999.805	2-YEAR	107.72	929.07	935.3		935.3	0.000001	0.14	837.73	260.34
1	5999.805	5-YEAR	161.11	929.07	935.71		935.71	0.000002	0.19	949.52	281.53
1	5999.805	10-YEAR	193.53	929.07	935.84		935.84	0.000003	0.22	984.23	287.83
1	5999.805	25-YEAR	236.25	929.07	935.89		935.89	0.000004	0.27	998.96	291.52
1	5999.805	50-YEAR	269.03	929.07	935.98		935.98	0.000005	0.3	1026.99	298.4
1	5999.805	100-YEAR	313.23	929.07	936.05		936.06	0.000007	0.34	1048.74	303.63
1	5973.188	2-YEAR	107.72	928.54	935.3	930.32	935.3	0.000002	0.16	777.33	266.73
1	5973.188	5-YEAR	161.11	928.54	935.71	930.56	935.71	0.000003	0.21	892.8	295.33
1	5973.188	10-YEAR	193.53	928.54	935.84	930.69	935.84	0.000004	0.24	929.35	304.63
1	5973.188	25-YEAR	236.25	928.54	935.89	930.85	935.89	0.000006	0.3	944.9	308.38
1	5973.188	50-YEAR	269.03	928.54	935.98	930.96	935.98	0.000007	0.33	974.52	315.4
1	5973.188	100-YEAR	313.23	928.54	936.05	931.08	936.06	0.000009	0.38	997.46	320.63
1	5928.188		Culvert								
1	5889.01	2-YEAR	107.72	928.15	929.59	929.58	930.02	0.018	5.26	20.46	34.57
1	5889.01	5-YEAR	161.11	928.15	929.87	929.87	930.42	0.017308	5.94	27.1	43.17
1	5889.01	10-YEAR	193.53	928.15	930.03	930.03	930.63	0.016861	6.26	30.94	49.03
1	5889.01	25-YEAR	236.25	928.15	930.21	930.21	930.89	0.016223	6.64	35.6	55.92
1	5889.01	50-YEAR	269.03	928.15	930.34	930.34	931.08	0.015571	6.91	38.96	60.91
1	5889.01	100-YEAR	313.23	928.15	930.49	930.49	931.31	0.015189	7.28	43	72.3
1	5845.319	2-YEAR	107.72	927.74	929.31	928.99	929.43	0.006451	2.81	38.36	51.24
1	5845.319	5-YEAR	161.11	927.74	929.52	929.2	929.68	0.006805	3.22	50.28	62.55
1	5845.319	10-YEAR	193.53	927.74	929.61	929.31	929.8	0.007004	3.49	56.58	74.22
1	5845.319	25-YEAR	236.25	927.74	929.72	929.43	929.95	0.007151	3.8	65.87	89.97
1	5845.319	50-YEAR	269.03	927.74	929.8	929.53	930.05	0.007255	4	73.23	99.65
1	5845.319	100-YEAR	313.23	927.74	929.9	929.63	930.17	0.007388	4.26	83.04	106.01
1	5607.176	2-YEAR	107.72	925.5	926.51	926.51	926.77	0.023491	4.05	26.6	54.09
1	5607.176	5-YEAR	161.11	925.5	926.68	926.68	926.99	0.021891	4.48	35.96	59.64
1	5607.176	10-YEAR	193.53	925.5	926.76	926.76	927.1	0.021102	4.68	41.39	62.62
1	5607.176	25-YEAR	236.25	925.5	926.87	926.87	927.24	0.020368	4.9	48.21	66.18
1	5607.176	50-YEAR	269.03	925.5	926.94	926.94	927.34	0.019908	5.07	53.07	68.63
1	5607.176	100-YEAR	313.23	925.5	927.03	927.03	927.47	0.01931	5.32	59.03	71.58
1	5344.232	2-YEAR	107.72	922.46	923.43		923.5	0.004764	2.16	49.89	78.82
1	5344.232	5-YEAR	161.11	922.46	923.57		923.68	0.005705	2.64	61.12	81.91
1	5344.232	10-YEAR	193.53	922.46	923.65		923.78	0.005959	2.85	67.93	83.74
1	5344.232	25-YEAR	236.25	922.46	923.74		923.89	0.006314	3.11	76.01	85.85
1	5344.232	50-YEAR	269.03	922.46	923.81		923.98	0.006509	3.28	82.01	87.39
1	5344.232	100-YEAR	313.23	922.46	923.9		924.09	0.006643	3.48	89.94	89.4
1	5167.427	2-YEAR	107.72	920.89	921.69	921.68	921.88	0.023691	3.5	30.74	78.19
1	5167.427	5-YEAR	161.11	920.89	921.86	921.81	922.07	0.016555	3.59	44.83	83.95
1	5167.427	10-YEAR	193.53	920.89	921.95	921.87	922.16	0.015456	3.74	51.74	86.63
1	5167.427	25-YEAR	236.25	920.89	922.05	921.96	922.28	0.01403	3.9	60.64	89.93
1	5167.427	50-YEAR	269.03	920.89	922.11	922.01	922.37	0.013482	4.06	66.48	92
1	5167.427	100-YEAR	313.23	920.89	922.19	922.09	922.47	0.013172	4.28	73.64	94.48
1	5009.304	2-YEAR	107.72	919.4	920.33	920.03	920.4	0.004806	2.18	49.51	181.87
1	5009.304	5-YEAR	161.11	919.4	920.47	920.18	920.58	0.005871	2.63	61.3	201.62
1	5009.304	10-YEAR	193.53	919.4	920.56	920.26	920.68	0.006071	2.8	69	213.76
1	5009.304	25-YEAR	236.25	919.4	920.66	920.36	920.8	0.006444	3.03	77.9	226.34
1	5009.304	50-YEAR	269.03	919.4	920.73	920.42	920.89	0.006642	3.18	84.55	232.68
1	5009.304	100-YEAR	313.23	919.4	920.81	920.51	920.99	0.006827	3.41	91.99	237.79
1	4894.661	2-YEAR	107.72	918.22	919.1	919.1	919.29	0.026648	3.53	30.53	111.57
1	4894.661	5-YEAR	161.11	918.22	919.24	919.24	919.43	0.020187	3.62	49.07	129.62
1	4894.661	10-YEAR	193.53	918.22	919.29	919.29	919.51	0.020294	3.86	55.83	132.06
1	4894.661	25-YEAR	236.25	918.22	919.36	919.36	919.6	0.019402	4.07	65.29	135.4
1	4894.661	50-YEAR	269.03	918.22	919.41	919.41	919.67	0.019186	4.24	71.79	137.65
1	4894.661	100-YEAR	313.23	918.22	919.46	919.46	919.75	0.019096	4.48	79.72	145.7
1	4615.427	2-YEAR	176.37	914.57	915.47	915.12	915.54	0.003834	2.12	83.04	114.29
1	4615.427	5-YEAR	259.03	914.57	915.69	915.27	915.78	0.003715	2.38	108.88	123.46
1	4615.427	10-YEAR	311.44	914.57	915.82	915.35	915.92	0.00351	2.48	125.4	127.8
1	4615.427	25-YEAR	381.47	914.57	915.96	915.44	916.07	0.003449	2.66	143.4	131.93
1	4615.427	50-YEAR	433.36	914.57	916.07		916.18	0.003336	2.76	158.35	155.11
1	4615.427	100-YEAR	503.94	914.57	916.19		916.32	0.003266	2.91	177.4	164.43

Table C.2
Country Club Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	4308.532	2-YEAR	176.37	910.96	913.29	913.29	913.69	0.010877	5.28	43.85	74
1	4308.532	5-YEAR	259.03	910.96	913.56	913.56	914	0.010302	5.82	65.13	82.54
1	4308.532	10-YEAR	311.44	910.96	913.67	913.67	914.17	0.010876	6.27	74.94	86.2
1	4308.532	25-YEAR	381.47	910.96	913.85	913.85	914.38	0.010482	6.57	90.77	91.78
1	4308.532	50-YEAR	433.36	910.96	913.96	913.96	914.51	0.010546	6.84	100.87	95.18
1	4308.532	100-YEAR	503.94	910.96	914.1	914.1	914.69	0.010512	7.15	114.59	99.6
1	4024.775	2-YEAR	176.37	909.38	910.68	910.27	910.77	0.004294	2.51	70.24	81.84
1	4024.775	5-YEAR	259.03	909.38	910.96	910.46	911.08	0.004072	2.72	95.67	109.73
1	4024.775	10-YEAR	311.44	909.38	911.1	910.57	911.23	0.003786	2.85	112.41	123.24
1	4024.775	25-YEAR	381.47	909.38	911.28		911.41	0.003453	3	134.71	130.2
1	4024.775	50-YEAR	433.36	909.38	911.4		911.55	0.003241	3.09	151.29	135.14
1	4024.775	100-YEAR	503.94	909.38	911.58		911.73	0.002891	3.15	176.23	142.23
1	3792.729	2-YEAR	254.2	906.18	908.12	908.12	908.62	0.017804	5.68	45.07	48.24
1	3792.729	5-YEAR	379.63	906.18	908.44	908.44	909.07	0.015381	6.35	61.83	54.65
1	3792.729	10-YEAR	457.69	906.18	908.62	908.62	909.31	0.014491	6.71	71.9	58.16
1	3792.729	25-YEAR	558.56	906.18	908.83	908.83	909.6	0.013778	7.13	84.4	62.24
1	3792.729	50-YEAR	634.4	906.18	908.98	908.98	909.8	0.013196	7.38	94.08	65.23
1	3792.729	100-YEAR	735.23	906.18	909.14	909.14	910.06	0.013372	7.84	104.58	69.91
1	3638.729		Culvert								
1	3524.657	2-YEAR	254.2	902.87	907.78	904.76	907.82	0.000283	1.61	198.14	116.82
1	3524.657	5-YEAR	379.63	902.87	908.01	905.25	908.08	0.000488	2.21	226.2	127.7
1	3524.657	10-YEAR	457.69	902.87	908.15	905.51	908.24	0.000608	2.52	244.52	133.81
1	3524.657	25-YEAR	558.56	902.87	908.27	905.83	908.39	0.000787	2.93	261.46	138.21
1	3524.657	50-YEAR	634.4	902.87	908.33	906.06	908.48	0.000954	3.26	269.04	141.51
1	3524.657	100-YEAR	735.23	902.87	908.47	906.34	908.64	0.001101	3.58	288.18	148.72
1	3493.204	2-YEAR	254.2	902.48	907.77	904.39	907.81	0.000256	1.57	213.22	125.5
1	3493.204	5-YEAR	379.63	902.48	908	904.93	908.06	0.000445	2.16	242.54	136.41
1	3493.204	10-YEAR	457.69	902.48	908.13	905.25	908.22	0.000558	2.47	261.71	143.09
1	3493.204	25-YEAR	558.56	902.48	908.25	905.59	908.37	0.000732	2.89	279.27	148.95
1	3493.204	50-YEAR	634.4	902.48	908.31	905.83	908.44	0.000895	3.22	286.91	151.43
1	3493.204	100-YEAR	735.23	902.48	908.44	906.12	908.61	0.001045	3.55	308.12	160.85
1	3463.204		Culvert								
1	3449.118	2-YEAR	254.2	902.04	906.42	904.83	906.61	0.001892	3.48	73.15	44.57
1	3449.118	5-YEAR	379.63	902.04	906.73	905.57	907.01	0.003173	4.29	88.45	58.51
1	3449.118	10-YEAR	457.69	902.04	906.87	905.98	907.21	0.004107	4.68	97.88	69.54
1	3449.118	25-YEAR	558.56	902.04	907.03	906.5	907.43	0.005104	5.08	109.86	81.42
1	3449.118	50-YEAR	634.4	902.04	907.12	906.8	907.57	0.005665	5.4	117.58	88.02
1	3449.118	100-YEAR	735.23	902.04	907.23	907.05	907.75	0.005949	5.8	127.22	95.18
1	3292.877	2-YEAR	254.2	902.04	906.51		906.51	0.000006	0.36	711.15	177.53
1	3292.877	5-YEAR	379.63	902.04	906.86		906.86	0.00001	0.49	774.44	182.09
1	3292.877	10-YEAR	457.69	902.04	907.03		907.04	0.000013	0.57	805.86	184.27
1	3292.877	25-YEAR	558.56	902.04	907.22		907.22	0.000017	0.66	840.47	190.52
1	3292.877	50-YEAR	634.4	902.04	907.33		907.34	0.00002	0.74	862.4	195.29
1	3292.877	100-YEAR	735.23	902.04	907.47		907.48	0.000025	0.83	889.3	198.09
1	2837.428	2-YEAR	190.42	902.04	906.51	902.59	906.51	0.000003	0.25	750.19	284.18
1	2837.428	5-YEAR	314.29	902.04	906.86	902.81	906.86	0.000007	0.38	821	293.92
1	2837.428	10-YEAR	394.28	902.04	907.03	902.94	907.03	0.000009	0.46	856.34	296.44
1	2837.428	25-YEAR	497.29	902.04	907.21	903.1	907.22	0.000012	0.56	894.93	299.17
1	2837.428	50-YEAR	579.56	902.04	907.32	903.21	907.33	0.000016	0.63	918.59	300.83
1	2837.428	100-YEAR	678.66	902.04	907.46	903.34	907.47	0.000019	0.72	947.35	302.83
1	2805.428		Inl Struct								
1	2670.083	2-YEAR	200.24	902.32	903.2	903.2	903.44	0.023184	3.93	50.96	107.5
1	2670.083	5-YEAR	329.82	902.32	903.39	903.39	903.7	0.021416	4.45	74.15	124.14
1	2670.083	10-YEAR	413.29	902.32	903.5	903.5	903.85	0.019985	4.77	87.19	129.66
1	2670.083	25-YEAR	524.55	902.32	903.63	903.63	904.03	0.018353	5.1	104.32	136.58
1	2670.083	50-YEAR	611.45	902.32	903.71	903.71	904.16	0.017719	5.36	116.67	141.35
1	2670.083	100-YEAR	715.94	902.32	903.82	903.82	904.31	0.016897	5.63	131.68	146.95
1	2610.083		Culvert								
1	2522.469	2-YEAR	200.24	891.69	893.98	893.51	894.15	0.004736	3.35	62.7	72.57
1	2522.469	5-YEAR	329.82	891.69	894.35	893.91	894.6	0.004956	4.09	92.34	89.51
1	2522.469	10-YEAR	413.29	891.69	894.53	894.12	894.83	0.0052	4.5	107.58	97.96
1	2522.469	25-YEAR	524.55	891.69	894.74	894.36	895.1	0.00552	4.99	125.14	108.54
1	2522.469	50-YEAR	611.45	891.69	894.91	894.5	895.3	0.005558	5.28	139.05	119.96

Table C.2
Country Club Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	2476.745	2-YEAR	200.24	891.45	893.63		893.84	0.009544	3.74	53.58	62.47
1	2476.745	5-YEAR	329.82	891.45	894.08		894.29	0.008153	3.7	89.23	94.04
1	2476.745	10-YEAR	413.29	891.45	894.3		894.52	0.00667	3.72	111.77	106.69
1	2476.745	25-YEAR	524.55	891.45	894.55		894.78	0.005412	3.84	139.75	116.4
1	2476.745	50-YEAR	611.45	891.45	894.76		894.99	0.004589	3.87	164.06	124
1	2476.745	100-YEAR	715.94	891.45	895.03		895.25	0.003622	3.83	198.85	132.3
1	2236.323	2-YEAR	190.48	889.6	892.22		892.39	0.004036	3.26	58.43	43.58
1	2236.323	5-YEAR	322	889.6	892.87		893.07	0.003412	3.64	88.47	49.22
1	2236.323	10-YEAR	405.38	889.6	893.2		893.43	0.003249	3.85	105.21	51.73
1	2236.323	25-YEAR	513.33	889.6	893.56		893.82	0.00304	4.15	124.14	54.6
1	2236.323	50-YEAR	597.21	889.6	893.81		894.11	0.002917	4.35	138.5	56.67
1	2236.323	100-YEAR	712.67	889.6	894.15		894.48	0.002767	4.59	158.17	59.4
1	2016.047	2-YEAR	190.48	887.94	891.02	890.44	891.31	0.005869	4.33	44.03	28.01
1	2016.047	5-YEAR	322	887.94	891.59	891.05	892.02	0.0069	5.24	61.39	33.03
1	2016.047	10-YEAR	405.38	887.94	891.84	891.35	892.36	0.007402	5.82	69.77	35.11
1	2016.047	25-YEAR	513.33	887.94	892.1	891.68	892.76	0.007905	6.52	79.4	37.32
1	2016.047	50-YEAR	597.21	887.94	892.31	891.91	893.06	0.008091	6.97	87.07	38.99
1	2016.047	100-YEAR	712.67	887.94	892.53	892.19	893.43	0.008649	7.63	95.96	40.84
1	974.9855	2-YEAR	258.81	881.77	884.6	884.17	884.82	0.006499	3.73	69.36	60.25
1	974.9855	5-YEAR	424.67	881.77	885.06	884.61	885.36	0.005988	4.34	97.9	63.73
1	974.9855	10-YEAR	557.39	881.77	885.39	884.85	885.73	0.005678	4.69	118.92	66.18
1	974.9855	25-YEAR	738	881.77	885.77	885.13	886.17	0.005403	5.11	144.48	69.13
1	974.9855	50-YEAR	884.17	881.77	886.02	885.36	886.48	0.005323	5.47	162.27	71.24
1	974.9855	100-YEAR	1025.06	881.77	886.26	885.56	886.77	0.00517	5.75	179.75	73.24
1	426.5397	2-YEAR	258.81	875.2	878.58	878.58	879.42	0.016156	7.38	35.08	20.82
1	426.5397	5-YEAR	424.67	875.2	879.32	879.32	880.35	0.015057	8.13	52.24	25.42
1	426.5397	10-YEAR	557.39	875.2	879.82	879.82	880.93	0.014599	8.45	65.99	29.72
1	426.5397	25-YEAR	738	875.2	880.31	880.31	881.59	0.013924	9.08	81.56	34.14
1	426.5397	50-YEAR	884.17	875.2	880.67	880.67	882.07	0.012865	9.52	94.4	37.59
1	426.5397	100-YEAR	1025.06	875.2	880.97	880.97	882.5	0.012329	9.96	106.33	40.76
1	180.664	2-YEAR	258.81	870.69	874.54	874.42	875.38	0.01397	7.35	35.22	18.28
1	180.664	5-YEAR	424.67	870.69	875.33	875.24	876.4	0.013959	8.31	51.08	22.02
1	180.664	10-YEAR	557.39	870.69	875.83	875.78	877.06	0.013968	8.9	62.62	24.38
1	180.664	25-YEAR	738	870.69	876.34	876.33	877.82	0.013967	9.75	75.82	26.82
1	180.664	50-YEAR	884.17	870.69	876.74	876.74	878.38	0.013124	10.28	86.84	28.73
1	180.664	100-YEAR	1025.06	870.69	877.11	877.11	878.88	0.012386	10.71	97.75	30.51

Nugent Creek

Table C.3
Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	6180.255	2-YEAR	146.57	917.98	918.96	918.69	919.04	0.003615	2.16	67.78	111.28
Trib. 1	6180.255	5-YEAR	212.95	917.98	919.11	918.82	919.21	0.00374	2.53	84.75	116.85
Trib. 1	6180.255	10-YEAR	252.51	917.98	919.19	918.89	919.31	0.003751	2.71	94.3	119.95
Trib. 1	6180.255	25-YEAR	306.23	917.98	919.29	918.97	919.43	0.003802	2.94	106.28	123.73
Trib. 1	6180.255	50-YEAR	347.25	917.98	919.36	919.02	919.51	0.003865	3.1	114.72	126.33
Trib. 1	6180.255	100-YEAR	402.15	917.98	919.45	919.09	919.62	0.003879	3.29	126.2	129.77
Trib. 1	5861.04	2-YEAR	146.57	916.03	916.63	916.63	916.84	0.017431	3.7	39.59	92.9
Trib. 1	5861.04	5-YEAR	212.95	916.03	916.75	916.75	917.02	0.016141	4.17	51.12	94.86
Trib. 1	5861.04	10-YEAR	252.51	916.03	916.82	916.82	917.12	0.015858	4.42	57.17	95.86
Trib. 1	5861.04	25-YEAR	306.23	916.03	916.9	916.9	917.24	0.01527	4.69	65.27	97.2
Trib. 1	5861.04	50-YEAR	347.25	916.03	916.96	916.96	917.33	0.014735	4.87	71.25	98.25
Trib. 1	5861.04	100-YEAR	402.15	916.03	917.04	917.04	917.44	0.014324	5.13	78.56	99.52
Trib. 1	5685.7	2-YEAR	146.57	912.23	916.42	913.77	916.43	0.000085	0.9	215.91	184.15
Trib. 1	5685.7	5-YEAR	212.95	912.23	916.54	914.07	916.56	0.000148	1.23	235.64	186.88
Trib. 1	5685.7	10-YEAR	252.51	912.23	916.61	914.24	916.63	0.000187	1.4	247.3	188.49
Trib. 1	5685.7	25-YEAR	306.23	912.23	916.67	914.42	916.71	0.00025	1.64	257.77	189.92
Trib. 1	5685.7	50-YEAR	347.25	912.23	916.76	914.55	916.79	0.000273	1.75	292.16	191.83
Trib. 1	5685.7	100-YEAR	402.15	912.23	916.84	914.71	916.88	0.000326	1.94	307.49	193.64
Trib. 1	5629.2		Culvert								
Trib. 1	5533.744	2-YEAR	104.5	911.6	913.03	912.72	913.25	0.005745	3.79	27.58	26.94
Trib. 1	5533.744	5-YEAR	147.01	911.6	913.52	912.96	913.71	0.003486	3.5	41.99	31.68
Trib. 1	5533.744	10-YEAR	220.41	911.6	914.26	913.3	914.42	0.002208	3.2	68.89	42.23
Trib. 1	5533.744	25-YEAR	315.71	911.6	915	913.67	915.14	0.001692	2.96	106.64	60.29
Trib. 1	5533.744	50-YEAR	381.75	911.6	915.31	913.88	915.45	0.001549	3.02	126.67	67.68
Trib. 1	5533.744	100-YEAR	469.09	911.6	915.75	914.18	915.89	0.001161	2.99	171.42	151.99
Trib. 1	5501.688	2-YEAR	104.5	911.42	912.9	912.55	913.06	0.004207	3.25	32.19	31.43
Trib. 1	5501.688	5-YEAR	147.01	911.42	913.46	912.74	913.59	0.002095	2.89	50.9	34.95
Trib. 1	5501.688	10-YEAR	220.41	911.42	914.23	913.03	914.35	0.001248	2.78	79.39	38.99
Trib. 1	5501.688	25-YEAR	315.71	911.42	914.96	913.36	915.09	0.001001	2.89	109.23	42.59
Trib. 1	5501.688	50-YEAR	381.75	911.42	915.26	913.56	915.41	0.001061	3.13	122.04	44.07
Trib. 1	5501.688	100-YEAR	469.09	911.42	915.67	913.8	915.84	0.001059	3.34	140.82	54.26
Trib. 1	5447.688		Culvert								
Trib. 1	5374.909	2-YEAR	104.5	911.08	912.9	912.08	912.95	0.001149	1.85	56.55	48.77
Trib. 1	5374.909	5-YEAR	147.01	911.08	913.44	912.27	913.48	0.000736	1.73	85.14	58.17
Trib. 1	5374.909	10-YEAR	220.41	911.08	914.16	912.53	914.21	0.000499	1.67	132.11	70.96
Trib. 1	5374.909	25-YEAR	315.71	911.08	914.71	912.82	914.76	0.000508	1.81	174.61	84.31
Trib. 1	5374.909	50-YEAR	381.75	911.08	914.85	912.99	914.92	0.000627	2.04	186.81	87.94
Trib. 1	5374.909	100-YEAR	469.09	911.08	915	913.2	915.08	0.000801	2.35	199.66	91.61
Trib. 1	5302.702	2-YEAR	104.5	910.49	912.77	911.87	912.85	0.001495	2.28	45.86	34.97
Trib. 1	5302.702	5-YEAR	147.01	910.49	913.34	912.13	913.41	0.001009	2.17	68.29	49.08
Trib. 1	5302.702	10-YEAR	220.41	910.49	914.1	912.47	914.16	0.000624	2.08	123.79	97.61
Trib. 1	5302.702	25-YEAR	315.71	910.49	914.65	912.83	914.72	0.000549	2.18	189.02	133.55
Trib. 1	5302.702	50-YEAR	381.75	910.49	914.78	913.03	914.87	0.000659	2.44	206.66	135.56
Trib. 1	5302.702	100-YEAR	469.09	910.49	914.91	913.29	915.01	0.000828	2.79	223.98	137.5
Trib. 1	5243.702		Culvert								
Trib. 1	5062.864	2-YEAR	104.5	908.84	911.26	909.81	911.31	0.000597	1.8	57.93	30.82
Trib. 1	5062.864	5-YEAR	147.01	908.84	911.82	910.04	911.87	0.00067	1.87	78.5	43.44
Trib. 1	5062.864	10-YEAR	220.41	908.84	912.76	910.39	912.8	0.000352	1.6	172.71	173.1
Trib. 1	5062.864	25-YEAR	315.71	908.84	914.26	910.78	914.27	0.000076	1.04	436.69	231.86
Trib. 1	5062.864	50-YEAR	381.75	908.84	914.5	911.01	914.51	0.000086	1.15	499.51	242.82
Trib. 1	5062.864	100-YEAR	469.09	908.84	914.69	911.35	914.71	0.000106	1.32	541.19	251.72
Trib. 1	4951.364		Culvert								
Trib. 1	4770.093	2-YEAR	104.5	907.64	909.16	909.09	909.39	0.0088	4.02	30.04	52.75
Trib. 1	4770.093	5-YEAR	147.01	907.64	909.33	909.26	909.61	0.008724	4.41	39.82	58.6
Trib. 1	4770.093	10-YEAR	220.41	907.64	909.58	909.49	909.91	0.008538	4.93	55.34	70.55
Trib. 1	4770.093	25-YEAR	315.71	907.64	909.83	909.73	910.22	0.008065	5.48	74.52	81.08
Trib. 1	4770.093	50-YEAR	381.75	907.64	909.99	909.89	910.41	0.007737	5.77	87.68	86.99
Trib. 1	4770.093	100-YEAR	469.09	907.64	910.26	910.05	910.66	0.006076	5.71	113.01	97.45
Trib. 1	4471.528	2-YEAR	104.5	906.69	908.16		908.2	0.002105	2.16	72.29	107.01
Trib. 1	4471.528	5-YEAR	147.01	906.69	908.36		908.41	0.002099	2.45	94.35	119.85
Trib. 1	4471.528	10-YEAR	220.41	906.69	908.63		908.7	0.002083	2.83	130.46	140.3
Trib. 1	4471.528	25-YEAR	315.71	906.69	908.89		908.97	0.00221	3.25	168.76	159.14
Trib. 1	4471.528	50-YEAR	381.75	906.69	909.02		909.11	0.002375	3.55	190.2	168.77
Trib. 1	4471.528	100-YEAR	469.09	906.69	908.96		909.12	0.004107	4.56	180.44	164.46

Table C.3
Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	4165.382	2-YEAR	104.5	904.11	906.74	906.74	906.98	0.008936	4.53	34.97	70.73
Trib. 1	4165.382	5-YEAR	147.01	904.11	906.88	906.88	907.16	0.009569	5.01	46.06	79.55
Trib. 1	4165.382	10-YEAR	220.41	904.11	907.08	907.08	907.41	0.010392	5.63	62.91	91.34
Trib. 1	4165.382	25-YEAR	315.71	904.11	907.31	907.31	907.65	0.009928	5.95	89.68	155.41
Trib. 1	4165.382	50-YEAR	381.75	904.11	907.46	907.46	907.77	0.008992	5.92	116.19	200.23
Trib. 1	4165.382	100-YEAR	469.09	904.11	907.98	907.58	908.09	0.002678	3.9	238.8	264.26
Trib. 1	3965.882		Culvert								
Trib. 1	3874.173	2-YEAR	104.5	902.28	904.74	903.72	904.85	0.00155	2.62	39.88	24.83
Trib. 1	3874.173	5-YEAR	147.01	902.28	905.33	904	905.44	0.001241	2.63	55.84	31.04
Trib. 1	3874.173	10-YEAR	220.41	902.28	905.78	904.42	905.92	0.001341	3.02	89.19	182.68
Trib. 1	3874.173	25-YEAR	315.71	902.28	906.15	904.86	906.31	0.001432	3.35	126.4	260.57
Trib. 1	3874.173	50-YEAR	381.75	902.28	906.37	905.13	906.53	0.001429	3.52	152.03	296.72
Trib. 1	3874.173	100-YEAR	469.09	902.28	906.63	905.77	906.8	0.001386	3.69	183.09	309.18
Trib. 1	3458.173	2-YEAR	212.59	899.76	902.44	902.3	902.92	0.00978	5.58	38.08	45.86
Trib. 1	3458.173	5-YEAR	343.19	899.76	902.91	902.83	903.52	0.010445	6.3	54.43	106.06
Trib. 1	3458.173	10-YEAR	456.57	899.76	903.17	903.17	903.93	0.011622	7.02	65.05	228.11
Trib. 1	3458.173	25-YEAR	597.18	899.76	903.52	903.52	904.36	0.011135	7.36	81.18	259.97
Trib. 1	3458.173	50-YEAR	697.08	899.76	903.74	903.74	904.63	0.010921	7.58	92.01	274.1
Trib. 1	3458.173	100-YEAR	831.43	899.76	903.99	903.99	904.96	0.01069	7.89	105.45	306.87
Trib. 1	3254.669	2-YEAR	212.59	898.34	901.54	900.93	901.72	0.003465	3.49	60.95	65.95
Trib. 1	3254.669	5-YEAR	343.19	898.34	902.05	901.38	902.29	0.003404	3.96	86.86	240.21
Trib. 1	3254.669	10-YEAR	456.57	898.34	902.24	901.69	902.46	0.003066	4.04	176.34	317.7
Trib. 1	3254.669	25-YEAR	597.18	898.34	902.35	901.99	902.62	0.003744	4.64	211.5	323.08
Trib. 1	3254.669	50-YEAR	697.08	898.34	902.45	902.37	902.73	0.003739	4.81	245.99	327.94
Trib. 1	3254.669	100-YEAR	831.43	898.34	902.59	902.46	902.86	0.003666	4.97	290.69	333.93
Trib. 1	2787.505	2-YEAR	212.59	896.15	898.38	898.36	898.92	0.012392	5.89	36.07	32.33
Trib. 1	2787.505	5-YEAR	343.19	896.15	898.81	898.81	899.51	0.01232	6.71	51.11	37.49
Trib. 1	2787.505	10-YEAR	456.57	896.15	899.14	899.14	899.93	0.011849	7.16	63.77	41.24
Trib. 1	2787.505	25-YEAR	597.18	896.15	899.68	899.68	900.32	0.00718	6.54	108.81	116.53
Trib. 1	2787.505	50-YEAR	697.08	896.15	899.87	899.87	900.51	0.006739	6.7	131.26	126.88
Trib. 1	2787.505	100-YEAR	831.43	896.15	900.07	900.07	900.74	0.006488	6.98	158.27	141.53
Trib. 1	2264.821	2-YEAR	212.59	894.21	896.8		896.9	0.001696	2.53	84.15	60.78
Trib. 1	2264.821	5-YEAR	343.19	894.21	897.4		897.52	0.001564	2.76	124.35	74.02
Trib. 1	2264.821	10-YEAR	456.57	894.21	897.82		897.95	0.00149	2.91	156.9	83.15
Trib. 1	2264.821	25-YEAR	597.18	894.21	898.23		898.37	0.001373	3.1	196.16	115.15
Trib. 1	2264.821	50-YEAR	697.08	894.21	898.49		898.65	0.001259	3.2	232.48	159
Trib. 1	2264.821	100-YEAR	831.43	894.21	898.81		898.97	0.001138	3.3	297.95	267.4
Trib. 1	1906.714	2-YEAR	212.59	892.71	895.73		895.99	0.004013	4.09	52.01	34.34
Trib. 1	1906.714	5-YEAR	343.19	892.71	896.25		896.61	0.004542	4.83	71.12	40.18
Trib. 1	1906.714	10-YEAR	456.57	892.71	896.53		897	0.005369	5.52	82.75	43.34
Trib. 1	1906.714	25-YEAR	597.18	892.71	896.72		897.38	0.007057	6.55	91.24	47.03
Trib. 1	1906.714	50-YEAR	697.08	892.71	896.76	896.62	897.63	0.009053	7.48	93.29	48.92
Trib. 1	1906.714	100-YEAR	831.43	892.71	896.95	896.95	897.98	0.00995	8.15	103.27	57.27
Trib. 1	1521.886	2-YEAR	212.59	892.15	894.78	894	894.89	0.00199	2.7	78.67	57.86
Trib. 1	1521.886	5-YEAR	343.19	892.15	895.36	894.38	895.49	0.001823	2.94	118.66	90.82
Trib. 1	1521.886	10-YEAR	456.57	892.15	895.72	894.65	895.87	0.001608	3.16	156.44	165.22
Trib. 1	1521.886	25-YEAR	597.18	892.15	896.14	894.95	896.28	0.001249	3.15	268.68	345.92
Trib. 1	1521.886	50-YEAR	697.08	892.15	896.34	895.13	896.47	0.001124	3.15	345.36	387.92
Trib. 1	1521.886	100-YEAR	831.43	892.15	896.57	895.36	896.69	0.000985	3.13	438.54	394.38
Trib. 1	1205.084	2-YEAR	212.59	891.18	893.86	893.22	894.08	0.003366	3.78	56.26	36.88
Trib. 1	1205.084	5-YEAR	343.19	891.18	894.23	893.7	894.6	0.00463	4.85	70.79	40.51
Trib. 1	1205.084	10-YEAR	456.57	891.18	894.59	894.02	895.03	0.0048	5.32	85.9	43.97
Trib. 1	1205.084	25-YEAR	597.18	891.18	895.19	894.4	895.62	0.003767	5.23	114.12	85.29
Trib. 1	1205.084	50-YEAR	697.08	891.18	895.36	894.62	895.83	0.004036	5.56	137.74	102.62
Trib. 1	1205.084	100-YEAR	831.43	891.18	895.57	894.91	896.1	0.004281	5.98	159.55	109.81
Trib. 1	1205		Lat Struct								
Trib. 1	779.4147	2-YEAR	212.59	890	892.67	891.89	892.84	0.002496	3.31	64.26	66.85
Trib. 1	779.4147	5-YEAR	343.19	890	893.71	892.34	893.79	0.000873	2.54	179.61	130.35
Trib. 1	779.4147	10-YEAR	456.57	890	894.28	892.67	894.36	0.000606	2.46	259.14	145.47
Trib. 1	779.4147	25-YEAR	597.14	890	895.08	893.01	895.14	0.000376	2.27	384.37	174.23
Trib. 1	779.4147	50-YEAR	694.74	890	895.23	893.35	895.3	0.00043	2.5	410.56	177.25
Trib. 1	779.4147	100-YEAR	810.88	890	895.42	893.49	895.51	0.000474	2.71	446.02	181.75

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Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	581.3154	2-YEAR	270.38	888.11	892.54		892.61	0.000617	2.16	151.66	135.89
Trib. 1	581.3154	5-YEAR	393.44	888.11	893.66		893.7	0.000244	1.74	320.46	171.85
Trib. 1	581.3154	10-YEAR	481.33	888.11	894.25		894.28	0.000183	1.67	431.84	197.04
Trib. 1	581.3154	25-YEAR	523.36	888.11	895.07		895.09	0.000093	1.35	603.37	223.09
Trib. 1	581.3154	50-YEAR	575.52	888.11	895.22		895.24	0.000098	1.41	637.55	226.11
Trib. 1	581.3154	100-YEAR	639.99	888.11	895.42		895.45	0.000101	1.48	683.51	230.12
Trib. 1	475.7265	2-YEAR	270.38	887.58	892.47		892.54	0.00062	2.2	150.84	142.86
Trib. 1	475.7265	5-YEAR	393.44	887.58	893.64		893.67	0.000227	1.69	346.82	191.58
Trib. 1	475.7265	10-YEAR	481.33	887.58	894.24		894.27	0.000162	1.58	466.51	206.35
Trib. 1	475.7265	25-YEAR	501.95	887.58	895.06		895.08	0.000075	1.22	647.24	230.45
Trib. 1	475.7265	50-YEAR	527.35	887.58	895.22		895.23	0.000072	1.22	682.79	233.16
Trib. 1	475.7265	100-YEAR	549.87	887.58	895.42		895.44	0.000066	1.2	730.58	236.76
Trib. 1	359.2033	2-YEAR	410.59	887.02	892.46	888.7	892.5	0.000148	1.85	245.98	362.18
Trib. 1	359.2033	5-YEAR	582.02	887.02	893.58	889.07	893.64	0.000156	2.15	299.74	385.65
Trib. 1	359.2033	10-YEAR	705.77	887.02	894.15	889.3	894.23	0.000171	2.38	327.31	399.98
Trib. 1	359.2033	25-YEAR	822.06	887.02	894.96	889.52	895.04	0.000161	2.48	366.12	442.11
Trib. 1	359.2033	50-YEAR	840.57	887.02	895.11	889.55	895.2	0.000157	2.49	373.46	442.11
Trib. 1	359.2033	100-YEAR	868.1	887.02	895.31	889.59	895.4	0.000154	2.5	383.14	442.11
Trib. 1	320.703		Culvert								
Trib. 1	278.0496	2-YEAR	410.59	886.74	891.64	890.06	891.82	0.001052	3.56	129.35	209.15
Trib. 1	278.0496	5-YEAR	582.02	886.74	892.3	890.56	892.54	0.001101	4.11	159.87	223.02
Trib. 1	278.0496	10-YEAR	705.77	886.74	892	890.84	892.42	0.002142	5.44	146.07	216.73
Trib. 1	278.0496	25-YEAR	822.06	886.74	892.15	891.07	892.67	0.002527	6.07	152.83	219.81
Trib. 1	278.0496	50-YEAR	840.57	886.74	892.17	891.12	892.71	0.002579	6.16	154.04	220.36
Trib. 1	278.0496	100-YEAR	868.1	886.74	892.21	891.15	892.77	0.002649	6.28	155.91	221.21
Trib. 1	234.3802	2-YEAR	410.59	886.76	891.01	890.55	891.6	0.006046	6.19	66.3	59.35
Trib. 1	234.3802	5-YEAR	582.02	886.76	891.57	891.12	892.3	0.006215	6.82	85.31	248.59
Trib. 1	234.3802	10-YEAR	705.77	886.76	891.97	891.47	892.24	0.00272	4.86	252.32	380.97
Trib. 1	234.3802	25-YEAR	822.06	886.76	892.24	891.87	892.39	0.001781	4.13	404.74	416.82
Trib. 1	234.3802	50-YEAR	840.57	886.76	892.28	891.88	892.43	0.001697	4.07	421.07	417.66
Trib. 1	234.3802	100-YEAR	868.1	886.76	892.34	891.91	892.48	0.001577	3.97	445.96	418.93
Trib. 1	25.61934	2-YEAR	410.59	885.25	889.8	889.28	890.34	0.005906	5.87	69.96	298
Trib. 1	25.61934	5-YEAR	582.02	885.25	890.39	889.87	891	0.005904	6.27	92.86	425.54
Trib. 1	25.61934	10-YEAR	705.77	885.25	890.73	890.21	891.39	0.005912	6.53	108.15	542.27
Trib. 1	25.61934	25-YEAR	822.06	885.25	891.02	890.5	891.72	0.005914	6.74	121.93	704.28
Trib. 1	25.61934	50-YEAR	840.57	885.25	891.06	890.54	891.77	0.005911	6.77	124.09	763.11
Trib. 1	25.61934	100-YEAR	868.1	885.25	891.12	890.6	891.84	0.005914	6.82	127.24	819.92
Main	22385.36	2-YEAR	396.42	911.24	914.63	914.63	915.24	0.010712	6.47	68.46	205.51
Main	22385.36	5-YEAR	616.07	911.24	915.22	915.22	915.74	0.007289	6.26	134.13	339.41
Main	22385.36	10-YEAR	696.34	911.24	915.34	915.34	915.87	0.00712	6.44	152.75	354.34
Main	22385.36	25-YEAR	824.14	911.24	915.48	915.48	916.05	0.007151	6.78	178.44	374.96
Main	22385.36	50-YEAR	947.13	911.24	915.58	915.58	915.7	0.002268	3.94	439.79	388.58
Main	22385.36	100-YEAR	1113.61	911.24	915.58	915.58	915.75	0.003136	4.63	439.79	388.58
Main	21872.73	2-YEAR	396.42	909.93	913.55		913.62	0.001261	2.54	255.49	284.78
Main	21872.73	5-YEAR	616.07	909.93	913.88		913.97	0.00135	2.95	355.97	329.73
Main	21872.73	10-YEAR	696.34	909.93	914.1		914.18	0.001064	2.8	432.71	361.13
Main	21872.73	25-YEAR	824.14	909.93	914.43		914.5	0.000804	2.66	561.93	422.08
Main	21872.73	50-YEAR	947.13	909.93	914.63		914.69	0.000742	2.68	648.74	449.07
Main	21872.73	100-YEAR	1113.61	909.93	914.87		914.93	0.000681	2.71	758.48	472.21
Main	21557.51	2-YEAR	578.1	909.89	913.25	912.65	913.29	0.000925	2.56	484.51	488.97
Main	21557.51	5-YEAR	897.39	909.89	913.53	912.83	913.59	0.001135	3.06	618.12	566.24
Main	21557.51	10-YEAR	1004.12	909.89	913.88	912.84	913.92	0.000679	2.58	797.18	657.3
Main	21557.51	25-YEAR	1293.23	909.89	914.26	913.03	914.29	0.000564	2.55	1106.75	735.33
Main	21557.51	50-YEAR	1537.44	909.89	914.46	913.13	914.5	0.00056	2.65	1255.4	765.78
Main	21557.51	100-YEAR	1880.07	909.89	914.7	913.25	914.74	0.000574	2.8	1436.05	803.33
Main	20896.61	2-YEAR	578.1	907.73	911.93	911.43	912.18	0.003853	4.33	195.38	376.41
Main	20896.61	5-YEAR	897.39	907.73	913.07	912.12	913.11	0.000498	2.2	802.16	657.01
Main	20896.61	10-YEAR	1004.12	907.73	913.66	912.19	913.68	0.000214	1.64	1214.72	747.5
Main	20896.61	25-YEAR	1293.23	907.73	914.07	912.36	914.08	0.000194	1.68	1512.63	793.11
Main	20896.61	50-YEAR	1537.44	907.73	914.25	912.44	914.28	0.000217	1.83	1659.34	836.51
Main	20896.61	100-YEAR	1880.07	907.73	914.47	912.7	914.5	0.000248	2.03	1870.78	874.61
Main	20345.11	2-YEAR	578.1	907.1	911.65	910.5	911.67	0.00034	1.64	722.83	603.45
Main	20345.11	5-YEAR	897.39	907.1	913	910.73	913.01	0.000081	1.04	1784.65	989.45
Main	20345.11	10-YEAR	1004.12	907.1	913.63	910.72	913.64	0.000043	0.84	2380.69	1077.02
Main	20345.11	25-YEAR	1293.23	907.1	914.03	911.12	914.04	0.000045	0.92	2791.43	1235.24
Main	20345.11	50-YEAR	1537.44	907.1	914.21	911.22	914.22	0.000057	1.06	3150.12	1281.76
Main	20345.11	100-YEAR	1880.07	907.1	914.42	911.32	914.43	0.000067	1.18	3422.84	1307.06

Table C.3
Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	20253.01	2-YEAR	809.47	907.04	911.49	909.32	911.6	0.000587	2.81	358.43	658.93
Main	20253.01	5-YEAR	1252.35	907.04	912.86	910.07	912.97	0.000387	2.83	564.49	1054.41
Main	20253.01	10-YEAR	1423.47	907.04	913.62	910.38	913.63	0.000051	1.13	2923.32	1295.86
Main	20253.01	25-YEAR	1788.6	907.04	914.02	910.82	914.03	0.000052	1.19	3451.53	1345.12
Main	20253.01	50-YEAR	2087.4	907.04	914.2	911.06	914.21	0.000058	1.29	3693.4	1361.77
Main	20253.01	100-YEAR	2495.8	907.04	914.41	911.37	914.42	0.000067	1.41	3979.84	1375.03
Main	20179.01		Culvert								
Main	20112.54	2-YEAR	809.47	906.62	910.3	909.03	910.61	0.003105	4.51	190.65	466.92
Main	20112.54	5-YEAR	1252.35	906.62	910.7	910.02	911.18	0.003923	5.68	246.37	552.95
Main	20112.54	10-YEAR	1423.47	906.62	910.77	910.39	911.35	0.0046	6.26	255.54	573.54
Main	20112.54	25-YEAR	1788.6	906.62	910.71	910.71	911.68	0.007896	8.08	247.61	558.1
Main	20112.54	50-YEAR	2087.4	906.62	910.95	910.95	911.99	0.007649	8.45	281.01	612.22
Main	20112.54	100-YEAR	2495.8	906.62	911.23	911.23	912.39	0.007605	8.98	319.97	678.09
Main	20048.73	2-YEAR	809.47	906	910.27	909.94	910.34	0.001861	3.71	563.7	671.49
Main	20048.73	5-YEAR	1252.35	906	910.81	910.09	910.85	0.001007	3.11	938.48	750.7
Main	20048.73	10-YEAR	1423.47	906	910.91	910.19	910.96	0.001026	3.22	1016.88	771.38
Main	20048.73	25-YEAR	1788.6	906	910.68	910.28	910.79	0.002784	5.03	846.93	726.63
Main	20048.73	50-YEAR	2087.4	906	910.83	910.35	910.94	0.002658	5.08	955.01	755.08
Main	20048.73	100-YEAR	2495.8	906	911.02	910.45	911.13	0.002542	5.17	1093.79	791.37
Main	19755.87	2-YEAR	809.47	905.68	910.14	909.67	910.15	0.000292	1.34	1103.44	794.17
Main	19755.87	5-YEAR	1252.35	905.68	909.83	909.83	910.14	0.012649	8.26	351.69	763.24
Main	19755.87	10-YEAR	1423.47	905.68	909.88	909.88	910.22	0.013501	8.63	374.7	768.98
Main	19755.87	25-YEAR	1788.6	905.68	910.23	910.06	910.27	0.001189	2.78	1171.8	801.22
Main	19755.87	50-YEAR	2087.4	905.68	910.38	910.06	910.43	0.001188	2.89	1298.79	814.15
Main	19755.87	100-YEAR	2495.8	905.68	910.57	910.06	910.62	0.001206	3.05	1455.38	830.08
Main	18948.9	2-YEAR	867.76	903.35	907.67	907.41	907.79	0.004272	5.14	396.2	583.51
Main	18948.9	5-YEAR	1318.69	903.35	907.85	907.59	908.02	0.005751	6.26	476.23	610.69
Main	18948.9	10-YEAR	1569.75	903.35	907.87	907.69	908.1	0.007801	7.32	483.11	612.48
Main	18948.9	25-YEAR	1943.95	903.35	907.98	907.82	908.26	0.008877	8.03	532.73	625.55
Main	18948.9	50-YEAR	2252.01	903.35	908.07	907.9	908.38	0.009528	8.49	573.09	635.67
Main	18948.9	100-YEAR	2676.44	903.35	908.21	908.01	908.56	0.009731	8.87	639.62	656.76
Main	17703.24	2-YEAR	867.76	900.16	905.61	905.26	905.71	0.001219	3.72	584.71	673.49
Main	17703.24	5-YEAR	1318.69	900.16	906.15	905.47	906.22	0.000869	3.47	988.65	1154.41
Main	17703.24	10-YEAR	1569.75	900.16	906.41	905.57	906.46	0.000687	3.22	1391.16	1227.97
Main	17703.24	25-YEAR	1943.95	900.16	906.66	905.72	906.7	0.000613	3.16	1705.57	1275.69
Main	17703.24	50-YEAR	2252.01	900.16	906.85	905.81	906.89	0.000568	3.13	1953.86	1311.99
Main	17703.24	100-YEAR	2676.44	900.16	907.08	906.02	907.12	0.000537	3.15	2257.14	1354.2
Main	17054.09	2-YEAR	941.66	899.18	904.67	904.42	904.77	0.00173	3.26	451.73	395.27
Main	17054.09	5-YEAR	1567.56	899.18	905.38	904.42	905.48	0.001458	3.65	867.05	740.76
Main	17054.09	10-YEAR	1942.53	899.18	904.43	904.43	905.06	0.012347	8	372.45	323.97
Main	17054.09	25-YEAR	2500.77	899.18	904.68	904.68	905.38	0.011934	8.58	455.52	398.91
Main	17054.09	50-YEAR	2935.26	899.18	904.85	904.85	905.62	0.012084	9.11	515.94	461.55
Main	17054.09	100-YEAR	3541.39	899.18	905.14	905.14	905.92	0.01073	9.31	630.47	686.75
Main	16033.01	2-YEAR	890.18	897.11	902.87	901.66	903.04	0.002012	3.56	306.22	1047.25
Main	16033.01	5-YEAR	1552.25	897.11	903.47	902.29	903.74	0.002478	4.66	422.52	1109.81
Main	16033.01	10-YEAR	2002.35	897.11	903.5	903.5	903.51	0.000182	1.27	2482.19	1116.15
Main	16033.01	25-YEAR	2661.01	897.11	903.5	903.5	903.52	0.000321	1.69	2482.05	1116.14
Main	16033.01	50-YEAR	3182.19	897.11	903.5	903.5	903.53	0.000459	2.02	2481.99	1116.14
Main	16033.01	100-YEAR	3805.35	897.11	903.5	903.5	903.54	0.000656	2.42	2481.99	1116.14
Main	15391.28	2-YEAR	890.18	894.96	901.24	901.24	901.53	0.002711	5.43	395.83	757.22
Main	15391.28	5-YEAR	1552.25	894.96	901.54	901.54	901.88	0.003451	6.51	609.77	905.58
Main	15391.28	10-YEAR	2002.35	894.96	901.78	901.68	902.08	0.003238	6.57	777.2	966.48
Main	15391.28	25-YEAR	2661.01	894.96	902.11	901.91	902.27	0.002015	5.48	1303.8	1040.05
Main	15391.28	50-YEAR	3182.19	894.96	902.32	901.91	902.46	0.001867	5.45	1521.4	1057.18
Main	15391.28	100-YEAR	3805.35	894.96	902.55	902	902.68	0.001737	5.44	1765.49	1072.21
Main	14908.33	2-YEAR	890.18	893.97	900.95	899.61	900.97	0.000226	1.55	1125.89	775.83
Main	14908.33	5-YEAR	1552.25	893.97	901.3	899.92	901.33	0.000388	2.18	1408.15	839.21
Main	14908.33	10-YEAR	2002.35	893.97	901.43	900.09	901.48	0.000534	2.62	1521.92	879.5
Main	14908.33	25-YEAR	2661.01	893.97	901.65	900.28	901.71	0.000678	3.08	1714.8	925.97
Main	14908.33	50-YEAR	3182.19	893.97	901.82	900.41	901.89	0.000774	3.38	1859.78	982.7
Main	14908.33	100-YEAR	3805.35	893.97	902.01	900.56	902.1	0.000855	3.67	2039.95	1047.79
Main	14522	2-YEAR	890.18	893.47	900.92	898.95	900.93	0.000051	0.94	2236.65	1209.12
Main	14522	5-YEAR	1552.25	893.47	901.25	899.22	901.26	0.0001	1.38	2612.58	1263.52
Main	14522	10-YEAR	2002.35	893.47	901.36	899.27	901.37	0.000144	1.68	2744.45	1283.91
Main	14522	25-YEAR	2661.01	893.47	901.56	899.51	901.57	0.000198	2.02	2976	1377.09
Main	14522	50-YEAR	3182.19	893.47	901.71	899.61	901.72	0.000228	2.21	3383.54	1410.56
Main	14522	100-YEAR	3805.35	893.47	901.89	899.74	901.91	0.00026	2.41	3645.64	1426.82

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Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	14191.31	2-YEAR	1022.73	892.69	900.91	897.17	900.92	0.000028	0.74	2457.81	1024.01
Main	14191.31	5-YEAR	1663.47	892.69	901.22	897.99	901.23	0.000056	1.08	2744.18	1086.53
Main	14191.31	10-YEAR	2016.3	892.69	901.33	898.35	901.34	0.000075	1.27	2841.05	1104.11
Main	14191.31	25-YEAR	2630.14	892.69	901.51	898.55	901.52	0.000109	1.56	3011.73	1129.8
Main	14191.31	50-YEAR	3091.55	892.69	901.64	898.68	901.67	0.000133	1.76	3144.74	1149.56
Main	14191.31	100-YEAR	3710.45	892.69	901.81	898.84	901.84	0.000167	2.01	3311.47	1174.12
Main	14120.59	2-YEAR	1022.73	892.69	900.91	897.85	900.91	0.000027	0.76	2674.17	938.99
Main	14120.59	5-YEAR	1663.47	892.69	901.22	898.47	901.23	0.000056	1.13	2978.32	1012.09
Main	14120.59	10-YEAR	2016.3	892.69	901.32	898.75	901.33	0.000075	1.32	3081.85	1021.73
Main	14120.59	25-YEAR	2630.14	892.69	901.5	899.2	901.52	0.000109	1.63	3264.18	1038.68
Main	14120.59	50-YEAR	3091.55	892.69	901.64	899.53	901.65	0.000133	1.83	3406.55	1049.83
Main	14120.59	100-YEAR	3710.45	892.69	901.81	899.91	901.83	0.000165	2.07	3584.77	1064.51
Main	14057.59		Culvert								
Main	13981.58	2-YEAR	1022.73	892.69	898.49	897.42	898.95	0.002788	5.65	228.3	695.71
Main	13981.58	5-YEAR	1663.47	892.69	898.69	898.69	899.67	0.005691	8.4	256.46	716.55
Main	13981.58	10-YEAR	2016.3	892.69	899	899	900.07	0.005779	8.95	299.24	758.37
Main	13981.58	25-YEAR	2630.14	892.69	899.45	899.45	900.68	0.006006	9.82	362.34	782.49
Main	13981.58	50-YEAR	3091.55	892.69	899.75	899.75	901.1	0.006126	10.39	405.26	789.64
Main	13981.58	100-YEAR	3710.45	892.69	900	900	900.09	0.00078	3.84	1952.01	803.3
Main	13923.13	2-YEAR	1022.73	892.71	897.09	897.09	898.41	0.009472	9.24	111.86	479.94
Main	13923.13	5-YEAR	1663.47	892.71	897.7	897.7	897.93	0.00255	5.47	669.63	613.25
Main	13923.13	10-YEAR	2016.3	892.71	897.7	897.7	898.04	0.003747	6.63	669.63	613.25
Main	13923.13	25-YEAR	2630.14	892.71	897.78	897.78	898.27	0.005414	8.1	712.85	628.19
Main	13923.13	50-YEAR	3091.55	892.71	897.9	897.9	898.44	0.005878	8.63	780.39	651.54
Main	13923.13	100-YEAR	3710.45	892.71	898.06	898.06	898.61	0.005968	8.97	922.05	689.05
Main	13313.13	2-YEAR	1022.73	891.89	895.64	895.19	895.69	0.001088	3.01	836.08	1447.72
Main	13313.13	5-YEAR	1663.47	891.89	896.03	895.41	896.08	0.001048	3.24	1191.24	1580.77
Main	13313.13	10-YEAR	2016.3	891.89	896.22	895.49	896.28	0.001062	3.41	1392.98	1761.15
Main	13313.13	25-YEAR	2630.14	891.89	896.44	895.64	896.47	0.000663	2.81	2384.71	1812.39
Main	13313.13	50-YEAR	3091.55	891.89	896.64	895.73	896.67	0.000587	2.75	2763.9	1841.05
Main	13313.13	100-YEAR	3710.45	891.89	896.93	895.83	896.95	0.000497	2.67	3290.83	1880.15
Main	12489.32	2-YEAR	1022.73	890.94	894.85	894.22	894.88	0.000965	2.22	879.92	831.07
Main	12489.32	5-YEAR	1663.47	890.94	895.28	894.39	895.31	0.000875	2.4	1244.78	860.04
Main	12489.32	10-YEAR	2016.3	890.94	895.48	894.48	895.52	0.000845	2.51	1423.57	872.25
Main	12489.32	25-YEAR	2630.14	890.94	895.85	894.61	895.89	0.00077	2.64	1743.83	899.61
Main	12489.32	50-YEAR	3091.55	890.94	896.1	894.69	896.14	0.000731	2.73	1973.91	922.15
Main	12489.32	100-YEAR	3710.45	890.94	896.43	894.81	896.48	0.000678	2.82	2287.83	954.95
Main	11810.37	2-YEAR	1022.73	889.89	894.11	893.46	894.15	0.001126	2.45	755.51	663.16
Main	11810.37	5-YEAR	1663.47	889.89	894.66	893.7	894.7	0.00088	2.59	1129.73	705.62
Main	11810.37	10-YEAR	2016.3	889.89	894.88	893.79	894.93	0.000871	2.73	1286.87	721.89
Main	11810.37	25-YEAR	2630.14	889.89	895.3	893.93	895.35	0.000772	2.84	1594.98	750.58
Main	11810.37	50-YEAR	3091.55	889.89	895.58	894.01	895.63	0.000728	2.93	1808.89	768.56
Main	11810.37	100-YEAR	3710.45	889.89	895.95	894.13	896.01	0.000666	3.01	2101.02	791.45
Main	11048.34	2-YEAR	1022.73	888.54	893.51	892.56	893.55	0.000547	2.52	847.84	548.68
Main	11048.34	5-YEAR	1663.47	888.54	894.1	892.88	894.15	0.000554	2.83	1185.62	587.39
Main	11048.34	10-YEAR	2016.3	888.54	894.27	893	894.33	0.000658	3.17	1282.75	605.09
Main	11048.34	25-YEAR	2630.14	888.54	894.72	893.18	894.79	0.000648	3.38	1568.87	652.43
Main	11048.34	50-YEAR	3091.55	888.54	895.03	893.3	895.1	0.00063	3.48	1771.05	671.88
Main	11048.34	100-YEAR	3710.45	888.54	895.44	893.44	895.51	0.000589	3.56	2056.14	697.53
Main	10491.67	2-YEAR	1045.06	889.33	893.23	892.18	893.27	0.000521	1.9	838.85	572.7
Main	10491.67	5-YEAR	1659.16	889.33	893.84	892.46	893.88	0.000467	2.12	1203.45	616.58
Main	10491.67	10-YEAR	1857.19	889.33	893.98	892.52	894.03	0.000477	2.21	1291.36	625.04
Main	10491.67	25-YEAR	2532.55	889.33	894.43	892.73	894.49	0.000493	2.47	1578.66	650.38
Main	10491.67	50-YEAR	2968.36	889.33	894.75	892.85	894.81	0.000469	2.56	1786.92	662.27
Main	10491.67	100-YEAR	3621.22	889.33	895.18	893.01	895.24	0.000464	2.74	2072.76	699.79
Main	9994.849	2-YEAR	1045.06	888.96	892.61	892.15	892.72	0.00324	3.53	424.55	354.18
Main	9994.849	5-YEAR	1659.16	888.96	893.34	892.42	893.44	0.00216	3.23	723.01	493.45
Main	9994.849	10-YEAR	1857.19	888.96	893.47	892.49	893.58	0.002192	3.35	788.61	527.09
Main	9994.849	25-YEAR	2532.55	888.96	893.95	892.71	894.06	0.001785	3.55	1049.73	603.52
Main	9994.849	50-YEAR	2968.36	888.96	894.32	892.86	894.43	0.001413	3.5	1274.66	666.01
Main	9994.849	100-YEAR	3621.22	888.96	894.79	893.01	894.9	0.0011	3.46	1626.09	705.79
Main	9348.257	2-YEAR	1045.06	886.5	891.48	890.25	891.64	0.001237	3.96	454.11	279.01
Main	9348.257	5-YEAR	1659.16	886.5	892.39	891.07	892.56	0.001161	4.35	806.85	560
Main	9348.257	10-YEAR	1857.19	886.5	892.64	891.2	892.78	0.000983	4.13	950.11	566.16
Main	9348.257	25-YEAR	2568.46	886.5	893.37	891.66	893.47	0.000703	3.77	1365.52	573.21
Main	9348.257	50-YEAR	3069.09	886.5	893.86	891.66	893.95	0.000579	3.62	1650.33	588.99
Main	9348.257	100-YEAR	3854.13	886.5	894.4	892.16	894.49	0.000541	3.72	1972.5	612.23

Table C.3
Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	8535.745	2-YEAR	1115.85	883.31	890.73	887.95	890.86	0.000799	3.12	479.67	319.99
Main	8535.745	5-YEAR	1824.07	883.31	891.81	889.74	891.93	0.000581	3.2	946.63	522.72
Main	8535.745	10-YEAR	2068.92	883.31	892.15	889.95	892.26	0.000503	3.12	1123.28	534.73
Main	8535.745	25-YEAR	2959.51	883.31	892.95	890.62	893.06	0.000452	3.28	1565.28	606.05
Main	8535.745	50-YEAR	3706.32	883.31	893.45	891.15	893.57	0.000455	3.48	1862.9	690.77
Main	8535.745	100-YEAR	4554.73	883.31	894.01	891.52	894.13	0.000434	3.61	2305.82	750.79
Main	8163.841	2-YEAR	1115.85	883.31	890.59		890.63	0.000391	1.95	1068.38	2095.56
Main	8163.841	5-YEAR	1824.07	883.31	891.84		891.85	0.000065	1.01	4357.56	2781.75
Main	8163.841	10-YEAR	2068.92	883.31	892.18		892.18	0.000047	0.9	5302.88	2786.51
Main	8163.841	25-YEAR	2959.51	883.31	892.99		893	0.000032	0.84	7590.66	2858.55
Main	8163.841	50-YEAR	3706.32	883.31	893.5		893.51	0.000029	0.85	9064.04	2901.66
Main	8163.841	100-YEAR	4554.73	883.31	894.07		894.07	0.000026	0.86	10707.92	2934.23
Main	7636.001	2-YEAR	1152.69	884.96	890.52		890.52	0.000104	0.86	2487.47	1973.61
Main	7636.001	5-YEAR	1882.03	884.96	891.82		891.82	0.000034	0.67	5619.71	2766.42
Main	7636.001	10-YEAR	2132.27	884.96	892.16		892.16	0.000027	0.63	6577.81	2784.45
Main	7636.001	25-YEAR	2975.78	884.96	892.98		892.98	0.00002	0.62	8857.66	2792.72
Main	7636.001	50-YEAR	3678.62	884.96	893.49		893.5	0.000019	0.64	10290.63	2797.9
Main	7636.001	100-YEAR	4598.73	884.96	894.06		894.06	0.000018	0.68	11869.13	2803.6
Main	7577.233	2-YEAR	1152.69	885.66	890.48	888.84	890.51	0.000278	1.43	1133.08	1806.58
Main	7577.233	5-YEAR	1882.03	885.66	891.8	889.27	891.81	0.000106	1.2	2218.63	2539.23
Main	7577.233	10-YEAR	2132.27	885.66	892.14	889.39	892.16	0.000094	1.19	2503.83	2700.87
Main	7577.233	25-YEAR	2975.78	885.66	892.96	889.84	892.98	0.000087	1.3	3176.92	2763.83
Main	7577.233	50-YEAR	3678.62	885.66	893.47	890.03	893.49	0.000089	1.41	3597.39	2768.45
Main	7577.233	100-YEAR	4598.73	885.66	894.02	890.26	894.05	0.000095	1.56	4058.58	2773.5
Main	7257.233		Bridge								
Main	7131.875	2-YEAR	1152.69	884.45	890.08	887.98	890.11	0.000238	1.41	869.39	1658.35
Main	7131.875	5-YEAR	1882.03	884.45	891.43	888.39	891.46	0.000155	1.46	1365.48	2171.76
Main	7131.875	10-YEAR	2132.27	884.45	891.77	888.52	891.81	0.000147	1.51	1516.17	2442.79
Main	7131.875	25-YEAR	2975.78	884.45	892.59	888.83	892.63	0.000152	1.73	1877.76	2458.41
Main	7131.875	50-YEAR	3678.62	884.45	893.01	889.06	893.06	0.000173	1.96	2066.53	2462.07
Main	7131.875	100-YEAR	4598.73	884.45	893.44	889.34	893.52	0.000205	2.24	2259.37	2464.66
Main	7052.06	2-YEAR	1152.69	884.45	890.09	887.06	890.09	0.00001	0.42	4892.39	2088.89
Main	7052.06	5-YEAR	1882.03	884.45	891.45	887.22	891.45	0.000008	0.44	7786.38	2678.75
Main	7052.06	10-YEAR	2132.27	884.45	891.79	887.25	891.79	0.000008	0.45	8540.82	2689.57
Main	7052.06	25-YEAR	2975.78	884.45	892.61	887.39	892.61	0.000007	0.47	11821.22	2704.58
Main	7052.06	50-YEAR	3678.62	884.45	893.03	887.49	893.04	0.000008	0.53	12984.21	2709.37
Main	7052.06	100-YEAR	4598.73	884.45	893.48	887.61	893.48	0.00001	0.59	14181.4	2714.29
Main	4367.346	2-YEAR	1161.65	878.81	890.01	883.26	890.04	0.000067	1.36	858.43	436.36
Main	4367.346	5-YEAR	1906.3	878.81	891.35	883.97	891.4	0.000094	1.81	1159.41	798.92
Main	4367.346	10-YEAR	2169.61	878.81	891.68	884.21	891.74	0.000103	1.95	1279.09	919.84
Main	4367.346	25-YEAR	3001.72	878.81	892.47	884.87	892.56	0.000133	2.36	1632.84	1140.15
Main	4367.346	50-YEAR	3655.97	878.81	892.88	885.34	892.98	0.00016	2.68	1848.39	1218.94
Main	4367.346	100-YEAR	4521.82	878.81	893.28	885.94	893.41	0.0002	3.08	2081.53	1286.7
Main	3910.738	2-YEAR	1161.65	878.53	890.01	882.29	890.02	0.000021	0.85	1372.78	258.58
Main	3910.738	5-YEAR	1906.3	878.53	891.35	882.87	891.37	0.000031	1.15	1921.48	696.87
Main	3910.738	10-YEAR	2169.61	878.53	891.68	883.06	891.7	0.000035	1.24	2110.92	841.24
Main	3910.738	25-YEAR	3001.72	878.53	892.48	883.57	892.51	0.000044	1.47	2980.18	1043.23
Main	3910.738	50-YEAR	3655.97	878.53	892.89	883.95	892.92	0.000052	1.64	3412.35	1082.53
Main	3910.738	100-YEAR	4521.82	878.53	893.29	884.4	893.34	0.000064	1.88	3860.55	1130.04
Main	3035.572	2-YEAR	1161.65	877.13	889.96	882.25	889.99	0.000056	1.42	854.08	150.78
Main	3035.572	5-YEAR	1906.3	877.13	891.26	883.08	891.32	0.00009	1.95	1071.7	577.07
Main	3035.572	10-YEAR	2169.61	877.13	891.58	883.35	891.65	0.000103	2.14	1139.47	904.97
Main	3035.572	25-YEAR	3001.72	877.13	892.37	884.1	892.45	0.000121	2.45	2093.91	1349.64
Main	3035.572	50-YEAR	3655.97	877.13	892.78	884.63	892.86	0.000125	2.56	2895.88	1414.07
Main	3035.572	100-YEAR	4521.82	877.13	893.18	885.27	893.26	0.000141	2.78	3464.68	1427.2
Main	1835.181	2-YEAR	1161.65	875.88	889.91	880.52	889.93	0.00004	1.21	960.23	152.18
Main	1835.181	5-YEAR	1906.3	875.88	891.17	881.54	891.22	0.000081	1.69	1131.11	298.87
Main	1835.181	10-YEAR	2169.61	875.88	891.48	881.87	891.53	0.000097	1.84	1177.42	371.5
Main	1835.181	25-YEAR	3001.72	875.88	892.21	882.73	892.29	0.000146	2.31	1325.21	730.76
Main	1835.181	50-YEAR	3655.97	875.88	892.57	883.35	892.68	0.000187	2.67	1435.8	769.11
Main	1835.181	100-YEAR	4521.82	875.88	892.9	884.08	893.06	0.000247	3.16	1544.62	817.04
Main	1162.53	2-YEAR	1161.65	873.72	889.91	879.58	889.91	0.000014	0.73	2007.05	281.88
Main	1162.53	5-YEAR	1906.3	873.72	891.17	881.43	891.18	0.000026	1.03	2357.12	372.38
Main	1162.53	10-YEAR	2169.61	873.72	891.47	881.7	891.49	0.000032	1.14	2453.41	479.08
Main	1162.53	25-YEAR	3001.72	873.72	892.2	882.37	892.23	0.000057	1.61	2777.99	1096.43
Main	1162.53	50-YEAR	3655.97	873.72	892.56	882.79	892.6	0.000073	1.85	2956.66	1299.6
Main	1162.53	100-YEAR	4521.82	873.72	892.89	883.27	892.94	0.000096	2.17	3278.65	1645.25

Table C.3
Nugent Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	1117.527	2-YEAR	1161.65	875.02	889.8	881.07	889.89	0.000223	2.37	490.4	77.25
Main	1117.527	5-YEAR	1906.3	875.02	890.99	882.82	891.14	0.000373	3.12	697.08	243.92
Main	1117.527	10-YEAR	2169.61	875.02	891.27	883.36	891.44	0.000414	3.36	769.45	267.9
Main	1117.527	25-YEAR	3001.72	875.02	891.93	884.83	892.16	0.000524	4.02	971.43	348.81
Main	1117.527	50-YEAR	3655.97	875.02	892.22	885.94	892.51	0.000654	4.61	1092.02	495.74
Main	1117.527	100-YEAR	4521.82	875.02	892.42	887.22	892.82	0.000883	5.45	1202.44	609.75
Main	1047.027		Culvert								
Main	984.0082	2-YEAR	1161.65	874.83	882.52	878.47	882.68	0.000437	3.22	360.52	70.17
Main	984.0082	5-YEAR	1906.3	874.83	884.29	879.55	884.54	0.000477	4.03	473.59	78.67
Main	984.0082	10-YEAR	2169.61	874.83	884.81	879.9	885.09	0.000493	4.28	506.98	81.18
Main	984.0082	25-YEAR	3001.72	874.83	886.3	880.8	886.61	0.000595	4.49	668.1	89.24
Main	984.0082	50-YEAR	3655.97	874.83	887.23	881.46	887.59	0.000671	4.83	756.18	99.17
Main	984.0082	100-YEAR	4521.82	874.83	888.31	882.24	888.73	0.00068	5.22	868.91	111.67
Main	920.2697	2-YEAR	1173.83	873.98	881.32		882.35	0.005242	8.15	143.97	39.28
Main	920.2697	5-YEAR	1927.45	873.98	882.85		884.15	0.005174	9.17	210.28	47.68
Main	920.2697	10-YEAR	2196.3	873.98	883.31		884.69	0.005102	9.42	233.25	50.28
Main	920.2697	25-YEAR	3033.21	873.98	884.54		886.14	0.005063	10.13	299.28	57.49
Main	920.2697	50-YEAR	3681.34	873.98	885.38		887.09	0.004946	10.51	350.67	65.05
Main	920.2697	100-YEAR	4543.31	873.98	886.23		888.18	0.004722	11.23	409.09	72.49
Main	525.4784	2-YEAR	1173.83	870.98	877.82	877.82	879.53	0.009755	10.47	112.06	32.83
Main	525.4784	5-YEAR	1927.45	870.98	879.31	879.31	881.4	0.009218	11.61	166.01	39.94
Main	525.4784	10-YEAR	2196.3	870.98	879.73	879.73	881.96	0.009203	11.99	183.2	41.95
Main	525.4784	25-YEAR	3033.21	870.98	880.95	880.95	883.47	0.008726	12.74	238.07	47.8
Main	525.4784	50-YEAR	3681.34	870.98	881.75	881.75	884.48	0.008531	13.26	277.63	51.62
Main	525.4784	100-YEAR	4543.31	870.98	882.61	882.61	885.68	0.008093	14.05	324.04	55.84
Main	154.246	2-YEAR	1173.83	866.71	873.62	873.6	875.35	0.009803	10.56	111.14	32.27
Main	154.246	5-YEAR	1927.45	866.71	875.1	875.1	877.24	0.009331	11.74	164.18	39.21
Main	154.246	10-YEAR	2196.3	866.71	875.57	875.57	877.81	0.00908	12.01	182.93	41.39
Main	154.246	25-YEAR	3033.21	866.71	876.81	876.81	879.33	0.008572	12.74	238.11	47.21
Main	154.246	50-YEAR	3681.34	866.71	877.52	877.52	880.36	0.008544	13.52	272.4	50.51
Main	154.246	100-YEAR	4543.31	866.71	878.43	878.43	881.6	0.007805	14.31	320.4	54.83

Table C.4
Nugent Creek Results for Existing Conditions (USGS Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	6180.255	100-YEAR	402.15	917.98	919.45	919.09	919.62	0.003879	3.29	126.2	129.77
Trib. 1	5861.04	100-YEAR	402.15	916.03	917.04	917.04	917.44	0.014324	5.13	78.56	99.52
Trib. 1	5685.7	100-YEAR	402.15	912.23	916.84	914.71	916.88	0.000326	1.94	307.49	193.64
Trib. 1	5629.2		Culvert								
Trib. 1	5533.744	100-YEAR	469.09	911.6	915.75	914.18	915.89	0.001161	2.99	171.42	151.99
Trib. 1	5501.688	100-YEAR	469.09	911.42	915.67	913.8	915.84	0.001059	3.34	140.82	54.26
Trib. 1	5447.688		Culvert								
Trib. 1	5374.909	100-YEAR	469.09	911.08	915	913.2	915.08	0.000801	2.35	199.66	91.61
Trib. 1	5302.702	100-YEAR	469.09	910.49	914.91	913.29	915.01	0.000828	2.79	223.98	137.5
Trib. 1	5243.702		Culvert								
Trib. 1	5062.864	100-YEAR	469.09	908.84	914.69	911.35	914.71	0.000106	1.32	541.19	251.72
Trib. 1	4951.364		Culvert								
Trib. 1	4770.093	100-YEAR	469.09	907.64	910.26	910.05	910.66	0.006076	5.71	113.01	97.45
Trib. 1	4471.528	100-YEAR	469.09	906.69	908.96		909.12	0.004107	4.56	180.44	164.46
Trib. 1	4165.382	100-YEAR	469.09	904.11	907.98	907.58	908.09	0.002678	3.9	238.8	264.26
Trib. 1	3965.882		Culvert								
Trib. 1	3874.173	100-YEAR	469.09	902.28	906.63	905.77	906.8	0.001386	3.69	183.09	309.18
Trib. 1	3458.173	100-YEAR	831.43	899.76	903.99	903.99	904.96	0.01069	7.89	105.45	306.87
Trib. 1	3254.669	100-YEAR	831.43	898.34	902.59	902.46	902.86	0.003666	4.97	290.69	333.93
Trib. 1	2787.505	100-YEAR	831.43	896.15	900.07	900.07	900.74	0.006488	6.98	158.27	141.53
Trib. 1	2264.821	100-YEAR	831.43	894.21	898.81		898.97	0.001138	3.3	297.95	267.4
Trib. 1	1906.714	100-YEAR	831.43	892.71	896.95	896.95	897.98	0.00995	8.15	103.27	57.27
Trib. 1	1521.886	100-YEAR	831.43	892.15	896.57	895.36	896.69	0.000985	3.13	438.59	394.38
Trib. 1	1205.084	100-YEAR	831.43	891.18	895.57	894.91	896.1	0.004273	5.97	159.69	109.86
Trib. 1	1205		Lat Struct								
Trib. 1	779.4147	100-YEAR	811.03	890	895.43	893.49	895.51	0.000474	2.71	446.29	181.79
Trib. 1	581.3154	100-YEAR	640.26	888.11	895.43		895.45	0.000101	1.48	683.85	230.14
Trib. 1	475.7265	100-YEAR	550.1	887.58	895.42		895.44	0.000066	1.2	730.92	236.79
Trib. 1	359.2033	100-YEAR	868.33	887.02	895.32	889.59	895.4	0.000154	2.5	383.21	442.11
Trib. 1	320.703		Culvert								
Trib. 1	278.0496	100-YEAR	868.33	886.74	892.21	891.17	892.77	0.002649	6.28	155.92	221.22
Trib. 1	234.3802	100-YEAR	868.33	886.76	892.34	891.91	892.48	0.001576	3.97	446.14	418.94
Trib. 1	25.61934	100-YEAR	868.33	885.25	891.12	890.6	891.84	0.005914	6.82	127.26	820.37
Main	22385.36	100-YEAR	2410	911.24	916.4	915.76	916.63	0.003142	5.73	825.84	535.74
Main	21872.73	100-YEAR	2410	909.93	915.1		915.3	0.002242	5.16	867.38	495.19
Main	21557.51	100-YEAR	2410	909.89	914.83	913.41	914.88	0.000779	3.34	1536.75	824.11
Main	20896.61	100-YEAR	2410	907.73	914.48	912.85	914.52	0.000403	2.59	1877.03	875.45
Main	20345.11	100-YEAR	2410	907.1	914.4	911.48	914.41	0.000113	1.53	3389.14	1303.96
Main	20253.01	100-YEAR	2410	907.04	914.39	911.3	914.4	0.000064	1.37	3950.73	1373.74
Main	20179.01		Culvert								
Main	20112.54	100-YEAR	2410	906.62	911.17	911.17	912.31	0.007604	8.87	312.18	654.64
Main	20048.73	100-YEAR	2410	906	910.96	910.44	911.07	0.002689	5.25	1048.28	779.58
Main	19755.87	100-YEAR	2410	905.68	910.46	910.06	910.52	0.001364	3.16	1364.85	820.79
Main	18948.9	100-YEAR	2410	903.35	908.25	907.94	908.52	0.007221	7.71	659.58	663.76
Main	17703.24	100-YEAR	2410	900.16	906.67	905.76	906.74	0.000915	3.87	1723.89	1278.42
Main	17054.09	100-YEAR	2410	899.18	906.02	904.66	906.1	0.001026	3.52	1390.59	890.93
Main	16033.01	100-YEAR	2410	897.11	903.34	903.13	904.08	0.007004	7.58	396.26	1089.23
Main	15391.28	100-YEAR	2410	894.96	902.26	901.91	902.35	0.001206	4.34	1459.51	1053.3
Main	14908.33	100-YEAR	2410	893.97	902.02	900.22	902.05	0.00034	2.32	2046.22	1050.75
Main	14522	100-YEAR	2410	893.47	901.98	899.45	901.98	0.000095	1.47	3767.62	1434.32
Main	14191.31	100-YEAR	4180	892.69	901.9	898.95	901.93	0.000197	2.21	3393.37	1187.97
Main	14120.59	100-YEAR	4180	892.69	901.89	900.2	901.91	0.000196	2.28	3671.63	1072.14
Main	14057.59		Culvert								
Main	13981.58	100-YEAR	4180	892.69	900	900	900.11	0.000989	4.32	1952.01	803.3
Main	13923.13	100-YEAR	4180	892.71	898.17	898.17	898.75	0.006186	9.31	997.53	700.06
Main	13313.13	100-YEAR	4180	891.89	897.13	895.9	897.16	0.000447	2.62	3685.49	1908.91
Main	12489.32	100-YEAR	4180	890.94	896.68	894.88	896.73	0.000641	2.88	2521.83	975.17
Main	11810.37	100-YEAR	4180	889.89	896.22	894.22	896.28	0.000631	3.07	2314.34	807.76
Main	11048.34	100-YEAR	4180	888.54	895.73	893.55	895.81	0.000568	3.62	2260.17	714.15
Main	10491.67	100-YEAR	4180	889.33	895.47	893.14	895.54	0.000468	2.88	2280.31	730.21
Main	9994.849	100-YEAR	4180	888.96	895.1	893.13	895.21	0.000991	3.5	1846.06	718.15
Main	9348.257	100-YEAR	4412.68	886.5	894.73	892.16	894.82	0.000535	3.83	2175.29	628.72
Main	8535.745	100-YEAR	4412.68	883.31	894.73	891.42	894.74	0.000032	1.05	10020.28	3163.29
Main	8163.841	100-YEAR	4412.68	883.31	894.73		894.73	0.000015	0.69	12659.12	2993.22
Main	7636.001	100-YEAR	5802.68	884.96	894.72		894.72	0.000018	0.73	13723.69	2810.28
Main	7577.233	100-YEAR	5802.68	885.66	894.68	890.48	894.71	0.000101	1.72	4598.73	2779.53

Table C.4
Nugent Creek Results for Existing Conditions (USGS Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	7257.233		Bridge								
Main	7131.875	100-YEAR	5802.68	884.45	893.93	889.67	894.02	0.000246	2.6	2473.85	2467.54
Main	7052.06	100-YEAR	5802.68	884.45	893.97	887.74	893.97	0.000012	0.68	15521.35	2719.79
Main	4367.346	100-YEAR	5802.68	878.81	893.7	886.72	893.89	0.000271	3.69	2353.43	1417.71
Main	3910.738	100-YEAR	5802.68	878.53	893.73	884.99	893.79	0.000085	2.22	4383.2	1222.03
Main	3035.572	100-YEAR	5802.68	877.13	893.6	886.14	893.7	0.00017	3.13	4066	1440.94
Main	1835.181	100-YEAR	5802.68	875.88	893.32	885	893.48	0.000261	3.36	2628.54	926.69
Main	1162.53	100-YEAR	5802.68	873.72	893.27	883.9	893.35	0.000144	2.73	3654.36	1949.58
Main	1117.527	100-YEAR	5802.68	875.02	892.55	888.67	893.17	0.001343	6.79	1289.73	744.66
Main	1047.027		Culvert								
Main	984.0082	100-YEAR	5802.68	874.83	889.72	883.24	890.23	0.000663	5.71	1044.91	137.09
Main	920.2697	100-YEAR	5802.68	873.98	887.36	886.31	889.62	0.004412	12.1	496.42	81.72
Main	525.4784	100-YEAR	5802.68	870.98	883.75	883.75	887.27	0.007415	15.08	390.92	61.43
Main	154.246	100-YEAR	6062.68	866.71	879.84	879.84	883.57	0.007069	15.54	402.78	61.55

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	6180.255	2-YEAR	147.38	917.98	918.97	918.7	919.04	0.003612	2.17	68.03	111.36
Trib. 1	6180.255	5-YEAR	214.21	917.98	919.12	918.83	919.22	0.003741	2.54	85.05	116.95
Trib. 1	6180.255	10-YEAR	254.29	917.98	919.2	918.89	919.31	0.003746	2.72	94.76	120.1
Trib. 1	6180.255	25-YEAR	308.55	917.98	919.3	918.97	919.43	0.003808	2.95	106.75	123.88
Trib. 1	6180.255	50-YEAR	350.06	917.98	919.36	919.03	919.51	0.003867	3.11	115.32	126.51
Trib. 1	6180.255	100-YEAR	404.45	917.98	919.45	919.1	919.62	0.003877	3.29	126.7	129.92
Trib. 1	5861.04	2-YEAR	147.38	916.03	916.63	916.63	916.85	0.017405	3.71	39.74	92.93
Trib. 1	5861.04	5-YEAR	214.21	916.03	916.76	916.76	917.03	0.016109	4.17	51.34	94.89
Trib. 1	5861.04	10-YEAR	254.29	916.03	916.82	916.82	917.12	0.015863	4.43	57.41	95.91
Trib. 1	5861.04	25-YEAR	308.55	916.03	916.91	916.91	917.25	0.015228	4.7	65.64	97.26
Trib. 1	5861.04	50-YEAR	350.06	916.03	916.97	916.97	917.34	0.014723	4.89	71.62	98.31
Trib. 1	5861.04	100-YEAR	404.45	916.03	917.04	917.04	917.45	0.014325	5.14	78.84	99.57
Trib. 1	5685.7	2-YEAR	147.38	912.23	916.39	913.78	916.4	0.00009	0.92	210.9	183.45
Trib. 1	5685.7	5-YEAR	214.21	912.23	916.52	914.08	916.54	0.000155	1.25	232.19	186.41
Trib. 1	5685.7	10-YEAR	254.29	912.23	916.61	914.24	916.63	0.000191	1.41	246.7	188.4
Trib. 1	5685.7	25-YEAR	308.55	912.23	916.7	914.42	916.73	0.000245	1.64	261.76	190.46
Trib. 1	5685.7	50-YEAR	350.06	912.23	916.74	914.56	916.78	0.000283	1.78	289.48	191.51
Trib. 1	5685.7	100-YEAR	404.45	912.23	916.85	914.73	916.9	0.000323	1.94	310.08	193.94
Trib. 1	5629.2		Culvert								
Trib. 1	5533.744	2-YEAR	106.97	911.6	913.05	912.75	913.27	0.005579	3.78	28.33	27.21
Trib. 1	5533.744	5-YEAR	149.33	911.6	913.55	912.98	913.73	0.00338	3.48	42.93	31.97
Trib. 1	5533.744	10-YEAR	220.01	911.6	914.26	913.31	914.42	0.002214	3.2	68.67	42.1
Trib. 1	5533.744	25-YEAR	316.83	911.6	915.01	913.67	915.14	0.001691	2.96	107.01	60.44
Trib. 1	5533.744	50-YEAR	383.57	911.6	915.32	913.89	915.46	0.001544	3.02	127.17	67.87
Trib. 1	5533.744	100-YEAR	469.51	911.6	915.76	914.18	915.89	0.001146	2.98	172.86	153.47
Trib. 1	5501.688	2-YEAR	106.97	911.42	912.93	912.56	913.09	0.003973	3.21	33.31	31.65
Trib. 1	5501.688	5-YEAR	149.33	911.42	913.49	912.74	913.62	0.002026	2.87	52.01	35.15
Trib. 1	5501.688	10-YEAR	220.01	911.42	914.23	913.03	914.35	0.001253	2.78	79.19	38.96
Trib. 1	5501.688	25-YEAR	316.83	911.42	914.97	913.36	915.1	0.001001	2.89	109.48	42.62
Trib. 1	5501.688	50-YEAR	383.57	911.42	915.27	913.56	915.42	0.001064	3.14	122.34	44.12
Trib. 1	5501.688	100-YEAR	469.51	911.42	915.67	913.81	915.85	0.001051	3.33	141.29	55.06
Trib. 1	5447.688		Culvert								
Trib. 1	5374.909	2-YEAR	106.97	911.08	912.93	912.09	912.99	0.001116	1.84	58.12	49.33
Trib. 1	5374.909	5-YEAR	149.33	911.08	913.47	912.28	913.51	0.000717	1.72	86.91	58.7
Trib. 1	5374.909	10-YEAR	220.01	911.08	914.16	912.54	914.2	0.000501	1.67	131.73	70.87
Trib. 1	5374.909	25-YEAR	316.83	911.08	914.72	912.83	914.77	0.000509	1.81	174.91	84.4
Trib. 1	5374.909	50-YEAR	383.57	911.08	914.86	913	914.92	0.000632	2.05	187	88
Trib. 1	5374.909	100-YEAR	469.51	911.08	915	913.2	915.09	0.000796	2.34	200.28	91.79
Trib. 1	5302.702	2-YEAR	106.97	910.49	912.8	911.9	912.89	0.001461	2.27	47.07	35.43
Trib. 1	5302.702	5-YEAR	149.33	910.49	913.37	912.14	913.44	0.00098	2.16	69.84	51.15
Trib. 1	5302.702	10-YEAR	220.01	910.49	914.09	912.47	914.15	0.000627	2.08	123.24	97.25
Trib. 1	5302.702	25-YEAR	316.83	910.49	914.66	912.83	914.72	0.00055	2.18	189.48	133.6
Trib. 1	5302.702	50-YEAR	383.57	910.49	914.79	913.05	914.87	0.000664	2.45	206.91	135.59
Trib. 1	5302.702	100-YEAR	469.51	910.49	914.92	913.29	915.02	0.000821	2.78	225.05	137.62
Trib. 1	5243.702		Culvert								
Trib. 1	5062.864	2-YEAR	106.97	908.84	911.3	909.82	911.35	0.000604	1.81	58.96	31.4
Trib. 1	5062.864	5-YEAR	149.33	908.84	911.85	910.06	911.9	0.000667	1.87	79.88	44.17
Trib. 1	5062.864	10-YEAR	220.01	908.84	912.76	910.39	912.8	0.000355	1.61	171.64	172.86
Trib. 1	5062.864	25-YEAR	316.83	908.84	914.26	910.78	914.27	0.000076	1.04	436.6	231.84
Trib. 1	5062.864	50-YEAR	383.57	908.84	914.5	911.02	914.52	0.000087	1.16	500.34	243
Trib. 1	5062.864	100-YEAR	469.51	908.84	914.71	911.35	914.73	0.0001	1.28	583.32	252.44
Trib. 1	4951.364		Culvert								
Trib. 1	4770.093	2-YEAR	106.97	907.64	909.17	909.11	909.41	0.008808	4.05	30.61	53.11
Trib. 1	4770.093	5-YEAR	149.33	907.64	909.34	909.28	909.62	0.008708	4.43	40.36	58.91
Trib. 1	4770.093	10-YEAR	220.01	907.64	909.58	909.49	909.9	0.00853	4.92	55.29	70.51
Trib. 1	4770.093	25-YEAR	316.83	907.64	909.83	909.74	910.22	0.008062	5.49	74.74	81.19
Trib. 1	4770.093	50-YEAR	383.57	907.64	909.99	909.9	910.41	0.007762	5.79	87.89	87.08
Trib. 1	4770.093	100-YEAR	469.51	907.64	910.27	910.06	910.66	0.006065	5.71	113.16	97.52
Trib. 1	4471.528	2-YEAR	106.97	906.69	908.17		908.22	0.002101	2.18	73.67	107.84
Trib. 1	4471.528	5-YEAR	149.33	906.69	908.37		908.42	0.002101	2.46	95.51	120.56
Trib. 1	4471.528	10-YEAR	220.01	906.69	908.63		908.7	0.002087	2.82	130.2	140.16
Trib. 1	4471.528	25-YEAR	316.83	906.69	908.89		908.97	0.002212	3.26	169.19	159.34
Trib. 1	4471.528	50-YEAR	383.57	906.69	909.03		909.12	0.002359	3.54	191.38	169.29
Trib. 1	4471.528	100-YEAR	469.51	906.69	908.96		909.11	0.004125	4.57	180.27	164.39

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	4165.382	2-YEAR	106.97	904.11	906.74	906.74	906.99	0.008994	4.57	35.63	71.28
Trib. 1	4165.382	5-YEAR	149.33	904.11	906.89	906.89	907.17	0.009561	5.02	46.71	80.04
Trib. 1	4165.382	10-YEAR	220.01	904.11	907.08	907.08	907.4	0.010354	5.62	62.91	91.34
Trib. 1	4165.382	25-YEAR	316.83	904.11	907.32	907.32	907.65	0.009928	5.96	90.02	156.27
Trib. 1	4165.382	50-YEAR	383.57	904.11	907.46	907.46	907.78	0.009147	5.97	115.73	199.72
Trib. 1	4165.382	100-YEAR	469.51	904.11	907.98	907.58	908.09	0.002667	3.9	239.35	264.47
Trib. 1	3965.882		Culvert								
Trib. 1	3874.173	2-YEAR	106.97	902.28	904.75	903.74	904.86	0.001601	2.67	40.09	24.89
Trib. 1	3874.173	5-YEAR	149.33	902.28	905.34	904.02	905.45	0.00127	2.67	56.02	31.45
Trib. 1	3874.173	10-YEAR	220.01	902.28	905.78	904.42	905.92	0.001333	3.01	89.32	182.82
Trib. 1	3874.173	25-YEAR	316.83	902.28	906.16	904.87	906.31	0.001424	3.35	127.17	262.86
Trib. 1	3874.173	50-YEAR	383.57	902.28	906.39	905.14	906.54	0.001393	3.49	154.4	297.68
Trib. 1	3874.173	100-YEAR	469.51	902.28	906.63	905.78	906.8	0.001391	3.7	182.97	309.13
Trib. 1	3458.173	2-YEAR	212.59	899.76	902.44	902.3	902.92	0.00978	5.58	38.08	45.86
Trib. 1	3458.173	5-YEAR	343.37	899.76	902.91	902.82	903.52	0.010443	6.31	54.46	106.81
Trib. 1	3458.173	10-YEAR	457.15	899.76	903.17	903.17	903.93	0.01165	7.03	65.05	228.12
Trib. 1	3458.173	25-YEAR	598.96	899.76	903.52	903.52	904.37	0.011215	7.38	81.15	259.92
Trib. 1	3458.173	50-YEAR	698.42	899.76	903.72	903.72	904.64	0.011324	7.68	90.89	272.67
Trib. 1	3458.173	100-YEAR	831.76	899.76	904	904	904.96	0.010626	7.87	105.69	307.57
Trib. 1	3254.669	2-YEAR	212.59	898.34	901.54	900.93	901.72	0.003465	3.49	60.95	65.95
Trib. 1	3254.669	5-YEAR	343.37	898.34	902.05	901.38	902.29	0.003406	3.96	86.87	240.3
Trib. 1	3254.669	10-YEAR	457.15	898.34	902.24	901.69	902.46	0.003064	4.04	176.69	317.75
Trib. 1	3254.669	25-YEAR	598.96	898.34	902.34	901.99	902.62	0.003857	4.7	208.93	322.69
Trib. 1	3254.669	50-YEAR	698.42	898.34	902.45	902.37	902.73	0.003737	4.81	246.49	328.01
Trib. 1	3254.669	100-YEAR	831.76	898.34	902.59	902.46	902.86	0.003667	4.97	290.77	333.94
Trib. 1	2787.505	2-YEAR	212.59	896.15	898.38	898.36	898.92	0.012392	5.89	36.07	32.33
Trib. 1	2787.505	5-YEAR	343.37	896.15	898.82	898.82	899.52	0.012302	6.71	51.16	37.5
Trib. 1	2787.505	10-YEAR	457.15	896.15	899.14	899.14	899.93	0.011857	7.16	63.82	41.25
Trib. 1	2787.505	25-YEAR	598.96	896.15	899.71	899.71	900.32	0.006851	6.44	111.97	117.26
Trib. 1	2787.505	50-YEAR	698.42	896.15	899.87	899.87	900.51	0.006739	6.7	131.51	127.02
Trib. 1	2787.505	100-YEAR	831.76	896.15	900.07	900.07	900.74	0.006486	6.98	158.36	141.58
Trib. 1	2264.821	2-YEAR	212.59	894.21	896.8		896.9	0.001696	2.53	84.15	60.78
Trib. 1	2264.821	5-YEAR	343.37	894.21	897.4		897.52	0.001564	2.76	124.41	74.04
Trib. 1	2264.821	10-YEAR	457.15	894.21	897.82		897.95	0.001489	2.91	157.06	83.19
Trib. 1	2264.821	25-YEAR	598.96	894.21	898.23		898.38	0.001372	3.1	196.64	115.84
Trib. 1	2264.821	50-YEAR	698.42	894.21	898.5		898.66	0.001248	3.2	233.83	160.39
Trib. 1	2264.821	100-YEAR	831.76	894.21	898.81		898.97	0.001137	3.3	298.14	267.72
Trib. 1	1906.714	2-YEAR	212.59	892.71	895.73		895.99	0.004014	4.09	52	34.34
Trib. 1	1906.714	5-YEAR	343.37	892.71	896.25		896.61	0.004543	4.83	71.14	40.18
Trib. 1	1906.714	10-YEAR	457.15	892.71	896.53		897	0.005373	5.52	82.8	43.36
Trib. 1	1906.714	25-YEAR	598.96	892.71	896.72		897.39	0.007075	6.56	91.35	47.14
Trib. 1	1906.714	50-YEAR	698.42	892.71	896.76	896.62	897.63	0.009104	7.5	93.23	48.87
Trib. 1	1906.714	100-YEAR	831.76	892.71	896.95	896.95	897.98	0.009951	8.15	103.3	57.3
Trib. 1	1521.886	2-YEAR	212.59	892.15	894.78	894	894.89	0.001989	2.7	78.67	57.86
Trib. 1	1521.886	5-YEAR	343.37	892.15	895.36	894.38	895.49	0.001823	2.94	118.71	90.86
Trib. 1	1521.886	10-YEAR	457.15	892.15	895.72	894.66	895.87	0.001607	3.16	156.63	165.56
Trib. 1	1521.886	25-YEAR	598.96	892.15	896.14	894.95	896.28	0.001248	3.16	270.11	349.76
Trib. 1	1521.886	50-YEAR	698.42	892.15	896.34	895.14	896.47	0.001119	3.15	346.88	388.03
Trib. 1	1521.886	100-YEAR	831.76	892.15	896.58	895.36	896.69	0.000985	3.13	438.88	394.4
Trib. 1	1205.084	2-YEAR	212.59	891.18	893.86	893.22	894.08	0.003336	3.77	56.44	36.92
Trib. 1	1205.084	5-YEAR	343.37	891.18	894.23	893.7	894.6	0.00463	4.85	70.81	40.52
Trib. 1	1205.084	10-YEAR	457.15	891.18	894.59	894.03	895.03	0.00481	5.32	85.91	43.98
Trib. 1	1205.084	25-YEAR	598.96	891.18	895.19	894.4	895.62	0.003783	5.25	114.19	85.43
Trib. 1	1205.084	50-YEAR	698.42	891.18	895.36	894.62	895.84	0.004054	5.57	137.71	102.61
Trib. 1	1205.084	100-YEAR	831.76	891.18	895.57	894.91	896.1	0.004266	5.97	159.87	109.92
Trib. 1	1205		Lat Struct								
Trib. 1	779.4147	2-YEAR	212.59	890	892.65	891.89	892.83	0.00257	3.34	63.58	65.32
Trib. 1	779.4147	5-YEAR	343.37	890	893.69	892.34	893.78	0.000893	2.56	178.1	130.06
Trib. 1	779.4147	10-YEAR	457.15	890	894.28	892.67	894.36	0.000609	2.46	258.93	145.43
Trib. 1	779.4147	25-YEAR	598.92	890	895.08	893.02	895.14	0.000378	2.28	384.52	174.24
Trib. 1	779.4147	50-YEAR	696.16	890	895.22	893.35	895.3	0.000433	2.5	410.3	177.22
Trib. 1	779.4147	100-YEAR	811.03	890	895.43	893.49	895.51	0.000473	2.71	446.7	181.84

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Trib. 1	581.3154	2-YEAR	269.2	888.11	892.52		892.59	0.000633	2.18	148.83	135.36
Trib. 1	581.3154	5-YEAR	393	888.11	893.65		893.68	0.000247	1.75	318.38	170.97
Trib. 1	581.3154	10-YEAR	481.66	888.11	894.25		894.28	0.000183	1.68	431.54	197
Trib. 1	581.3154	25-YEAR	524.32	888.11	895.07		895.09	0.000093	1.35	603.58	223.11
Trib. 1	581.3154	50-YEAR	577.48	888.11	895.22		895.24	0.000099	1.42	637.19	226.08
Trib. 1	581.3154	100-YEAR	641.02	888.11	895.43		895.45	0.000101	1.48	684.35	230.19
Trib. 1	475.7265	2-YEAR	269.2	887.58	892.45		892.52	0.000639	2.22	147.58	141.87
Trib. 1	475.7265	5-YEAR	393	887.58	893.62		893.66	0.000231	1.7	344.43	191.26
Trib. 1	475.7265	10-YEAR	481.66	887.58	894.24		894.26	0.000162	1.59	466.18	206.32
Trib. 1	475.7265	25-YEAR	502.79	887.58	895.07		895.08	0.000076	1.23	647.45	230.47
Trib. 1	475.7265	50-YEAR	529.31	887.58	895.22		895.23	0.000073	1.23	682.41	233.13
Trib. 1	475.7265	100-YEAR	551.34	887.58	895.42		895.44	0.000066	1.2	731.44	236.83
Trib. 1	359.2033	2-YEAR	407.38	887.02	892.43	888.69	892.48	0.000148	1.84	244.92	361.77
Trib. 1	359.2033	5-YEAR	580.12	887.02	893.56	889.07	893.63	0.000156	2.15	299.17	385.35
Trib. 1	359.2033	10-YEAR	705.55	887.02	894.15	889.3	894.23	0.000171	2.38	327.24	399.94
Trib. 1	359.2033	25-YEAR	822.18	887.02	894.96	889.52	895.05	0.000161	2.48	366.16	442.11
Trib. 1	359.2033	50-YEAR	840.42	887.02	895.11	889.54	895.2	0.000157	2.49	373.39	442.11
Trib. 1	359.2033	100-YEAR	868.67	887.02	895.32	889.59	895.4	0.000154	2.5	383.31	442.11
Trib. 1	320.703		Culvert								
Trib. 1	278.0496	2-YEAR	407.38	886.74	891.62	890.05	891.8	0.001052	3.55	128.7	208.85
Trib. 1	278.0496	5-YEAR	580.12	886.74	892.29	890.56	892.53	0.0011	4.1	159.57	222.88
Trib. 1	278.0496	10-YEAR	705.55	886.74	892	890.84	892.42	0.002142	5.44	146.05	216.73
Trib. 1	278.0496	25-YEAR	822.18	886.74	892.15	891.08	892.67	0.002528	6.07	152.83	219.81
Trib. 1	278.0496	50-YEAR	840.42	886.74	892.17	891.11	892.71	0.002578	6.16	154.03	220.35
Trib. 1	278.0496	100-YEAR	868.67	886.74	892.21	891.17	892.77	0.00265	6.29	155.95	221.23
Trib. 1	234.3802	2-YEAR	407.38	886.76	890.99	890.53	891.59	0.006045	6.18	65.91	57.93
Trib. 1	234.3802	5-YEAR	580.12	886.76	891.57	891.1	892.29	0.006213	6.82	85.11	246.82
Trib. 1	234.3802	10-YEAR	705.55	886.76	891.97	891.47	892.24	0.002722	4.86	252.18	380.86
Trib. 1	234.3802	25-YEAR	822.18	886.76	892.24	891.87	892.39	0.00178	4.13	404.84	416.83
Trib. 1	234.3802	50-YEAR	840.42	886.76	892.28	891.88	892.43	0.001697	4.07	420.94	417.66
Trib. 1	234.3802	100-YEAR	868.67	886.76	892.34	891.91	892.48	0.001575	3.97	446.42	418.95
Trib. 1	25.61934	2-YEAR	407.38	885.25	889.79	889.27	890.32	0.005906	5.86	69.51	295.98
Trib. 1	25.61934	5-YEAR	580.12	885.25	890.38	889.86	890.99	0.005904	6.26	92.62	423.73
Trib. 1	25.61934	10-YEAR	705.55	885.25	890.73	890.21	891.39	0.005913	6.53	108.13	541.99
Trib. 1	25.61934	25-YEAR	822.18	885.25	891.02	890.5	891.72	0.005914	6.74	121.94	704.39
Trib. 1	25.61934	50-YEAR	840.42	885.25	891.06	890.52	891.77	0.005911	6.77	124.08	762.68
Trib. 1	25.61934	100-YEAR	868.67	885.25	891.12	890.6	891.84	0.005914	6.82	127.31	821.15
Main	22385.36	2-YEAR	397.88	911.24	914.64	914.64	915.24	0.01073	6.48	68.62	205.73
Main	22385.36	5-YEAR	615.73	911.24	915.22	915.22	915.74	0.007276	6.26	134.17	339.45
Main	22385.36	10-YEAR	738.41	911.24	915.38	915.38	915.93	0.007286	6.61	159.72	360.06
Main	22385.36	25-YEAR	881.83	911.24	915.58	915.58	915.69	0.001966	3.67	439.81	388.59
Main	22385.36	50-YEAR	948.62	911.24	915.58	915.58	915.7	0.002275	3.94	439.79	388.58
Main	22385.36	100-YEAR	1114.89	911.24	915.58	915.58	915.75	0.003143	4.63	439.79	388.58
Main	21872.73	2-YEAR	397.88	909.93	913.56		913.63	0.001257	2.54	256.64	285.33
Main	21872.73	5-YEAR	615.73	909.93	913.88		913.97	0.001342	2.94	356.64	330.01
Main	21872.73	10-YEAR	738.41	909.93	914.14		914.22	0.00111	2.89	446.49	367.48
Main	21872.73	25-YEAR	881.83	909.93	914.47		914.53	0.000869	2.79	575.71	428.13
Main	21872.73	50-YEAR	948.62	909.93	914.65		914.71	0.000721	2.66	656.4	450.73
Main	21872.73	100-YEAR	1114.89	909.93	914.89		914.94	0.000664	2.69	766.16	473.78
Main	21557.51	2-YEAR	581.62	909.89	913.26	912.65	913.3	0.000926	2.56	486.43	490.09
Main	21557.51	5-YEAR	899.61	909.89	913.53	912.83	913.59	0.001133	3.06	619.64	567.11
Main	21557.51	10-YEAR	1027.92	909.89	913.92	912.84	913.96	0.000658	2.57	818.89	670.41
Main	21557.51	25-YEAR	1322.31	909.89	914.29	913.03	914.32	0.000557	2.55	1129.86	740.13
Main	21557.51	50-YEAR	1543.38	909.89	914.48	913.14	914.52	0.000544	2.62	1271.75	769.07
Main	21557.51	100-YEAR	1885.41	909.89	914.72	913.25	914.76	0.000559	2.78	1451.94	806.61
Main	20896.61	2-YEAR	581.62	907.73	911.93	911.45	912.19	0.003832	4.33	197.59	378.85
Main	20896.61	5-YEAR	899.61	907.73	913.07	912.12	913.11	0.000495	2.19	805.53	657.71
Main	20896.61	10-YEAR	1027.92	907.73	913.71	912.21	913.73	0.000207	1.62	1250.13	752.27
Main	20896.61	25-YEAR	1322.31	907.73	914.1	912.37	914.12	0.000194	1.69	1537.7	798.88
Main	20896.61	50-YEAR	1543.38	907.73	914.28	912.45	914.3	0.000212	1.82	1681.46	842.07
Main	20896.61	100-YEAR	1885.41	907.73	914.5	912.71	914.52	0.000241	2.01	1894.2	877.75
Main	20345.11	2-YEAR	581.62	907.1	911.66	910.51	911.68	0.000339	1.64	726.81	604.51
Main	20345.11	5-YEAR	899.61	907.1	913.01	910.75	913.02	0.00008	1.04	1789.68	990.2
Main	20345.11	10-YEAR	1027.92	907.1	913.68	910.72	913.68	0.000042	0.84	2428.56	1084.74
Main	20345.11	25-YEAR	1322.31	907.1	914.06	911.13	914.07	0.000046	0.93	2827.58	1250.19
Main	20345.11	50-YEAR	1543.38	907.1	914.24	911.21	914.25	0.000056	1.05	3186.86	1285.19
Main	20345.11	100-YEAR	1885.41	907.1	914.45	911.33	914.46	0.000065	1.17	3459.59	1310.43

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	20253.01	2-YEAR	810.58	907.04	911.5	909.33	911.61	0.000584	2.81	359.51	663.04
Main	20253.01	5-YEAR	1254.02	907.04	912.87	910.07	912.97	0.000386	2.83	565.32	1055.06
Main	20253.01	10-YEAR	1448.39	907.04	913.67	910.42	913.68	0.00005	1.13	2987.38	1302.23
Main	20253.01	25-YEAR	1818.25	907.04	914.05	910.84	914.06	0.000052	1.19	3495.34	1348.15
Main	20253.01	50-YEAR	2092.99	907.04	914.23	911.06	914.24	0.000057	1.27	3732.75	1363.99
Main	20253.01	100-YEAR	2500.49	907.04	914.44	911.37	914.45	0.000066	1.4	4018.89	1376.77
Main	20179.01		Culvert								
Main	20112.54	2-YEAR	810.58	906.62	910.3	909.03	910.62	0.003115	4.51	190.64	466.89
Main	20112.54	5-YEAR	1254.02	906.62	910.7	910.02	911.18	0.003937	5.69	246.29	552.63
Main	20112.54	10-YEAR	1448.39	906.62	910.77	910.41	911.37	0.004757	6.37	255.65	573.75
Main	20112.54	25-YEAR	1818.25	906.62	910.75	910.75	911.71	0.007739	8.08	252.62	567.85
Main	20112.54	50-YEAR	2092.99	906.62	910.96	910.96	912	0.00761	8.44	282.07	613.63
Main	20112.54	100-YEAR	2500.49	906.62	911.23	911.23	912.39	0.007632	9	319.99	678.16
Main	20048.73	2-YEAR	810.58	906	910.27	909.94	910.34	0.001869	3.72	563.5	671.45
Main	20048.73	5-YEAR	1254.02	906	910.81	910.08	910.85	0.00101	3.12	938.34	750.66
Main	20048.73	10-YEAR	1448.39	906	910.92	910.2	910.97	0.001046	3.25	1022.37	772.82
Main	20048.73	25-YEAR	1818.25	906	910.7	910.29	910.81	0.002758	5.02	859.08	729.74
Main	20048.73	50-YEAR	2092.99	906	910.83	910.35	910.95	0.002644	5.07	958.41	755.99
Main	20048.73	100-YEAR	2500.49	906	911.02	910.46	911.13	0.002541	5.17	1095.35	791.77
Main	19755.87	2-YEAR	810.58	905.68	910.14	909.67	910.15	0.000293	1.35	1102.71	794.1
Main	19755.87	5-YEAR	1254.02	905.68	909.84	909.84	910.14	0.012442	8.2	353.94	763.8
Main	19755.87	10-YEAR	1448.39	905.68	909.93	909.9	910.24	0.011983	8.21	394.26	773.88
Main	19755.87	25-YEAR	1818.25	905.68	910.25	910.06	910.29	0.001174	2.77	1189.91	803.08
Main	19755.87	50-YEAR	2092.99	905.68	910.39	910.06	910.44	0.001174	2.88	1306.29	814.91
Main	19755.87	100-YEAR	2500.49	905.68	910.58	910.06	910.63	0.001206	3.05	1457.15	830.26
Main	18948.9	2-YEAR	865.14	903.35	907.67	907.42	907.79	0.004267	5.14	395.51	583.21
Main	18948.9	5-YEAR	1320	903.35	907.86	907.59	908.03	0.00573	6.25	477.14	610.92
Main	18948.9	10-YEAR	1587.54	903.35	907.88	907.69	908.11	0.00771	7.3	488.57	613.91
Main	18948.9	25-YEAR	2006.41	903.35	908	907.83	908.29	0.008862	8.07	544.16	628.42
Main	18948.9	50-YEAR	2283.63	903.35	908.08	907.91	908.4	0.009568	8.53	577.54	636.78
Main	18948.9	100-YEAR	2681.15	903.35	908.21	908.01	908.56	0.009757	8.88	639.82	656.83
Main	17703.24	2-YEAR	865.14	900.16	905.61	905.26	905.71	0.001222	3.72	582.47	671.85
Main	17703.24	5-YEAR	1320	900.16	906.15	905.47	906.22	0.000872	3.47	988.25	1154.29
Main	17703.24	10-YEAR	1587.54	900.16	906.41	905.59	906.46	0.000693	3.24	1398.28	1229.07
Main	17703.24	25-YEAR	2006.41	900.16	906.69	905.73	906.74	0.000609	3.17	1749.91	1282.28
Main	17703.24	50-YEAR	2283.63	900.16	906.87	905.78	906.91	0.000564	3.13	1977.75	1315.23
Main	17703.24	100-YEAR	2681.15	900.16	907.08	906.02	907.12	0.000535	3.14	2262.43	1354.94
Main	17054.09	2-YEAR	937.41	899.18	904.67	904.42	904.77	0.001721	3.25	451.02	394.6
Main	17054.09	5-YEAR	1565.68	899.18	905.37	904.42	905.48	0.001461	3.65	865.65	740.44
Main	17054.09	10-YEAR	1950.71	899.18	904.43	904.43	905.06	0.012451	8.04	372.45	323.97
Main	17054.09	25-YEAR	2558.3	899.18	904.68	904.68	905.41	0.012509	8.79	455.23	398.61
Main	17054.09	50-YEAR	2981.16	899.18	904.88	904.88	905.65	0.01182	9.09	527.13	472.55
Main	17054.09	100-YEAR	3543.95	899.18	905.13	905.13	905.92	0.010921	9.37	626.39	683.43
Main	16033.01	2-YEAR	886.83	897.11	902.86	901.67	903.03	0.002043	3.57	303.85	1046.48
Main	16033.01	5-YEAR	1549.42	897.11	903.46	902.23	903.74	0.002472	4.65	422.29	1109.62
Main	16033.01	10-YEAR	2009.13	897.11	903.5	903.5	903.51	0.000183	1.28	2482.19	1116.15
Main	16033.01	25-YEAR	2726.62	897.11	903.5	903.5	903.52	0.000337	1.73	2482.05	1116.14
Main	16033.01	50-YEAR	3227.7	897.11	903.5	903.5	903.53	0.000472	2.05	2481.99	1116.14
Main	16033.01	100-YEAR	3807.72	897.11	903.5	903.5	903.54	0.000657	2.42	2481.99	1116.14
Main	15391.28	2-YEAR	886.83	894.96	901.24	901.24	901.53	0.002654	5.38	399.01	759.51
Main	15391.28	5-YEAR	1549.42	894.96	901.54	901.54	901.88	0.003458	6.51	608.25	904.55
Main	15391.28	10-YEAR	2009.13	894.96	901.78	901.69	902.08	0.003211	6.55	782.01	968.04
Main	15391.28	25-YEAR	2726.62	894.96	902.15	901.91	902.3	0.001929	5.4	1348.22	1045.13
Main	15391.28	50-YEAR	3227.7	894.96	902.34	901.91	902.48	0.001849	5.44	1541.93	1058.46
Main	15391.28	100-YEAR	3807.72	894.96	902.54	902	902.68	0.001751	5.46	1761.31	1072.05
Main	14908.33	2-YEAR	886.83	893.97	900.95	899.6	900.97	0.000225	1.54	1125.75	775.8
Main	14908.33	5-YEAR	1549.42	893.97	901.27	899.91	901.3	0.000404	2.21	1383.81	833.25
Main	14908.33	10-YEAR	2009.13	893.97	901.44	900.1	901.49	0.000531	2.62	1529.11	880.78
Main	14908.33	25-YEAR	2726.62	893.97	901.71	900.3	901.77	0.000656	3.06	1765.99	945.45
Main	14908.33	50-YEAR	3227.7	893.97	901.83	900.42	901.91	0.000776	3.39	1877.32	988.56
Main	14908.33	100-YEAR	3807.72	893.97	902	900.56	902.09	0.000868	3.69	2029.99	1043.08
Main	14522	2-YEAR	886.83	893.47	900.92	898.94	900.93	0.000051	0.94	2236.65	1209.12
Main	14522	5-YEAR	1549.42	893.47	901.22	899.22	901.23	0.000103	1.4	2576.08	1259.51
Main	14522	10-YEAR	2009.13	893.47	901.37	899.27	901.38	0.000143	1.67	2754.68	1289.22
Main	14522	25-YEAR	2726.62	893.47	901.62	899.52	901.63	0.000187	1.98	3262.8	1403.34
Main	14522	50-YEAR	3227.7	893.47	901.72	899.62	901.74	0.000229	2.22	3410.5	1412.24
Main	14522	100-YEAR	3807.72	893.47	901.88	899.74	901.9	0.000265	2.43	3627.01	1425.67

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Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	14191.31	2-YEAR	1019.99	892.69	900.91	897.17	900.92	0.000028	0.74	2457.86	1024.01
Main	14191.31	5-YEAR	1660.11	892.69	901.19	897.98	901.2	0.000057	1.09	2714.44	1081.07
Main	14191.31	10-YEAR	2020.93	892.69	901.34	898.35	901.35	0.000075	1.27	2849.33	1105.36
Main	14191.31	25-YEAR	2680.54	892.69	901.57	898.57	901.59	0.000107	1.56	3073.35	1138.99
Main	14191.31	50-YEAR	3136.88	892.69	901.66	898.69	901.69	0.000135	1.78	3162.59	1152.2
Main	14191.31	100-YEAR	3711.05	892.69	901.8	898.84	901.83	0.000169	2.02	3297.69	1171.74
Main	14120.59	2-YEAR	1019.99	892.69	900.91	897.85	900.91	0.000027	0.75	2674.23	939
Main	14120.59	5-YEAR	1660.11	892.69	901.19	898.46	901.2	0.000058	1.14	2946.06	1009.06
Main	14120.59	10-YEAR	2020.93	892.69	901.33	898.76	901.34	0.000075	1.32	3090.77	1022.55
Main	14120.59	25-YEAR	2680.54	892.69	901.56	899.23	901.58	0.000107	1.62	3330.88	1044.36
Main	14120.59	50-YEAR	3136.88	892.69	901.66	899.54	901.67	0.000135	1.84	3425.72	1051.21
Main	14120.59	100-YEAR	3711.05	892.69	901.79	899.91	901.81	0.000167	2.08	3569.77	1063.19
Main	14057.59		Culvert								
Main	13981.58	2-YEAR	1019.99	892.69	898.49	897.4	898.95	0.002758	5.63	228.86	696.13
Main	13981.58	5-YEAR	1660.11	892.69	898.68	898.68	899.67	0.00573	8.41	255.24	715.66
Main	13981.58	10-YEAR	2020.93	892.69	898.99	898.99	900.07	0.005817	8.97	298.99	758.22
Main	13981.58	25-YEAR	2680.54	892.69	899.46	899.46	900.73	0.006128	9.95	364.78	782.88
Main	13981.58	50-YEAR	3136.88	892.69	899.77	899.77	901.14	0.006195	10.48	407.91	790.18
Main	13981.58	100-YEAR	3711.05	892.69	900	900	900.09	0.00078	3.84	1952.01	803.3
Main	13923.13	2-YEAR	1019.99	892.71	897.08	897.08	898.41	0.009582	9.27	111.17	478.13
Main	13923.13	5-YEAR	1660.11	892.71	897.7	897.7	897.93	0.00254	5.46	669.63	613.25
Main	13923.13	10-YEAR	2020.93	892.71	897.7	897.7	898.04	0.003764	6.65	669.63	613.25
Main	13923.13	25-YEAR	2680.54	892.71	897.79	897.79	898.29	0.005452	8.15	721.26	631.08
Main	13923.13	50-YEAR	3136.88	892.71	897.91	897.91	898.45	0.005878	8.66	788.9	655.12
Main	13923.13	100-YEAR	3711.05	892.71	898.06	898.06	898.61	0.005969	8.97	922.05	689.05
Main	13313.13	2-YEAR	1019.99	891.89	895.64	895.2	895.69	0.001089	3	834.37	1446.88
Main	13313.13	5-YEAR	1660.11	891.89	896.02	895.41	896.08	0.001048	3.24	1189.45	1578.07
Main	13313.13	10-YEAR	2020.93	891.89	896.23	895.5	896.28	0.001061	3.41	1395.48	1761.96
Main	13313.13	25-YEAR	2680.54	891.89	896.46	895.66	896.49	0.000654	2.8	2425.9	1815.52
Main	13313.13	50-YEAR	3136.88	891.89	896.66	895.73	896.69	0.000581	2.75	2798.88	1843.67
Main	13313.13	100-YEAR	3711.05	891.89	896.93	895.84	896.95	0.000497	2.67	3290.72	1880.14
Main	12489.32	2-YEAR	1019.99	890.94	894.84	894.22	894.87	0.000965	2.22	878.25	830.91
Main	12489.32	5-YEAR	1660.11	890.94	895.28	894.4	895.31	0.000875	2.4	1242.94	859.91
Main	12489.32	10-YEAR	2020.93	890.94	895.49	894.48	895.52	0.000845	2.51	1425.75	872.4
Main	12489.32	25-YEAR	2680.54	890.94	895.87	894.62	895.91	0.000767	2.65	1767.96	901.75
Main	12489.32	50-YEAR	3136.88	890.94	896.12	894.7	896.17	0.000729	2.74	1995.38	924.43
Main	12489.32	100-YEAR	3711.05	890.94	896.43	894.82	896.48	0.000678	2.82	2287.48	954.92
Main	11810.37	2-YEAR	1019.99	889.89	894.11	893.46	894.15	0.001128	2.45	753.61	662.93
Main	11810.37	5-YEAR	1660.11	889.89	894.66	893.7	894.7	0.000881	2.59	1127.84	705.42
Main	11810.37	10-YEAR	2020.93	889.89	894.88	893.79	894.93	0.000871	2.73	1288.72	722.07
Main	11810.37	25-YEAR	2680.54	889.89	895.33	893.93	895.38	0.00077	2.86	1616.31	752.48
Main	11810.37	50-YEAR	3136.88	889.89	895.6	894.01	895.66	0.000726	2.94	1827.82	770.06
Main	11810.37	100-YEAR	3711.05	889.89	895.95	894.12	896.01	0.000667	3.01	2100.34	791.4
Main	11048.34	2-YEAR	1019.99	888.54	893.51	892.56	893.55	0.000548	2.52	845.53	548.47
Main	11048.34	5-YEAR	1660.11	888.54	894.1	892.88	894.15	0.000554	2.83	1183.97	587.09
Main	11048.34	10-YEAR	2020.93	888.54	894.27	893	894.33	0.00066	3.18	1283.67	605.26
Main	11048.34	25-YEAR	2680.54	888.54	894.75	893.19	894.82	0.000651	3.4	1586.7	654.18
Main	11048.34	50-YEAR	3136.88	888.54	895.05	893.31	895.12	0.000631	3.5	1787.55	673.46
Main	11048.34	100-YEAR	3711.05	888.54	895.44	893.45	895.51	0.00059	3.56	2054.9	697.43
Main	10491.67	2-YEAR	1040.38	889.33	893.23	892.17	893.26	0.000521	1.89	836.34	572.36
Main	10491.67	5-YEAR	1655.51	889.33	893.84	892.46	893.88	0.000467	2.12	1201.76	616.41
Main	10491.67	10-YEAR	1859.02	889.33	893.99	892.52	894.03	0.000477	2.21	1292.12	625.11
Main	10491.67	25-YEAR	2573.79	889.33	894.46	892.74	894.52	0.000493	2.49	1596.06	651.38
Main	10491.67	50-YEAR	3008.62	889.33	894.78	892.86	894.84	0.000469	2.57	1803.02	663.18
Main	10491.67	100-YEAR	3621.39	889.33	895.17	893.01	895.24	0.000465	2.74	2071.1	699.69
Main	9994.849	2-YEAR	1040.38	888.96	892.6	892.14	892.72	0.003242	3.53	423.02	353.68
Main	9994.849	5-YEAR	1655.51	888.96	893.34	892.42	893.44	0.002159	3.23	721.76	492.72
Main	9994.849	10-YEAR	1859.02	888.96	893.47	892.49	893.58	0.002191	3.36	789.21	527.29
Main	9994.849	25-YEAR	2573.79	888.96	893.97	892.74	894.09	0.001761	3.56	1066.67	608.4
Main	9994.849	50-YEAR	3008.62	888.96	894.34	892.88	894.45	0.001402	3.51	1290.71	670.29
Main	9994.849	100-YEAR	3621.39	888.96	894.79	893.01	894.89	0.001106	3.46	1623.29	705.64
Main	9348.257	2-YEAR	1040.38	886.5	891.47	890.24	891.63	0.001244	3.97	451.45	278.74
Main	9348.257	5-YEAR	1655.51	886.5	892.38	891.07	892.56	0.001163	4.35	804.77	559.64
Main	9348.257	10-YEAR	1859.02	886.5	892.65	891.19	892.79	0.000973	4.11	954.81	566.24
Main	9348.257	25-YEAR	2609.98	886.5	893.41	891.66	893.51	0.000694	3.76	1387.14	573.58
Main	9348.257	50-YEAR	3108.95	886.5	893.89	891.66	893.98	0.000577	3.62	1667.07	590.31
Main	9348.257	100-YEAR	3853.69	886.5	894.39	892.16	894.49	0.000544	3.73	1968.68	611.97

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	8535.745	2-YEAR	1110.14	883.31	890.71	887.92	890.85	0.000806	3.13	474.82	316.39
Main	8535.745	5-YEAR	1831.6	883.31	891.8	889.75	891.92	0.000598	3.24	938.09	522.13
Main	8535.745	10-YEAR	2073.5	883.31	892.16	889.96	892.27	0.000497	3.11	1130.69	535.23
Main	8535.745	25-YEAR	3011.67	883.31	892.99	890.67	893.1	0.000451	3.29	1587.5	612.39
Main	8535.745	50-YEAR	3762.11	883.31	893.48	891.17	893.6	0.000458	3.51	1878.73	695.17
Main	8535.745	100-YEAR	4523.9	883.31	894.01	891.49	894.13	0.000429	3.59	2303.52	750.64
Main	8163.841	2-YEAR	1110.14	883.31	890.57		890.61	0.000401	1.97	1028.54	2008.33
Main	8163.841	5-YEAR	1831.6	883.31	891.82		891.83	0.000067	1.03	4312.57	2781.52
Main	8163.841	10-YEAR	2073.5	883.31	892.19		892.2	0.000046	0.9	5341.32	2786.7
Main	8163.841	25-YEAR	3011.67	883.31	893.03		893.04	0.000032	0.84	7703.08	2861.47
Main	8163.841	50-YEAR	3762.11	883.31	893.53		893.54	0.000029	0.86	9141.82	2904.14
Main	8163.841	100-YEAR	4523.9	883.31	894.06		894.07	0.000026	0.85	10697.18	2934.04
Main	7636.001	2-YEAR	1142	884.96	890.5		890.5	0.000107	0.86	2445.37	1960.55
Main	7636.001	5-YEAR	1879.64	884.96	891.8		891.8	0.000035	0.67	5573.3	2763.67
Main	7636.001	10-YEAR	2136.68	884.96	892.18		892.18	0.000026	0.63	6616.9	2784.59
Main	7636.001	25-YEAR	3016.93	884.96	893.02		893.02	0.00002	0.62	8967.78	2793.12
Main	7636.001	50-YEAR	3721.8	884.96	893.52		893.52	0.000019	0.64	10365.6	2798.17
Main	7636.001	100-YEAR	4586.66	884.96	894.05		894.06	0.000018	0.68	11859.03	2803.56
Main	7577.233	2-YEAR	1142	885.66	890.46	888.84	890.49	0.000284	1.44	1114.96	1800.95
Main	7577.233	5-YEAR	1879.64	885.66	891.78	889.27	891.8	0.000108	1.2	2204.57	2533.17
Main	7577.233	10-YEAR	2136.68	885.66	892.16	889.4	892.17	0.000093	1.19	2515.58	2703.53
Main	7577.233	25-YEAR	3016.93	885.66	893	889.86	893.01	0.000086	1.3	3209.39	2764.19
Main	7577.233	50-YEAR	3721.8	885.66	893.49	890.05	893.51	0.000089	1.42	3619.26	2768.69
Main	7577.233	100-YEAR	4586.66	885.66	894.02	890.26	894.05	0.000094	1.55	4055.66	2773.47
Main	7257.233		Bridge								
Main	7131.875	2-YEAR	1142	884.45	890.06	887.97	890.09	0.000241	1.41	860.65	1652.09
Main	7131.875	5-YEAR	1879.64	884.45	891.42	888.4	891.45	0.000157	1.46	1357.77	2129.7
Main	7131.875	10-YEAR	2136.68	884.45	891.79	888.52	891.82	0.000146	1.51	1522.74	2443.07
Main	7131.875	25-YEAR	3016.93	884.45	892.62	888.85	892.67	0.000152	1.74	1893.89	2459.11
Main	7131.875	50-YEAR	3721.8	884.45	893.03	889.07	893.09	0.000175	1.97	2075.62	2462.19
Main	7131.875	100-YEAR	4586.66	884.45	893.44	889.34	893.51	0.000204	2.24	2259.01	2464.65
Main	7052.06	2-YEAR	1142	884.45	890.07	887.06	890.07	0.00001	0.42	4846	2068.77
Main	7052.06	5-YEAR	1879.64	884.45	891.43	887.23	891.43	0.000008	0.44	7746.29	2677.99
Main	7052.06	10-YEAR	2136.68	884.45	891.8	887.25	891.8	0.000008	0.45	8573.45	2689.9
Main	7052.06	25-YEAR	3016.93	884.45	892.64	887.39	892.64	0.000007	0.48	11919.94	2704.99
Main	7052.06	50-YEAR	3721.8	884.45	893.06	887.5	893.06	0.000008	0.53	13040.6	2709.61
Main	7052.06	100-YEAR	4586.66	884.45	893.48	887.61	893.48	0.00001	0.59	14178.75	2714.28
Main	4367.346	2-YEAR	1150.24	878.81	889.99	883.25	890.02	0.000066	1.35	854.75	431.55
Main	4367.346	5-YEAR	1891.72	878.81	891.33	883.97	891.38	0.000093	1.8	1153.3	795.66
Main	4367.346	10-YEAR	2173.7	878.81	891.7	884.21	891.76	0.000102	1.95	1284.77	923.39
Main	4367.346	25-YEAR	3040.58	878.81	892.51	884.88	892.59	0.000134	2.38	1651.11	1148.52
Main	4367.346	50-YEAR	3695.12	878.81	892.9	885.38	893	0.000162	2.7	1858.97	1222.15
Main	4367.346	100-YEAR	4521.22	878.81	893.28	885.94	893.41	0.0002	3.08	2080.98	1286.54
Main	3910.738	2-YEAR	1150.24	878.53	889.99	882.27	890	0.000021	0.84	1366.51	250.28
Main	3910.738	5-YEAR	1891.72	878.53	891.33	882.85	891.35	0.000031	1.14	1911.6	688.83
Main	3910.738	10-YEAR	2173.7	878.53	891.7	883.06	891.72	0.000035	1.24	2119.76	845.12
Main	3910.738	25-YEAR	3040.58	878.53	892.52	883.59	892.55	0.000044	1.47	3017.51	1047.7
Main	3910.738	50-YEAR	3695.12	878.53	892.9	883.97	892.94	0.000053	1.66	3433.12	1084.24
Main	3910.738	100-YEAR	4521.22	878.53	893.29	884.4	893.34	0.000064	1.88	3859.59	1127.54
Main	3035.572	2-YEAR	1150.24	877.13	889.94	882.24	889.97	0.000055	1.41	850.46	150.19
Main	3035.572	5-YEAR	1891.72	877.13	891.25	883.08	891.3	0.000089	1.94	1068.42	570.06
Main	3035.572	10-YEAR	2173.7	877.13	891.6	883.35	891.67	0.000103	2.14	1143.04	918.79
Main	3035.572	25-YEAR	3040.58	877.13	892.4	884.12	892.48	0.000121	2.46	2132.55	1356
Main	3035.572	50-YEAR	3695.12	877.13	892.8	884.66	892.88	0.000126	2.57	2922.29	1414.69
Main	3035.572	100-YEAR	4521.22	877.13	893.18	885.28	893.26	0.000141	2.78	3463.29	1427.16
Main	1835.181	2-YEAR	1150.24	875.88	889.89	880.5	889.91	0.00004	1.2	957.34	151.26
Main	1835.181	5-YEAR	1891.72	875.88	891.16	881.52	891.2	0.00008	1.68	1128.69	295.73
Main	1835.181	10-YEAR	2173.7	875.88	891.49	881.87	891.54	0.000097	1.84	1179.84	374.83
Main	1835.181	25-YEAR	3040.58	875.88	892.25	882.77	892.33	0.000148	2.33	1335.3	734.43
Main	1835.181	50-YEAR	3695.12	875.88	892.59	883.39	892.7	0.000189	2.7	1440.7	771.41
Main	1835.181	100-YEAR	4521.22	875.88	892.9	884.08	893.05	0.000247	3.16	1544.29	816.9
Main	1162.53	2-YEAR	1150.24	873.72	889.89	879.56	889.89	0.000014	0.72	2000.78	280.87
Main	1162.53	5-YEAR	1891.72	873.72	891.15	881.42	891.17	0.000026	1.02	2352.32	370.39
Main	1162.53	10-YEAR	2173.7	873.72	891.49	881.69	891.5	0.000032	1.14	2458.96	490.67
Main	1162.53	25-YEAR	3040.58	873.72	892.23	882.39	892.26	0.000058	1.62	2794.31	1114.61
Main	1162.53	50-YEAR	3695.12	873.72	892.58	882.8	892.61	0.000074	1.87	2964.55	1303.51
Main	1162.53	100-YEAR	4521.22	873.72	892.89	883.28	892.94	0.000096	2.17	3277.77	1643.36

Table C.5
Nugent Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Main	1117.527	2-YEAR	1150.24	875.02	889.78	881.04	889.87	0.000221	2.35	488.69	77.01
Main	1117.527	5-YEAR	1891.72	875.02	890.98	882.79	891.12	0.00037	3.11	693.53	241.91
Main	1117.527	10-YEAR	2173.7	875.02	891.29	883.35	891.45	0.000412	3.35	773.87	268.36
Main	1117.527	25-YEAR	3040.58	875.02	891.96	884.86	892.19	0.000527	4.04	982.62	369.89
Main	1117.527	50-YEAR	3695.12	875.02	892.23	886.03	892.53	0.000664	4.65	1096.85	500.95
Main	1117.527	100-YEAR	4521.22	875.02	892.42	887.22	892.82	0.000884	5.45	1201.7	608.89
Main	1047.027		Culvert								
Main	984.0082	2-YEAR	1150.24	874.83	882.49	878.45	882.65	0.000436	3.21	358.44	70.01
Main	984.0082	5-YEAR	1891.72	874.83	884.25	879.53	884.5	0.000478	4.01	471.19	78.49
Main	984.0082	10-YEAR	2173.7	874.83	884.82	879.91	885.1	0.000493	4.28	507.44	81.22
Main	984.0082	25-YEAR	3040.58	874.83	886.35	880.82	886.67	0.0006	4.52	673.44	89.88
Main	984.0082	50-YEAR	3695.12	874.83	887.28	881.48	887.65	0.000676	4.86	761.03	99.69
Main	984.0082	100-YEAR	4521.22	874.83	888.32	882.22	888.74	0.000679	5.22	869.31	111.73
Main	920.2697	2-YEAR	1162.13	873.98	881.29		882.32	0.005243	8.13	142.88	39.13
Main	920.2697	5-YEAR	1909.39	873.98	882.81		884.11	0.005175	9.15	208.77	47.5
Main	920.2697	10-YEAR	2200.22	873.98	883.32		884.7	0.005101	9.42	233.58	50.31
Main	920.2697	25-YEAR	3071.45	873.98	884.6		886.2	0.005076	10.16	302.44	58.05
Main	920.2697	50-YEAR	3718.09	873.98	885.42		887.14	0.004933	10.54	353.34	65.37
Main	920.2697	100-YEAR	4545.73	873.98	886.23		888.19	0.004722	11.23	409.25	72.51
Main	525.4784	2-YEAR	1162.13	870.98	877.8	877.8	879.49	0.009765	10.45	111.18	32.7
Main	525.4784	5-YEAR	1909.39	870.98	879.28	879.28	881.36	0.009231	11.59	164.76	39.79
Main	525.4784	10-YEAR	2200.22	870.98	879.73	879.73	881.97	0.009202	11.99	183.45	41.98
Main	525.4784	25-YEAR	3071.45	870.98	881.01	881.01	883.53	0.008683	12.76	240.77	48.07
Main	525.4784	50-YEAR	3718.09	870.98	881.79	881.79	884.53	0.008526	13.29	279.76	51.81
Main	525.4784	100-YEAR	4545.73	870.98	882.61	882.61	885.68	0.008091	14.06	324.17	55.85
Main	154.246	2-YEAR	1162.13	866.71	873.59	873.57	875.32	0.009804	10.54	110.3	32.15
Main	154.246	5-YEAR	1909.39	866.71	875.07	875.07	877.2	0.009349	11.72	162.91	39.06
Main	154.246	10-YEAR	2200.22	866.71	875.58	875.58	877.82	0.009075	12.01	183.21	41.42
Main	154.246	25-YEAR	3071.45	866.71	876.86	876.86	879.4	0.008564	12.77	240.44	47.44
Main	154.246	50-YEAR	3718.09	866.71	877.56	877.56	880.41	0.008503	13.56	274.48	50.7
Main	154.246	100-YEAR	4545.73	866.71	878.43	878.43	881.61	0.007804	14.31	320.52	54.84

Rock Creek

Table C.6
Rock Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	18605.55	2-YEAR	2367.59	902.49	910.56		910.59	0.000139	1.94	2646.92	1087.32
RC	18605.55	5-YEAR	4097.92	902.49	911.32		911.36	0.000209	2.57	3508.49	1210.39
RC	18605.55	10-YEAR	5175.29	902.49	911.7		911.75	0.000243	2.87	3986.63	1279.71
RC	18605.55	25-YEAR	6701.54	902.49	912.16		912.22	0.000289	3.26	4599.43	1411.54
RC	18605.55	50-YEAR	7810.41	902.49	912.46		912.53	0.000313	3.48	5029.64	1466.16
RC	18605.55	100-YEAR	9519	902.49	912.88		912.96	0.000342	3.76	5666.5	1540.83
RC	17847.37	2-YEAR	2375.18	902.49	910.46		910.48	0.000172	2.19	2905.15	1411.7
RC	17847.37	5-YEAR	4110.89	902.49	911.18		911.21	0.000224	2.67	3964.62	1539.88
RC	17847.37	10-YEAR	5194.76	902.49	911.54		911.58	0.000243	2.88	4541.04	1583.18
RC	17847.37	25-YEAR	6727.32	902.49	911.98		912.03	0.000269	3.15	5248.4	1634.75
RC	17847.37	50-YEAR	7841.14	902.49	912.27		912.32	0.000285	3.32	5723.6	1668.5
RC	17847.37	100-YEAR	9556.63	902.49	912.68		912.73	0.000303	3.53	6417.54	1707.54
RC	17503.88	2-YEAR	2375.18	902.48	910.41		910.43	0.00014	1.94	3189.76	1509.02
RC	17503.88	5-YEAR	4110.89	902.48	911.11		911.14	0.000182	2.38	4277.1	1582.63
RC	17503.88	10-YEAR	5194.76	902.48	911.47		911.5	0.0002	2.58	4855.47	1604.76
RC	17503.88	25-YEAR	6727.32	902.48	911.9		911.94	0.000225	2.84	5552.94	1631.05
RC	17503.88	50-YEAR	7841.14	902.48	912.19		912.23	0.00024	3	6015.87	1648.06
RC	17503.88	100-YEAR	9556.63	902.48	912.59		912.64	0.000259	3.23	6687.99	1679.34
RC	17069.85	2-YEAR	2375.18	902.42	910.37		910.38	0.000072	1.44	3840.3	1363.78
RC	17069.85	5-YEAR	4110.89	902.42	911.06		911.07	0.000116	1.95	4796.73	1441.81
RC	17069.85	10-YEAR	5194.76	902.42	911.41		911.43	0.000139	2.2	5312.49	1486.16
RC	17069.85	25-YEAR	6727.32	902.42	911.83		911.85	0.000172	2.53	5946.61	1554.82
RC	17069.85	50-YEAR	7841.14	902.42	912.1		912.13	0.000193	2.75	6378.67	1598.81
RC	17069.85	100-YEAR	9556.63	902.42	912.49		912.53	0.000222	3.03	7019.72	1664.88
RC	16454.44	2-YEAR	2375.18	901.96	910.34		910.35	0.000047	1.18	4442	1603.65
RC	16454.44	5-YEAR	4110.89	901.96	911		911.02	0.000086	1.69	5525.32	1680.03
RC	16454.44	10-YEAR	5194.76	901.96	911.35		911.36	0.000101	1.89	6104.15	1690.82
RC	16454.44	25-YEAR	6727.32	901.96	911.75		911.77	0.000122	2.15	6790.25	1703.72
RC	16454.44	50-YEAR	7841.14	901.96	912.01		912.04	0.000136	2.32	7243.03	1714.24
RC	16454.44	100-YEAR	9556.63	901.96	912.4		912.43	0.000155	2.56	7900.55	1736.28
RC	16060.2	2-YEAR	2394.99	901.88	910.33		910.34	0.000023	0.87	6073.32	2134.67
RC	16060.2	5-YEAR	4142.77	901.88	910.98		910.99	0.000042	1.25	7657.14	2607.38
RC	16060.2	10-YEAR	5240.47	901.88	911.32		911.33	0.00005	1.41	8548.35	2634.39
RC	16060.2	25-YEAR	6789.4	901.88	911.72		911.73	0.000062	1.62	9610.09	2676.9
RC	16060.2	50-YEAR	7911.34	901.88	911.99		912	0.000069	1.74	10315.6	2701.89
RC	16060.2	100-YEAR	9645.11	901.88	912.36		912.38	0.000079	1.92	11343.53	2737.91
RC	15994	2-YEAR	2394.99	901.67	910.32	905.88	910.33	0.000049	1.35	4347.69	2499.28
RC	15994	5-YEAR	4142.77	901.67	910.97	906.73	910.98	0.000081	1.84	5326.02	2555.88
RC	15994	10-YEAR	5240.47	901.67	911.3	907.09	911.32	0.000099	2.08	5843.22	2580.81
RC	15994	25-YEAR	6789.4	901.67	911.7	907.55	911.72	0.000124	2.4	6454.6	2605.26
RC	15994	50-YEAR	7911.34	901.67	911.95	907.85	911.99	0.00014	2.6	6858.64	2622.42
RC	15994	100-YEAR	9645.11	901.67	912.32	908.27	912.36	0.000163	2.88	7444.68	2654.82
RC	15854		Bridge								
RC	15690.23	2-YEAR	2394.99	901.59	910.13	906.78	910.14	0.000055	1.38	3861.49	1448.34
RC	15690.23	5-YEAR	4142.77	901.59	910.63	908.05	910.65	0.000108	2.01	4437.71	1476.54
RC	15690.23	10-YEAR	5240.47	901.59	910.9	908.43	910.93	0.00014	2.35	4745.22	1549.53
RC	15690.23	25-YEAR	6789.4	901.59	911.18	908.86	911.22	0.000192	2.81	5065.96	1564.23
RC	15690.23	50-YEAR	7911.34	901.59	911.37	909	911.42	0.000228	3.11	5283.69	1574.19
RC	15690.23	100-YEAR	9645.11	901.59	911.67	909.01	911.73	0.000279	3.51	5625.91	1589.84
RC	15631.43	2-YEAR	2394.99	901.4	910.13		910.13	0.000042	1.2	4386.31	1418.88
RC	15631.43	5-YEAR	4142.77	901.4	910.63		910.65	0.000082	1.75	5117.73	1470.06
RC	15631.43	10-YEAR	5240.47	901.4	910.9		910.92	0.000107	2.04	5515.65	1501.91
RC	15631.43	25-YEAR	6789.4	901.4	911.18		911.21	0.000146	2.44	5944.07	1574.97
RC	15631.43	50-YEAR	7911.34	901.4	911.37		911.4	0.000174	2.71	6247.03	1608.52
RC	15631.43	100-YEAR	9645.11	901.4	911.66		911.71	0.00021	3.04	6727.62	1618.5
RC	15278.91	2-YEAR	2394.64	901.32	910.12		910.12	0.000025	0.91	4986.16	1132.87
RC	15278.91	5-YEAR	4142.24	901.32	910.61		910.62	0.000053	1.38	5547.94	1139.66
RC	15278.91	10-YEAR	5240.4	901.32	910.88		910.89	0.000072	1.65	5847.11	1143.38
RC	15278.91	25-YEAR	6790.39	901.32	911.14		911.17	0.000103	2.01	6155.39	1147.22
RC	15278.91	50-YEAR	7912.67	901.32	911.33		911.36	0.000126	2.26	6364.35	1149.81
RC	15278.91	100-YEAR	9648.79	901.32	911.61		911.65	0.00016	2.6	6694.5	1153.9

Table C.6
Rock Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	15235.34	2-YEAR	2394.64	901.32	910.11	906.75	910.12	0.000055	1.26	3824.49	1132.67
RC	15235.34	5-YEAR	4142.24	901.32	910.6	908.01	910.62	0.000109	1.85	4376.84	1137.67
RC	15235.34	10-YEAR	5240.4	901.32	910.85	908.7	910.88	0.000143	2.17	4669.72	1140.31
RC	15235.34	25-YEAR	6790.39	901.32	911.12	909.56	911.16	0.000198	2.62	4967.53	1142.99
RC	15235.34	50-YEAR	7912.67	901.32	911.29	909.9	911.34	0.000238	2.91	5169.02	1144.8
RC	15235.34	100-YEAR	9648.79	901.32	911.57	909.91	911.64	0.000293	3.31	5487.9	1147.65
RC	15171.34		Culvert								
RC	15083.73	2-YEAR	2394.64	901.32	906.5	906.5	907.79	0.00725	9.26	283.81	621.32
RC	15083.73	5-YEAR	4142.24	901.32	907.69	907.69	909.45	0.00688	11.07	430.05	705.99
RC	15083.73	10-YEAR	5240.4	901.32	908.31	908.31	910.34	0.006793	11.99	507.47	755.25
RC	15083.73	25-YEAR	6790.39	901.32	909	909	909.14	0.000827	4.55	2688.96	1085.63
RC	15083.73	50-YEAR	7912.67	901.32	909.52	909.01	909.66	0.000736	4.54	3105.71	1249.82
RC	15083.73	100-YEAR	9648.79	901.32	910.34	909.01	910.48	0.000641	4.6	4007.62	2069.55
RC	15011.53	2-YEAR	2394.64	901.32	906.11	905.66	906.52	0.003906	6.54	712.72	587.83
RC	15011.53	5-YEAR	4142.24	901.32	907.36	905.99	907.55	0.001551	5.14	1565.42	835.74
RC	15011.53	10-YEAR	5240.4	901.32	908.07	906.79	908.23	0.001072	4.72	2070.63	960.98
RC	15011.53	25-YEAR	6790.39	901.32	908.89	907.05	909.04	0.000826	4.58	2689.18	1166.11
RC	15011.53	50-YEAR	7912.67	901.32	909.47	907.22	909.61	0.000709	4.52	3133.85	1275.83
RC	15011.53	100-YEAR	9648.79	901.32	910.3	907.46	910.43	0.00062	4.58	4004.71	2217.64
RC	14480.11	2-YEAR	2394.64	900.97	905.82		905.85	0.000558	2.59	1818.92	1038.05
RC	14480.11	5-YEAR	4142.24	900.97	907.22		907.25	0.000275	2.3	3326.14	1106.63
RC	14480.11	10-YEAR	5240.4	900.97	907.97		908	0.000221	2.27	4161.75	1128.99
RC	14480.11	25-YEAR	6790.39	900.97	908.81		908.84	0.000195	2.35	5123.62	1156.15
RC	14480.11	50-YEAR	7912.67	900.97	909.4		909.43	0.00018	2.39	5807.83	1179.53
RC	14480.11	100-YEAR	9648.79	900.97	910.23		910.27	0.000165	2.47	6820.57	1287.56
RC	13373.18	2-YEAR	2377.28	895.08	905.72	900.76	905.74	0.000055	1.37	3197.64	868.31
RC	13373.18	5-YEAR	4117.05	895.08	907.13	902.12	907.15	0.000067	1.7	4507.84	963.3
RC	13373.18	10-YEAR	5207.48	895.08	907.88	902.33	907.9	0.000071	1.85	5241.67	1043.98
RC	13373.18	25-YEAR	6746.2	895.08	908.72	903.43	908.75	0.000078	2.05	6097.63	1184.83
RC	13373.18	50-YEAR	7865.98	895.08	909.3	903.64	909.34	0.000086	2.24	6892.12	1218.7
RC	13373.18	100-YEAR	9588.4	895.08	910.14	904.06	910.18	0.000086	2.35	7929.71	1250.05
RC	12798.72	2-YEAR	2398.03	893.91	905.69	899.42	905.71	0.000056	1.67	2706.18	567.67
RC	12798.72	5-YEAR	4143.53	893.91	907.08	900.54	907.11	0.000084	2.24	3544.64	642.6
RC	12798.72	10-YEAR	5235.02	893.91	907.81	900.71	907.86	0.000104	2.6	4045.11	736.93
RC	12798.72	25-YEAR	6774.02	893.91	908.64	901.86	908.7	0.000122	2.95	4682.6	800.55
RC	12798.72	50-YEAR	7902.12	893.91	909.21	902.24	909.28	0.000132	3.15	5150.19	842.36
RC	12798.72	100-YEAR	9622.55	893.91	910.05	902.7	910.13	0.000142	3.41	5879.76	910.57
RC	12096.61	2-YEAR	2409.61	893.91	905.6	898.75	905.65	0.000094	1.83	1357.36	230.81
RC	12096.61	5-YEAR	4178.89	893.91	906.91	900	907.02	0.000161	2.67	1662.91	237.34
RC	12096.61	10-YEAR	5324.38	893.91	907.59	900.56	907.74	0.000201	3.14	1825.55	240.75
RC	12096.61	25-YEAR	6850.94	893.91	908.34	901.24	908.54	0.000254	3.71	2007.19	244.92
RC	12096.61	50-YEAR	7967.94	893.91	908.85	901.7	909.1	0.000289	4.08	2134.25	249.1
RC	12096.61	100-YEAR	9708.38	893.91	909.6	902.38	909.91	0.000338	4.62	2319.11	277.26
RC	11857.11		Culvert								
RC	11684.69	2-YEAR	2409.61	893.28	901.53	898.71	901.74	0.000701	3.61	668.15	144.05
RC	11684.69	5-YEAR	4178.89	893.28	903.17	899.71	903.49	0.000819	4.59	911.13	153.52
RC	11684.69	10-YEAR	5324.38	893.28	903.92	900.29	904.34	0.000924	5.18	1028.29	157.84
RC	11684.69	25-YEAR	6850.94	893.28	904.7	900.99	905.25	0.001076	5.94	1153.62	162.44
RC	11684.69	50-YEAR	7967.94	893.28	905.2	901.45	905.85	0.001164	6.46	1235.35	165.63
RC	11684.69	100-YEAR	9708.38	893.28	905.96	902.13	906.75	0.001259	7.15	1362.91	170.54
RC	10597.41	2-YEAR	2409.61	891.48	899.63	897.55	900.3	0.002531	6.64	408.27	169.47
RC	10597.41	5-YEAR	4178.89	891.48	900.92	900.03	901.8	0.003138	7.94	676.7	241.21
RC	10597.41	10-YEAR	5324.38	891.48	901.52	900.82	902.49	0.003335	8.55	827.73	263.91
RC	10597.41	25-YEAR	6850.94	891.48	902.44	901.51	903.39	0.002835	8.72	1079.73	283.82
RC	10597.41	50-YEAR	7967.94	891.48	903.18	901.88	904.08	0.002393	8.63	1294.84	299.49
RC	10597.41	100-YEAR	9708.38	891.48	904.32	902.42	905.15	0.001884	8.48	1655.16	328.71
RC	9767.048	2-YEAR	2409.61	891.25	898.42	897.49	898.73	0.00151	5.78	733.3	264.57
RC	9767.048	5-YEAR	4178.89	891.25	899.01	898.23	899.6	0.002622	8.16	890.05	266.95
RC	9767.048	10-YEAR	5324.38	891.25	900.08	898.65	900.57	0.001872	7.69	1176.67	271.24
RC	9767.048	25-YEAR	6850.94	891.25	901.48	899.12	901.91	0.001318	7.28	1561.76	277.26
RC	9767.048	50-YEAR	7967.94	891.25	902.41	899.45	902.82	0.001115	7.17	1821.52	281.77
RC	9767.048	100-YEAR	9708.38	891.25	903.73	899.91	904.13	0.000934	7.16	2196.39	288.16

Table C.6
Rock Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	9473.876	2-YEAR	2409.61	891.25	898.36	894.83	898.43	0.000477	3.16	1370.01	454.38
RC	9473.876	5-YEAR	4178.89	891.25	898.9	896.35	899.06	0.000882	4.58	1620.59	468.26
RC	9473.876	10-YEAR	5324.38	891.25	900.05	896.3	900.18	0.000603	4.27	2168.52	489.37
RC	9473.876	25-YEAR	6850.94	891.25	901.5	897.45	901.62	0.000419	4.05	2902.31	516.23
RC	9473.876	50-YEAR	7967.94	891.25	902.46	897.48	902.57	0.000351	3.98	3400.15	528.63
RC	9473.876	100-YEAR	9708.38	891.25	903.8	898.3	903.91	0.000292	3.97	4121.26	548.65
RC	9310.741	2-YEAR	2400.02	891.25	898.33	894.73	898.38	0.00027	2.45	1616.71	477.33
RC	9310.741	5-YEAR	4138.35	891.25	898.84	895.63	898.95	0.000532	3.63	1863.16	487.05
RC	9310.741	10-YEAR	5222.75	891.25	900	896.34	900.1	0.000379	3.46	2443.23	509
RC	9310.741	25-YEAR	6755.87	891.25	901.47	896.87	901.56	0.000284	3.4	3211.54	539.55
RC	9310.741	50-YEAR	7878.71	891.25	902.43	897.16	902.52	0.000248	3.41	3739.01	560.56
RC	9310.741	100-YEAR	9580.69	891.25	903.77	897.8	903.87	0.00021	3.44	4509.02	582.65
RC	9247.697	2-YEAR	2400.02	891.25	897.19	895.69	898.09	0.002737	7.61	315.34	483.33
RC	9247.697	5-YEAR	4138.35	891.25	898.82	897.28	898.92	0.000443	3.56	2031.23	537.2
RC	9247.697	10-YEAR	5222.75	891.25	899.99	898.09	900.08	0.00032	3.39	2663.68	563.65
RC	9247.697	25-YEAR	6755.87	891.25	901.46	898.09	901.54	0.000231	3.22	3547.17	583.06
RC	9247.697	50-YEAR	7878.71	891.25	902.42	898.09	902.5	0.000201	3.21	4112.44	595.68
RC	9247.697	100-YEAR	9580.69	891.25	903.77	898.09	903.85	0.000172	3.23	4926.6	612.4
RC	9196.197		Culvert								
RC	9146.366	2-YEAR	2400.02	889.33	895.98	894.62	897.6	0.003535	10.24	234.36	460.19
RC	9146.366	5-YEAR	4138.35	889.33	898.88	897.01	898.9	0.000071	1.47	3597.07	534.98
RC	9146.366	10-YEAR	5222.75	889.33	899.98	897.01	900	0.000066	1.44	4426.6	578
RC	9146.366	25-YEAR	6755.87	889.33	901.46	897.01	901.48	0.000063	1.6	5295.74	597.46
RC	9146.366	50-YEAR	7878.71	889.33	902.43	897.01	902.46	0.000062	1.7	5881.52	610.23
RC	9146.366	100-YEAR	9580.69	889.33	903.77	897.01	903.8	0.000062	1.88	6711.32	626.1
RC	9110.756	2-YEAR	2400.02	889.67	896.63	894.02	896.85	0.000785	3.72	644.86	144.95
RC	9110.756	5-YEAR	4138.35	889.67	898.5	895.01	898.81	0.000772	4.47	925.41	155.46
RC	9110.756	10-YEAR	5222.75	889.67	899.54	895.54	899.9	0.00075	4.79	1090.22	161.29
RC	9110.756	25-YEAR	6755.87	889.67	900.96	896.22	901.37	0.000698	5.1	1325.35	168.94
RC	9110.756	50-YEAR	7878.71	889.67	901.89	896.7	902.33	0.000662	5.3	1496.8	188.7
RC	9110.756	100-YEAR	9580.69	889.67	903.18	897.36	903.66	0.000613	5.6	1743.74	195.55
RC	8715.771	2-YEAR	2395.14	886.92	895.56	893.51	896.29	0.002374	6.89	347.62	68.42
RC	8715.771	5-YEAR	4134.69	886.92	896.61	895.28	898.1	0.004086	9.78	422.68	73.73
RC	8715.771	10-YEAR	5219.88	886.92	897.11	896.21	899.11	0.00514	11.35	460.09	76.23
RC	8715.771	25-YEAR	6753.23	886.92	898.19	897.35	900.57	0.005371	12.39	545.07	81.64
RC	8715.771	50-YEAR	7877.2	886.92	898.88	898.12	901.53	0.005519	13.07	602.83	85.11
RC	8715.771	100-YEAR	9581.99	886.92	899.67	899.14	902.85	0.005743	14.29	671.8	88.96
RC	8259.184	2-YEAR	2395.14	885.47	895.07	891.83	895.37	0.00111	4.58	638.84	434.71
RC	8259.184	5-YEAR	4134.69	885.47	896.1	893.87	896.56	0.001473	5.89	925.18	466.34
RC	8259.184	10-YEAR	5219.88	885.47	896.73	894.93	897.24	0.001511	6.33	1105.66	478.47
RC	8259.184	25-YEAR	6753.23	885.47	898.32	895.76	898.72	0.001005	5.76	1581.77	513.55
RC	8259.184	50-YEAR	7877.2	885.47	899.26	896.13	899.64	0.000834	5.69	1880.37	547.3
RC	8259.184	100-YEAR	9581.99	885.47	900.87	896.65	901	0.000285	3.75	3975.51	572.44
RC	8170.184		Culvert								
RC	7917.137	2-YEAR	2395.14	884.3	893.35	890.75	894.12	0.001973	7.1	372.06	123.4
RC	7917.137	5-YEAR	4134.69	884.3	895.23	893.18	896.08	0.001925	7.97	735.8	219.91
RC	7917.137	10-YEAR	5219.88	884.3	896.25	894.74	897.03	0.001724	7.99	967.96	236.11
RC	7917.137	25-YEAR	6753.23	884.3	897.98	895.58	898.58	0.001199	7.33	1396.3	257.94
RC	7917.137	50-YEAR	7877.2	884.3	898.98	896.11	899.54	0.001031	7.26	1659.74	270.25
RC	7917.137	100-YEAR	9581.99	884.3	900.38	896.73	900.91	0.000863	7.23	2048.95	285.82
RC	7323.238	2-YEAR	2395.14	884.3	892.88		893.22	0.000763	4.86	599.67	217.35
RC	7323.238	5-YEAR	4134.69	884.3	894.86		895.22	0.000671	5.39	1232.98	359.02
RC	7323.238	10-YEAR	5219.88	884.3	895.94		896.27	0.000578	5.41	1640.19	392.06
RC	7323.238	25-YEAR	6753.23	884.3	897.81		898.05	0.000379	4.91	2388.41	409.2
RC	7323.238	50-YEAR	7877.2	884.3	898.85		899.07	0.000331	4.86	2817.3	417.47
RC	7323.238	100-YEAR	9581.99	884.3	900.28		900.49	0.000285	4.84	3424.69	427.3
RC	6271.714	2-YEAR	2392.79	883.23	892.06		892.37	0.000852	4.84	719.14	243.94
RC	6271.714	5-YEAR	4130.76	883.23	894.24		894.52	0.00063	5.07	1327.44	318.18
RC	6271.714	10-YEAR	5215.27	883.23	895.42		895.68	0.000529	5.06	1728.52	350.16
RC	6271.714	25-YEAR	6749.6	883.23	897.42		897.65	0.00039	4.93	2531.34	477.73
RC	6271.714	50-YEAR	7872.91	883.23	898.53		898.73	0.000319	4.74	3068.23	490.57
RC	6271.714	100-YEAR	9573.2	883.23	900.03		900.2	0.000259	4.6	3817.17	507.93

Table C.6
Rock Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	6112.396	2-YEAR	2392.79	882.8	891.27	889.36	892.02	0.002327	7.08	374.65	168.82
RC	6112.396	5-YEAR	4130.76	882.8	893.22	891.46	894.17	0.002057	8.21	601.66	229.21
RC	6112.396	10-YEAR	5215.27	882.8	894.28	892.25	895.31	0.001914	8.67	732.87	269.11
RC	6112.396	25-YEAR	6749.6	882.8	896.43	893.18	897.34	0.001307	8.35	1007.79	349.87
RC	6112.396	50-YEAR	7872.91	882.8	897.44	893.8	898.41	0.00124	8.65	1142.23	371.8
RC	6112.396	100-YEAR	9573.2	882.8	898.81	894.62	899.87	0.001186	9.13	1326.41	418.54
RC	6058.396		Bridge								
RC	5980.438	2-YEAR	2392.79	881.92	889.2	889.2	890.54	0.007131	9.53	284	182.56
RC	5980.438	5-YEAR	4130.76	881.92	890.45	890.45	892.16	0.006806	11.07	442.87	235.82
RC	5980.438	10-YEAR	5215.27	881.92	891.05	891.05	893.02	0.006782	11.99	520.54	250.59
RC	5980.438	25-YEAR	6749.6	881.92	891.81	891.81	894.12	0.006765	13.11	619.94	270.73
RC	5980.438	50-YEAR	7872.91	881.92	892.33	892.33	894.86	0.006738	13.83	687.78	282.87
RC	5980.438	100-YEAR	9573.2	881.92	893.03	893.03	895.92	0.006773	14.84	781.36	299.13
RC	4838.84	2-YEAR	2392.83	878.48	887.15		887.42	0.000934	4.26	658.87	314.31
RC	4838.84	5-YEAR	4131.4	878.48	888.64		888.95	0.000834	4.82	1201.02	380.6
RC	4838.84	10-YEAR	5216.43	878.48	889.38		889.7	0.000797	5.07	1481.98	387.23
RC	4838.84	25-YEAR	6751.88	878.48	889.72		890.17	0.001069	6.06	1616.94	390.37
RC	4838.84	50-YEAR	7876.52	878.48	890.33		890.79	0.00101	6.22	1857.37	395.91
RC	4838.84	100-YEAR	9576.43	878.48	891.32		891.77	0.000883	6.28	2252.94	404.86
RC	4263.236	2-YEAR	2392.83	878.2	887.14		887.18	0.000174	2.31	1693.17	377.35
RC	4263.236	5-YEAR	4131.4	878.2	888.62		888.69	0.000225	2.99	2288.82	418.25
RC	4263.236	10-YEAR	5216.43	878.2	889.34		889.43	0.000252	3.34	2596.22	434.6
RC	4263.236	25-YEAR	6751.88	878.2	889.67		889.8	0.000376	4.17	2740.41	455.27
RC	4263.236	50-YEAR	7876.52	878.2	890.26		890.42	0.000406	4.51	3020.99	485.95
RC	4263.236	100-YEAR	9576.43	878.2	891.26		891.43	0.000389	4.7	3515.17	502.89
RC	4076.095	2-YEAR	2397.26	878.2	887.09		887.15	0.000236	2.22	1493.64	399.9
RC	4076.095	5-YEAR	4140.26	878.2	888.56		888.65	0.000276	2.78	2159.84	485.33
RC	4076.095	10-YEAR	5229.08	878.2	889.29		889.38	0.000278	3.01	2531.82	530.95
RC	4076.095	25-YEAR	6767.65	878.2	889.59		889.73	0.000391	3.66	2693.38	535.54
RC	4076.095	50-YEAR	7894.54	878.2	890.19		890.34	0.000385	3.83	3019.36	546.71
RC	4076.095	100-YEAR	9599.36	878.2	891.2		891.36	0.000349	3.95	3579.29	564.56
RC	3193.07	2-YEAR	2400.04	878.2	886.92		886.97	0.000182	2.63	1936.63	573.75
RC	3193.07	5-YEAR	4140.6	878.2	888.39		888.45	0.000197	3.07	2812.06	619.23
RC	3193.07	10-YEAR	5231	878.2	889.11		889.18	0.000204	3.27	3263.66	626.81
RC	3193.07	25-YEAR	6771.29	878.2	889.34		889.44	0.000301	4.04	3404.9	629.17
RC	3193.07	50-YEAR	7898.92	878.2	889.95		890.05	0.000297	4.17	3791.46	636.07
RC	3193.07	100-YEAR	9603.91	878.2	890.99		891.09	0.000271	4.23	4457.38	648.5
RC	2820.052	2-YEAR	2397.84	877.95	886.48		886.81	0.001052	4.71	647.45	343.15
RC	2820.052	5-YEAR	4144.4	877.95	887.93		888.28	0.000966	5.26	1196.26	412.01
RC	2820.052	10-YEAR	5235.96	877.95	888.66		889.01	0.000909	5.47	1508.05	440.21
RC	2820.052	25-YEAR	6777.63	877.95	888.52		889.16	0.001681	7.35	1447.33	437.58
RC	2820.052	50-YEAR	7908.13	877.95	889.22		889.79	0.001419	7.19	1757.37	451.1
RC	2820.052	100-YEAR	9610.88	877.95	890.4		890.88	0.001036	6.76	2305.35	473.91
RC	2139.167	2-YEAR	2779.07	875.66	886.35	882.21	886.4	0.000219	2.27	1986.96	768.34
RC	2139.167	5-YEAR	4584.02	875.66	887.85	883.43	887.9	0.000177	2.4	3259.72	890.91
RC	2139.167	10-YEAR	5648.53	875.66	888.59	884.01	888.65	0.000164	2.47	3945.69	964.1
RC	2139.167	25-YEAR	7137.54	875.66	888.39	884.61	888.49	0.000297	3.26	3757.87	944.3
RC	2139.167	50-YEAR	8221.42	875.66	889.12	884.61	889.21	0.000257	3.22	4464.37	990.7
RC	2139.167	100-YEAR	9862.63	875.66	890.35	884.86	890.43	0.000184	2.99	5702.81	1011.35
RC	2048.167		Culvert								
RC	1871.616	2-YEAR	2779.07	873.67	886.34	880.38	886.35	0.000036	1.11	3821.9	707.92
RC	1871.616	5-YEAR	4584.02	873.67	887.85	881.51	887.87	0.000048	1.46	5100.62	922.76
RC	1871.616	10-YEAR	5648.53	873.67	888.61	881.51	888.63	0.000051	1.59	5812.15	957.12
RC	1871.616	25-YEAR	7137.54	873.67	888.45	881.51	888.48	0.000088	2.07	5655.99	947.16
RC	1871.616	50-YEAR	8221.42	873.67	889.13	881.51	889.17	0.000086	2.14	6317.52	974.33
RC	1871.616	100-YEAR	9862.63	873.67	890.39	881.51	890.42	0.000075	2.16	7565.12	1016.22
RC	1766.516	2-YEAR	2396.92	873.19	886.31	877.57	886.34	0.000044	1.44	1713.44	712.07
RC	1766.516	5-YEAR	4123.64	873.19	887.78	878.55	887.85	0.000077	2.11	2068.13	864.78
RC	1766.516	10-YEAR	5186.86	873.19	888.51	879.09	888.6	0.000096	2.46	2244.08	928.21
RC	1766.516	25-YEAR	6734.06	873.19	888.26	879.81	888.43	0.000175	3.28	2185.2	919.26
RC	1766.516	50-YEAR	7859.78	873.19	888.91	880.29	889.11	0.000196	3.59	2341.36	943
RC	1766.516	100-YEAR	9524.36	873.19	890.37	880.97	890.41	0.000046	1.85	6838.81	995.7
RC	1686.516		Bridge								

Table C.6
Rock Creek Results for Existing Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	1598.795	2-YEAR	2396.92	872.64	884.97	877.76	885.01	0.000072	1.6	1512.99	671.36
RC	1598.795	5-YEAR	4123.64	872.64	886.4	878.73	886.48	0.000117	2.29	1873.93	977.68
RC	1598.795	10-YEAR	5186.86	872.64	887.11	879.24	887.22	0.000141	2.66	2055.11	1023.15
RC	1598.795	25-YEAR	6734.06	872.64	888	879.92	888.15	0.000175	3.13	2282.07	1080.61
RC	1598.795	50-YEAR	7859.78	872.64	888.59	880.37	888.77	0.000197	3.44	2431.96	1127.73
RC	1598.795	100-YEAR	9524.36	872.64	889.46	881	889.51	0.000082	2.34	6545.91	1204.23
RC	1512.292	2-YEAR	2396.92	872.69	884.98		884.99	0.000022	0.98	3222.96	934.74
RC	1512.292	5-YEAR	4123.64	872.69	886.42		886.45	0.000043	1.5	4711.05	1122.01
RC	1512.292	10-YEAR	5186.86	872.69	887.14		887.17	0.000047	1.65	5540.66	1175.31
RC	1512.292	25-YEAR	6734.06	872.69	888.05		888.08	0.000052	1.83	6646.34	1257.37
RC	1512.292	50-YEAR	7859.78	872.69	888.65		888.69	0.000055	1.94	7420.59	1314.91
RC	1512.292	100-YEAR	9524.36	872.69	889.46		889.5	0.000058	2.07	8509.18	1377.3
RC	1177.636	2-YEAR	2402.11	871.83	884.95		884.98	0.000069	1.98	2717.31	905.58
RC	1177.636	5-YEAR	4127.86	871.83	886.39		886.43	0.000081	2.32	4077.57	979.24
RC	1177.636	10-YEAR	5199.21	871.83	887.11		887.15	0.000085	2.47	4796.7	1015.73
RC	1177.636	25-YEAR	6740.95	871.83	888.02		888.06	0.00009	2.65	5738.55	1060.07
RC	1177.636	50-YEAR	7873.76	871.83	888.62		888.66	0.000092	2.76	6382.15	1082.5
RC	1177.636	100-YEAR	9542.6	871.83	889.43		889.47	0.000095	2.9	7268.05	1109.53
RC	820.246	2-YEAR	2402.11	871.73	884.93		884.96	0.000055	1.84	2837.37	904.06
RC	820.246	5-YEAR	4127.86	871.73	886.37		886.4	0.000069	2.22	4198.55	991.24
RC	820.246	10-YEAR	5199.21	871.73	887.08		887.13	0.000074	2.39	4925.14	1027.6
RC	820.246	25-YEAR	6740.95	871.73	887.99		888.04	0.00008	2.6	5874.04	1072.04
RC	820.246	50-YEAR	7873.76	871.73	888.59		888.64	0.000084	2.73	6527	1110.19
RC	820.246	100-YEAR	9542.6	871.73	889.4		889.45	0.000088	2.9	7446.7	1167.58
RC	96.2263	2-YEAR	2402.11	871.73	884.87	878.17	884.91	0.000092	1.97	2429.4	992.15
RC	96.2263	5-YEAR	4127.86	871.73	886.31	879.94	886.36	0.000093	2.19	3924.96	1076.08
RC	96.2263	10-YEAR	5199.21	871.73	887.03	880.74	887.08	0.000092	2.29	4712.47	1107.92
RC	96.2263	25-YEAR	6740.95	871.73	887.94	881.53	887.98	0.000092	2.42	5729.8	1138.44
RC	96.2263	50-YEAR	7873.76	871.73	888.54	882.52	888.58	0.000092	2.5	6417.91	1155.74
RC	96.2263	100-YEAR	9542.6	871.73	889.35	883.36	889.39	0.000092	2.6	7360.05	1189

Table C.7
Rock Creek Results for Existing Conditions (USGS Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	18605.55	100-YEAR	11500	902.49	913.31		913.4	0.000374	4.07	6339.61	1609.44
RC	17847.37	100-YEAR	11500	902.49	913.1		913.15	0.00032	3.74	7131.11	1743.38
RC	17503.88	100-YEAR	11500	902.48	913		913.05	0.000278	3.45	7381.46	1727.7
RC	17069.85	100-YEAR	11500	902.42	912.89		912.94	0.00025	3.32	7690.88	1724.37
RC	16454.44	100-YEAR	11500	901.96	912.78		912.82	0.000175	2.8	8572.86	1772.73
RC	16060.2	100-YEAR	11500	901.88	912.74		912.76	0.000087	2.07	12394.76	2768.6
RC	15994	100-YEAR	11500	901.67	912.7	908.69	912.75	0.000184	3.13	8041.71	2683.48
RC	15854		Bridge								
RC	15690.23	100-YEAR	11500	901.59	911.99	909.01	912.07	0.000323	3.87	5999.93	1610.45
RC	15631.43	100-YEAR	11500	901.4	911.99		912.05	0.000241	3.33	7256.58	1633.21
RC	15278.91	100-YEAR	11500	901.32	911.93		911.98	0.000192	2.92	7058.19	1158.39
RC	15235.34	100-YEAR	11500	901.32	911.88	909.91	911.96	0.000342	3.67	5840.58	1150.81
RC	15171.34		Culvert								
RC	15083.73	100-YEAR	11500	901.32	911.19	909.01	911.32	0.000643	4.96	5308.69	2301.48
RC	15011.53	100-YEAR	11500	901.32	911.14	907.71	911.28	0.000663	5.09	5345.68	2353.43
RC	14480.11	100-YEAR	11500	900.97	911.07		911.11	0.000177	2.74	7987.78	1454.37
RC	13373.18	100-YEAR	11500	895.08	910.97	904.35	911.01	0.000086	2.46	8985.23	1281.32
RC	12798.72	100-YEAR	11500	893.91	910.87	903.18	910.96	0.000156	3.72	6670.97	1032.12
RC	12096.61	100-YEAR	11500	893.91	910.33	903.02	910.71	0.00038	5.1	2504.84	340.82
RC	11857.11		Culvert								
RC	11684.69	100-YEAR	11500	893.28	906.95	902.8	907.84	0.001215	7.57	1534.78	176.93
RC	10597.41	100-YEAR	11500	891.48	905.7	902.93	906.41	0.001373	8.03	2132.26	363.81
RC	9767.048	100-YEAR	11500	891.25	905.25	900.35	905.64	0.000746	6.99	2641.19	295.91
RC	9473.876	100-YEAR	11500	891.25	905.34	898.62	905.44	0.000228	3.84	4980.8	561.44
RC	9310.741	100-YEAR	11500	891.25	905.32	898.13	905.41	0.000174	3.42	5427.93	606.8
RC	9247.697	100-YEAR	11500	891.25	905.32	898.09	905.4	0.000144	3.22	5889.35	634.79
RC	9196.197		Culvert								
RC	9146.366	100-YEAR	11500	889.33	905.32	897.01	905.36	0.000058	1.99	7713.61	681.76
RC	9110.756	100-YEAR	11500	889.67	904.7	898.06	905.21	0.000544	5.8	2046.46	203.61
RC	8715.771	100-YEAR	11500	886.92	901.59	900.11	904.51	0.003975	13.75	851.15	98.25
RC	8259.184	100-YEAR	11500	885.47	902.78	897.2	902.89	0.000194	3.48	5077.95	583.48
RC	8170.184		Culvert								
RC	7917.137	100-YEAR	11500	884.3	902.38	897.35	902.83	0.000617	6.78	2639.31	303.96
RC	7323.238	100-YEAR	11500	884.3	902.33		902.5	0.000214	4.58	4313.3	443.59
RC	6271.714	100-YEAR	12200	883.23	902.12		902.28	0.000209	4.52	4906.28	534.38
RC	6112.396	100-YEAR	12200	882.8	901.97	895.78	902.22	0.000323	5.52	4140.21	520.66
RC	6058.396		Bridge								
RC	5980.438	100-YEAR	12200	881.92	894.09	894.09	897.42	0.006579	16.04	925.09	335.25
RC	4838.84	100-YEAR	12200	878.48	892.65		893.11	0.00078	6.48	2800.29	416.93
RC	4263.236	100-YEAR	12200	878.2	892.61		892.79	0.000377	5	4208.18	526.74
RC	4076.095	100-YEAR	12200	878.2	892.55		892.72	0.000322	4.17	4386.15	678.53
RC	3193.07	100-YEAR	12200	878.2	892.36		892.48	0.000251	4.38	5362.29	666
RC	2820.052	100-YEAR	12200	877.95	891.87		892.29	0.000807	6.6	3018.43	502.04
RC	2139.167	100-YEAR	12200	875.66	891.85	886.09	891.92	0.00014	2.87	7235.31	1038.51
RC	2048.167		Culvert								
RC	1871.616	100-YEAR	12200	873.67	891.84	881.51	891.88	0.000071	2.27	9085.75	1083.73
RC	1766.516	100-YEAR	12500	873.19	891.81	882.06	891.87	0.000057	2.19	7918.69	1142.58
RC	1686.516		Bridge								
RC	1598.795	100-YEAR	12500	872.64	891.04	882.01	891.09	0.000071	2.35	9382.8	1331.23
RC	1512.292	100-YEAR	12500	872.69	891.04		891.08	0.000054	2.17	10760.72	1468.16
RC	1177.636	100-YEAR	12500	871.83	891.01		891.05	0.000088	2.98	9061.45	1164.51
RC	820.246	100-YEAR	12500	871.73	890.98		891.03	0.000085	3.03	9391.6	1300.27
RC	96.2263	100-YEAR	13200	871.73	890.92	884.93	890.98	0.000092	2.81	9293.39	1252.21

Table C.8
Rock Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	18605.55	2-YEAR	2364.81	902.49	910.56		910.58	0.00014	1.95	2638.03	1086.01
RC	18605.55	5-YEAR	4096.05	902.49	911.31		911.35	0.000209	2.57	3503.69	1209.68
RC	18605.55	10-YEAR	5226.39	902.49	911.72		911.77	0.000244	2.88	4015.34	1283.75
RC	18605.55	25-YEAR	6731.54	902.49	912.16		912.22	0.000291	3.27	4605.03	1413
RC	18605.55	50-YEAR	7890.96	902.49	912.48		912.55	0.000314	3.49	5063.06	1470.14
RC	18605.55	100-YEAR	9555.36	902.49	912.89		912.96	0.000343	3.77	5675.91	1541.92
RC	17847.37	2-YEAR	2371.34	902.49	910.45		910.48	0.000173	2.19	2892.49	1409.69
RC	17847.37	5-YEAR	4109.26	902.49	911.17		911.2	0.000225	2.68	3957.66	1539.35
RC	17847.37	10-YEAR	5244.86	902.49	911.57		911.6	0.000242	2.88	4577.02	1585.84
RC	17847.37	25-YEAR	6757.42	902.49	911.99		912.03	0.000271	3.16	5253.09	1635.08
RC	17847.37	50-YEAR	7915.87	902.49	912.29		912.34	0.000285	3.32	5761.41	1670.84
RC	17847.37	100-YEAR	9587.34	902.49	912.69		912.74	0.000303	3.53	6427.13	1708.07
RC	17503.88	2-YEAR	2371.34	902.48	910.4		910.42	0.000141	1.95	3175.49	1507.73
RC	17503.88	5-YEAR	4109.26	902.48	911.11		911.13	0.000183	2.38	4269.47	1582.34
RC	17503.88	10-YEAR	5244.86	902.48	911.5		911.53	0.000199	2.58	4892.32	1606.16
RC	17503.88	25-YEAR	6757.42	902.48	911.91		911.94	0.000226	2.85	5556.72	1631.19
RC	17503.88	50-YEAR	7915.87	902.48	912.21		912.25	0.00024	3.01	6053.2	1649.59
RC	17503.88	100-YEAR	9587.34	902.48	912.6		912.64	0.00026	3.23	6697.12	1679.97
RC	17069.85	2-YEAR	2371.34	902.42	910.36		910.37	0.000073	1.45	3827.15	1362.35
RC	17069.85	5-YEAR	4109.26	902.42	911.05		911.07	0.000116	1.95	4789.42	1441.32
RC	17069.85	10-YEAR	5244.86	902.42	911.43		911.45	0.000139	2.21	5346.64	1489.76
RC	17069.85	25-YEAR	6757.42	902.42	911.83		911.86	0.000173	2.54	5949.27	1555.16
RC	17069.85	50-YEAR	7915.87	902.42	912.12		912.16	0.000194	2.76	6414.52	1601.94
RC	17069.85	100-YEAR	9587.34	902.42	912.5		912.54	0.000222	3.04	7028.25	1665.65
RC	16454.44	2-YEAR	2371.34	901.96	910.33		910.34	0.000047	1.18	4426.25	1602.7
RC	16454.44	5-YEAR	4109.26	901.96	911		911.01	0.000086	1.69	5516.5	1679.87
RC	16454.44	10-YEAR	5244.86	901.96	911.37		911.39	0.000101	1.9	6142.96	1691.56
RC	16454.44	25-YEAR	6757.42	901.96	911.75		911.77	0.000123	2.16	6792.12	1703.76
RC	16454.44	50-YEAR	7915.87	901.96	912.04		912.06	0.000137	2.33	7281.02	1715.26
RC	16454.44	100-YEAR	9587.34	901.96	912.4		912.43	0.000156	2.56	7908.92	1736.58
RC	16060.2	2-YEAR	2392.5	901.88	910.32		910.33	0.000023	0.87	6052.26	2124.25
RC	16060.2	5-YEAR	4141.08	901.88	910.98		910.99	0.000042	1.25	7643.3	2606.97
RC	16060.2	10-YEAR	5290.06	901.88	911.35		911.36	0.00005	1.41	8608.84	2636.94
RC	16060.2	25-YEAR	6820.72	901.88	911.72		911.74	0.000062	1.62	9612.38	2676.98
RC	16060.2	50-YEAR	7989.31	901.88	912.01		912.02	0.00007	1.75	10375.15	2703.99
RC	16060.2	100-YEAR	9683.99	901.88	912.37		912.38	0.00008	1.92	11356.23	2738.35
RC	15994	2-YEAR	2392.5	901.67	910.31	905.88	910.32	0.000049	1.35	4332.68	2498.6
RC	15994	5-YEAR	4141.08	901.67	910.96	906.73	910.98	0.000081	1.84	5317.78	2555.45
RC	15994	10-YEAR	5290.06	901.67	911.33	907.11	911.35	0.000099	2.09	5878.63	2582.23
RC	15994	25-YEAR	6820.72	901.67	911.7	907.54	911.72	0.000125	2.41	6455.65	2605.3
RC	15994	50-YEAR	7989.31	901.67	911.98	907.86	912.01	0.000141	2.61	6892.9	2623.97
RC	15994	100-YEAR	9683.99	901.67	912.33	908.28	912.37	0.000164	2.88	7451.65	2655.26
RC	15854		Bridge								
RC	15690.23	2-YEAR	2392.5	901.59	910.12	906.78	910.13	0.000056	1.38	3847.7	1447.62
RC	15690.23	5-YEAR	4141.08	901.59	910.62	908.06	910.65	0.000109	2.02	4429.82	1476.15
RC	15690.23	10-YEAR	5290.06	901.59	910.92	908.44	910.95	0.000141	2.36	4767.03	1550.53
RC	15690.23	25-YEAR	6820.72	901.59	911.17	908.89	911.21	0.000196	2.83	5051.68	1563.57
RC	15690.23	50-YEAR	7989.31	901.59	911.39	909	911.44	0.00023	3.12	5302.83	1575.07
RC	15690.23	100-YEAR	9683.99	901.59	911.66	909.01	911.73	0.000282	3.53	5619.52	1589.55
RC	15631.43	2-YEAR	2392.5	901.4	910.11		910.12	0.000042	1.2	4369.18	1416.9
RC	15631.43	5-YEAR	4141.08	901.4	910.62		910.64	0.000082	1.75	5107.5	1469.88
RC	15631.43	10-YEAR	5290.06	901.4	910.92		910.94	0.000107	2.05	5544.28	1505.66
RC	15631.43	25-YEAR	6820.72	901.4	911.16		911.2	0.000149	2.46	5924.4	1569.31
RC	15631.43	50-YEAR	7989.31	901.4	911.38		911.42	0.000176	2.72	6273.84	1609.08
RC	15631.43	100-YEAR	9683.99	901.4	911.66		911.71	0.000213	3.06	6718.53	1618.31
RC	15278.91	2-YEAR	2392.42	901.32	910.11		910.11	0.000025	0.91	4972.4	1132.71
RC	15278.91	5-YEAR	4141.22	901.32	910.61		910.62	0.000054	1.39	5539.94	1139.56
RC	15278.91	10-YEAR	5291.2	901.32	910.89		910.91	0.000073	1.66	5868.68	1143.65
RC	15278.91	25-YEAR	6821.68	901.32	911.13		911.16	0.000105	2.03	6140.4	1147.03
RC	15278.91	50-YEAR	7989.64	901.32	911.34		911.37	0.000128	2.27	6383.02	1150.05
RC	15278.91	100-YEAR	9684.08	901.32	911.61		911.65	0.000162	2.61	6687.46	1153.81

Table C.8
Rock Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	15235.34	2-YEAR	2392.42	901.32	910.1	906.76	910.11	0.000056	1.26	3810.67	1132.55
RC	15235.34	5-YEAR	4141.22	901.32	910.59	908	910.61	0.00011	1.86	4368.78	1137.6
RC	15235.34	10-YEAR	5291.2	901.32	910.87	908.72	910.9	0.000144	2.18	4691.15	1140.5
RC	15235.34	25-YEAR	6821.68	901.32	911.1	909.57	911.14	0.000202	2.64	4951.97	1142.85
RC	15235.34	50-YEAR	7989.64	901.32	911.31	909.9	911.36	0.00024	2.93	5187.26	1144.96
RC	15235.34	100-YEAR	9684.08	901.32	911.56	909.91	911.63	0.000297	3.33	5480.34	1147.59
RC	15171.34		Culvert								
RC	15083.73	2-YEAR	2392.42	901.32	906.5	906.5	907.79	0.007253	9.26	283.57	620.96
RC	15083.73	5-YEAR	4141.22	901.32	907.69	907.69	909.45	0.006877	11.07	430.05	705.99
RC	15083.73	10-YEAR	5291.2	901.32	908.34	908.34	910.37	0.006781	12.03	511.13	756.73
RC	15083.73	25-YEAR	6821.68	901.32	909	909	909.15	0.000834	4.57	2688.96	1085.63
RC	15083.73	50-YEAR	7989.64	901.32	909.56	909.01	909.71	0.000725	4.53	3142.68	1263.75
RC	15083.73	100-YEAR	9684.08	901.32	910.39	909.01	910.52	0.000627	4.57	4073.2	2084.34
RC	15011.53	2-YEAR	2392.42	901.32	906.1	905.66	906.52	0.00395	6.57	708.56	586.68
RC	15011.53	5-YEAR	4141.22	901.32	907.34	905.99	907.53	0.001593	5.19	1550.97	831.22
RC	15011.53	10-YEAR	5291.2	901.32	908.1	906.8	908.26	0.001058	4.71	2093.7	966.75
RC	15011.53	25-YEAR	6821.68	901.32	908.94	907.05	909.08	0.000801	4.54	2725.71	1179.29
RC	15011.53	50-YEAR	7989.64	901.32	909.52	907.23	909.65	0.000698	4.5	3169.87	1283.49
RC	15011.53	100-YEAR	9684.08	901.32	910.34	907.47	910.47	0.000606	4.54	4074.56	2230.13
RC	14480.11	2-YEAR	2392.42	900.97	905.8		905.84	0.000573	2.62	1801.44	1037.22
RC	14480.11	5-YEAR	4141.22	900.97	907.2		907.23	0.000282	2.32	3299.4	1105.45
RC	14480.11	10-YEAR	5291.2	900.97	908		908.03	0.000219	2.27	4198.29	1129.84
RC	14480.11	25-YEAR	6821.68	900.97	908.86		908.89	0.00019	2.33	5181.81	1158.15
RC	14480.11	50-YEAR	7989.64	900.97	909.44		909.48	0.000178	2.39	5863.38	1181.41
RC	14480.11	100-YEAR	9684.08	900.97	910.28		910.31	0.000163	2.47	6878.8	1301.77
RC	13373.18	2-YEAR	2374.35	895.08	905.7	900.76	905.72	0.000056	1.38	3181.91	867.38
RC	13373.18	5-YEAR	4115.96	895.08	907.1	902.11	907.13	0.000068	1.71	4482.99	962.35
RC	13373.18	10-YEAR	5256.79	895.08	907.91	902.33	907.94	0.000071	1.85	5274	1050.17
RC	13373.18	25-YEAR	6778.21	895.08	908.77	903.45	908.8	0.000077	2.04	6151.77	1195.74
RC	13373.18	50-YEAR	7938.2	895.08	909.35	903.71	909.38	0.000086	2.24	6950.55	1220.46
RC	13373.18	100-YEAR	9627.21	895.08	910.19	904.06	910.22	0.000085	2.34	7987.44	1251.79
RC	12798.72	2-YEAR	2395.32	893.91	905.67	899.41	905.69	0.000056	1.66	2696.07	559.32
RC	12798.72	5-YEAR	4143.99	893.91	907.05	900.54	907.09	0.000085	2.24	3527.84	637.88
RC	12798.72	10-YEAR	5284.16	893.91	907.84	901.32	907.89	0.000104	2.61	4068.88	738.27
RC	12798.72	25-YEAR	6807.53	893.91	908.69	901.86	908.76	0.000121	2.94	4725.19	803.01
RC	12798.72	50-YEAR	7975.51	893.91	909.26	902.25	909.33	0.000132	3.16	5190.59	846.28
RC	12798.72	100-YEAR	9661.26	893.91	910.09	902.71	910.17	0.000141	3.4	5922.59	914.42
RC	12096.61	2-YEAR	2407.37	893.91	905.58	898.74	905.64	0.000094	1.84	1353.12	230.72
RC	12096.61	5-YEAR	4178.09	893.91	906.88	900	906.99	0.000163	2.68	1656.35	237.2
RC	12096.61	10-YEAR	5374.39	893.91	907.62	900.59	907.77	0.000203	3.15	1832.74	240.9
RC	12096.61	25-YEAR	6882.69	893.91	908.39	901.26	908.6	0.000252	3.7	2020.52	245.36
RC	12096.61	50-YEAR	8042.18	893.91	908.9	901.74	909.15	0.00029	4.1	2145.39	249.46
RC	12096.61	100-YEAR	9751.91	893.91	909.64	902.39	909.96	0.000336	4.61	2331.07	283.21
RC	11857.11		Culvert								
RC	11684.69	2-YEAR	2407.37	893.28	901.53	898.7	901.73	0.000701	3.61	667.77	144.04
RC	11684.69	5-YEAR	4178.09	893.28	903.17	899.71	903.49	0.000819	4.59	911.08	153.52
RC	11684.69	10-YEAR	5374.39	893.28	903.95	900.32	904.37	0.000929	5.2	1032.88	158
RC	11684.69	25-YEAR	6882.69	893.28	904.72	901	905.27	0.001079	5.95	1156.11	162.53
RC	11684.69	50-YEAR	8042.18	893.28	905.24	901.49	905.89	0.001169	6.49	1241.02	165.85
RC	11684.69	100-YEAR	9751.91	893.28	905.98	902.15	906.77	0.001262	7.17	1365.82	170.65
RC	10597.41	2-YEAR	2407.37	891.48	899.63	897.55	900.29	0.00253	6.64	407.94	169.36
RC	10597.41	5-YEAR	4178.09	891.48	900.92	900.01	901.79	0.003143	7.95	675.97	241.07
RC	10597.41	10-YEAR	5374.39	891.48	901.54	900.84	902.51	0.003333	8.57	834.37	264.46
RC	10597.41	25-YEAR	6882.69	891.48	902.45	901.52	903.41	0.002837	8.74	1083.35	284.09
RC	10597.41	50-YEAR	8042.18	891.48	903.25	901.9	904.14	0.002335	8.59	1316.66	301.35
RC	10597.41	100-YEAR	9751.91	891.48	904.34	902.41	905.17	0.001882	8.49	1661.59	329.21
RC	9767.048	2-YEAR	2407.37	891.25	898.42	897.48	898.73	0.001508	5.78	733.18	264.56
RC	9767.048	5-YEAR	4178.09	891.25	899.03	898.24	899.6	0.002594	8.13	893.19	266.99
RC	9767.048	10-YEAR	5374.39	891.25	900.11	898.67	900.6	0.00187	7.7	1184.4	271.36
RC	9767.048	25-YEAR	6882.69	891.25	901.49	899.12	901.92	0.001323	7.3	1564.44	277.3
RC	9767.048	50-YEAR	8042.18	891.25	902.51	899.47	902.91	0.001085	7.12	1849.08	282.24
RC	9767.048	100-YEAR	9751.91	891.25	903.75	899.91	904.15	0.000935	7.17	2201.94	288.25

Table C.8
Rock Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	9473.876	2-YEAR	2407.37	891.25	898.36	894.83	898.43	0.000476	3.15	1369.84	454.37
RC	9473.876	5-YEAR	4178.09	891.25	898.92	896.35	899.07	0.000871	4.56	1627.14	468.61
RC	9473.876	10-YEAR	5374.39	891.25	900.08	896.3	900.21	0.000602	4.28	2183.05	489.96
RC	9473.876	25-YEAR	6882.69	891.25	901.51	897.46	901.63	0.000421	4.06	2907.51	516.36
RC	9473.876	50-YEAR	8042.18	891.25	902.55	897.48	902.66	0.000341	3.95	3452.71	529.92
RC	9473.876	100-YEAR	9751.91	891.25	903.82	898.29	903.93	0.000292	3.98	4132.18	548.99
RC	9310.741	2-YEAR	2398.76	891.25	898.32	894.73	898.38	0.00027	2.45	1616.53	477.32
RC	9310.741	5-YEAR	4139.75	891.25	898.85	895.64	898.96	0.000527	3.61	1870.29	487.33
RC	9310.741	10-YEAR	5270.7	891.25	900.03	896.35	900.13	0.000379	3.47	2458.4	509.56
RC	9310.741	25-YEAR	6791.46	891.25	901.48	896.88	901.57	0.000285	3.41	3216.81	539.81
RC	9310.741	50-YEAR	7947.76	891.25	902.53	897.48	902.62	0.000241	3.39	3795.28	562.33
RC	9310.741	100-YEAR	9621.94	891.25	903.79	897.79	903.89	0.00021	3.44	4520.61	582.95
RC	9247.697	2-YEAR	2398.76	891.25	897.19	895.7	898.09	0.002731	7.6	315.44	483.38
RC	9247.697	5-YEAR	4139.75	891.25	898.83	897.28	898.93	0.000438	3.55	2039.07	537.72
RC	9247.697	10-YEAR	5270.7	891.25	900.02	898.09	900.11	0.000319	3.4	2680.13	564.04
RC	9247.697	25-YEAR	6791.46	891.25	901.47	898.09	901.55	0.000232	3.23	3552.86	583.19
RC	9247.697	50-YEAR	7947.76	891.25	902.52	898.09	902.6	0.000196	3.19	4172.31	596.99
RC	9247.697	100-YEAR	9621.94	891.25	903.79	898.09	903.87	0.000172	3.24	4938.78	612.64
RC	9196.197		Culvert								
RC	9146.366	2-YEAR	2398.76	889.33	895.98	894.62	897.6	0.003525	10.23	234.5	460.32
RC	9146.366	5-YEAR	4139.75	889.33	898.88	897.01	898.9	0.000071	1.47	3597.67	535.01
RC	9146.366	10-YEAR	5270.7	889.33	900.03	897.01	900.05	0.000066	1.44	4453.64	578.61
RC	9146.366	25-YEAR	6791.46	889.33	901.48	897.01	901.51	0.000063	1.6	5311.64	597.81
RC	9146.366	50-YEAR	7947.76	889.33	902.49	897.01	902.52	0.000062	1.71	5916.78	610.99
RC	9146.366	100-YEAR	9621.94	889.33	903.8	897.01	903.84	0.000062	1.88	6731.73	626.36
RC	9110.756	2-YEAR	2398.76	889.67	896.63	894.02	896.85	0.000783	3.72	645.22	144.96
RC	9110.756	5-YEAR	4139.75	889.67	898.5	895.01	898.81	0.000772	4.47	925.58	155.47
RC	9110.756	10-YEAR	5270.7	889.67	899.58	895.56	899.94	0.000749	4.8	1097.41	161.54
RC	9110.756	25-YEAR	6791.46	889.67	900.99	896.25	901.39	0.000699	5.11	1329.49	169.07
RC	9110.756	50-YEAR	7947.76	889.67	901.95	896.73	902.39	0.000659	5.31	1507.27	189
RC	9110.756	100-YEAR	9621.94	889.67	903.21	897.38	903.7	0.000611	5.6	1749.9	195.71
RC	8715.771	2-YEAR	2393.92	886.92	895.56	893.51	896.3	0.002363	6.88	348.07	68.46
RC	8715.771	5-YEAR	4135.95	886.92	896.61	895.29	898.1	0.004088	9.78	422.7	73.73
RC	8715.771	10-YEAR	5267.96	886.92	897.13	896.25	899.15	0.00519	11.41	461.51	76.33
RC	8715.771	25-YEAR	6789.52	886.92	898.16	897.39	900.59	0.005497	12.51	542.63	81.49
RC	8715.771	50-YEAR	7946.46	886.92	898.93	898.16	901.59	0.005495	13.09	607.03	85.35
RC	8715.771	100-YEAR	9622.85	886.92	899.72	899.17	902.88	0.005674	14.27	676.14	89.19
RC	8259.184	2-YEAR	2393.92	885.47	895.08	891.82	895.38	0.001097	4.56	642.19	435.93
RC	8259.184	5-YEAR	4135.95	885.47	896.1	893.86	896.56	0.001474	5.89	925.11	466.34
RC	8259.184	10-YEAR	5267.96	885.47	896.75	894.95	897.27	0.001515	6.35	1112.67	478.94
RC	8259.184	25-YEAR	6789.52	885.47	898.28	895.76	898.69	0.001037	5.83	1570.44	512.73
RC	8259.184	50-YEAR	7946.46	885.47	899.33	896.17	899.7	0.000822	5.68	1901.51	548.85
RC	8259.184	100-YEAR	9622.85	885.47	900.92	896.65	901.04	0.000281	3.74	4002.35	572.72
RC	8170.184		Culvert								
RC	7917.137	2-YEAR	2393.92	884.3	893.35	890.76	894.12	0.001973	7.1	371.89	123.19
RC	7917.137	5-YEAR	4135.95	884.3	895.24	893.2	896.08	0.001925	7.97	736.14	219.94
RC	7917.137	10-YEAR	5267.96	884.3	896.29	894.77	897.07	0.001715	7.99	978.03	236.65
RC	7917.137	25-YEAR	6789.52	884.3	898.01	895.58	898.61	0.001193	7.33	1404.49	258.34
RC	7917.137	50-YEAR	7946.46	884.3	899.03	896.13	899.59	0.001025	7.27	1674.26	270.85
RC	7917.137	100-YEAR	9622.85	884.3	900.43	896.73	900.96	0.000854	7.21	2063.53	286.39
RC	7323.238	2-YEAR	2393.92	884.3	892.87		893.22	0.000763	4.86	599.4	217.11
RC	7323.238	5-YEAR	4135.95	884.3	894.86		895.22	0.00067	5.39	1233.61	359.08
RC	7323.238	10-YEAR	5267.96	884.3	895.99		896.31	0.000574	5.4	1658.1	392.49
RC	7323.238	25-YEAR	6789.52	884.3	897.84		898.08	0.000377	4.91	2401.97	409.5
RC	7323.238	50-YEAR	7946.46	884.3	898.9		899.12	0.00033	4.86	2840.35	417.85
RC	7323.238	100-YEAR	9622.85	884.3	900.34		900.54	0.000282	4.83	3447.18	427.66
RC	6271.714	2-YEAR	2391.98	883.23	892.06		892.36	0.000852	4.84	718.77	243.9
RC	6271.714	5-YEAR	4132.27	883.23	894.24		894.53	0.00063	5.07	1328.05	318.33
RC	6271.714	10-YEAR	5262.69	883.23	895.47		895.73	0.000524	5.06	1746	350.69
RC	6271.714	25-YEAR	6785.41	883.23	897.46		897.68	0.000388	4.93	2548.46	478.15
RC	6271.714	50-YEAR	7937.79	883.23	898.59		898.78	0.000316	4.73	3096.7	491.24
RC	6271.714	100-YEAR	9614.41	883.23	900.09		900.26	0.000256	4.58	3845.49	508.58

Table C.8
Rock Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	6112.396	2-YEAR	2391.98	882.8	891.27	889.36	892.02	0.002328	7.08	374.45	168.74
RC	6112.396	5-YEAR	4132.27	882.8	893.22	891.48	894.17	0.002056	8.21	601.91	229.29
RC	6112.396	10-YEAR	5262.69	882.8	894.33	892.29	895.36	0.001908	8.69	738.55	270.78
RC	6112.396	25-YEAR	6785.41	882.8	896.46	893.19	897.38	0.001305	8.36	1012.02	350.16
RC	6112.396	50-YEAR	7937.79	882.8	897.5	893.81	898.47	0.001239	8.68	1149.15	373
RC	6112.396	100-YEAR	9614.41	882.8	898.87	894.63	899.92	0.001175	9.11	1334.55	420.84
RC	6058.396		Bridge								
RC	5980.438	2-YEAR	2391.98	881.92	889.2	889.2	890.54	0.007117	9.52	284.18	182.65
RC	5980.438	5-YEAR	4132.27	881.92	890.46	890.46	892.16	0.006782	11.06	443.53	235.95
RC	5980.438	10-YEAR	5262.69	881.92	891.07	891.07	893.05	0.006808	12.04	523.09	251.07
RC	5980.438	25-YEAR	6785.41	881.92	891.84	891.84	894.14	0.006736	13.12	623.04	271.29
RC	5980.438	50-YEAR	7937.79	881.92	892.37	892.37	894.9	0.006697	13.84	692.95	283.79
RC	5980.438	100-YEAR	9614.41	881.92	893.08	893.08	895.94	0.006652	14.78	788.22	300.37
RC	4838.84	2-YEAR	2391.19	878.48	887.13		887.41	0.000946	4.27	653.43	311.74
RC	4838.84	5-YEAR	4133.09	878.48	888.64		888.95	0.000836	4.82	1200.1	380.58
RC	4838.84	10-YEAR	5264.55	878.48	889.4		889.72	0.000797	5.09	1492.43	387.48
RC	4838.84	25-YEAR	6788.42	878.48	889.75		890.19	0.001065	6.06	1626.06	390.59
RC	4838.84	50-YEAR	7943.6	878.48	890.36		890.81	0.001015	6.24	1865.98	396.11
RC	4838.84	100-YEAR	9619.92	878.48	891.34		891.78	0.000885	6.3	2259.1	405
RC	4263.236	2-YEAR	2391.19	878.2	887.12		887.17	0.000176	2.32	1686.55	376.47
RC	4263.236	5-YEAR	4133.09	878.2	888.62		888.69	0.000226	2.99	2287.8	418.19
RC	4263.236	10-YEAR	5264.55	878.2	889.37		889.46	0.000256	3.37	2607.37	437.34
RC	4263.236	25-YEAR	6788.42	878.2	889.69		889.82	0.000376	4.18	2750.64	455.55
RC	4263.236	50-YEAR	7943.6	878.2	890.28		890.44	0.000409	4.54	3031.37	486.28
RC	4263.236	100-YEAR	9619.92	878.2	891.28		891.44	0.00039	4.71	3522.82	503.14
RC	4076.095	2-YEAR	2396.54	878.2	887.07		887.13	0.000239	2.23	1486.35	398.98
RC	4076.095	5-YEAR	4142.14	878.2	888.56		888.65	0.000277	2.79	2158.6	485.3
RC	4076.095	10-YEAR	5276.84	878.2	889.31		889.41	0.000279	3.02	2545.53	531.34
RC	4076.095	25-YEAR	6803.82	878.2	889.61		889.75	0.00039	3.67	2705.55	535.88
RC	4076.095	50-YEAR	7961.7	878.2	890.22		890.37	0.000387	3.85	3030.81	547.11
RC	4076.095	100-YEAR	9640.49	878.2	891.22		891.37	0.00035	3.96	3587.87	564.81
RC	3193.07	2-YEAR	2392.55	878.2	886.9		886.95	0.000183	2.64	1925.08	573.32
RC	3193.07	5-YEAR	4142.45	878.2	888.39		888.45	0.000198	3.07	2810.17	619.2
RC	3193.07	10-YEAR	5278.42	878.2	889.14		889.21	0.000204	3.29	3279.57	627.08
RC	3193.07	25-YEAR	6807.35	878.2	889.36		889.46	0.0003	4.04	3419.65	629.41
RC	3193.07	50-YEAR	7967.57	878.2	889.97		890.07	0.0003	4.19	3803.73	636.3
RC	3193.07	100-YEAR	9647.27	878.2	891		891.11	0.000272	4.24	4467	648.68
RC	2820.052	2-YEAR	2388.88	877.95	886.46		886.79	0.001063	4.73	638.96	340.54
RC	2820.052	5-YEAR	4146.9	877.95	887.93		888.28	0.000971	5.27	1194.17	411.74
RC	2820.052	10-YEAR	5283.53	877.95	888.68		889.03	0.00091	5.49	1518.7	440.67
RC	2820.052	25-YEAR	6815.11	877.95	888.55		889.18	0.001663	7.33	1460.39	438.15
RC	2820.052	50-YEAR	7975	877.95	889.23		889.81	0.001432	7.23	1762.94	451.33
RC	2820.052	100-YEAR	9654.98	877.95	890.42		890.89	0.001038	6.77	2311.63	474.16
RC	2139.167	2-YEAR	2773.72	875.66	886.32	882.17	886.38	0.000223	2.28	1965.83	760.17
RC	2139.167	5-YEAR	4590.1	875.66	887.84	883.43	887.9	0.000179	2.4	3254.45	890.73
RC	2139.167	10-YEAR	5705.88	875.66	888.61	884.04	888.67	0.000165	2.48	3968.51	967.81
RC	2139.167	25-YEAR	7175.77	875.66	888.43	884.61	888.52	0.000294	3.25	3787.6	947.46
RC	2139.167	50-YEAR	8291.89	875.66	889.13	884.63	889.22	0.00026	3.24	4475.67	990.89
RC	2139.167	100-YEAR	9908.63	875.66	890.37	884.86	890.44	0.000184	2.99	5716.21	1011.57
RC	2048.167		Culvert								
RC	1871.616	2-YEAR	2773.72	873.67	886.33	880.39	886.34	0.000036	1.11	3814.82	706.79
RC	1871.616	5-YEAR	4590.1	873.67	887.85	881.51	887.87	0.000048	1.47	5100.4	922.75
RC	1871.616	10-YEAR	5705.88	873.67	888.63	881.51	888.65	0.000052	1.6	5834.89	958.57
RC	1871.616	25-YEAR	7175.77	873.67	888.47	881.51	888.5	0.000088	2.07	5677.22	948.52
RC	1871.616	50-YEAR	8291.89	873.67	889.17	881.51	889.2	0.000086	2.15	6351.31	975.41
RC	1871.616	100-YEAR	9908.63	873.67	890.41	881.51	890.44	0.000075	2.16	7586.53	1017.06
RC	1766.516	2-YEAR	2388.76	873.19	886.3	877.55	886.33	0.000043	1.44	1711.07	711.3
RC	1766.516	5-YEAR	4119.02	873.19	887.78	878.55	887.85	0.000077	2.1	2068.14	864.79
RC	1766.516	10-YEAR	5224.41	873.19	888.53	879.1	888.62	0.000097	2.48	2249.58	929.05
RC	1766.516	25-YEAR	6769.71	873.19	888.28	879.83	888.45	0.000176	3.29	2190.31	920.03
RC	1766.516	50-YEAR	7918.65	873.19	888.94	880.31	889.14	0.000197	3.61	2349.26	944.2
RC	1766.516	100-YEAR	9563.19	873.19	890.39	881	890.44	0.000047	1.85	6854.08	996.26
RC	1686.516		Bridge								

Table C.8
Rock Creek Results for Future Conditions (SWMM Flows)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
RC	1598.795	2-YEAR	2388.76	872.64	884.96	877.77	885	0.000071	1.6	1510.75	669.44
RC	1598.795	5-YEAR	4119.02	872.64	886.4	878.73	886.48	0.000117	2.29	1873.96	977.69
RC	1598.795	10-YEAR	5224.41	872.64	887.13	879.25	887.24	0.000142	2.67	2061.04	1024.65
RC	1598.795	25-YEAR	6769.71	872.64	888.02	879.93	888.17	0.000176	3.14	2287	1081.85
RC	1598.795	50-YEAR	7918.65	872.64	888.62	880.4	888.8	0.000198	3.46	2439.49	1130.25
RC	1598.795	100-YEAR	9563.19	872.64	889.47	881.01	889.53	0.000083	2.35	6558.14	1205.4
RC	1512.292	2-YEAR	2388.76	872.69	884.97		884.98	0.000022	0.98	3214.31	930.38
RC	1512.292	5-YEAR	4119.02	872.69	886.42		886.45	0.000043	1.5	4711.12	1122.02
RC	1512.292	10-YEAR	5224.41	872.69	887.17		887.19	0.000047	1.65	5568.51	1176.82
RC	1512.292	25-YEAR	6769.71	872.69	888.07		888.1	0.000052	1.83	6671.21	1258.45
RC	1512.292	50-YEAR	7918.65	872.69	888.68		888.72	0.000055	1.95	7460.43	1317.26
RC	1512.292	100-YEAR	9563.19	872.69	889.47		889.51	0.000058	2.08	8527.17	1378.21
RC	1177.636	2-YEAR	2392.91	871.83	884.94		884.97	0.000069	1.98	2708.91	905
RC	1177.636	5-YEAR	4127.92	871.83	886.39		886.43	0.000081	2.32	4077.57	979.24
RC	1177.636	10-YEAR	5236.7	871.83	887.13		887.17	0.000085	2.48	4820.77	1016.93
RC	1177.636	25-YEAR	6776.64	871.83	888.04		888.08	0.00009	2.66	5759.45	1060.81
RC	1177.636	50-YEAR	7933.72	871.83	888.65		888.69	0.000092	2.77	6414.93	1083.63
RC	1177.636	100-YEAR	9579.28	871.83	889.44		889.49	0.000095	2.91	7282.47	1109.95
RC	820.246	2-YEAR	2392.91	871.73	884.92		884.95	0.000055	1.84	2828.98	903.52
RC	820.246	5-YEAR	4127.92	871.73	886.37		886.4	0.000069	2.22	4198.55	991.24
RC	820.246	10-YEAR	5236.7	871.73	887.11		887.15	0.000074	2.4	4949.43	1028.65
RC	820.246	25-YEAR	6776.64	871.73	888.01		888.06	0.00008	2.6	5895.18	1073.16
RC	820.246	50-YEAR	7933.72	871.73	888.62		888.67	0.000084	2.74	6560.58	1112.8
RC	820.246	100-YEAR	9579.28	871.73	889.41		889.46	0.000088	2.91	7461.81	1168.41
RC	96.2263	2-YEAR	2392.91	871.73	884.86	878.16	884.91	0.000092	1.97	2420.14	991.53
RC	96.2263	5-YEAR	4127.92	871.73	886.31	879.94	886.36	0.000093	2.19	3924.96	1076.08
RC	96.2263	10-YEAR	5236.7	871.73	887.06	880.76	887.1	0.000092	2.29	4738.65	1108.77
RC	96.2263	25-YEAR	6776.64	871.73	887.96	881.54	888	0.000092	2.42	5752.25	1139.08
RC	96.2263	50-YEAR	7933.72	871.73	888.57	882.59	888.61	0.000092	2.5	6452.91	1156.35
RC	96.2263	100-YEAR	9579.28	871.73	889.36	883.3	889.41	0.000093	2.61	7375.37	1189.78

Visitor Center

Table C.9
Visitor Center Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	9759.345	2-YEAR	67.22	938.37	939.08	939.08	939.27	0.025635	3.51	19.16	52.03
1	9759.345	5-YEAR	98.49	938.37	939.2	939.2	939.43	0.02415	3.81	25.95	60.56
1	9759.345	10-YEAR	117.65	938.37	939.26	939.26	939.51	0.022813	4.02	29.55	64.63
1	9759.345	25-YEAR	143.3	938.37	939.33	939.33	939.61	0.021333	4.26	34.44	69.78
1	9759.345	50-YEAR	162.39	938.37	939.38	939.38	939.68	0.02044	4.42	38.1	73.39
1	9759.345	100-YEAR	187.75	938.37	939.45	939.45	939.77	0.01888	4.56	43.42	77.8
1	9073.384	2-YEAR	152.23	928.12	929.7	929.27	929.76	0.003115	1.95	78.1	106.13
1	9073.384	5-YEAR	220.77	928.12	929.92		929.99	0.002838	2.17	102.56	113.64
1	9073.384	10-YEAR	261.74	928.12	930.05		930.12	0.002665	2.26	117.31	117.94
1	9073.384	25-YEAR	316.08	928.12	930.26		930.34	0.002078	2.25	143.41	123.76
1	9073.384	50-YEAR	357.15	928.12	930.37		930.45	0.002006	2.34	156.94	126.49
1	9073.384	100-YEAR	411.03	928.12	930.46		930.56	0.002142	2.52	168.35	128.75
1	8718.038	2-YEAR	152.23	925.36	927.49		927.86	0.01064	4.88	31.2	26.15
1	8718.038	5-YEAR	220.77	925.36	927.96		928.34	0.008533	4.94	44.66	31.1
1	8718.038	10-YEAR	261.74	925.36	928.2		928.59	0.007801	4.99	52.43	33.62
1	8718.038	25-YEAR	316.08	925.36	928.08	928	928.74	0.014189	6.55	48.29	32.3
1	8718.038	50-YEAR	357.15	925.36	928.26	928.15	928.93	0.013217	6.58	54.31	34.2
1	8718.038	100-YEAR	411.03	925.36	928.93		929.35	0.005796	5.17	79.84	41.32
1	8623.688	2-YEAR	236.46	922.7	925.76	925.76	926.47	0.016397	6.76	34.99	24.46
1	8623.688	5-YEAR	347.46	922.7	926.23	926.23	927.06	0.015899	7.29	47.63	29.07
1	8623.688	10-YEAR	414.4	922.7	926.48	926.48	927.36	0.015435	7.52	55.14	31.49
1	8623.688	25-YEAR	502.93	922.7	927.24	926.76	927.83	0.007363	6.17	82	39.12
1	8623.688	50-YEAR	570.18	922.7	927.51	926.96	928.11	0.006478	6.23	92.93	41.95
1	8623.688	100-YEAR	658.39	922.7	927.17	927.17	928.25	0.014059	8.34	79.21	38.37
1	8472.688		Culvert								
1	8341.053	2-YEAR	236.46	919.14	922.26	921.65	922.53	0.005262	4.14	57.16	36.18
1	8341.053	5-YEAR	347.46	919.14	922.41	922.07	922.89	0.008907	5.54	62.66	48.08
1	8341.053	10-YEAR	414.4	919.14	922.28	922.28	923.08	0.015661	7.16	57.84	36.4
1	8341.053	25-YEAR	502.93	919.14	922.54	922.54	923.39	0.015225	7.43	67.66	59.88
1	8341.053	50-YEAR	570.18	919.14	922.72	922.72	923.62	0.014953	7.61	74.88	76.51
1	8341.053	100-YEAR	658.39	919.14	922.94	922.94	923.88	0.013874	7.8	85.38	151.7
1	8261.463	2-YEAR	236.46	918.4	921.06	921.06	921.72	0.016613	6.52	36.26	103.01
1	8261.463	5-YEAR	347.46	918.4	921.77	921.77	922.19	0.007872	5.47	89.53	264.89
1	8261.463	10-YEAR	414.4	918.4	921.91	921.91	922.06	0.003744	3.92	211.17	273.94
1	8261.463	25-YEAR	502.93	918.4	921.91	921.91	922.13	0.005515	4.76	211.15	273.94
1	8261.463	50-YEAR	570.18	918.4	921.91	921.91	922.19	0.00709	5.4	211.13	273.94
1	8261.463	100-YEAR	658.39	918.4	921.94	921.94	922.29	0.008581	6	219.77	274.67
1	7861.642	2-YEAR	236.89	912.46	914.97	914.97	915.41	0.012777	6.09	56.7	107.97
1	7861.642	5-YEAR	345.41	912.46	915.24	915.24	915.78	0.013896	6.9	73.09	130.76
1	7861.642	10-YEAR	410.6	912.46	915.44	915.44	915.77	0.009118	5.9	126.3	137.84
1	7861.642	25-YEAR	497.01	912.46	915.52	915.48	915.93	0.010919	6.63	136.72	139.42
1	7861.642	50-YEAR	564.22	912.46	915.63	915.58	916.04	0.010568	6.78	152.65	141.81
1	7861.642	100-YEAR	652.65	912.46	915.79	915.66	916.2	0.009761	6.86	175.5	145.16
1	7208.181	2-YEAR	311.74	906.37	909.59	909.59	909.89	0.005734	5.28	131.25	222.12
1	7208.181	5-YEAR	467.02	906.37	909.79	909.79	910.14	0.006868	6.12	175.33	225.97
1	7208.181	10-YEAR	565.96	906.37	909.9	909.9	910.27	0.007361	6.53	200.06	228.11
1	7208.181	25-YEAR	692.83	906.37	910	910	910.42	0.008373	7.15	223.43	230
1	7208.181	50-YEAR	790.04	906.37	910.09	910.09	910.53	0.00866	7.44	244.09	231.32
1	7208.181	100-YEAR	921.7	906.37	910.19	910.19	910.66	0.009277	7.89	267.17	232.78
1	6453.327	2-YEAR	311.74	897.61	900.01	900.01	900.39	0.01986	4.93	63.25	84.08
1	6453.327	5-YEAR	467.02	897.61	900.24	900.24	900.73	0.01963	5.63	82.9	89.4
1	6453.327	10-YEAR	565.96	897.61	900.4	900.4	900.92	0.01791	5.82	97.18	93.08
1	6453.327	25-YEAR	692.83	897.61	900.55	900.55	901.15	0.017503	6.18	112.11	96.77
1	6453.327	50-YEAR	790.04	897.61	900.67	900.67	901.31	0.016642	6.41	123.45	99.43
1	6453.327	100-YEAR	921.7	897.61	900.81	900.81	901.51	0.016023	6.74	137.48	102.62
1	5749.292	2-YEAR	311.74	890.59	894.28		894.46	0.002617	3.44	90.51	44.66
1	5749.292	5-YEAR	467.02	890.59	894.82		895.07	0.00271	4.04	118.66	63.06
1	5749.292	10-YEAR	565.96	890.59	895.1		895.4	0.002736	4.36	138.21	73.52
1	5749.292	25-YEAR	692.83	890.59	895.39		895.73	0.002905	4.79	160.06	81.98
1	5749.292	50-YEAR	790.04	890.59	895.58		895.97	0.002998	5.08	176.95	87.66
1	5749.292	100-YEAR	921.7	890.59	895.69	894.65	896.18	0.00362	5.7	186.5	90.69

Table C.9
Visitor Center Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	4639.772	2-YEAR	539.09	882.91	886.09	886.09	886.66	0.017523	6.07	88.76	78.34
1	4639.772	5-YEAR	842.29	882.91	886.5	886.5	887.24	0.015952	6.94	121.33	81.59
1	4639.772	10-YEAR	1021.55	882.91	886.69	886.69	887.55	0.015824	7.42	137.62	83.18
1	4639.772	25-YEAR	1246	882.91	886.95	886.95	887.9	0.014677	7.83	159.19	85.26
1	4639.772	50-YEAR	1414.62	882.91	887.12	887.12	888.15	0.014161	8.15	173.98	86.66
1	4639.772	100-YEAR	1353.38	882.91	887.06	887.06	888.06	0.014302	8.03	168.78	86.17
1	3891.665	2-YEAR	539.09	879.01	882.87		882.98	0.001847	2.73	197.71	107.28
1	3891.665	5-YEAR	842.29	879.01	883.62		883.76	0.001496	3.01	280.14	111.9
1	3891.665	10-YEAR	1021.55	879.01	884.02		884.17	0.001376	3.14	324.92	114.25
1	3891.665	25-YEAR	1246	879.01	884.45		884.62	0.001278	3.33	374.87	116.63
1	3891.665	50-YEAR	1414.62	879.01	884.75		884.94	0.001232	3.46	409.98	118.45
1	3891.665	100-YEAR	1353.38	879.01	884.65		884.83	0.001238	3.41	398.3	117.84
1	3033.514	2-YEAR	539.09	876.42	880.85	879.58	881.1	0.002606	4.01	134.39	95.11
1	3033.514	5-YEAR	842.29	876.42	881.81	880.19	882.12	0.002465	4.49	187.38	106.64
1	3033.514	10-YEAR	1021.55	876.42	882.28	880.52	882.63	0.002381	4.74	215.51	112.4
1	3033.514	25-YEAR	1246	876.42	882.73	880.89	883.14	0.00237	5.13	244.44	118.25
1	3033.514	50-YEAR	1414.62	876.42	883.01	881.14	883.47	0.002436	5.44	263.04	121.86
1	3033.514	100-YEAR	1353.38	876.42	882.97	881.05	883.4	0.002311	5.26	259.98	121.27
1	164.1859	2-YEAR	610.61	868.48	872.95	871.44	873.29	0.00283	4.68	130.41	42.04
1	164.1859	5-YEAR	965.5	868.48	874.06	872.28	874.51	0.002826	5.36	180.01	46.95
1	164.1859	10-YEAR	1178.09	868.48	874.63	872.7	875.13	0.002829	5.68	207.26	49.44
1	164.1859	25-YEAR	1384.05	868.48	875.13	873.07	875.68	0.002826	5.95	232.62	51.65
1	164.1859	50-YEAR	1487.64	868.48	875.36	873.25	875.94	0.002829	6.08	244.67	52.7
1	164.1859	100-YEAR	1528.04	868.48	875.44	873.32	876.03	0.002825	6.14	248.77	53.12

Table C.10
Visitor Center Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	9759.345	2-YEAR	76.92	938.37	939.12	939.12	939.32	0.024928	3.61	21.36	54.95
1	9759.345	5-YEAR	109.17	938.37	939.23	939.23	939.47	0.023649	3.95	27.85	62.74
1	9759.345	10-YEAR	128.27	938.37	939.29	939.29	939.55	0.022177	4.13	31.56	66.79
1	9759.345	25-YEAR	153.64	938.37	939.36	939.36	939.65	0.020832	4.35	36.42	71.76
1	9759.345	50-YEAR	172.51	938.37	939.41	939.41	939.72	0.019532	4.46	40.39	75.57
1	9759.345	100-YEAR	197.46	938.37	939.47	939.47	939.8	0.018639	4.63	45.21	78.33
1	9073.384	2-YEAR	165.84	928.12	929.74	929.3	929.8	0.003123	2.02	82.46	107.51
1	9073.384	5-YEAR	235.84	928.12	929.96		930.04	0.002792	2.21	107.74	115.17
1	9073.384	10-YEAR	276.45	928.12	930.09		930.17	0.002613	2.29	122.5	119.42
1	9073.384	25-YEAR	330.65	928.12	930.3		930.38	0.002054	2.28	148.18	124.73
1	9073.384	50-YEAR	670.9	928.12	931.18		931.29	0.001425	2.69	268.89	149.74
1	9073.384	100-YEAR	424.18	928.12	930.49		930.59	0.00213	2.55	172.17	129.5
1	8718.038	2-YEAR	165.84	925.36	927.62		927.98	0.00944	4.77	34.77	27.55
1	8718.038	5-YEAR	235.84	925.36	928.07		928.44	0.008036	4.92	47.98	32.2
1	8718.038	10-YEAR	276.45	925.36	928.3		928.68	0.007389	4.96	55.73	34.64
1	8718.038	25-YEAR	330.65	925.36	928.15	928.05	928.81	0.013669	6.53	50.64	33.05
1	8718.038	50-YEAR	670.9	925.36	928.99	928.99	930.04	0.014127	8.21	82.14	41.91
1	8718.038	100-YEAR	424.18	925.36	929.01		929.42	0.005491	5.15	82.88	42.09
1	8623.688	2-YEAR	265.03	922.7	925.89	925.89	926.63	0.016349	6.93	38.26	25.73
1	8623.688	5-YEAR	375.83	922.7	926.34	926.34	927.19	0.015682	7.39	50.86	30.13
1	8623.688	10-YEAR	442.16	922.7	926.57	926.57	927.47	0.015292	7.6	58.14	32.4
1	8623.688	25-YEAR	530.48	922.7	927.46	926.84	928	0.006016	5.92	90.75	41.41
1	8623.688	50-YEAR	596.6	922.7	927.52	927.02	928.17	0.007	6.5	93.34	42.06
1	8623.688	100-YEAR	683.7	922.7	927.22	927.22	928.33	0.014035	8.46	81.19	38.9
1	8472.688		Culvert								
1	8341.053	2-YEAR	265.03	919.14	922.4	921.76	922.68	0.005277	4.26	62.23	47.05
1	8341.053	5-YEAR	375.83	919.14	922.47	922.15	922.99	0.009427	5.78	65.08	53.84
1	8341.053	10-YEAR	442.16	919.14	922.36	922.36	923.18	0.015474	7.25	61.02	44.11
1	8341.053	25-YEAR	530.48	919.14	922.61	922.61	923.49	0.015109	7.51	70.64	66.7
1	8341.053	50-YEAR	596.6	919.14	922.78	922.78	923.7	0.014875	7.69	77.55	91.78
1	8341.053	100-YEAR	683.7	919.14	923	923	923.95	0.013354	7.83	89.2	184.68
1	8261.463	2-YEAR	265.03	918.4	921.19	921.19	921.87	0.016198	6.65	39.87	118.08
1	8261.463	5-YEAR	375.83	918.4	921.83	921.83	922.26	0.007833	5.55	98.44	268.99
1	8261.463	10-YEAR	442.16	918.4	921.91	921.91	922.08	0.004262	4.18	211.17	273.94
1	8261.463	25-YEAR	530.48	918.4	921.91	921.91	922.16	0.006137	5.02	211.13	273.94
1	8261.463	50-YEAR	596.6	918.4	921.92	921.92	922.22	0.007585	5.6	213.18	274.11
1	8261.463	100-YEAR	683.7	918.4	921.95	921.95	922.31	0.008907	6.14	223.25	275.04
1	7861.642	2-YEAR	262.65	912.46	915.04	915.04	915.51	0.013131	6.31	60.75	115.49
1	7861.642	5-YEAR	371.6	912.46	915.3	915.3	915.86	0.014098	7.07	76.74	132.87
1	7861.642	10-YEAR	436.51	912.46	915.44	915.44	915.82	0.010307	6.27	126.29	137.84
1	7861.642	25-YEAR	525.54	912.46	915.56	915.52	915.98	0.010948	6.74	142.62	140.31
1	7861.642	50-YEAR	591.8	912.46	915.72	915.6	916.1	0.009332	6.57	165.88	143.76
1	7861.642	100-YEAR	679.36	912.46	915.88	915.7	916.26	0.008678	6.65	188.86	147.09
1	7208.181	2-YEAR	351.11	906.37	909.65	909.65	909.96	0.006034	5.51	143.74	223.22
1	7208.181	5-YEAR	512.44	906.37	909.84	909.84	910.2	0.007169	6.34	186.29	226.92
1	7208.181	10-YEAR	609.48	906.37	909.94	909.94	910.32	0.007677	6.73	208.86	228.86
1	7208.181	25-YEAR	734.16	906.37	910.04	910.04	910.47	0.008404	7.24	233.39	230.64
1	7208.181	50-YEAR	921.7	906.37	910.19	910.19	910.66	0.009277	7.89	267.17	232.78
1	7208.181	100-YEAR	1067.48	906.37	910.29	910.29	910.8	0.009835	8.32	291.43	234.31
1	6453.327	2-YEAR	351.11	897.61	900.08	900.08	900.48	0.01939	5.09	68.92	85.65
1	6453.327	5-YEAR	512.44	897.61	900.32	900.32	900.82	0.018149	5.66	90.52	91.38
1	6453.327	10-YEAR	609.48	897.61	900.44	900.44	901	0.018241	6	101.51	94.16
1	6453.327	25-YEAR	734.16	897.61	900.6	900.6	901.22	0.017121	6.28	117.03	97.94
1	6453.327	50-YEAR	921.7	897.61	900.81	900.81	901.51	0.016023	6.74	137.48	102.62
1	6453.327	100-YEAR	1067.48	897.61	900.95	900.95	901.73	0.015556	7.08	152.35	105.89
1	5749.292	2-YEAR	351.11	890.59	894.41		894.61	0.002753	3.65	96.32	47.46
1	5749.292	5-YEAR	512.44	890.59	894.92		895.2	0.002837	4.25	125.46	67.94
1	5749.292	10-YEAR	609.48	890.59	895.2		895.51	0.002813	4.52	145.4	76.44
1	5749.292	25-YEAR	734.16	890.59	895.46		895.83	0.002996	4.94	166.05	84
1	5749.292	50-YEAR	921.7	890.59	895.8	894.65	896.24	0.003231	5.49	196.09	93.64
1	5749.292	100-YEAR	1067.48	890.59	896.02	894.95	896.53	0.00343	5.9	217.54	99.91

Table C.10
Visitor Center Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	4639.772	2-YEAR	586.28	882.91	886.16	886.16	886.76	0.017113	6.22	94.28	78.9
1	4639.772	5-YEAR	894.23	882.91	886.56	886.56	887.33	0.01569	7.06	126.72	82.12
1	4639.772	10-YEAR	1074.24	882.91	886.75	886.75	887.63	0.015763	7.55	142.32	83.63
1	4639.772	25-YEAR	1293.37	882.91	887	887	887.97	0.014489	7.92	163.5	85.67
1	4639.772	50-YEAR	1547.07	882.91	887.24	887.24	888.34	0.013995	8.42	184.57	87.64
1	4639.772	100-YEAR	1739.2	882.91	887.43	887.43	888.61	0.013423	8.71	201.19	89.17
1	3891.665	2-YEAR	586.28	879.01	882.99		883.11	0.001776	2.78	210.99	108.04
1	3891.665	5-YEAR	894.23	879.01	883.74		883.89	0.001454	3.04	293.71	112.64
1	3891.665	10-YEAR	1074.24	879.01	884.12		884.28	0.00135	3.19	336.87	114.82
1	3891.665	25-YEAR	1293.37	879.01	884.54		884.71	0.001263	3.37	384.99	117.14
1	3891.665	50-YEAR	1547.07	879.01	884.97		885.17	0.001203	3.56	439.08	150.38
1	3891.665	100-YEAR	1739.2	879.01	885.29		885.5	0.001154	3.68	494.65	201.62
1	3033.514	2-YEAR	586.28	876.42	881.01	879.69	881.27	0.002598	4.11	142.63	97
1	3033.514	5-YEAR	894.23	876.42	881.95	880.29	882.28	0.002457	4.57	195.71	108.33
1	3033.514	10-YEAR	1074.24	876.42	882.39	880.6	882.76	0.002364	4.83	222.79	113.9
1	3033.514	25-YEAR	1293.37	876.42	882.81	880.96	883.24	0.002388	5.22	249.77	119.3
1	3033.514	50-YEAR	1547.07	876.42	883.19	881.33	883.69	0.00254	5.7	275.2	124.15
1	3033.514	100-YEAR	1739.2	876.42	883.49	881.6	884.04	0.002583	6	296.22	133.97
1	164.1859	2-YEAR	659.29	868.48	873.12	871.57	873.47	0.002829	4.79	137.6	42.78
1	164.1859	5-YEAR	1020	868.48	874.21	872.41	874.68	0.002825	5.45	187.16	47.61
1	164.1859	10-YEAR	1235.24	868.48	874.77	872.81	875.29	0.002828	5.76	214.41	50.07
1	164.1859	25-YEAR	1413.45	868.48	875.2	873.12	875.75	0.002826	5.99	236.15	51.95
1	164.1859	50-YEAR	1523.65	868.48	875.43	873.31	876.02	0.002825	6.14	248.33	53.07
1	164.1859	100-YEAR	1661.4	868.48	875.68	873.54	876.31	0.002825	6.35	261.86	54.45

Table C.11
Visitor Center Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	9759.345	2-YEAR	76.92	938.37	939.12	939.12	939.32	0.024928	3.61	21.36	54.95
1	9759.345	5-YEAR	109.17	938.37	939.23	939.23	939.47	0.023649	3.95	27.85	62.74
1	9759.345	10-YEAR	128.27	938.37	939.29	939.29	939.55	0.022177	4.13	31.56	66.79
1	9759.345	25-YEAR	153.64	938.37	939.36	939.36	939.65	0.020143	4.3	36.84	72.17
1	9759.345	50-YEAR	172.51	938.37	939.41	939.41	939.72	0.019532	4.46	40.39	75.57
1	9759.345	100-YEAR	197.46	938.37	939.47	939.47	939.8	0.018639	4.63	45.21	78.33
1	9073.384	2-YEAR	165.84	928.12	929.74	929.3	929.8	0.003123	2.02	82.46	107.51
1	9073.384	5-YEAR	235.84	928.12	929.96		930.04	0.002792	2.21	107.74	115.17
1	9073.384	10-YEAR	276.45	928.12	930.09		930.17	0.002613	2.29	122.5	119.42
1	9073.384	25-YEAR	330.65	928.12	930.25		930.33	0.002378	2.39	141.38	123.35
1	9073.384	50-YEAR	670.9	928.12	931.18		931.29	0.001426	2.69	268.83	149.73
1	9073.384	100-YEAR	424.18	928.12	930.49		930.59	0.00213	2.55	172.17	129.5
1	8718.038	2-YEAR	165.84	925.36	927.62		927.98	0.00944	4.77	34.77	27.55
1	8718.038	5-YEAR	235.84	925.36	928.07		928.44	0.008036	4.92	47.98	32.2
1	8718.038	10-YEAR	276.45	925.36	928.3		928.68	0.007389	4.96	55.73	34.64
1	8718.038	25-YEAR	330.65	925.36	928.59		928.98	0.006631	4.99	66.32	37.71
1	8718.038	50-YEAR	670.9	925.36	928.99	928.99	930.04	0.014127	8.21	82.14	41.91
1	8718.038	100-YEAR	424.18	925.36	929.01		929.42	0.005491	5.15	82.88	42.09
1	8623.688	2-YEAR	265.03	922.7	925.89	925.89	926.63	0.016349	6.93	38.26	25.73
1	8623.688	5-YEAR	375.83	922.7	926.34	926.34	927.19	0.015682	7.39	50.86	30.13
1	8623.688	10-YEAR	442.16	922.7	926.57	926.57	927.47	0.015292	7.6	58.14	32.4
1	8623.688	25-YEAR	530.48	922.7	926.84	926.84	927.81	0.015044	7.89	67.22	35.03
1	8623.688	50-YEAR	596.6	922.7	927.02	927.02	928.04	0.01456	8.1	73.68	36.82
1	8623.688	100-YEAR	683.7	922.7	927.22	927.22	928.33	0.014035	8.46	81.19	38.9
1	8472.688		Culvert								
1	8341.053	2-YEAR	265.03	919.14	922.4	921.76	922.68	0.005277	4.26	62.23	47.05
1	8341.053	5-YEAR	375.83	919.14	922.47	922.15	922.99	0.009427	5.78	65.08	53.84
1	8341.053	10-YEAR	442.16	919.14	922.36	922.36	923.18	0.015474	7.25	61.02	44.11
1	8341.053	25-YEAR	530.48	919.14	922.61	922.61	923.49	0.015109	7.51	70.64	66.7
1	8341.053	50-YEAR	596.6	919.14	922.78	922.78	923.7	0.014875	7.69	77.55	91.78
1	8341.053	100-YEAR	683.7	919.14	923.01	923.01	923.95	0.013133	7.79	90.43	191.42
1	8261.463	2-YEAR	265.03	918.4	921.19	921.19	921.87	0.016198	6.65	39.87	118.08
1	8261.463	5-YEAR	375.83	918.4	921.83	921.83	922.26	0.007833	5.55	98.44	268.99
1	8261.463	10-YEAR	442.16	918.4	921.91	921.91	922.08	0.004262	4.18	211.17	273.94
1	8261.463	25-YEAR	530.48	918.4	921.91	921.91	922.16	0.006137	5.02	211.13	273.94
1	8261.463	50-YEAR	596.6	918.4	921.92	921.92	922.22	0.007585	5.6	213.18	274.11
1	8261.463	100-YEAR	683.7	918.4	921.95	921.95	922.31	0.008907	6.14	223.25	275.04
1	7861.642	2-YEAR	262.65	912.46	915.04	915.04	915.51	0.013131	6.31	60.75	115.49
1	7861.642	5-YEAR	371.6	912.46	915.3	915.3	915.86	0.014098	7.07	76.74	132.87
1	7861.642	10-YEAR	436.51	912.46	915.44	915.44	915.82	0.010307	6.27	126.29	137.84
1	7861.642	25-YEAR	525.54	912.46	915.56	915.52	915.98	0.010948	6.74	142.62	140.31
1	7861.642	50-YEAR	591.8	912.46	915.72	915.6	916.1	0.009332	6.57	165.88	143.76
1	7861.642	100-YEAR	679.36	912.46	915.88	915.7	916.26	0.008678	6.65	188.86	147.09
1	7208.181	2-YEAR	351.11	906.37	909.65	909.65	909.96	0.006034	5.51	143.74	223.22
1	7208.181	5-YEAR	512.44	906.37	909.84	909.84	910.2	0.007169	6.34	186.29	226.92
1	7208.181	10-YEAR	609.48	906.37	909.94	909.94	910.32	0.007677	6.73	208.86	228.86
1	7208.181	25-YEAR	734.16	906.37	910.04	910.04	910.47	0.008404	7.24	233.39	230.64
1	7208.181	50-YEAR	921.7	906.37	910.19	910.19	910.66	0.009277	7.89	267.17	232.78
1	7208.181	100-YEAR	1067.48	906.37	910.29	910.29	910.8	0.009835	8.32	291.43	234.31
1	6453.327	2-YEAR	351.11	897.61	900.08	900.08	900.48	0.01939	5.09	68.92	85.65
1	6453.327	5-YEAR	512.44	897.61	900.32	900.32	900.82	0.018149	5.66	90.52	91.38
1	6453.327	10-YEAR	609.48	897.61	900.44	900.44	901	0.018241	6	101.51	94.16
1	6453.327	25-YEAR	734.16	897.61	900.6	900.6	901.22	0.017121	6.28	117.03	97.94
1	6453.327	50-YEAR	921.7	897.61	900.81	900.81	901.51	0.016023	6.74	137.48	102.62
1	6453.327	100-YEAR	1067.48	897.61	900.95	900.95	901.73	0.015556	7.08	152.35	105.89
1	5749.292	2-YEAR	351.11	890.59	894.41		894.61	0.002753	3.65	96.32	47.46
1	5749.292	5-YEAR	512.44	890.59	894.92		895.2	0.002837	4.25	125.46	67.94
1	5749.292	10-YEAR	609.48	890.59	895.2		895.51	0.002813	4.52	145.4	76.44
1	5749.292	25-YEAR	734.16	890.59	895.46		895.83	0.002996	4.94	166.05	84
1	5749.292	50-YEAR	921.7	890.59	895.8	894.65	896.24	0.003231	5.49	196.09	93.64
1	5749.292	100-YEAR	1067.48	890.59	896.02	894.95	896.53	0.00343	5.9	217.54	99.91

Table C.11
Visitor Center Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
1	4639.772	2-YEAR	586.28	882.91	886.16	886.16	886.76	0.017113	6.22	94.28	78.9
1	4639.772	5-YEAR	894.23	882.91	886.56	886.56	887.33	0.01569	7.06	126.72	82.12
1	4639.772	10-YEAR	1074.24	882.91	886.75	886.75	887.63	0.015763	7.55	142.32	83.63
1	4639.772	25-YEAR	1293.37	882.91	887	887	887.97	0.014489	7.92	163.5	85.67
1	4639.772	50-YEAR	1547.07	882.91	887.24	887.24	888.34	0.013995	8.42	184.57	87.64
1	4639.772	100-YEAR	1739.2	882.91	887.43	887.43	888.61	0.013423	8.71	201.19	89.17
1	3891.665	2-YEAR	586.28	879.01	882.99		883.11	0.001776	2.78	210.99	108.04
1	3891.665	5-YEAR	894.23	879.01	883.74		883.89	0.001454	3.04	293.71	112.64
1	3891.665	10-YEAR	1074.24	879.01	884.12		884.28	0.00135	3.19	336.87	114.82
1	3891.665	25-YEAR	1293.37	879.01	884.54		884.71	0.001263	3.37	384.99	117.14
1	3891.665	50-YEAR	1547.07	879.01	884.97		885.17	0.001203	3.56	439.08	150.38
1	3891.665	100-YEAR	1739.2	879.01	885.29		885.5	0.001154	3.68	494.65	201.62
1	3033.514	2-YEAR	586.28	876.42	881.01	879.69	881.27	0.002598	4.11	142.63	97
1	3033.514	5-YEAR	894.23	876.42	881.95	880.29	882.28	0.002457	4.57	195.71	108.33
1	3033.514	10-YEAR	1074.24	876.42	882.39	880.6	882.76	0.002364	4.83	222.79	113.9
1	3033.514	25-YEAR	1293.37	876.42	882.81	880.96	883.24	0.002388	5.22	249.77	119.3
1	3033.514	50-YEAR	1547.07	876.42	883.19	881.33	883.69	0.00254	5.7	275.2	124.15
1	3033.514	100-YEAR	1739.2	876.42	883.49	881.6	884.04	0.002583	6	296.22	133.97
1	164.1859	2-YEAR	659.29	868.48	873.12	871.57	873.47	0.002829	4.79	137.6	42.78
1	164.1859	5-YEAR	1020	868.48	874.21	872.41	874.68	0.002825	5.45	187.16	47.61
1	164.1859	10-YEAR	1235.24	868.48	874.77	872.81	875.29	0.002828	5.76	214.41	50.07
1	164.1859	25-YEAR	1413.45	868.48	875.2	873.12	875.75	0.002826	5.99	236.15	51.95
1	164.1859	50-YEAR	1523.65	868.48	875.43	873.31	876.02	0.002825	6.14	248.33	53.07
1	164.1859	100-YEAR	1661.4	868.48	875.68	873.54	876.31	0.002825	6.35	261.86	54.45

Wilson Creek

Table C.12
Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	18045.96	2-YEAR	253	908.86	910.97	909.78	910.97	0.000445	0.72	383.46	347.11
Tributary	18045.96	5-YEAR	377	908.86	911.56	909.93	911.57	0.000246	0.75	619.3	467.88
Tributary	18045.96	10-YEAR	454	908.86	911.89	910.02	911.9	0.000203	0.78	781.49	530.27
Tributary	18045.96	25-YEAR	545	908.86	912.25	910.09	912.26	0.000169	0.8	984.32	606.65
Tributary	18045.96	50-YEAR	634	908.86	912.58	910.29	912.59	0.000143	0.81	1209.22	734.72
Tributary	18045.96	100-YEAR	738	908.86	912.96	910.38	912.97	0.000111	0.79	1509.56	846.32
Tributary	18015.11		Culvert								
Tributary	17984.25	2-YEAR	253	907.32	908.7	908.7	909.16	0.014508	5.75	56.21	69.62
Tributary	17984.25	5-YEAR	377	907.32	909	909	909.54	0.014159	6.39	79.24	80.57
Tributary	17984.25	10-YEAR	454	907.32	909.26	909.26	909.79	0.01225	6.44	102.46	116.2
Tributary	17984.25	25-YEAR	545	907.32	909.83		910.05	0.005358	4.59	209.16	273.41
Tributary	17984.25	50-YEAR	634	907.32	910.66		910.71	0.001226	2.36	475.68	352.02
Tributary	17984.25	100-YEAR	738	907.32	911.86		911.87	0.000224	1.31	974.75	467.59
Tributary	17655.92	2-YEAR	253	904.01	907.08	905.31	907.19	0.000943	2.75	91.97	53.32
Tributary	17655.92	5-YEAR	377	904.01	908.02	905.71	908.17	0.000858	3.14	120.17	167.39
Tributary	17655.92	10-YEAR	454	904.01	908.56	905.94	908.73	0.000816	3.33	136.4	206.31
Tributary	17655.92	25-YEAR	545	904.01	909.36	906.18	909.54	0.000682	3.39	160.61	259.96
Tributary	17655.92	50-YEAR	634	904.01	910.23	906.41	910.41	0.000561	3.4	186.52	348.21
Tributary	17655.92	100-YEAR	738	904.01	911.57	906.67	911.73	0.000397	3.26	226.68	576.37
Tributary	17611.55		Culvert								
Tributary	17567.17	2-YEAR	253	903.64	906.77	904.81	906.81	0.00038	1.59	159.61	163.74
Tributary	17567.17	5-YEAR	377	903.64	907.61	905.12	907.66	0.00034	1.8	209.72	291.29
Tributary	17567.17	10-YEAR	454	903.64	908.09	905.29	908.15	0.00032	1.9	238.79	361.89
Tributary	17567.17	25-YEAR	545	903.64	908.66	905.46	908.72	0.000295	2	272.96	447.61
Tributary	17567.17	50-YEAR	634	903.64	909.21	905.62	909.28	0.000273	2.07	306.03	553.65
Tributary	17567.17	100-YEAR	738	903.64	910.11	905.78	910.12	0.000048	0.83	1579.89	594.49
Tributary	17303.28	2-YEAR	253	902.95	906.63		906.68	0.000693	1.65	154.81	92.22
Tributary	17303.28	5-YEAR	377	902.95	907.51		907.54	0.000481	1.57	250.54	129.39
Tributary	17303.28	10-YEAR	454	902.95	908.01		908.04	0.000387	1.5	321.16	152.54
Tributary	17303.28	25-YEAR	545	902.95	908.6		908.63	0.000299	1.41	422.79	195.78
Tributary	17303.28	50-YEAR	634	902.95	909.17		909.19	0.000229	1.31	561.29	287.43
Tributary	17303.28	100-YEAR	738	902.95	910.08		910.09	0.000111	1.09	906.14	481.34
Tributary	17032.19	2-YEAR	253	902.88	906.31	904.33	906.44	0.000879	2.85	88.92	75.53
Tributary	17032.19	5-YEAR	377	902.88	907.14	904.76	907.32	0.000948	3.41	110.44	140.13
Tributary	17032.19	10-YEAR	454	902.88	907.62	905.01	907.83	0.000963	3.69	122.87	191.68
Tributary	17032.19	25-YEAR	545	902.88	908.19	905.28	908.43	0.000952	3.96	137.59	257.86
Tributary	17032.19	50-YEAR	634	902.88	908.74	905.54	909.01	0.000926	4.17	151.88	445.6
Tributary	17032.19	100-YEAR	738	902.88	909.97	905.83	910.03	0.00027	2.37	598.5	606.13
Tributary	16974.83		Culvert								
Tributary	16917.47	2-YEAR	253	902.69	905.75	903.62	905.79	0.000341	1.65	153.07	119.15
Tributary	16917.47	5-YEAR	377	902.69	906.18	903.9	906.25	0.000491	2.16	174.26	127.04
Tributary	16917.47	10-YEAR	454	902.69	906.33	904.06	906.43	0.000615	2.49	182.13	129.96
Tributary	16917.47	25-YEAR	545	902.69	906.48	904.23	906.61	0.000777	2.88	189.44	136.64
Tributary	16917.47	50-YEAR	634	902.69	906.61	904.4	906.78	0.000936	3.23	196.18	155.37
Tributary	16917.47	100-YEAR	738	902.69	906.85	904.58	906.9	0.000372	1.76	427.34	174.74
Tributary	16670.08	2-YEAR	253	901.1	905.76	901.77	905.76	0.000024	0.53	507.86	254.37
Tributary	16670.08	5-YEAR	377	901.1	906.19	901.97	906.19	0.000037	0.71	581.67	290.61
Tributary	16670.08	10-YEAR	454	901.1	906.35	902.08	906.36	0.000048	0.82	611.95	305.98
Tributary	16670.08	25-YEAR	545	901.1	906.5	902.21	906.51	0.000062	0.95	642.01	320.32
Tributary	16670.08	50-YEAR	634	901.1	906.64	902.33	906.66	0.000075	1.07	671.3	334.47
Tributary	16670.08	100-YEAR	738	901.1	906.82	902.45	906.84	0.00009	1.19	710.47	352.51
Tributary	16487.01	2-YEAR	461	900.93	905.72	902.22	905.75	0.000169	1.34	361.12	217.82
Tributary	16487.01	5-YEAR	685	900.93	906.12	902.59	906.17	0.000261	1.78	424.98	275.36
Tributary	16487.01	10-YEAR	817	900.93	906.26	902.8	906.33	0.000328	2.05	450.34	303.89
Tributary	16487.01	25-YEAR	1006	900.93	906.38	903.06	906.47	0.000451	2.44	472.55	335.04
Tributary	16487.01	50-YEAR	1143	900.93	906.5	903.25	906.61	0.00053	2.69	496.44	383.78
Tributary	16487.01	100-YEAR	1323	900.93	906.65	903.46	906.79	0.000626	2.99	531.19	397.26
Tributary	16375.16	2-YEAR	461	900.91	905.71		905.72	0.000194	1.26	601.75	276.83
Tributary	16375.16	5-YEAR	685	900.91	906.11		906.13	0.000261	1.59	717.39	296.54
Tributary	16375.16	10-YEAR	817	900.91	906.25		906.28	0.000317	1.79	760.06	303.44
Tributary	16375.16	25-YEAR	1006	900.91	906.37		906.41	0.000424	2.12	795.8	309.59
Tributary	16375.16	50-YEAR	1143	900.91	906.49		906.54	0.000485	2.31	833.12	317.36
Tributary	16375.16	100-YEAR	1323	900.91	906.64		906.7	0.000558	2.55	882.27	328.37

Table C.12
Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	16013.58	2-YEAR	461	899.89	905.65		905.66	0.000142	1.19	635.93	278.95
Tributary	16013.58	5-YEAR	685	899.89	906.02		906.05	0.000209	1.54	745.4	300.73
Tributary	16013.58	10-YEAR	817	899.89	906.15		906.18	0.000263	1.76	782.3	307.72
Tributary	16013.58	25-YEAR	1006	899.89	906.22		906.27	0.00037	2.11	805.68	312.07
Tributary	16013.58	50-YEAR	1143	899.89	906.32		906.37	0.000436	2.33	835.32	317.47
Tributary	16013.58	100-YEAR	1323	899.89	906.44		906.5	0.000521	2.59	874.04	323.94
Tributary	15563.42	2-YEAR	461	898.87	905.58	902.89	905.6	0.000151	1.26	828.42	640.14
Tributary	15563.42	5-YEAR	685	898.87	905.94	903.59	905.95	0.000202	1.55	1021.89	715.34
Tributary	15563.42	10-YEAR	817	898.87	906.04	903.9	906.06	0.000249	1.75	1079.72	725.47
Tributary	15563.42	25-YEAR	1006	898.87	906.07	904.45	906.1	0.000362	2.12	1096.17	727.53
Tributary	15563.42	50-YEAR	1143	898.87	906.13	904.58	906.17	0.000426	2.32	1135.31	732.87
Tributary	15563.42	100-YEAR	1323	898.87	906.22	904.8	906.26	0.000516	2.58	1185.05	747.96
Tributary	15317.12	2-YEAR	531	898.93	905.56	902.97	905.57	0.000073	0.89	1528.98	1053.67
Tributary	15317.12	5-YEAR	760	898.93	905.91	903.56	905.92	0.000097	1.07	1940.38	1257.35
Tributary	15317.12	10-YEAR	896	898.93	906.01	903.85	906.01	0.000114	1.18	2061.96	1281.76
Tributary	15317.12	25-YEAR	1083	898.93	906.02	904.19	906.03	0.000163	1.42	2080.76	1285.5
Tributary	15317.12	50-YEAR	1220	898.93	906.08	904.45	906.09	0.000188	1.53	2158.98	1300.92
Tributary	15317.12	100-YEAR	1330	898.93	906.16	904.64	906.17	0.000197	1.59	2264.53	1320.43
Tributary	15246.62		Culvert								
Tributary	15146.83	2-YEAR	531	897.96	902.74	901.81	903.01	0.003107	4.43	151.05	481.64
Tributary	15146.83	5-YEAR	760	897.96	903.04	902.45	903.44	0.004227	5.44	178.99	565.32
Tributary	15146.83	10-YEAR	896	897.96	903.37	902.67	903.77	0.003948	5.53	209.2	650.88
Tributary	15146.83	25-YEAR	1083	897.96	903.8	902.94	904.2	0.003531	5.61	250.22	826.28
Tributary	15146.83	50-YEAR	1220	897.96	904.19	903.11	904.26	0.000854	2.97	927.72	932.39
Tributary	15146.83	100-YEAR	1330	897.96	904.58	903.24	904.62	0.000571	2.59	1152.87	1020.95
Tributary	15031.62	2-YEAR	531	898.18	901.39	901.39	902.19	0.013891	7.25	76.94	52.28
Tributary	15031.62	5-YEAR	760	898.18	902.46	902.06	902.83	0.006516	5.13	185.92	197.99
Tributary	15031.62	10-YEAR	896	898.18	902.99	902.28	903.23	0.004072	4.27	279.54	282.11
Tributary	15031.62	25-YEAR	1083	898.18	903.58	902.51	903.74	0.002511	3.56	419.61	370.4
Tributary	15031.62	50-YEAR	1220	898.18	903.98	902.68	904.1	0.001896	3.18	533.84	458.22
Tributary	15031.62	100-YEAR	1330	898.18	904.43	902.81	904.52	0.001245	2.76	684.58	581.33
Tributary	14701.37	2-YEAR	531	896.79	901.39	899.56	901.44	0.000572	2.06	417.24	248.05
Tributary	14701.37	5-YEAR	760	896.79	902.41	899.8	902.44	0.000323	1.89	693.96	301.56
Tributary	14701.37	10-YEAR	896	896.79	902.91	899.8	902.95	0.00026	1.84	852.76	351.69
Tributary	14701.37	25-YEAR	1083	896.79	903.5	900.47	903.53	0.000213	1.81	1066.91	492.3
Tributary	14701.37	50-YEAR	1220	896.79	903.9	900.6	903.93	0.000193	1.81	1250.37	601.9
Tributary	14701.37	100-YEAR	1330	896.79	904.36	900.71	904.39	0.000152	1.7	1480.25	789.42
Tributary	14360.15	2-YEAR	531	896.68	901.27	899.3	901.3	0.000285	1.35	482.01	407.3
Tributary	14360.15	5-YEAR	760	896.68	902.35	899.62	902.37	0.000134	1.17	938.34	726.6
Tributary	14360.15	10-YEAR	896	896.68	902.87	899.77	902.89	0.000105	1.13	1157.69	805.23
Tributary	14360.15	25-YEAR	1083	896.68	903.47	899.93	903.48	0.000088	1.13	1410.6	880.65
Tributary	14360.15	50-YEAR	1220	896.68	903.87	900.04	903.88	0.00008	1.14	1578.88	929.34
Tributary	14360.15	100-YEAR	1330	896.68	904.34	900.13	904.35	0.000067	1.1	1777.47	1023.72
Tributary	14037.12	2-YEAR	527	895.64	901.14	898.94	901.19	0.00037	1.78	304.49	575.19
Tributary	14037.12	5-YEAR	697	895.64	902.26	899.15	902.31	0.000238	1.74	411.96	845.93
Tributary	14037.12	10-YEAR	785	895.64	902.79	899.26	902.83	0.000206	1.75	462.43	1026.49
Tributary	14037.12	25-YEAR	890	895.64	903.39	899.37	903.44	0.000179	1.76	520.3	1129.04
Tributary	14037.12	50-YEAR	961	895.64	903.79	899.45	903.84	0.000165	1.77	558.72	1185.71
Tributary	14037.12	100-YEAR	1048	895.64	904.26	899.54	904.31	0.000152	1.79	603.94	1243.5
Tributary	13925.12		Bridge								
Tributary	13809.03	2-YEAR	527	894.62	899.05	897.38	899.15	0.001065	2.75	257.46	554.59
Tributary	13809.03	5-YEAR	697	894.62	899.3	897.85	899.44	0.001308	3.23	297.24	610.04
Tributary	13809.03	10-YEAR	785	894.62	899.42	898.04	899.57	0.001417	3.44	316.1	614.36
Tributary	13809.03	25-YEAR	890	894.62	899.62	898.22	899.78	0.001416	3.58	347.84	621.63
Tributary	13809.03	50-YEAR	961	894.62	899.78	898.37	899.94	0.001356	3.62	374.15	627.66
Tributary	13809.03	100-YEAR	1048	894.62	900.05	898.49	900.2	0.001195	3.56	416.85	637.44
Tributary	13732	2-YEAR	527	894.32	899		899.08	0.000655	2.45	396.09	440.64
Tributary	13732	5-YEAR	697	894.32	899.25		899.34	0.000756	2.73	510.05	471.16
Tributary	13732	10-YEAR	785	894.32	899.37		899.46	0.000787	2.83	567.83	483.19
Tributary	13732	25-YEAR	890	894.32	899.58		899.66	0.000725	2.79	672.17	502.33
Tributary	13732	50-YEAR	961	894.32	899.76		899.83	0.000645	2.69	761.46	512.45
Tributary	13732	100-YEAR	1048	894.32	900.04		900.1	0.000524	2.5	913.05	580.46

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Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	13249.13	2-YEAR	527	893.71	898.67		898.72	0.000926	2.73	486.41	391.94
Tributary	13249.13	5-YEAR	697	893.71	898.87		898.93	0.001095	3.08	566.96	410.18
Tributary	13249.13	10-YEAR	785	893.71	898.98		899.04	0.001133	3.2	612.26	418.72
Tributary	13249.13	25-YEAR	890	893.71	899.25		899.3	0.000934	3.05	728.28	448.09
Tributary	13249.13	50-YEAR	961	893.71	899.48		899.52	0.000769	2.88	833.24	472.58
Tributary	13249.13	100-YEAR	1048	893.71	899.83		899.86	0.000561	2.6	1005.1	509.03
Tributary	12521.19	2-YEAR	527	893.46	897.15		897.4	0.006868	4.14	161.41	231.89
Tributary	12521.19	5-YEAR	697	893.46	897.9		897.99	0.002011	2.77	392.01	422.73
Tributary	12521.19	10-YEAR	785	893.46	898.33		898.38	0.000952	2.18	581.6	453
Tributary	12521.19	25-YEAR	890	893.46	898.85		898.89	0.000484	1.79	851.7	571.81
Tributary	12521.19	50-YEAR	961	893.46	899.2		899.22	0.000325	1.59	1053.18	608.27
Tributary	12521.19	100-YEAR	1048	893.46	899.64		899.66	0.000207	1.39	1337.35	658.49
Tributary	12252.66	2-YEAR	527	893.46	897.19	895.65	897.19	0.000173	1.21	980.27	516.62
Tributary	12252.66	5-YEAR	697	893.46	897.89	895.75	897.89	0.000112	1.1	1347.29	529.08
Tributary	12252.66	10-YEAR	785	893.46	898.31	895.81	898.32	0.000087	1.04	1574.28	537.34
Tributary	12252.66	25-YEAR	890	893.46	898.84	895.86	898.84	0.000072	1.02	2052.22	768.71
Tributary	12252.66	50-YEAR	961	893.46	899.18	895.89	899.18	0.000059	0.96	2322.58	802.37
Tributary	12252.66	100-YEAR	1048	893.46	899.63	895.93	899.64	0.000046	0.9	2695.24	845.95
Tributary	12157.3	2-YEAR	578	892.17	897.17	893.64	897.18	0.000143	1.33	687.49	526.44
Tributary	12157.3	5-YEAR	758	892.17	897.86	893.82	897.88	0.000149	1.5	799.19	547.92
Tributary	12157.3	10-YEAR	865	892.17	898.29	893.91	898.31	0.000148	1.58	867.07	560.99
Tributary	12157.3	25-YEAR	994	892.17	898.81	894.01	898.83	0.000144	1.65	950.46	577.09
Tributary	12157.3	50-YEAR	1089	892.17	899.15	894.08	899.17	0.000143	1.71	1005.24	589.53
Tributary	12157.3	100-YEAR	1218	892.17	899.6	894.18	899.62	0.000143	1.79	1077.23	606.95
Tributary	12050.3		Culvert								
Tributary	11942.51	2-YEAR	578	891.81	896.93	893.6	896.95	0.00013	1.28	497.67	191.56
Tributary	11942.51	5-YEAR	758	891.81	897.54	893.82	897.57	0.00014	1.45	581.57	199.07
Tributary	11942.51	10-YEAR	865	891.81	897.92	893.93	897.95	0.000141	1.53	634.31	203.65
Tributary	11942.51	25-YEAR	994	891.81	898.39	894.06	898.43	0.000138	1.6	700.98	208.85
Tributary	11942.51	50-YEAR	1089	891.81	898.7	894.16	898.74	0.000138	1.66	744.28	212.18
Tributary	11942.51	100-YEAR	1218	891.81	899.1	894.28	899.14	0.000138	1.73	801.71	216.56
Tributary	11907.87	2-YEAR	578	891.62	896.93		896.94	0.000052	0.85	1240.23	495.11
Tributary	11907.87	5-YEAR	758	891.62	897.55		897.56	0.00005	0.9	1554.67	524.15
Tributary	11907.87	10-YEAR	865	891.62	897.93		897.94	0.000046	0.92	1757.44	540.02
Tributary	11907.87	25-YEAR	994	891.62	898.41		898.41	0.000042	0.92	2020.21	565.8
Tributary	11907.87	50-YEAR	1089	891.62	898.71		898.72	0.00004	0.93	2195.32	581.54
Tributary	11907.87	100-YEAR	1218	891.62	899.11		899.12	0.000039	0.95	2435	615.6
Tributary	11840.85	2-YEAR	578	890.93	896.93		896.94	0.000064	0.86	1256.88	514.85
Tributary	11840.85	5-YEAR	758	890.93	897.55		897.55	0.000058	0.91	1590.12	558
Tributary	11840.85	10-YEAR	865	890.93	897.93		897.93	0.000053	0.91	1807.07	579.78
Tributary	11840.85	25-YEAR	994	890.93	898.4		898.41	0.000047	0.91	2089.47	607.37
Tributary	11840.85	50-YEAR	1089	890.93	898.71		898.72	0.000045	0.92	2278.03	627.4
Tributary	11840.85	100-YEAR	1218	890.93	899.11		899.12	0.000042	0.93	2535.93	660.07
Tributary	11787.88	2-YEAR	578	891.49	896.88	894.22	896.92	0.000327	1.98	445.04	508.4
Tributary	11787.88	5-YEAR	758	891.49	897.49	894.45	897.54	0.000337	2.2	523.32	553.74
Tributary	11787.88	10-YEAR	865	891.49	897.87	894.6	897.92	0.00033	2.29	571.98	579.92
Tributary	11787.88	25-YEAR	994	891.49	898.34	894.77	898.39	0.000315	2.37	632.82	608.26
Tributary	11787.88	50-YEAR	1089	891.49	898.64	894.92	898.7	0.000312	2.44	671.73	636.21
Tributary	11787.88	100-YEAR	1218	891.49	899.04	895.05	899.1	0.000309	2.53	722.76	676.32
Tributary	11739.88		Bridge								
Tributary	11697.27	2-YEAR	578	890.05	896.15	895.14	896.3	0.001482	4.04	262.3	217.01
Tributary	11697.27	5-YEAR	758	890.05	896.4	895.4	896.6	0.001876	4.73	292.26	219.54
Tributary	11697.27	10-YEAR	865	890.05	896.55	895.54	896.78	0.002061	5.07	309.97	221.03
Tributary	11697.27	25-YEAR	994	890.05	896.7	895.69	896.96	0.002334	5.51	326.74	222.45
Tributary	11697.27	50-YEAR	1089	890.05	896.79	895.78	897.08	0.002543	5.82	337.66	223.37
Tributary	11697.27	100-YEAR	1218	890.05	896.91	895.94	897.24	0.00282	6.23	351.71	224.56
Tributary	11657.98	2-YEAR	578	890.05	896.17		896.21	0.000522	2.4	505.27	270.22
Tributary	11657.98	5-YEAR	758	890.05	896.43		896.49	0.000635	2.76	579.89	288.87
Tributary	11657.98	10-YEAR	865	890.05	896.59		896.65	0.000681	2.93	626.45	300.93
Tributary	11657.98	25-YEAR	994	890.05	896.74		896.81	0.000753	3.15	673.63	315.6
Tributary	11657.98	50-YEAR	1089	890.05	896.84		896.92	0.000804	3.3	705.85	324.21
Tributary	11657.98	100-YEAR	1218	890.05	896.98		897.06	0.000866	3.48	750.62	358.74
Tributary	11009.06	2-YEAR	578	890.39	894.74	894.74	895.36	0.008798	6.45	112.38	166.7
Tributary	11009.06	5-YEAR	758	890.39	895.19	895.19	895.64	0.005844	5.94	223.12	291.94
Tributary	11009.06	10-YEAR	865	890.39	895.29	895.29	895.77	0.006034	6.21	254.34	303.24
Tributary	11009.06	25-YEAR	994	890.39	895.46	895.41	895.91	0.005573	6.21	307.19	322.49
Tributary	11009.06	50-YEAR	1089	890.39	895.6	895.49	896.01	0.005108	6.14	351.38	337.75
Tributary	11009.06	100-YEAR	1218	890.39	895.77	895.59	896.14	0.004619	6.06	410.24	357.05

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Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	10690.17	2-YEAR	578	888.46	894.61		894.7	0.000606	2.73	403.92	400.83
Tributary	10690.17	5-YEAR	758	888.46	894.96		895.05	0.00062	2.91	547.96	419.22
Tributary	10690.17	10-YEAR	865	888.46	895.09		895.19	0.000669	3.08	603.92	426.15
Tributary	10690.17	25-YEAR	994	888.46	895.25		895.36	0.00071	3.24	672.66	434.51
Tributary	10690.17	50-YEAR	1089	888.46	895.36		895.47	0.000737	3.35	720.28	440.21
Tributary	10690.17	100-YEAR	1218	888.46	895.51		895.63	0.000754	3.45	789.67	448.38
Tributary	9932.969	2-YEAR	578	887.45	894.3		894.36	0.000398	2.2	593.27	575.58
Tributary	9932.969	5-YEAR	758	887.45	894.69		894.74	0.000365	2.23	829.06	651.01
Tributary	9932.969	10-YEAR	865	887.45	894.8		894.86	0.000397	2.36	905.67	677.25
Tributary	9932.969	25-YEAR	994	887.45	894.96		895.01	0.00041	2.45	1011.94	692.98
Tributary	9932.969	50-YEAR	1089	887.45	895.07		895.12	0.000419	2.52	1085.53	700.91
Tributary	9932.969	100-YEAR	1218	887.45	895.23		895.28	0.000413	2.55	1201.3	712.96
Tributary	9888.318	2-YEAR	578	887.21	894.31	890.84	894.33	0.000164	1.52	837.02	667.63
Tributary	9888.318	5-YEAR	758	887.21	894.69	891.27	894.72	0.000163	1.6	1106.11	726.31
Tributary	9888.318	10-YEAR	865	887.21	894.81	891.49	894.83	0.000182	1.71	1190.23	738.68
Tributary	9888.318	25-YEAR	994	887.21	894.96	891.72	894.99	0.000196	1.81	1304.92	756.32
Tributary	9888.318	50-YEAR	1089	887.21	895.06	891.88	895.09	0.000206	1.88	1384.88	770.47
Tributary	9888.318	100-YEAR	1218	887.21	895.23	892.06	895.26	0.00021	1.94	1511.93	791.77
Tributary	9850.318		Bridge								
Tributary	9813.512	2-YEAR	578	886.87	893.03	891.6	893.23	0.002093	4.03	227.14	219.86
Tributary	9813.512	5-YEAR	758	886.87	893.76	892.13	893.89	0.001196	3.5	507	563.48
Tributary	9813.512	10-YEAR	865	886.87	894.01	892.56	894.12	0.000985	3.31	663.5	685.69
Tributary	9813.512	25-YEAR	994	886.87	894.46	892.83	894.52	0.000584	2.73	1006.27	839.79
Tributary	9813.512	50-YEAR	1089	886.87	894.78	893.16	894.82	0.000413	2.4	1283.69	887.35
Tributary	9813.512	100-YEAR	1218	886.87	895.16	893.12	895.19	0.000282	2.08	1630.25	934.5
Tributary	9728.044	2-YEAR	616	886.66	892.95		893.07	0.001188	3.11	330.59	315.24
Tributary	9728.044	5-YEAR	813	886.66	893.73		893.8	0.000637	2.63	738.04	685.41
Tributary	9728.044	10-YEAR	908	886.66	893.99		894.04	0.000503	2.44	921.46	735.15
Tributary	9728.044	25-YEAR	990	886.66	894.45		894.48	0.000279	1.94	1269.04	772.97
Tributary	9728.044	50-YEAR	1073	886.66	894.77		894.79	0.000206	1.74	1522.43	798.45
Tributary	9728.044	100-YEAR	1155	886.66	895.15		895.17	0.000146	1.54	1834.22	828.11
Tributary	9192.625	2-YEAR	616	886.15	892.75		892.78	0.000274	1.42	628.97	386.1
Tributary	9192.625	5-YEAR	813	886.15	893.62		893.64	0.000155	1.27	988.17	446.09
Tributary	9192.625	10-YEAR	908	886.15	893.88		893.9	0.000146	1.29	1111.28	478.29
Tributary	9192.625	25-YEAR	990	886.15	894.37		894.39	0.000105	1.18	1350.97	501.09
Tributary	9192.625	50-YEAR	1073	886.15	894.71		894.72	0.000091	1.15	1522.3	525.42
Tributary	9192.625	100-YEAR	1155	886.15	895.1		895.12	0.000076	1.11	1735.74	554.25
Tributary	8600.113	2-YEAR	1135	885.58	892	889.51	892.31	0.001784	4.54	250.2	451.81
Tributary	8600.113	5-YEAR	1855	885.58	893.28	890.68	893.4	0.000745	3.46	1164.43	661.19
Tributary	8600.113	10-YEAR	2328	885.58	893.49	891.32	893.63	0.000918	3.93	1302.02	679.01
Tributary	8600.113	25-YEAR	3181	885.58	893.96	892.74	894.12	0.00102	4.38	1630.11	719.73
Tributary	8600.113	50-YEAR	3749	885.58	894.3	892.95	894.46	0.001005	4.51	1881.6	750.44
Tributary	8600.113	100-YEAR	4402	885.58	894.72	893.15	894.88	0.000938	4.55	2205.84	788.45
Tributary	8197.604	2-YEAR	1135	885.58	891.4	888.81	891.65	0.001443	4.05	280.54	228.76
Tributary	8197.604	5-YEAR	1855	885.58	892.55	889.87	892.93	0.001766	4.98	422.59	529.47
Tributary	8197.604	10-YEAR	2328	885.58	892.97	890.46	893.2	0.001235	4.38	993.85	584.64
Tributary	8197.604	25-YEAR	3181	885.58	893.29	891.37	893.59	0.001638	5.24	1183.47	619.52
Tributary	8197.604	50-YEAR	3749	885.58	893.65	892.09	893.95	0.001568	5.36	1416.2	659.82
Tributary	8197.604	100-YEAR	4402	885.58	894.15	892.85	894.41	0.001345	5.24	1762.19	716.41
Tributary	7745.407	2-YEAR	1205	885.56	888.71	888.71	890.01	0.013612	9.16	131.51	258.46
Tributary	7745.407	5-YEAR	2024	885.56	890.23	890.23	891.33	0.007918	8.74	297.84	409.03
Tributary	7745.407	10-YEAR	2605	885.56	890.75	890.75	891.9	0.007465	9.19	399.76	545.11
Tributary	7745.407	25-YEAR	3634	885.56	892.31		892.69	0.002267	6.28	1263.9	669.23
Tributary	7745.407	50-YEAR	4252	885.56	892.94		893.21	0.001576	5.62	1698.33	704.51
Tributary	7745.407	100-YEAR	4899	885.56	893.65		893.84	0.001094	5.03	2206.57	745.16
Tributary	7120.867	2-YEAR	1205	879.57	888.06		888.2	0.000738	3.22	520.28	206.99
Tributary	7120.867	5-YEAR	2024	879.57	889.81		889.94	0.00052	3.33	1009.68	485.83
Tributary	7120.867	10-YEAR	2605	879.57	890.7		890.82	0.000448	3.37	1466.45	547.19
Tributary	7120.867	25-YEAR	3634	879.57	892.07		892.17	0.000343	3.3	2279.42	632.17
Tributary	7120.867	50-YEAR	4252	879.57	892.69		892.79	0.000321	3.34	2683.91	666.03
Tributary	7120.867	100-YEAR	4899	879.57	893.41		893.5	0.000285	3.3	3180.41	710.26
Tributary	6661.149	2-YEAR	1205	879.56	887.39		887.68	0.001746	4.37	275.66	68.67
Tributary	6661.149	5-YEAR	2024	879.56	889.22		889.54	0.001559	4.64	539.82	359.07
Tributary	6661.149	10-YEAR	2605	879.56	890.29		890.52	0.000979	4.21	963.8	414.08
Tributary	6661.149	25-YEAR	3634	879.56	891.8		891.96	0.000605	3.86	1625.39	463.46
Tributary	6661.149	50-YEAR	4252	879.56	892.44		892.6	0.000547	3.88	1930.15	483.28
Tributary	6661.149	100-YEAR	4899	879.56	893.19		893.34	0.000471	3.82	2302.4	510.36

Table C.12
Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	6465.54	2-YEAR	1205	879.57	887.14		887.36	0.00135	3.83	314.23	78.14
Tributary	6465.54	5-YEAR	2024	879.57	889.01		889.26	0.001113	4.12	577.55	275.18
Tributary	6465.54	10-YEAR	2605	879.57	890.14		890.34	0.000765	3.88	997.59	415.25
Tributary	6465.54	25-YEAR	3634	879.57	891.7		891.85	0.000493	3.61	1700.38	476.84
Tributary	6465.54	50-YEAR	4252	879.57	892.35		892.5	0.000452	3.65	2016.72	493.95
Tributary	6465.54	100-YEAR	4899	879.57	893.12		893.25	0.000392	3.6	2401.71	514.1
Tributary	6300.468	2-YEAR	1209	879.31	887	883.41	887.17	0.000768	3.25	372.42	81.22
Tributary	6300.468	5-YEAR	2025	879.31	888.88	884.6	889.1	0.000718	3.77	594.39	235.25
Tributary	6300.468	10-YEAR	2597	879.31	890	885.25	890.22	0.000628	3.94	801.01	347.76
Tributary	6300.468	25-YEAR	3557	879.31	891.51	886.16	891.74	0.00054	4.14	1140.85	469.1
Tributary	6300.468	50-YEAR	4074	879.31	892.14	886.61	892.39	0.000528	4.29	1284.66	476.09
Tributary	6300.468	100-YEAR	4706	879.31	892.88	887.1	893.14	0.000513	4.44	1452.1	482.84
Tributary	6205.468		Bridge								
Tributary	6121.399	2-YEAR	1209	879.38	886.71	884.05	886.87	0.000786	3.58	504.48	277.93
Tributary	6121.399	5-YEAR	2025	879.38	888.59	885.35	888.74	0.000563	3.71	873.01	324.3
Tributary	6121.399	10-YEAR	2597	879.38	889.67	885.81	889.82	0.000494	3.81	1092.78	353.42
Tributary	6121.399	25-YEAR	3557	879.38	891.06	886.37	891.23	0.000471	4.13	1376.1	385.53
Tributary	6121.399	50-YEAR	4074	879.38	891.61	886.97	891.8	0.000488	4.36	1488.94	399.33
Tributary	6121.399	100-YEAR	4706	879.38	892.25	887.27	892.46	0.000504	4.62	1619.39	411.22
Tributary	6022.257	2-YEAR	1209	878.53	886.67	882.8	886.78	0.000546	2.75	439.09	91.61
Tributary	6022.257	5-YEAR	2025	878.53	888.51	884.12	888.68	0.000555	3.29	615.04	104.09
Tributary	6022.257	10-YEAR	2597	878.53	889.56	884.62	889.75	0.000558	3.57	783.71	257.35
Tributary	6022.257	25-YEAR	3557	878.53	890.95	885.37	891.16	0.000526	3.86	1154.93	333.85
Tributary	6022.257	50-YEAR	4074	878.53	891.5	885.76	891.73	0.000525	4.03	1330.08	369.28
Tributary	6022.257	100-YEAR	4706	878.53	892.15	886.19	892.4	0.000514	4.18	1555.76	413.52
Tributary	5679.313	2-YEAR	1209	878.09	886.44	883.03	886.57	0.000715	2.88	419.34	100.76
Tributary	5679.313	5-YEAR	2025	878.09	888.31	884.08	888.47	0.000689	3.21	631.57	126.37
Tributary	5679.313	10-YEAR	2597	878.09	889.36	884.64	889.54	0.000673	3.36	772.96	141.89
Tributary	5679.313	25-YEAR	3557	878.09	890.76	885.47	890.96	0.000663	3.6	1005.18	213.7
Tributary	5679.313	50-YEAR	4074	878.09	891.31	885.87	891.53	0.000669	3.76	1132.62	249.64
Tributary	5679.313	100-YEAR	4706	878.09	891.97	886.33	892.2	0.000634	3.91	1319.27	324.64
Tributary	5490.167	2-YEAR	1210	878.12	885.81	883.38	886.24	0.002601	5.31	227.72	56.16
Tributary	5490.167	5-YEAR	2028	878.12	887.6	884.96	888.14	0.002238	5.94	359.57	169.9
Tributary	5490.167	10-YEAR	2600	878.12	888.63	885.81	889.21	0.001953	6.24	457.01	205.35
Tributary	5490.167	25-YEAR	3536	878.12	889.93	886.88	890.62	0.001844	6.86	582.42	236.23
Tributary	5490.167	50-YEAR	4006	878.12	890.4	887.43	891.17	0.0019	7.25	629.38	247.91
Tributary	5490.167	100-YEAR	4689	878.12	890.89	888.02	891.8	0.002109	7.94	677.82	318.14
Tributary	5445.167		Bridge								
Tributary	5385.84	2-YEAR	1210	877.54	884.8	883.04	885.27	0.003145	5.5	219.93	60.26
Tributary	5385.84	5-YEAR	2028	877.54	886.51	884.37	887.09	0.002794	6.1	332.38	71.26
Tributary	5385.84	10-YEAR	2600	877.54	887.48	885.04	888.13	0.002666	6.42	404.78	77.52
Tributary	5385.84	25-YEAR	3536	877.54	888.7	886	889.46	0.002707	7.02	503.69	85.34
Tributary	5385.84	50-YEAR	4006	877.54	889.12	886.45	889.97	0.002871	7.42	543.58	191.4
Tributary	5385.84	100-YEAR	4689	877.54	889.51	887.05	890.54	0.003265	8.13	590.08	219.72
Tributary	5340.014	2-YEAR	1210	877.21	884.83	881.74	885.06	0.001347	3.82	316.6	80.06
Tributary	5340.014	5-YEAR	2028	877.21	886.57	883.15	886.86	0.001266	4.34	466.95	92.93
Tributary	5340.014	10-YEAR	2600	877.21	887.56	883.88	887.89	0.00124	4.62	562.34	100.24
Tributary	5340.014	25-YEAR	3536	877.21	888.8	884.81	889.2	0.001291	5.11	692.09	185.24
Tributary	5340.014	50-YEAR	4006	877.21	889.24	885.2	889.68	0.001326	5.37	797.05	233.38
Tributary	5340.014	100-YEAR	4689	877.21	889.67	885.7	890.19	0.001441	5.83	911.56	296.61
Tributary	5071.343	2-YEAR	1210	876.95	884.52		884.68	0.001337	3.16	382.32	127.41
Tributary	5071.343	5-YEAR	2028	876.95	886.4		886.55	0.000813	3.17	640.68	147.32
Tributary	5071.343	10-YEAR	2600	876.95	887.43		887.59	0.000726	3.26	797.85	161.44
Tributary	5071.343	25-YEAR	3536	876.95	888.72		888.9	0.000627	3.38	1176.84	383.73
Tributary	5071.343	50-YEAR	4006	876.95	889.19		889.37	0.000597	3.47	1362.11	409.36
Tributary	5071.343	100-YEAR	4689	876.95	889.65		889.85	0.00062	3.71	1554.57	434.12
Tributary	4700.785	2-YEAR	1210	876.26	883.69		884.06	0.001961	4.87	248.56	54.15
Tributary	4700.785	5-YEAR	2028	876.26	885.6		886.07	0.002088	5.48	369.81	71.88
Tributary	4700.785	10-YEAR	2600	876.26	886.6		887.13	0.002114	5.83	445.71	80.1
Tributary	4700.785	25-YEAR	3536	876.26	887.93		888.49	0.001906	6.1	716.51	328.31
Tributary	4700.785	50-YEAR	4006	876.26	888.46		888.99	0.001718	6.1	903.32	374.18
Tributary	4700.785	100-YEAR	4689	876.26	888.88		889.46	0.001781	6.46	1066.98	404.22
Tributary	4278.65	2-YEAR	1210	875.42	882.71	879.8	883.13	0.002447	5.21	232.12	63.1
Tributary	4278.65	5-YEAR	2028	875.42	884.59	881.52	885.11	0.002444	5.76	352.05	95.48
Tributary	4278.65	10-YEAR	2600	875.42	885.58	882.56	886.15	0.002501	6.09	427.14	116.38
Tributary	4278.65	25-YEAR	3536	875.42	886.92	883.73	887.56	0.002529	6.42	551.95	190.8
Tributary	4278.65	50-YEAR	4006	875.42	887.45	884.21	888.13	0.002385	6.62	615.01	351.44
Tributary	4278.65	100-YEAR	4689	875.42	888.17	884.83	888.69	0.001773	6.15	1097.33	458.49

Table C.12
Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	3421.745	2-YEAR	1210	873.71	881.05		881.38	0.001694	4.61	262.5	58.49
Tributary	3421.745	5-YEAR	2028	873.71	883		883.43	0.001565	5.21	391.82	78.15
Tributary	3421.745	10-YEAR	2600	873.71	884.03		884.52	0.001467	5.63	482.43	99.01
Tributary	3421.745	25-YEAR	3536	873.71	885.37		885.96	0.001418	6.25	635.18	128.37
Tributary	3421.745	50-YEAR	4006	873.71	885.95		886.58	0.001409	6.52	712.52	139.54
Tributary	3421.745	100-YEAR	4689	873.71	886.64		887.35	0.001444	6.95	813.45	153.39
Tributary	2994.294	2-YEAR	1210	872.68	880.37	876.95	880.7	0.001477	4.63	261.1	50.43
Tributary	2994.294	5-YEAR	2028	872.68	882.23	878.39	882.71	0.001794	5.53	366.86	63.17
Tributary	2994.294	10-YEAR	2600	872.68	883.24	879.25	883.79	0.001931	5.99	433.86	70.06
Tributary	2994.294	25-YEAR	3536	872.68	884.53	880.6	885.22	0.002129	6.67	530.15	80.66
Tributary	2994.294	50-YEAR	4006	872.68	885.07	881.17	885.83	0.002196	6.98	576.43	88.26
Tributary	2994.294	100-YEAR	4689	872.68	885.7	881.89	886.57	0.002287	7.49	634.04	120.51
Tributary	2439.681	2-YEAR	1210	872.69	879.01		879.54	0.003054	5.86	206.6	50.16
Tributary	2439.681	5-YEAR	2032	872.69	880.63		881.36	0.00327	6.9	294.53	58.66
Tributary	2439.681	10-YEAR	2605	872.69	881.5		882.37	0.003386	7.49	348.49	69.66
Tributary	2439.681	25-YEAR	3535	872.69	882.64		883.7	0.003453	8.31	453.4	115.02
Tributary	2439.681	50-YEAR	4011	872.69	883.2		884.31	0.003369	8.55	523.72	135.27
Tributary	2439.681	100-YEAR	4679	872.69	883.95		885.08	0.003079	8.76	641.16	179.07
Tributary	2290.547	2-YEAR	1210	872.4	878.78	876.15	879.15	0.001801	4.92	245.75	224.63
Tributary	2290.547	5-YEAR	2032	872.4	880.37	877.46	880.92	0.002097	6.01	363.24	395.78
Tributary	2290.547	10-YEAR	2605	872.4	881.28	878.24	881.9	0.002129	6.47	475.19	498.22
Tributary	2290.547	25-YEAR	3535	872.4	882.59	879.44	883.2	0.001795	6.65	722.09	575.56
Tributary	2290.547	50-YEAR	4011	872.4	883.23	880.09	883.81	0.001619	6.66	842.08	595.43
Tributary	2290.547	100-YEAR	4679	872.4	884.04	880.88	884.61	0.001451	6.72	996.27	617.49
Tributary	1483.476	2-YEAR	1210	868.52	877.32		877.69	0.001816	4.89	252.14	71.57
Tributary	1483.476	5-YEAR	2032	868.52	879.34		879.67	0.001169	4.97	593.04	196.54
Tributary	1483.476	10-YEAR	2605	868.52	880.49		880.79	0.000925	4.91	835.37	221.56
Tributary	1483.476	25-YEAR	3535	868.52	882.06		882.32	0.000715	4.86	1190.51	231.65
Tributary	1483.476	50-YEAR	4011	868.52	882.76		883.02	0.000658	4.89	1354.26	236.06
Tributary	1483.476	100-YEAR	4679	868.52	883.63		883.89	0.000612	4.99	1562.06	241.55
Tributary	1052.839	2-YEAR	1210	868.24	876.64		876.98	0.001475	4.7	257.28	48.67
Tributary	1052.839	5-YEAR	2032	868.24	878.55		879.05	0.001709	5.68	358.03	56.82
Tributary	1052.839	10-YEAR	2605	868.24	879.62		880.22	0.001813	6.18	421.74	61.54
Tributary	1052.839	25-YEAR	3535	868.24	881.06		881.79	0.001972	6.86	515.04	68.31
Tributary	1052.839	50-YEAR	4011	868.24	881.7		882.5	0.00204	7.17	559.71	71.37
Tributary	1052.839	100-YEAR	4679	868.24	882.49		883.38	0.002046	7.59	617.09	75.13
Tributary	896.5909	2-YEAR	1210	868.9	875.75		876.45	0.003953	6.69	180.78	42.97
Tributary	896.5909	5-YEAR	2032	868.9	877.56		878.46	0.003926	7.65	265.74	51.21
Tributary	896.5909	10-YEAR	2605	868.9	878.6		879.62	0.003863	8.1	321.42	55.95
Tributary	896.5909	25-YEAR	3535	868.9	879.95		881.16	0.003906	8.8	401.62	62.15
Tributary	896.5909	50-YEAR	4011	868.9	880.55		881.85	0.003942	9.12	439.76	64.9
Tributary	896.5909	100-YEAR	4679	868.9	881.31		882.73	0.003826	9.55	490.38	68.49
Tributary	833.9909	2-YEAR	1210	868.58	875.58	873.61	876.18	0.00318	6.22	194.64	43.73
Tributary	833.9909	5-YEAR	2032	868.58	877.38	875.13	878.19	0.003334	7.25	280.24	51.51
Tributary	833.9909	10-YEAR	2605	868.58	878.41	875.98	879.35	0.003355	7.75	336.02	56
Tributary	833.9909	25-YEAR	3535	868.58	879.76	877.18	880.89	0.003488	8.51	415.47	61.84
Tributary	833.9909	50-YEAR	4011	868.58	880.36	877.72	881.58	0.003454	8.86	453.35	64.85
Tributary	833.9909	100-YEAR	4679	868.58	881.12	878.42	882.47	0.003356	9.34	504.15	68.58
Tributary	807.9909		Inl Struct								
Tributary	779.2909	2-YEAR	1219	868	873.46	871.38	873.93	0.002486	5.51	221.2	49.63
Tributary	779.2909	5-YEAR	2047	868	875.37	872.66	875.99	0.002394	6.36	321.87	56
Tributary	779.2909	10-YEAR	2623	868	876.44	873.42	877.17	0.002388	6.83	383.98	59.59
Tributary	779.2909	25-YEAR	3557	868	877.89	874.52	878.77	0.002435	7.5	474.02	64.43
Tributary	779.2909	50-YEAR	4037	868	878.53	875.02	879.49	0.002386	7.83	516.3	67.62
Tributary	779.2909	100-YEAR	4709	868	879.38	875.7	880.43	0.002316	8.25	575.31	72.08
Tributary	686.7909	2-YEAR	1219	866.36	872.37		873.41	0.006679	8.18	148.97	37.73
Tributary	686.7909	5-YEAR	2047	866.36	874.1		875.44	0.006456	9.27	220.8	44.87
Tributary	686.7909	10-YEAR	2623	866.36	875.11		876.6	0.006275	9.79	268.03	49.01
Tributary	686.7909	25-YEAR	3557	866.36	876.43		878.17	0.006122	10.58	336.33	55.04
Tributary	686.7909	50-YEAR	4037	866.36	876.99		878.88	0.005921	11.02	368.11	58.15
Tributary	686.7909	100-YEAR	4709	866.36	877.74		879.81	0.005687	11.57	412.99	62.27
Tributary	466.027	2-YEAR	1219	864.6	870.99		871.97	0.006158	7.96	153.19	38.76
Tributary	466.027	5-YEAR	2047	864.6	872.93		874.09	0.005362	8.63	237.18	47.68
Tributary	466.027	10-YEAR	2623	864.6	874.06		875.29	0.004971	8.93	293.57	52.84
Tributary	466.027	25-YEAR	3557	864.6	875.54		876.93	0.004367	9.46	377.14	59.69
Tributary	466.027	50-YEAR	4037	864.6	876.19		877.67	0.004118	9.78	416.95	62.69
Tributary	466.027	100-YEAR	4709	864.6	877.03		878.64	0.003884	10.21	471.2	66.57

Table C.12
Wilson Creek Results for Existing Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	125.6782	2-YEAR	1219	862.03	868.29	867.49	869.6	0.007725	9.18	132.77	30.61
Tributary	125.6782	5-YEAR	2047	862.03	870.14	869.24	871.86	0.007721	10.53	194.4	36.07
Tributary	125.6782	10-YEAR	2623	862.03	871.19	870.23	873.14	0.00772	11.22	233.82	39.29
Tributary	125.6782	25-YEAR	3557	862.03	872.63	871.63	874.9	0.00772	12.11	293.62	43.78
Tributary	125.6782	50-YEAR	4037	862.03	873.27	872.24	875.71	0.00773	12.51	322.64	45.81
Tributary	125.6782	100-YEAR	4709	862.03	874.08	873.09	876.73	0.00772	13.06	360.58	48.79

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	18045.96	2-YEAR	251	908.86	910.96	909.78	910.96	0.000452	0.72	379.74	346.21
Tributary	18045.96	5-YEAR	377	908.86	911.56	909.93	911.57	0.000246	0.75	619.3	467.88
Tributary	18045.96	10-YEAR	453	908.86	911.89	910.02	911.89	0.000204	0.78	779.32	529.49
Tributary	18045.96	25-YEAR	555	908.86	912.29	910.12	912.29	0.000168	0.81	1007.8	622.22
Tributary	18045.96	50-YEAR	634	908.86	912.58	910.29	912.59	0.000143	0.81	1209.22	734.72
Tributary	18045.96	100-YEAR	738	908.86	913.03	910.38	913.03	0.0001	0.77	1564.77	865.45
Tributary	18015.11		Culvert								
Tributary	17984.25	2-YEAR	251	907.32	908.7	908.7	909.15	0.014434	5.73	55.96	69.48
Tributary	17984.25	5-YEAR	377	907.32	909	909	909.54	0.014159	6.39	79.24	80.57
Tributary	17984.25	10-YEAR	453	907.32	909.26	909.26	909.79	0.012279	6.45	102.11	115.79
Tributary	17984.25	25-YEAR	555	907.32	910.04		910.18	0.00331	3.69	272.38	304.28
Tributary	17984.25	50-YEAR	634	907.32	911.11		911.14	0.000544	1.68	653.04	414.2
Tributary	17984.25	100-YEAR	738	907.32	912.05		912.06	0.000178	1.21	1064.78	492.25
Tributary	17655.92	2-YEAR	251	904.01	907.09	905.31	907.21	0.000909	2.71	92.55	53.95
Tributary	17655.92	5-YEAR	377	904.01	908.03	905.71	908.18	0.000847	3.12	120.64	174.28
Tributary	17655.92	10-YEAR	453	904.01	908.57	905.92	908.74	0.000806	3.31	136.72	206.76
Tributary	17655.92	25-YEAR	555	904.01	909.6	906.22	909.77	0.000611	3.31	167.79	285.24
Tributary	17655.92	50-YEAR	634	904.01	910.79	906.41	910.94	0.00042	3.12	203.47	376.57
Tributary	17655.92	100-YEAR	738	904.01	911.78	906.67	911.93	0.000362	3.17	233.03	632.59
Tributary	17611.55		Culvert								
Tributary	17567.17	2-YEAR	251	903.64	906.8	904.8	906.84	0.00036	1.55	161.54	166.11
Tributary	17567.17	5-YEAR	377	903.64	907.63	905.12	907.68	0.000333	1.79	210.98	294.4
Tributary	17567.17	10-YEAR	453	903.64	908.11	905.29	908.16	0.000314	1.89	239.82	364.28
Tributary	17567.17	25-YEAR	555	903.64	908.86	905.48	908.92	0.000266	1.95	284.8	524.32
Tributary	17567.17	50-YEAR	634	903.64	909.75	905.62	909.8	0.000196	1.87	338.14	571.2
Tributary	17567.17	100-YEAR	738	903.64	910.31	905.78	910.32	0.00004	0.78	1702.7	617.98
Tributary	17303.28	2-YEAR	251	902.95	906.68		906.72	0.000641	1.6	158.71	93.93
Tributary	17303.28	5-YEAR	377	902.95	907.53		907.57	0.000468	1.55	253.62	130.44
Tributary	17303.28	10-YEAR	453	902.95	908.03		908.06	0.000377	1.49	324.12	153.85
Tributary	17303.28	25-YEAR	555	902.95	908.81		908.83	0.000253	1.32	466.31	222.56
Tributary	17303.28	50-YEAR	634	902.95	909.73		909.74	0.00012	1.06	748.38	404.22
Tributary	17303.28	100-YEAR	738	902.95	910.29		910.3	0.00009	1.02	1008.74	506.84
Tributary	17032.19	2-YEAR	251	902.88	906.38	904.32	906.5	0.000814	2.77	90.55	77.14
Tributary	17032.19	5-YEAR	377	902.88	907.17	904.76	907.35	0.000925	3.39	111.23	141.73
Tributary	17032.19	10-YEAR	453	902.88	907.65	905.01	907.86	0.000941	3.67	123.56	193.41
Tributary	17032.19	25-YEAR	555	902.88	908.42	905.31	908.66	0.000853	3.86	143.75	366.27
Tributary	17032.19	50-YEAR	634	902.88	909.4	905.54	909.62	0.000647	3.75	169.13	541.52
Tributary	17032.19	100-YEAR	738	902.88	910.17	905.83	910.24	0.000281	2.47	708.94	955.3
Tributary	16974.83		Culvert								
Tributary	16917.47	2-YEAR	251	902.69	905.87	903.62	905.91	0.000296	1.58	158.99	121.35
Tributary	16917.47	5-YEAR	377	902.69	906.25	903.9	906.32	0.000456	2.12	178.18	128.49
Tributary	16917.47	10-YEAR	453	902.69	906.46	904.05	906.55	0.000548	2.41	188.33	134.69
Tributary	16917.47	25-YEAR	555	902.69	907.22	904.26	907.24	0.000143	1.18	497.14	192.9
Tributary	16917.47	50-YEAR	634	902.69	908.01	904.4	908.02	0.000091	1.07	665.95	266.19
Tributary	16917.47	100-YEAR	738	902.69	908.82	904.58	908.83	0.000065	1.01	929.17	376.57
Tributary	16670.08	2-YEAR	251	901.1	905.87	901.76	905.88	0.000021	0.51	527.6	262.54
Tributary	16670.08	5-YEAR	377	901.1	906.26	901.97	906.27	0.000035	0.69	596.11	298.28
Tributary	16670.08	10-YEAR	453	901.1	906.47	902.08	906.48	0.000044	0.79	636.28	317.47
Tributary	16670.08	25-YEAR	555	901.1	907.21	902.22	907.22	0.000039	0.82	803.24	408.31
Tributary	16670.08	50-YEAR	634	901.1	908	902.33	908.01	0.000024	0.7	1448.8	593.09
Tributary	16670.08	100-YEAR	738	901.1	908.81	902.45	908.82	0.000018	0.66	1970.68	733.34
Tributary	16487.01	2-YEAR	482.18	900.93	905.84	902.26	905.86	0.000166	1.36	378.62	233.77
Tributary	16487.01	5-YEAR	708.58	900.93	906.2	902.64	906.25	0.000261	1.81	438.46	290.73
Tributary	16487.01	10-YEAR	839.03	900.93	906.39	902.83	906.45	0.000312	2.03	473.86	338.45
Tributary	16487.01	25-YEAR	1028.75	900.93	907.14	903.09	907.2	0.000258	2.05	652.31	454.71
Tributary	16487.01	50-YEAR	1164.71	900.93	907.97	903.27	907.99	0.000129	1.59	1329.1	596.73
Tributary	16487.01	100-YEAR	1345.37	900.93	908.79	903.5	908.81	0.000087	1.43	1856.62	687.63

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	16375.16	2-YEAR	482.18	900.91	905.83		905.84	0.000182	1.25	635.2	282.7
Tributary	16375.16	5-YEAR	708.58	900.91	906.19		906.21	0.000256	1.59	740.69	300.33
Tributary	16375.16	10-YEAR	839.03	900.91	906.38		906.41	0.000291	1.76	799.47	310.44
Tributary	16375.16	25-YEAR	1028.75	900.91	907.14		907.16	0.000213	1.7	1054.28	364.41
Tributary	16375.16	50-YEAR	1164.71	900.91	907.95		907.98	0.000159	1.64	1434.97	526.33
Tributary	16375.16	100-YEAR	1345.37	900.91	908.78		908.8	0.000112	1.51	1931.24	672.02
Tributary	16013.58	2-YEAR	482.18	899.89	905.77		905.78	0.000135	1.19	670.55	286.02
Tributary	16013.58	5-YEAR	708.58	899.89	906.1		906.13	0.000206	1.55	769.43	305.3
Tributary	16013.58	10-YEAR	839.03	899.89	906.28		906.31	0.000243	1.73	824.96	315.61
Tributary	16013.58	25-YEAR	1028.75	899.89	907.06		907.09	0.000191	1.72	1097.88	416.64
Tributary	16013.58	50-YEAR	1164.71	899.89	907.9		907.93	0.000125	1.54	1584.46	825.66
Tributary	16013.58	100-YEAR	1345.37	899.89	908.75		908.76	0.000083	1.37	2424.86	1150.27
Tributary	15563.42	2-YEAR	482.18	898.87	905.71	902.95	905.72	0.000135	1.22	895.72	657.98
Tributary	15563.42	5-YEAR	708.58	898.87	906.02	903.59	906.04	0.000192	1.53	1069.34	724.16
Tributary	15563.42	10-YEAR	839.03	898.87	906.19	903.9	906.21	0.000215	1.66	1167.03	742.23
Tributary	15563.42	25-YEAR	1028.75	898.87	907	904.35	907.01	0.000128	1.43	1701.96	884.02
Tributary	15563.42	50-YEAR	1164.71	898.87	907.87	904.59	907.88	0.00007	1.17	2380.73	1159.32
Tributary	15563.42	100-YEAR	1345.37	898.87	908.73	904.81	908.73	0.000044	1.01	3104.95	1218.61
Tributary	15317.12	2-YEAR	579.59	898.93	905.69	903.11	905.7	0.000078	0.93	1670.81	1178.83
Tributary	15317.12	5-YEAR	837.09	898.93	905.99	903.73	906	0.000102	1.12	2044.54	1278.29
Tributary	15317.12	10-YEAR	982.23	898.93	906.16	904.02	906.17	0.000108	1.17	2260.82	1319.81
Tributary	15317.12	25-YEAR	1181.24	898.93	906.99	904.38	906.99	0.000053	0.92	3447.1	1545.17
Tributary	15317.12	50-YEAR	1323.92	898.93	907.87	904.61	907.87	0.000025	0.7	4879.44	1703.69
Tributary	15317.12	100-YEAR	1445.53	898.93	908.73	904.85	908.73	0.000013	0.56	6373.47	1772.28
Tributary	15246.62		Culvert								
Tributary	15146.83	2-YEAR	579.59	897.96	903.15	901.95	903.36	0.002139	3.94	189.18	590.81
Tributary	15146.83	5-YEAR	837.09	897.96	904.85	902.58	904.86	0.000157	1.42	1319.94	1087.16
Tributary	15146.83	10-YEAR	982.23	897.96	905.85	902.8	905.86	0.00004	0.82	3217.1	1467.74
Tributary	15146.83	25-YEAR	1181.24	897.96	906.98	903.05	906.98	0.000017	0.61	4916.88	1564.6
Tributary	15146.83	50-YEAR	1323.92	897.96	907.86	903.22	907.86	0.000011	0.52	6333.45	1671.99
Tributary	15146.83	100-YEAR	1445.53	897.96	908.72	903.35	908.72	0.000007	0.45	7815.93	1750.95
Tributary	15031.62	2-YEAR	579.59	898.18	902.99	901.49	903.09	0.001706	2.76	279.39	282
Tributary	15031.62	5-YEAR	837.09	898.18	904.81	902.19	904.84	0.000297	1.47	854.26	710.54
Tributary	15031.62	10-YEAR	982.23	898.18	905.83	902.4	905.85	0.000126	1.16	1479.73	1182.13
Tributary	15031.62	25-YEAR	1181.24	898.18	906.97	902.63	906.98	0.000051	0.88	2437.47	1622.4
Tributary	15031.62	50-YEAR	1323.92	898.18	907.85	902.8	907.85	0.00003	0.75	3181.34	1722.14
Tributary	15031.62	100-YEAR	1445.53	898.18	908.72	902.91	908.72	0.000019	0.65	3915.7	1725.94
Tributary	14701.37	2-YEAR	579.59	896.79	902.96	899.64	902.97	0.000104	1.17	867.69	360.18
Tributary	14701.37	5-YEAR	837.09	896.79	904.79	899.8	904.8	0.000042	0.94	1709.59	889.67
Tributary	14701.37	10-YEAR	982.23	896.79	905.82	899.8	905.83	0.000027	0.83	2282.52	1008.91
Tributary	14701.37	25-YEAR	1181.24	896.79	906.96	900.57	906.97	0.000019	0.77	2922.84	1158.22
Tributary	14701.37	50-YEAR	1323.92	896.79	907.84	900.7	907.85	0.000015	0.73	3417.08	1223.76
Tributary	14701.37	100-YEAR	1445.53	896.79	908.71	900.8	908.71	0.000012	0.69	3904.76	1359.39
Tributary	14360.15	2-YEAR	579.59	896.68	902.94	899.36	902.95	0.000041	0.71	1187.9	815.96
Tributary	14360.15	5-YEAR	837.09	896.68	904.79	899.7	904.79	0.000019	0.62	1968.37	1222.55
Tributary	14360.15	10-YEAR	982.23	896.68	905.82	899.84	905.82	0.000014	0.6	2404.29	1652.63
Tributary	14360.15	25-YEAR	1181.24	896.68	906.96	900	906.96	0.000012	0.6	2887.53	1848.56
Tributary	14360.15	50-YEAR	1323.92	896.68	907.84	900.13	907.84	0.00001	0.59	3260.48	1915.04
Tributary	14360.15	100-YEAR	1445.53	896.68	908.71	900.21	908.71	0.000009	0.58	3628.46	1985.21
Tributary	14037.12	2-YEAR	797.94	895.64	902.86	899.27	902.91	0.000202	1.75	469.67	1041.45
Tributary	14037.12	5-YEAR	1133.12	895.64	904.71	899.61	904.76	0.000141	1.8	647.29	1304.53
Tributary	14037.12	10-YEAR	1333.24	895.64	905.74	899.81	905.79	0.000122	1.84	746.14	1586.74
Tributary	14037.12	25-YEAR	1568.59	895.64	906.88	900.03	906.94	0.000107	1.89	855.56	1746.04
Tributary	14037.12	50-YEAR	1757.14	895.64	907.76	900.18	907.82	0.000098	1.92	939.96	1826.26
Tributary	14037.12	100-YEAR	1950.08	895.64	908.63	900.33	908.69	0.000091	1.96	1023.2	1884.34
Tributary	13925.12		Bridge								

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	13809.03	2-YEAR	797.94	894.62	899.45	898.07	899.6	0.001412	3.46	320.59	615.39
Tributary	13809.03	5-YEAR	1133.12	894.62	900.17	898.6	900.33	0.001231	3.69	435.95	641.82
Tributary	13809.03	10-YEAR	1333.24	894.62	900.65	898.84	900.81	0.001062	3.7	513.67	684.53
Tributary	13809.03	25-YEAR	1568.59	894.62	901.37	899.06	901.52	0.000805	3.56	628.91	888.99
Tributary	13809.03	50-YEAR	1757.14	894.62	901.89	899.23	902.03	0.000692	3.52	711.9	999.49
Tributary	13809.03	100-YEAR	1950.08	894.62	902.98	899.38	903.09	0.000432	3.13	886.67	1088.53
Tributary	13732	2-YEAR	797.94	894.32	899.4		899.49	0.000775	2.82	582.45	486.19
Tributary	13732	5-YEAR	1133.12	894.32	900.17		900.22	0.000521	2.53	987.15	610.56
Tributary	13732	10-YEAR	1333.24	894.32	900.67		900.71	0.000375	2.26	1303.43	629.49
Tributary	13732	25-YEAR	1568.59	894.32	901.41		901.43	0.000221	1.87	1769.54	645.48
Tributary	13732	50-YEAR	1757.14	894.32	901.93		901.95	0.000165	1.72	2139.78	743.28
Tributary	13732	100-YEAR	1950.08	894.32	903.02		903.03	0.000081	1.35	2982.62	802.65
Tributary	13249.13	2-YEAR	797.94	893.71	899.03		899.08	0.001088	3.16	630.11	422.98
Tributary	13249.13	5-YEAR	1133.12	893.71	899.96		899.99	0.000555	2.63	1070.53	522.24
Tributary	13249.13	10-YEAR	1333.24	893.71	900.52		900.55	0.000386	2.38	1387.21	585.06
Tributary	13249.13	25-YEAR	1568.59	893.71	901.32		901.33	0.000242	2.07	1898.82	691.66
Tributary	13249.13	50-YEAR	1757.14	893.71	901.86		901.88	0.000189	1.94	2295.7	763.2
Tributary	13249.13	100-YEAR	1950.08	893.71	902.99		903	0.000096	1.54	3248.73	917.32
Tributary	12521.19	2-YEAR	797.94	893.46	898.46		898.51	0.000771	2.04	641.43	471.1
Tributary	12521.19	5-YEAR	1133.12	893.46	899.77		899.79	0.000205	1.42	1423.27	673.93
Tributary	12521.19	10-YEAR	1333.24	893.46	900.4		900.41	0.000143	1.32	1881.48	772.85
Tributary	12521.19	25-YEAR	1568.59	893.46	901.24		901.25	0.00009	1.18	2574.56	896.92
Tributary	12521.19	50-YEAR	1757.14	893.46	901.8		901.81	0.000069	1.11	3097.16	951.93
Tributary	12521.19	100-YEAR	1950.08	893.46	902.96		902.96	0.000036	0.91	4321.13	1147.27
Tributary	12252.66	2-YEAR	797.94	893.46	898.44	895.81	898.45	0.000079	1.01	1644.89	543.36
Tributary	12252.66	5-YEAR	1133.12	893.46	899.76	895.96	899.77	0.000048	0.93	2804.82	858.32
Tributary	12252.66	10-YEAR	1333.24	893.46	900.39	896.05	900.39	0.000043	0.94	3372.87	952.33
Tributary	12252.66	25-YEAR	1568.59	893.46	901.23	896.14	901.24	0.000032	0.88	4213.38	1038.99
Tributary	12252.66	50-YEAR	1757.14	893.46	901.8	896.19	901.8	0.000028	0.86	4816.75	1097.72
Tributary	12252.66	100-YEAR	1950.08	893.46	902.95	896.27	902.96	0.000018	0.75	6156.29	1237.96
Tributary	12157.3	2-YEAR	897.08	892.17	898.42	893.94	898.44	0.000147	1.6	887.89	564.99
Tributary	12157.3	5-YEAR	1256.02	892.17	899.73	894.21	899.75	0.000142	1.81	1097.73	611.18
Tributary	12157.3	10-YEAR	1446.74	892.17	900.35	894.32	900.38	0.000141	1.91	1197.53	633.85
Tributary	12157.3	25-YEAR	1721.5	892.17	901.19	894.51	901.22	0.000141	2.05	1331.82	677.72
Tributary	12157.3	50-YEAR	1913.91	892.17	901.76	894.62	901.79	0.00014	2.13	1421.87	707.43
Tributary	12157.3	100-YEAR	2132.75	892.17	902.91	894.75	902.94	0.000116	2.1	1606.98	750.44
Tributary	12050.3		Culvert								
Tributary	11942.51	2-YEAR	897.08	891.81	898.04	893.96	898.07	0.00014	1.55	650.81	204.94
Tributary	11942.51	5-YEAR	1256.02	891.81	899.21	894.33	899.25	0.000138	1.75	818.09	217.8
Tributary	11942.51	10-YEAR	1446.74	891.81	899.76	894.5	899.81	0.000139	1.85	898.54	223.83
Tributary	11942.51	25-YEAR	1721.5	891.81	900.49	894.74	900.55	0.000139	1.98	1007.93	232.05
Tributary	11942.51	50-YEAR	1913.91	891.81	900.98	894.9	901.04	0.000139	2.06	1082.5	237.68
Tributary	11942.51	100-YEAR	2132.75	891.81	902.16	895.07	902.22	0.000108	1.98	1266.33	251.63
Tributary	11907.87	2-YEAR	897.08	891.62	898.05		898.06	0.000045	0.92	1821.67	545.97
Tributary	11907.87	5-YEAR	1256.02	891.62	899.23		899.23	0.000038	0.95	2505.23	623
Tributary	11907.87	10-YEAR	1446.74	891.62	899.78		899.78	0.000036	0.97	2858.66	658.96
Tributary	11907.87	25-YEAR	1721.5	891.62	900.51		900.52	0.000034	1	3368.28	736.04
Tributary	11907.87	50-YEAR	1913.91	891.62	901		901.01	0.000032	1.02	3745.24	796.12
Tributary	11907.87	100-YEAR	2132.75	891.62	902.19		902.19	0.000022	0.92	4771.65	940.24
Tributary	11840.85	2-YEAR	897.08	890.93	898.05		898.05	0.000052	0.91	1876.1	586.84
Tributary	11840.85	5-YEAR	1256.02	890.93	899.22		899.23	0.000042	0.94	2611.35	669.32
Tributary	11840.85	10-YEAR	1446.74	890.93	899.78		899.78	0.000038	0.95	2992.94	714.31
Tributary	11840.85	25-YEAR	1721.5	890.93	900.51		900.52	0.000035	0.97	3542.94	784.08
Tributary	11840.85	50-YEAR	1913.91	890.93	901		901.01	0.000033	0.98	3941.11	833.65
Tributary	11840.85	100-YEAR	2132.75	890.93	902.19		902.19	0.000023	0.89	4998.26	962.44

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	11787.88	2-YEAR	897.08	891.49	897.98	894.63	898.03	0.000327	2.31	587.12	584.65
Tributary	11787.88	5-YEAR	1256.02	891.49	899.15	895.08	899.21	0.000308	2.56	737.21	687.68
Tributary	11787.88	10-YEAR	1446.74	891.49	899.69	895.26	899.76	0.000304	2.69	807.41	742.85
Tributary	11787.88	25-YEAR	1721.5	891.49	900.42	895.49	900.49	0.000302	2.86	900.94	797.73
Tributary	11787.88	50-YEAR	1913.91	891.49	900.9	895.64	900.98	0.000299	2.96	963.52	825.19
Tributary	11787.88	100-YEAR	2132.75	891.49	902.09	895.8	902.17	0.000229	2.84	1117.14	899.67
Tributary	11739.88		Bridge								
Tributary	11697.27	2-YEAR	897.08	890.05	896.6	895.58	896.83	0.002113	5.16	315.15	221.47
Tributary	11697.27	5-YEAR	1256.02	890.05	896.96	895.97	897.3	0.002852	6.31	357.71	225.07
Tributary	11697.27	10-YEAR	1446.74	890.05	897.15	896.14	897.53	0.003171	6.82	379.45	226.9
Tributary	11697.27	25-YEAR	1721.5	890.05	897.35	896.4	897.82	0.003743	7.59	403.04	228.89
Tributary	11697.27	50-YEAR	1913.91	890.05	897.46	896.56	898	0.004207	8.16	415.89	229.98
Tributary	11697.27	100-YEAR	2132.75	890.05	897.56	896.73	898.2	0.004773	8.8	428.39	231.03
Tributary	11657.98	2-YEAR	897.08	890.05	896.64		896.7	0.000695	2.98	640.48	306.43
Tributary	11657.98	5-YEAR	1256.02	890.05	897.03		897.11	0.000867	3.51	770.43	373.29
Tributary	11657.98	10-YEAR	1446.74	890.05	897.23		897.32	0.000961	3.79	851.71	426.15
Tributary	11657.98	25-YEAR	1721.5	890.05	897.46		897.57	0.001036	4.06	951.4	428.59
Tributary	11657.98	50-YEAR	1913.91	890.05	897.6		897.71	0.001102	4.25	1009.26	430
Tributary	11657.98	100-YEAR	2132.75	890.05	897.73		897.86	0.001179	4.47	1068.62	431.44
Tributary	11009.06	2-YEAR	897.08	890.39	895.32	895.32	895.8	0.006181	6.32	261.19	305.81
Tributary	11009.06	5-YEAR	1256.02	890.39	895.74	895.61	896.16	0.005211	6.39	399.03	353.46
Tributary	11009.06	10-YEAR	1446.74	890.39	895.93	895.74	896.33	0.00493	6.47	468.66	380.98
Tributary	11009.06	25-YEAR	1721.5	890.39	896.17	895.87	896.57	0.004655	6.59	565.68	417.82
Tributary	11009.06	50-YEAR	1913.91	890.39	896.33	896.01	896.7	0.004375	6.58	645.42	463.89
Tributary	11009.06	100-YEAR	2132.75	890.39	896.54	896.23	896.87	0.003848	6.41	744.68	478.1
Tributary	10690.17	2-YEAR	897.08	888.46	895.06		895.17	0.000753	3.25	590.32	424.47
Tributary	10690.17	5-YEAR	1256.02	888.46	895.42		895.56	0.000906	3.74	747.27	443.41
Tributary	10690.17	10-YEAR	1446.74	888.46	895.57		895.72	0.000987	3.98	816.92	451.55
Tributary	10690.17	25-YEAR	1721.5	888.46	895.78		895.94	0.001093	4.3	909.21	462.13
Tributary	10690.17	50-YEAR	1913.91	888.46	895.91		896.08	0.001161	4.49	970.16	468.98
Tributary	10690.17	100-YEAR	2132.75	888.46	896.13		896.3	0.001144	4.58	1074.22	489.94
Tributary	9932.969	2-YEAR	897.08	887.45	894.71		894.77	0.000499	2.61	839.54	654.66
Tributary	9932.969	5-YEAR	1256.02	887.45	895.01		895.09	0.000603	3	1049.6	697.05
Tributary	9932.969	10-YEAR	1446.74	887.45	895.14		895.22	0.000667	3.2	1134.99	706.17
Tributary	9932.969	25-YEAR	1721.5	887.45	895.29		895.38	0.000755	3.48	1246.13	717.52
Tributary	9932.969	50-YEAR	1913.91	887.45	895.39		895.49	0.00081	3.65	1320.27	724.99
Tributary	9932.969	100-YEAR	2132.75	887.45	895.68		895.77	0.000694	3.49	1531.01	745.83
Tributary	9888.318	2-YEAR	897.08	887.21	894.71	891.56	894.74	0.000223	1.87	1118.14	728.17
Tributary	9888.318	5-YEAR	1256.02	887.21	895.01	892.11	895.06	0.000292	2.23	1345.56	763.54
Tributary	9888.318	10-YEAR	1446.74	887.21	895.13	892.37	895.18	0.000333	2.41	1438.24	779.77
Tributary	9888.318	25-YEAR	1721.5	887.21	895.29	892.75	895.35	0.000391	2.66	1559.7	799.33
Tributary	9888.318	50-YEAR	1913.91	887.21	895.39	893	895.46	0.000429	2.82	1641.3	813.33
Tributary	9888.318	100-YEAR	2132.75	887.21	895.67	893.26	895.74	0.000388	2.77	1878.81	863.82
Tributary	9850.318		Bridge								
Tributary	9813.512	2-YEAR	897.08	886.87	893.27	892.64	893.62	0.003415	5.41	308.18	289.5
Tributary	9813.512	5-YEAR	1256.02	886.87	893.95	893.15	894.2	0.002321	5.03	623.11	658.72
Tributary	9813.512	10-YEAR	1446.74	886.87	894.21	893.27	894.4	0.001938	4.79	804.45	754.3
Tributary	9813.512	25-YEAR	1721.5	886.87	894.65	893.91	894.77	0.001312	4.19	1163.84	871.34
Tributary	9813.512	50-YEAR	1913.91	886.87	894.95	894.02	895.04	0.000968	3.75	1433.53	908.32
Tributary	9813.512	100-YEAR	2132.75	886.87	895.65	894.12	895.69	0.000445	2.77	2100.07	997.66
Tributary	9728.044	2-YEAR	886.94	886.66	893.16		893.35	0.001817	4	409.92	428.68
Tributary	9728.044	5-YEAR	1262.72	886.66	893.89		894.01	0.001144	3.62	853.64	717.48
Tributary	9728.044	10-YEAR	1405.34	886.66	894.17		894.26	0.000883	3.32	1054.44	750.71
Tributary	9728.044	25-YEAR	1585.7	886.66	894.62		894.68	0.000555	2.81	1402.39	786.48
Tributary	9728.044	50-YEAR	1724.69	886.66	894.93		894.97	0.000432	2.58	1647.12	810.69
Tributary	9728.044	100-YEAR	1904.73	886.66	895.63		895.66	0.00023	2.05	2238.68	858.92

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	9192.625	2-YEAR	886.94	886.15	892.78		892.83	0.000547	2.01	638.88	387.7
Tributary	9192.625	5-YEAR	1262.72	886.15	893.63		893.68	0.000368	1.96	995.59	447.47
Tributary	9192.625	10-YEAR	1405.34	886.15	893.94		893.98	0.00033	1.96	1136.69	480.21
Tributary	9192.625	25-YEAR	1585.7	886.15	894.45		894.48	0.000252	1.85	1387.9	506.43
Tributary	9192.625	50-YEAR	1724.69	886.15	894.78		894.81	0.000222	1.82	1559.06	530.5
Tributary	9192.625	100-YEAR	1904.73	886.15	895.54		895.56	0.000151	1.65	1987.78	647.77
Tributary	8600.113	2-YEAR	1092.58	885.58	891.96	889.43	892.26	0.001691	4.4	248.17	449.37
Tributary	8600.113	5-YEAR	1819.52	885.58	893.25	890.63	893.37	0.000746	3.44	1143.29	658.41
Tributary	8600.113	10-YEAR	2348.9	885.58	893.49	891.35	893.64	0.000933	3.97	1302.85	679.12
Tributary	8600.113	25-YEAR	3230.66	885.58	893.99	892.76	894.15	0.001017	4.39	1653.35	722.53
Tributary	8600.113	50-YEAR	3807.7	885.58	894.33	892.96	894.49	0.001006	4.53	1905.05	753.26
Tributary	8600.113	100-YEAR	4497.75	885.58	895.24	893.18	895.35	0.000629	3.91	2632.33	835.82
Tributary	8197.604	2-YEAR	1092.58	885.58	891.41	888.74	891.64	0.001328	3.88	281.24	234.77
Tributary	8197.604	5-YEAR	1819.52	885.58	892.54	889.81	892.91	0.001718	4.9	419.67	527.04
Tributary	8197.604	10-YEAR	2348.9	885.58	892.95	890.48	893.19	0.001279	4.45	984.55	582.87
Tributary	8197.604	25-YEAR	3230.66	885.58	893.32	891.43	893.62	0.001626	5.25	1205.82	623.5
Tributary	8197.604	50-YEAR	3807.7	885.58	893.68	892.32	893.98	0.001571	5.38	1435.82	663.11
Tributary	8197.604	100-YEAR	4497.75	885.58	894.92	892.88	895.07	0.000733	4.18	2351.58	809.46
Tributary	7745.407	2-YEAR	1221.89	885.56	888.73	888.73	890.05	0.013692	9.22	132.5	258.88
Tributary	7745.407	5-YEAR	2016.07	885.56	890.22	890.22	891.32	0.007919	8.73	296.51	408.59
Tributary	7745.407	10-YEAR	2669.95	885.56	891.1	891.1	892	0.005457	8.3	496.55	597.8
Tributary	7745.407	25-YEAR	3708.15	885.56	892.38		892.75	0.002176	6.21	1311.92	673.2
Tributary	7745.407	50-YEAR	4290.32	885.56	892.99		893.25	0.001537	5.58	1728.77	706.98
Tributary	7745.407	100-YEAR	4923.36	885.56	894.69		894.78	0.000495	3.71	3022.2	818.37
Tributary	7120.867	2-YEAR	1221.89	879.57	888.1		888.24	0.000728	3.22	529.76	209.05
Tributary	7120.867	5-YEAR	2016.07	879.57	889.8		889.93	0.000522	3.33	1002.27	484.98
Tributary	7120.867	10-YEAR	2669.95	879.57	890.79		890.91	0.000443	3.37	1517.1	556.37
Tributary	7120.867	25-YEAR	3708.15	879.57	892.14		892.24	0.000343	3.31	2322.1	635.82
Tributary	7120.867	50-YEAR	4290.32	879.57	892.74		892.83	0.000318	3.33	2713.52	668.44
Tributary	7120.867	100-YEAR	4923.36	879.57	894.56		894.61	0.000159	2.65	4026.52	762.84
Tributary	6661.149	2-YEAR	1221.89	879.56	887.43		887.73	0.001747	4.38	278.92	69.31
Tributary	6661.149	5-YEAR	2016.07	879.56	889.2		889.52	0.001574	4.65	532.94	355
Tributary	6661.149	10-YEAR	2669.95	879.56	890.39		890.62	0.00094	4.18	1007.71	417.54
Tributary	6661.149	25-YEAR	3708.15	879.56	891.87		892.03	0.000602	3.87	1657	465.69
Tributary	6661.149	50-YEAR	4290.32	879.56	892.49		892.65	0.000541	3.88	1952.72	484.65
Tributary	6661.149	100-YEAR	4923.36	879.56	894.44		894.53	0.000256	3.08	2974.82	572.39
Tributary	6465.54	2-YEAR	1221.89	879.57	887.18		887.41	0.001351	3.84	317.95	78.85
Tributary	6465.54	5-YEAR	2016.07	879.57	888.99		889.24	0.001121	4.13	571.87	272.33
Tributary	6465.54	10-YEAR	2669.95	879.57	890.25		890.45	0.000738	3.85	1043.77	420.74
Tributary	6465.54	25-YEAR	3708.15	879.57	891.77		891.92	0.000492	3.63	1733.06	478.63
Tributary	6465.54	50-YEAR	4290.32	879.57	892.4		892.55	0.000448	3.65	2040.21	495.19
Tributary	6465.54	100-YEAR	4923.36	879.57	894.39		894.48	0.000215	2.91	3093.1	568.26
Tributary	6300.468	2-YEAR	1225.59	879.31	887.05	883.44	887.22	0.000765	3.26	376.31	81.88
Tributary	6300.468	5-YEAR	2014.32	879.31	888.86	884.57	889.08	0.00072	3.77	590.68	234.29
Tributary	6300.468	10-YEAR	2653.72	879.31	890.1	885.28	890.33	0.000619	3.95	823.79	361.74
Tributary	6300.468	25-YEAR	3599.5	879.31	891.58	886.19	891.81	0.000535	4.14	1156.68	469.87
Tributary	6300.468	50-YEAR	4086.83	879.31	892.19	886.62	892.44	0.000519	4.27	1296.17	476.65
Tributary	6300.468	100-YEAR	4811.08	879.31	894.22	887.19	894.4	0.00032	3.81	1754.53	502.65
Tributary	6205.468		Bridge								
Tributary	6121.399	2-YEAR	1225.59	879.38	886.76	884.09	886.92	0.000774	3.58	513.47	278.85
Tributary	6121.399	5-YEAR	2014.32	879.38	888.57	885.33	888.72	0.000565	3.71	868.95	324
Tributary	6121.399	10-YEAR	2653.72	879.38	889.77	885.87	889.92	0.000489	3.82	1113.56	356.56
Tributary	6121.399	25-YEAR	3599.5	879.38	891.12	886.37	891.29	0.000469	4.14	1389.45	387.27
Tributary	6121.399	50-YEAR	4086.83	879.38	891.66	886.94	891.85	0.00048	4.34	1500.03	400.23
Tributary	6121.399	100-YEAR	4811.08	879.38	893.74	887.34	893.89	0.00031	3.94	1924.07	443.07

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	6022.257	2-YEAR	1225.59	878.53	886.72	882.84	886.83	0.000544	2.76	443.67	91.81
Tributary	6022.257	5-YEAR	2014.32	878.53	888.5	884.1	888.66	0.000555	3.29	613.16	103.82
Tributary	6022.257	10-YEAR	2653.72	878.53	889.66	884.67	889.86	0.000554	3.59	808.35	262.16
Tributary	6022.257	25-YEAR	3599.5	878.53	891.01	885.4	891.23	0.000521	3.86	1175.1	338.2
Tributary	6022.257	50-YEAR	4086.83	878.53	891.56	885.77	891.79	0.000514	4	1349.02	373.09
Tributary	6022.257	100-YEAR	4811.08	878.53	893.72	886.26	893.86	0.000254	3.26	2407.4	544.88
Tributary	5679.313	2-YEAR	1225.59	878.09	886.49	883.06	886.62	0.000712	2.89	424.52	101.49
Tributary	5679.313	5-YEAR	2014.32	878.09	888.29	884.07	888.45	0.000689	3.2	629.18	126.11
Tributary	5679.313	10-YEAR	2653.72	878.09	889.47	884.7	889.64	0.00067	3.37	787.57	143.42
Tributary	5679.313	25-YEAR	3599.5	878.09	890.82	885.49	891.03	0.000658	3.61	1019.89	217.64
Tributary	5679.313	50-YEAR	4086.83	878.09	891.37	885.87	891.59	0.000651	3.73	1148.26	254.67
Tributary	5679.313	100-YEAR	4811.08	878.09	893.62	886.42	893.76	0.000297	3.07	1965.3	474.11
Tributary	5490.167	2-YEAR	1228.33	878.12	885.85	883.42	886.29	0.002602	5.33	230.47	56.61
Tributary	5490.167	5-YEAR	2018.15	878.12	887.58	884.95	888.12	0.002244	5.93	357.85	169.27
Tributary	5490.167	10-YEAR	2658.36	878.12	888.73	885.87	889.32	0.001929	6.27	466.61	207.72
Tributary	5490.167	25-YEAR	3590.72	878.12	889.98	886.93	890.68	0.00185	6.91	588.08	237.61
Tributary	5490.167	50-YEAR	4060.2	878.12	890.45	887.48	891.23	0.001911	7.3	634.09	248.82
Tributary	5490.167	100-YEAR	4813	878.12	892.97	888.12	893.54	0.00101	6.34	895.1	385.38
Tributary	5445.167		Bridge								
Tributary	5385.84	2-YEAR	1228.33	877.54	884.85	883.07	885.32	0.003127	5.51	222.75	60.56
Tributary	5385.84	5-YEAR	2018.15	877.54	886.49	884.34	887.07	0.002796	6.09	331.14	71.15
Tributary	5385.84	10-YEAR	2658.36	877.54	887.58	885.11	888.23	0.00265	6.45	412.26	78.13
Tributary	5385.84	25-YEAR	3590.72	877.54	888.75	886.08	889.52	0.00273	7.07	507.79	85.65
Tributary	5385.84	50-YEAR	4060.2	877.54	889.16	886.49	890.02	0.002895	7.47	548.19	195.02
Tributary	5385.84	100-YEAR	4813	877.54	889.6	887.13	890.65	0.003298	8.23	600.36	226.39
Tributary	5340.014	2-YEAR	1228.33	877.21	884.88	881.79	885.11	0.001341	3.83	320.41	80.41
Tributary	5340.014	5-YEAR	2018.15	877.21	886.55	883.15	886.85	0.001266	4.34	465.31	92.8
Tributary	5340.014	10-YEAR	2658.36	877.21	887.66	883.94	887.99	0.001236	4.65	572.13	100.96
Tributary	5340.014	25-YEAR	3590.72	877.21	888.85	884.86	889.26	0.001302	5.14	712.14	195.58
Tributary	5340.014	50-YEAR	4060.2	877.21	889.28	885.23	889.73	0.001332	5.4	807.32	236.72
Tributary	5340.014	100-YEAR	4813	877.21	889.76	885.8	890.29	0.001445	5.89	939.48	308.78
Tributary	5071.343	2-YEAR	1228.33	876.95	884.58		884.73	0.001308	3.16	389.16	128.17
Tributary	5071.343	5-YEAR	2018.15	876.95	886.38		886.53	0.000816	3.16	637.94	147.13
Tributary	5071.343	10-YEAR	2658.36	876.95	887.53		887.69	0.000723	3.27	814.12	165.2
Tributary	5071.343	25-YEAR	3590.72	876.95	888.78		888.95	0.000624	3.39	1197.15	386.63
Tributary	5071.343	50-YEAR	4060.2	876.95	889.24		889.42	0.000596	3.49	1381.11	411.89
Tributary	5071.343	100-YEAR	4813	876.95	889.75		889.95	0.000617	3.74	1597.08	439.33
Tributary	4700.785	2-YEAR	1228.33	876.26	883.75		884.12	0.001966	4.88	251.66	54.77
Tributary	4700.785	5-YEAR	2018.15	876.26	885.58		886.05	0.002087	5.48	368.51	71.73
Tributary	4700.785	10-YEAR	2658.36	876.26	886.69		887.23	0.002113	5.86	453.42	80.89
Tributary	4700.785	25-YEAR	3590.72	876.26	887.98		888.54	0.0019	6.12	734.28	340.54
Tributary	4700.785	50-YEAR	4060.2	876.26	888.51		889.04	0.001707	6.11	922.05	377.38
Tributary	4700.785	100-YEAR	4813	876.26	888.99		889.56	0.001752	6.47	1111.05	414.5
Tributary	4278.65	2-YEAR	1228.33	875.42	882.77	879.82	883.19	0.002449	5.22	235.17	63.97
Tributary	4278.65	5-YEAR	2018.15	875.42	884.58	881.51	885.09	0.002442	5.75	350.8	95.17
Tributary	4278.65	10-YEAR	2658.36	875.42	885.67	882.64	886.25	0.002509	6.11	435.03	118.76
Tributary	4278.65	25-YEAR	3590.72	875.42	886.96	883.78	887.61	0.002537	6.46	556.94	206.2
Tributary	4278.65	50-YEAR	4060.2	875.42	887.49	884.26	888.18	0.002394	6.67	620.62	358.77
Tributary	4278.65	100-YEAR	4813	875.42	888.31	884.95	888.82	0.001698	6.1	1157.26	476.98
Tributary	3421.745	2-YEAR	1228.33	873.71	881.11		881.44	0.001687	4.62	265.98	58.93
Tributary	3421.745	5-YEAR	2018.15	873.71	882.99		883.41	0.001566	5.2	390.46	77.81
Tributary	3421.745	10-YEAR	2658.36	873.71	884.13		884.62	0.001458	5.67	492.17	101.02
Tributary	3421.745	25-YEAR	3590.72	873.71	885.39		886	0.001449	6.33	637.84	128.76
Tributary	3421.745	50-YEAR	4060.2	873.71	885.97		886.62	0.001435	6.59	715.2	139.93
Tributary	3421.745	100-YEAR	4813	873.71	886.77		887.49	0.001454	7.03	833.55	164.55

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	2994.294	2-YEAR	1228.33	872.68	880.43	876.99	880.76	0.001482	4.65	264.05	50.83
Tributary	2994.294	5-YEAR	2018.15	872.68	882.21	878.37	882.69	0.001789	5.52	365.85	63.06
Tributary	2994.294	10-YEAR	2658.36	872.68	883.33	879.31	883.9	0.001941	6.03	440.65	70.72
Tributary	2994.294	25-YEAR	3590.72	872.68	884.52	880.67	885.23	0.002205	6.79	529.37	80.52
Tributary	2994.294	50-YEAR	4060.2	872.68	885.07	881.22	885.84	0.002263	7.08	575.68	88.14
Tributary	2994.294	100-YEAR	4813	872.68	885.82	882.03	886.71	0.002277	7.56	646.56	145.28
Tributary	2439.681	2-YEAR	1231.08	872.69	879.06		879.6	0.003049	5.88	209.33	50.44
Tributary	2439.681	5-YEAR	2023.71	872.69	880.61		881.35	0.003268	6.89	293.73	58.59
Tributary	2439.681	10-YEAR	2665.27	872.69	881.59		882.47	0.003377	7.54	354.88	73.21
Tributary	2439.681	25-YEAR	3527.67	872.69	882.63		883.69	0.003454	8.31	452.39	114.66
Tributary	2439.681	50-YEAR	4005.5	872.69	883.19		884.3	0.00337	8.55	522.84	135.09
Tributary	2439.681	100-YEAR	4826.98	872.69	884.11		885.25	0.003009	8.79	671.33	188.78
Tributary	2290.547	2-YEAR	1231.08	872.4	878.83	876.2	879.21	0.001806	4.95	248.53	226.5
Tributary	2290.547	5-YEAR	2023.71	872.4	880.36	877.46	880.91	0.002095	6	361.97	395.12
Tributary	2290.547	10-YEAR	2665.27	872.4	881.37	878.31	882	0.002145	6.54	490.6	512.01
Tributary	2290.547	25-YEAR	3527.67	872.4	882.58	879.42	883.19	0.001798	6.65	720.18	575.09
Tributary	2290.547	50-YEAR	4005.5	872.4	883.22	880.07	883.81	0.001621	6.66	840.72	595.23
Tributary	2290.547	100-YEAR	4826.98	872.4	884.21	881.01	884.78	0.00142	6.73	1028.93	622.16
Tributary	1483.476	2-YEAR	1231.08	868.52	877.38		877.75	0.001803	4.92	256.63	86.99
Tributary	1483.476	5-YEAR	2023.71	868.52	879.32		879.65	0.001173	4.97	589.51	196.13
Tributary	1483.476	10-YEAR	2665.27	868.52	880.61		880.9	0.000904	4.9	860.44	222.48
Tributary	1483.476	25-YEAR	3527.67	868.52	882.05		882.31	0.000716	4.86	1187.88	231.57
Tributary	1483.476	50-YEAR	4005.5	868.52	882.75		883.01	0.000658	4.89	1352.41	236.01
Tributary	1483.476	100-YEAR	4826.98	868.52	883.81		884.07	0.000605	5.01	1606.14	242.7
Tributary	1052.839	2-YEAR	1231.08	868.24	876.69		877.04	0.001482	4.73	260.11	48.91
Tributary	1052.839	5-YEAR	2023.71	868.24	878.53		879.03	0.001707	5.67	357.08	56.75
Tributary	1052.839	10-YEAR	2665.27	868.24	879.73		880.33	0.001822	6.22	428.19	62.01
Tributary	1052.839	25-YEAR	3527.67	868.24	881.05		881.78	0.001971	6.86	514.33	68.26
Tributary	1052.839	50-YEAR	4005.5	868.24	881.69		882.49	0.00204	7.16	559.2	71.33
Tributary	1052.839	100-YEAR	4826.98	868.24	882.65		883.56	0.002044	7.69	629.32	75.9
Tributary	896.5909	2-YEAR	1231.08	868.9	875.81		876.51	0.003951	6.72	183.13	43.22
Tributary	896.5909	5-YEAR	2023.71	868.9	877.54		878.45	0.003926	7.64	264.92	51.13
Tributary	896.5909	10-YEAR	2665.27	868.9	878.7		879.73	0.003857	8.15	327.1	56.41
Tributary	896.5909	25-YEAR	3527.67	868.9	879.94		881.15	0.003906	8.8	401	62.11
Tributary	896.5909	50-YEAR	4005.5	868.9	880.55		881.84	0.003941	9.12	439.32	64.87
Tributary	896.5909	100-YEAR	4826.98	868.9	881.47		882.92	0.003799	9.65	501.13	69.24
Tributary	833.9909	2-YEAR	1231.08	868.58	875.63	873.64	876.24	0.003184	6.25	197.03	43.96
Tributary	833.9909	5-YEAR	2023.71	868.58	877.36	875.11	878.17	0.003333	7.24	279.41	51.44
Tributary	833.9909	10-YEAR	2665.27	868.58	878.51	876.06	879.46	0.003357	7.8	341.7	56.44
Tributary	833.9909	25-YEAR	3527.67	868.58	879.75	877.17	880.87	0.003487	8.5	414.86	61.8
Tributary	833.9909	50-YEAR	4005.5	868.58	880.35	877.72	881.57	0.003455	8.85	452.92	64.82
Tributary	833.9909	100-YEAR	4826.98	868.58	881.28	878.58	882.66	0.003346	9.44	514.94	69.35
Tributary	807.9909		Inl Struct								
Tributary	779.2909	2-YEAR	1240.87	868	873.52	871.42	873.99	0.00248	5.54	224.1	49.83
Tributary	779.2909	5-YEAR	2039.11	868	875.35	872.66	875.98	0.002394	6.35	320.99	55.94
Tributary	779.2909	10-YEAR	2684.22	868	876.55	873.51	877.28	0.002388	6.88	390.3	59.94
Tributary	779.2909	25-YEAR	3551.45	868	877.88	874.52	878.76	0.002434	7.5	473.52	64.41
Tributary	779.2909	50-YEAR	4032.3	868	878.53	875.02	879.48	0.002386	7.83	515.89	67.58
Tributary	779.2909	100-YEAR	4860.09	868	879.56	875.84	880.64	0.002304	8.34	588.36	73.03
Tributary	686.7909	2-YEAR	1240.87	866.36	872.42		873.47	0.006675	8.22	150.97	37.95
Tributary	686.7909	5-YEAR	2039.11	866.36	874.09		875.42	0.006458	9.26	220.15	44.81
Tributary	686.7909	10-YEAR	2684.22	866.36	875.21		876.71	0.006256	9.83	272.96	49.42
Tributary	686.7909	25-YEAR	3551.45	866.36	876.42		878.16	0.006124	10.58	335.96	55
Tributary	686.7909	50-YEAR	4032.3	866.36	876.99		878.87	0.005923	11.02	367.8	58.12
Tributary	686.7909	100-YEAR	4860.09	866.36	877.9		880.01	0.005646	11.69	422.97	63.15

Table C.13
Wilson Creek Results for Future Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	466.027	2-YEAR	1240.87	864.6	871.05		872.04	0.006132	7.98	155.47	39.03
Tributary	466.027	5-YEAR	2039.11	864.6	872.92		874.07	0.005368	8.63	236.4	47.6
Tributary	466.027	10-YEAR	2684.22	864.6	874.17		875.41	0.004935	8.96	299.49	53.35
Tributary	466.027	25-YEAR	3551.45	864.6	875.53		876.92	0.00437	9.46	376.68	59.65
Tributary	466.027	50-YEAR	4032.3	864.6	876.19		877.67	0.00412	9.77	416.56	62.66
Tributary	466.027	100-YEAR	4860.09	864.6	877.21		878.85	0.00385	10.3	482.94	67.37
Tributary	125.6782	2-YEAR	1240.87	862.03	868.35	867.53	869.67	0.007725	9.23	134.51	30.78
Tributary	125.6782	5-YEAR	2039.11	862.03	870.12	869.22	871.84	0.007721	10.52	193.85	36.03
Tributary	125.6782	10-YEAR	2684.22	862.03	871.29	870.33	873.27	0.00772	11.28	237.88	39.61
Tributary	125.6782	25-YEAR	3551.45	862.03	872.62	871.62	874.9	0.00772	12.11	293.28	43.76
Tributary	125.6782	50-YEAR	4032.3	862.03	873.27	872.24	875.7	0.00773	12.51	322.36	45.79
Tributary	125.6782	100-YEAR	4860.09	862.03	874.22	873.27	876.94	0.007719	13.23	367.69	49.76

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	18045.96	2-YEAR	253	908.86	910.97	909.78	910.97	0.000445	0.72	383.46	347.11
Tributary	18045.96	5-YEAR	377	908.86	911.56	909.93	911.57	0.000246	0.75	619.3	467.88
Tributary	18045.96	10-YEAR	454	908.86	911.89	910.02	911.9	0.000203	0.78	781.49	530.27
Tributary	18045.96	25-YEAR	545	908.86	912.25	910.09	912.26	0.000169	0.8	984.32	606.65
Tributary	18045.96	50-YEAR	634	908.86	912.58	910.29	912.59	0.000143	0.81	1209.22	734.72
Tributary	18045.96	100-YEAR	738	908.86	912.96	910.38	912.97	0.000111	0.79	1509.56	846.32
Tributary	18015.11		Culvert								
Tributary	17984.25	2-YEAR	253	907.32	908.7	908.7	909.16	0.014508	5.75	56.21	69.62
Tributary	17984.25	5-YEAR	377	907.32	909	909	909.54	0.014159	6.39	79.24	80.57
Tributary	17984.25	10-YEAR	454	907.32	909.26	909.26	909.79	0.01225	6.44	102.46	116.2
Tributary	17984.25	25-YEAR	545	907.32	909.83		910.05	0.005358	4.59	209.16	273.41
Tributary	17984.25	50-YEAR	634	907.32	910.66		910.71	0.001225	2.36	475.76	352.04
Tributary	17984.25	100-YEAR	738	907.32	911.86		911.87	0.000224	1.31	974.75	467.59
Tributary	17655.92	2-YEAR	253	904.01	907.08	905.31	907.19	0.000943	2.75	91.97	53.32
Tributary	17655.92	5-YEAR	377	904.01	908.02	905.71	908.17	0.000858	3.14	120.17	167.39
Tributary	17655.92	10-YEAR	454	904.01	908.56	905.94	908.73	0.000816	3.33	136.4	206.31
Tributary	17655.92	25-YEAR	545	904.01	909.36	906.18	909.54	0.000682	3.39	160.61	259.96
Tributary	17655.92	50-YEAR	634	904.01	910.23	906.41	910.41	0.000561	3.4	186.53	348.22
Tributary	17655.92	100-YEAR	738	904.01	911.57	906.67	911.73	0.000397	3.26	226.68	576.37
Tributary	17611.55		Culvert								
Tributary	17567.17	2-YEAR	253	903.64	906.77	904.81	906.81	0.00038	1.59	159.61	163.74
Tributary	17567.17	5-YEAR	377	903.64	907.61	905.12	907.66	0.00034	1.8	209.72	291.29
Tributary	17567.17	10-YEAR	454	903.64	908.09	905.29	908.15	0.00032	1.9	238.79	361.89
Tributary	17567.17	25-YEAR	545	903.64	908.66	905.46	908.72	0.000295	2	272.96	447.61
Tributary	17567.17	50-YEAR	634	903.64	909.21	905.62	909.28	0.000273	2.07	306.04	553.66
Tributary	17567.17	100-YEAR	738	903.64	910.11	905.78	910.12	0.000048	0.83	1579.89	594.49
Tributary	17303.28	2-YEAR	253	902.95	906.63		906.68	0.000693	1.65	154.81	92.22
Tributary	17303.28	5-YEAR	377	902.95	907.51		907.54	0.000481	1.57	250.54	129.39
Tributary	17303.28	10-YEAR	454	902.95	908.01		908.04	0.000387	1.5	321.16	152.54
Tributary	17303.28	25-YEAR	545	902.95	908.6		908.63	0.000299	1.41	422.79	195.78
Tributary	17303.28	50-YEAR	634	902.95	909.17		909.19	0.000229	1.31	561.37	287.46
Tributary	17303.28	100-YEAR	738	902.95	910.08		910.09	0.000111	1.09	906.14	481.34
Tributary	17032.19	2-YEAR	253	902.88	906.31	904.33	906.44	0.000879	2.85	88.92	75.53
Tributary	17032.19	5-YEAR	377	902.88	907.14	904.76	907.32	0.000948	3.41	110.44	140.13
Tributary	17032.19	10-YEAR	454	902.88	907.62	905.01	907.83	0.000963	3.69	122.87	191.68
Tributary	17032.19	25-YEAR	545	902.88	908.19	905.28	908.43	0.000952	3.96	137.59	257.86
Tributary	17032.19	50-YEAR	634	902.88	908.74	905.54	909.01	0.000926	4.17	151.89	445.69
Tributary	17032.19	100-YEAR	738	902.88	909.97	905.83	910.03	0.00027	2.37	598.5	606.13
Tributary	16974.83		Culvert								
Tributary	16917.47	2-YEAR	253	902.69	905.75	903.62	905.79	0.000341	1.65	153.07	119.15
Tributary	16917.47	5-YEAR	377	902.69	906.18	903.9	906.25	0.000491	2.16	174.26	127.04
Tributary	16917.47	10-YEAR	454	902.69	906.33	904.06	906.43	0.000615	2.49	182.13	129.96
Tributary	16917.47	25-YEAR	545	902.69	906.48	904.23	906.61	0.000777	2.88	189.44	136.64
Tributary	16917.47	50-YEAR	634	902.69	906.62	904.4	906.78	0.000929	3.22	196.62	155.69
Tributary	16917.47	100-YEAR	738	902.69	906.84	904.58	906.89	0.000373	1.76	426.78	174.51
Tributary	16670.08	2-YEAR	253	901.1	905.76	901.77	905.76	0.000024	0.53	507.86	254.37
Tributary	16670.08	5-YEAR	377	901.1	906.19	901.97	906.19	0.000037	0.71	581.67	290.61
Tributary	16670.08	10-YEAR	454	901.1	906.35	902.08	906.36	0.000048	0.82	611.95	305.98
Tributary	16670.08	25-YEAR	545	901.1	906.5	902.21	906.51	0.000062	0.95	642.01	320.32
Tributary	16670.08	50-YEAR	634	901.1	906.65	902.33	906.67	0.000075	1.07	673.17	335.36
Tributary	16670.08	100-YEAR	738	901.1	906.82	902.45	906.84	0.00009	1.2	709.75	352.18
Tributary	16487.01	2-YEAR	461	900.93	905.72	902.22	905.75	0.000169	1.34	361.12	217.82
Tributary	16487.01	5-YEAR	685	900.93	906.12	902.59	906.17	0.000261	1.78	424.98	275.36
Tributary	16487.01	10-YEAR	817	900.93	906.26	902.8	906.33	0.000328	2.05	450.34	303.89
Tributary	16487.01	25-YEAR	1006	900.93	906.38	903.06	906.47	0.000451	2.44	472.55	335.04
Tributary	16487.01	50-YEAR	1143	900.93	906.51	903.25	906.62	0.000526	2.69	498.6	386.24
Tributary	16487.01	100-YEAR	1323	900.93	906.65	903.46	906.78	0.000628	2.99	530.34	397.07
Tributary	16375.16	2-YEAR	461	900.91	905.71		905.72	0.000194	1.26	601.75	276.83
Tributary	16375.16	5-YEAR	685	900.91	906.11		906.13	0.000261	1.59	717.39	296.54
Tributary	16375.16	10-YEAR	817	900.91	906.25		906.28	0.000317	1.79	760.06	303.44
Tributary	16375.16	25-YEAR	1006	900.91	906.37		906.41	0.000424	2.12	795.8	309.59
Tributary	16375.16	50-YEAR	1143	900.91	906.5		906.55	0.00048	2.3	836.31	318.08
Tributary	16375.16	100-YEAR	1323	900.91	906.64		906.69	0.00056	2.55	881.03	328.1

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	16013.58	2-YEAR	461	899.89	905.65		905.66	0.000142	1.19	635.93	278.95
Tributary	16013.58	5-YEAR	685	899.89	906.02		906.05	0.000209	1.54	745.4	300.73
Tributary	16013.58	10-YEAR	817	899.89	906.15		906.18	0.000263	1.76	782.3	307.72
Tributary	16013.58	25-YEAR	1006	899.89	906.22		906.27	0.00037	2.11	805.68	312.07
Tributary	16013.58	50-YEAR	1143	899.89	906.33		906.38	0.000431	2.32	839.12	318.11
Tributary	16013.58	100-YEAR	1323	899.89	906.43		906.5	0.000523	2.6	872.54	323.69
Tributary	15563.42	2-YEAR	461	898.87	905.58	902.89	905.6	0.000151	1.26	828.42	640.14
Tributary	15563.42	5-YEAR	685	898.87	905.94	903.59	905.95	0.000202	1.55	1021.89	715.34
Tributary	15563.42	10-YEAR	817	898.87	906.04	903.9	906.06	0.000249	1.75	1079.72	725.47
Tributary	15563.42	25-YEAR	1006	898.87	906.07	904.45	906.1	0.000362	2.12	1096.17	727.53
Tributary	15563.42	50-YEAR	1143	898.87	906.15	904.58	906.19	0.000418	2.3	1144.06	735.21
Tributary	15563.42	100-YEAR	1323	898.87	906.21	904.8	906.26	0.000519	2.59	1181.49	746.83
Tributary	15317.12	2-YEAR	531	898.93	905.56	902.97	905.57	0.000073	0.89	1528.98	1053.67
Tributary	15317.12	5-YEAR	760	898.93	905.91	903.56	905.92	0.000097	1.07	1940.38	1257.35
Tributary	15317.12	10-YEAR	896	898.93	906.01	903.85	906.01	0.000114	1.18	2061.96	1281.76
Tributary	15317.12	25-YEAR	1083	898.93	906.02	904.19	906.03	0.000163	1.42	2080.76	1285.5
Tributary	15317.12	50-YEAR	1220	898.93	906.1	904.45	906.11	0.000183	1.52	2180.3	1305.09
Tributary	15317.12	100-YEAR	1330	898.93	906.16	904.64	906.17	0.000199	1.59	2255.91	1318.97
Tributary	15246.62		Culvert								
Tributary	15146.83	2-YEAR	531	897.96	902.7	901.81	902.99	0.00328	4.52	147.57	473.44
Tributary	15146.83	5-YEAR	760	897.96	903.16	902.45	903.52	0.003632	5.14	190.13	593.02
Tributary	15146.83	10-YEAR	896	897.96	903.36	902.67	903.77	0.00399	5.55	208.34	646.92
Tributary	15146.83	25-YEAR	1083	897.96	903.59	902.94	904.07	0.004481	6.08	230.21	744.18
Tributary	15146.83	50-YEAR	1220	897.96	903.7	903.11	904.26	0.004989	6.54	241.3	789.44
Tributary	15146.83	100-YEAR	1330	897.96	903.78	903.24	904.4	0.005462	6.95	248.08	817.45
Tributary	15031.62	2-YEAR	531	898.18	901.47	901.39	902.2	0.012511	6.88	81.6	55.48
Tributary	15031.62	5-YEAR	760	898.18	902.06	902.06	902.73	0.0119	6.75	133.09	114.86
Tributary	15031.62	10-YEAR	896	898.18	902.28	902.28	902.95	0.011926	6.84	160.31	151.24
Tributary	15031.62	25-YEAR	1083	898.18	902.51	902.51	903.21	0.012291	7.07	193.34	206.99
Tributary	15031.62	50-YEAR	1220	898.18	902.68	902.68	903.37	0.012005	7.1	221.84	235.61
Tributary	15031.62	100-YEAR	1330	898.18	902.81	902.81	903.49	0.011805	7.13	244.22	254.85
Tributary	14701.37	2-YEAR	531	896.79	900.78	899.56	900.89	0.001564	2.91	274.16	208.61
Tributary	14701.37	5-YEAR	760	896.79	901.13	899.8	901.27	0.00178	3.41	353.76	237.79
Tributary	14701.37	10-YEAR	896	896.79	901.32	899.8	901.47	0.001807	3.6	400.54	245.39
Tributary	14701.37	25-YEAR	1083	896.79	901.59	900.47	901.74	0.001789	3.8	465.95	255.64
Tributary	14701.37	50-YEAR	1220	896.79	901.77	900.6	901.93	0.001762	3.92	514	263.22
Tributary	14701.37	100-YEAR	1330	896.79	901.97	900.71	902.13	0.001635	3.93	567.24	274.69
Tributary	14360.15	2-YEAR	531	896.68	899.83	899.3	900	0.005071	3.31	160.64	147.03
Tributary	14360.15	5-YEAR	760	896.68	900.37	899.62	900.52	0.002776	3.17	257.54	227.9
Tributary	14360.15	10-YEAR	896	896.68	900.64	899.77	900.79	0.002273	3.16	315.45	266.87
Tributary	14360.15	25-YEAR	1083	896.68	900.97	899.93	901.12	0.001883	3.19	395.47	334.16
Tributary	14360.15	50-YEAR	1220	896.68	901.2	900.04	901.35	0.001677	3.21	459.7	390.01
Tributary	14360.15	100-YEAR	1330	896.68	901.5	900.13	901.63	0.0013	3.05	576.02	621.11
Tributary	14037.12	2-YEAR	527	895.64	899.74	897.06	899.76	0.000183	1.31	405.79	368.45
Tributary	14037.12	5-YEAR	697	895.64	900.26	897.25	900.3	0.000199	1.5	469.87	443.18
Tributary	14037.12	10-YEAR	785	895.64	900.53	897.35	900.57	0.000203	1.59	502.51	471.18
Tributary	14037.12	25-YEAR	890	895.64	900.86	897.44	900.91	0.000202	1.67	543.19	511.01
Tributary	14037.12	50-YEAR	961	895.64	901.09	897.52	901.14	0.0002	1.71	571.42	568.77
Tributary	14037.12	100-YEAR	1048	895.64	901.4	897.59	901.45	0.000194	1.75	608.45	618.02
Tributary	13925.12		Culvert								
Tributary	13809.03	2-YEAR	527	894.62	899.07	896.88	899.12	0.000407	1.87	281.59	555.34
Tributary	13809.03	5-YEAR	697	894.62	899.31	897.09	899.39	0.000563	2.31	302.09	610.25
Tributary	13809.03	10-YEAR	785	894.62	899.42	897.18	899.52	0.000641	2.51	312.13	614.49
Tributary	13809.03	25-YEAR	890	894.62	899.62	897.32	899.73	0.000688	2.7	329.43	621.78
Tributary	13809.03	50-YEAR	961	894.62	899.78	897.38	899.91	0.000696	2.8	343.71	627.79
Tributary	13809.03	100-YEAR	1048	894.62	900.05	897.48	900.18	0.000667	2.86	366.75	637.5
Tributary	13732	2-YEAR	527	894.32	899		899.08	0.000655	2.45	396.09	440.64
Tributary	13732	5-YEAR	697	894.32	899.25		899.34	0.000756	2.73	510.05	471.16
Tributary	13732	10-YEAR	785	894.32	899.37		899.46	0.000787	2.83	567.83	483.19
Tributary	13732	25-YEAR	890	894.32	899.58		899.66	0.000725	2.79	672.17	502.33
Tributary	13732	50-YEAR	961	894.32	899.76		899.83	0.000645	2.69	761.46	512.45
Tributary	13732	100-YEAR	1048	894.32	900.04		900.1	0.000524	2.5	913.05	580.46

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	13249.13	2-YEAR	527	893.71	898.67		898.72	0.000926	2.73	486.41	391.94
Tributary	13249.13	5-YEAR	697	893.71	898.87		898.93	0.001095	3.08	566.96	410.18
Tributary	13249.13	10-YEAR	785	893.71	898.98		899.04	0.001133	3.2	612.26	418.72
Tributary	13249.13	25-YEAR	890	893.71	899.25		899.3	0.000934	3.05	728.28	448.09
Tributary	13249.13	50-YEAR	961	893.71	899.48		899.52	0.000769	2.88	833.24	472.58
Tributary	13249.13	100-YEAR	1048	893.71	899.83		899.86	0.000561	2.6	1005.1	509.03
Tributary	12521.19	2-YEAR	527	893.46	897.15		897.4	0.006868	4.14	161.41	231.89
Tributary	12521.19	5-YEAR	697	893.46	897.9		897.99	0.002011	2.77	392.01	422.73
Tributary	12521.19	10-YEAR	785	893.46	898.33		898.38	0.000952	2.18	581.6	453
Tributary	12521.19	25-YEAR	890	893.46	898.85		898.89	0.000484	1.79	851.7	571.81
Tributary	12521.19	50-YEAR	961	893.46	899.2		899.22	0.000325	1.59	1053.18	608.27
Tributary	12521.19	100-YEAR	1048	893.46	899.64		899.66	0.000207	1.39	1337.35	658.49
Tributary	12252.66	2-YEAR	527	893.46	897.19	895.65	897.19	0.000173	1.21	980.27	516.62
Tributary	12252.66	5-YEAR	697	893.46	897.89	895.75	897.89	0.000112	1.1	1347.29	529.08
Tributary	12252.66	10-YEAR	785	893.46	898.31	895.81	898.32	0.000087	1.04	1574.28	537.34
Tributary	12252.66	25-YEAR	890	893.46	898.84	895.86	898.84	0.000072	1.02	2052.22	768.71
Tributary	12252.66	50-YEAR	961	893.46	899.18	895.89	899.18	0.000059	0.96	2322.58	802.37
Tributary	12252.66	100-YEAR	1048	893.46	899.63	895.93	899.64	0.000046	0.9	2695.24	845.95
Tributary	12157.3	2-YEAR	578	892.17	897.17	893.64	897.18	0.000143	1.33	687.49	526.44
Tributary	12157.3	5-YEAR	758	892.17	897.86	893.82	897.88	0.000149	1.5	799.19	547.92
Tributary	12157.3	10-YEAR	865	892.17	898.29	893.91	898.31	0.000148	1.58	867.07	560.99
Tributary	12157.3	25-YEAR	994	892.17	898.81	894.01	898.83	0.000144	1.65	950.46	577.09
Tributary	12157.3	50-YEAR	1089	892.17	899.15	894.08	899.17	0.000143	1.71	1005.24	589.53
Tributary	12157.3	100-YEAR	1218	892.17	899.6	894.18	899.62	0.000143	1.79	1077.23	606.95
Tributary	12050.3		Culvert								
Tributary	11942.51	2-YEAR	578	891.81	896.93	893.6	896.95	0.00013	1.28	497.67	191.56
Tributary	11942.51	5-YEAR	758	891.81	897.54	893.82	897.57	0.00014	1.45	581.57	199.07
Tributary	11942.51	10-YEAR	865	891.81	897.92	893.93	897.95	0.000141	1.53	634.31	203.65
Tributary	11942.51	25-YEAR	994	891.81	898.39	894.06	898.43	0.000138	1.6	700.98	208.85
Tributary	11942.51	50-YEAR	1089	891.81	898.7	894.16	898.74	0.000138	1.66	744.28	212.18
Tributary	11942.51	100-YEAR	1218	891.81	899.1	894.28	899.14	0.000138	1.73	801.71	216.56
Tributary	11907.87	2-YEAR	578	891.62	896.93		896.94	0.000052	0.85	1240.23	495.11
Tributary	11907.87	5-YEAR	758	891.62	897.55		897.56	0.00005	0.9	1554.67	524.15
Tributary	11907.87	10-YEAR	865	891.62	897.93		897.94	0.000046	0.92	1757.44	540.02
Tributary	11907.87	25-YEAR	994	891.62	898.41		898.41	0.000042	0.92	2020.21	565.8
Tributary	11907.87	50-YEAR	1089	891.62	898.71		898.72	0.00004	0.93	2195.32	581.54
Tributary	11907.87	100-YEAR	1218	891.62	899.11		899.12	0.000039	0.95	2435	615.6
Tributary	11840.85	2-YEAR	578	890.93	896.93		896.94	0.000064	0.86	1256.88	514.85
Tributary	11840.85	5-YEAR	758	890.93	897.55		897.55	0.000058	0.91	1590.12	558
Tributary	11840.85	10-YEAR	865	890.93	897.93		897.93	0.000053	0.91	1807.07	579.78
Tributary	11840.85	25-YEAR	994	890.93	898.4		898.41	0.000047	0.91	2089.47	607.37
Tributary	11840.85	50-YEAR	1089	890.93	898.71		898.72	0.000045	0.92	2278.03	627.4
Tributary	11840.85	100-YEAR	1218	890.93	899.11		899.12	0.000042	0.93	2535.93	660.07
Tributary	11787.88	2-YEAR	578	891.49	896.88	894.22	896.92	0.000327	1.98	445.04	508.4
Tributary	11787.88	5-YEAR	758	891.49	897.49	894.45	897.54	0.000337	2.2	523.32	553.74
Tributary	11787.88	10-YEAR	865	891.49	897.87	894.6	897.92	0.00033	2.29	571.98	579.92
Tributary	11787.88	25-YEAR	994	891.49	898.34	894.77	898.39	0.000315	2.37	632.82	608.26
Tributary	11787.88	50-YEAR	1089	891.49	898.64	894.92	898.7	0.000312	2.44	671.73	636.21
Tributary	11787.88	100-YEAR	1218	891.49	899.04	895.05	899.1	0.000309	2.53	722.76	676.32
Tributary	11739.88		Bridge								
Tributary	11697.27	2-YEAR	578	890.05	896.15	895.14	896.3	0.001482	4.04	262.3	217.01
Tributary	11697.27	5-YEAR	758	890.05	896.4	895.4	896.6	0.001876	4.73	292.26	219.54
Tributary	11697.27	10-YEAR	865	890.05	896.55	895.54	896.78	0.002061	5.07	309.97	221.03
Tributary	11697.27	25-YEAR	994	890.05	896.7	895.69	896.96	0.002334	5.51	326.74	222.45
Tributary	11697.27	50-YEAR	1089	890.05	896.79	895.78	897.08	0.002543	5.82	337.66	223.37
Tributary	11697.27	100-YEAR	1218	890.05	896.91	895.94	897.24	0.00282	6.23	351.71	224.56
Tributary	11657.98	2-YEAR	578	890.05	896.17		896.21	0.000522	2.4	505.27	270.22
Tributary	11657.98	5-YEAR	758	890.05	896.43		896.49	0.000635	2.76	579.89	288.87
Tributary	11657.98	10-YEAR	865	890.05	896.59		896.65	0.000681	2.93	626.45	300.93
Tributary	11657.98	25-YEAR	994	890.05	896.74		896.81	0.000753	3.15	673.63	315.6
Tributary	11657.98	50-YEAR	1089	890.05	896.84		896.92	0.000804	3.3	705.85	324.21
Tributary	11657.98	100-YEAR	1218	890.05	896.98		897.06	0.000866	3.48	750.62	358.74

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	11009.06	2-YEAR	578	890.39	894.74	894.74	895.36	0.008798	6.45	112.38	166.7
Tributary	11009.06	5-YEAR	758	890.39	895.19	895.19	895.64	0.005844	5.94	223.12	291.94
Tributary	11009.06	10-YEAR	865	890.39	895.29	895.29	895.77	0.006034	6.21	254.34	303.24
Tributary	11009.06	25-YEAR	994	890.39	895.46	895.41	895.91	0.005573	6.21	307.19	322.49
Tributary	11009.06	50-YEAR	1089	890.39	895.6	895.49	896.01	0.005108	6.14	351.38	337.75
Tributary	11009.06	100-YEAR	1218	890.39	895.77	895.59	896.14	0.004619	6.06	410.24	357.05
Tributary	10690.17	2-YEAR	578	888.46	894.61		894.7	0.000606	2.73	403.92	400.83
Tributary	10690.17	5-YEAR	758	888.46	894.96		895.05	0.00062	2.91	547.96	419.22
Tributary	10690.17	10-YEAR	865	888.46	895.09		895.19	0.000669	3.08	603.92	426.15
Tributary	10690.17	25-YEAR	994	888.46	895.25		895.36	0.00071	3.24	672.66	434.51
Tributary	10690.17	50-YEAR	1089	888.46	895.36		895.47	0.000737	3.35	720.28	440.21
Tributary	10690.17	100-YEAR	1218	888.46	895.51		895.63	0.000754	3.45	789.67	448.38
Tributary	9932.969	2-YEAR	578	887.45	894.3		894.36	0.000398	2.2	593.27	575.58
Tributary	9932.969	5-YEAR	758	887.45	894.69		894.74	0.000365	2.23	829.06	651.01
Tributary	9932.969	10-YEAR	865	887.45	894.8		894.86	0.000397	2.36	905.67	677.25
Tributary	9932.969	25-YEAR	994	887.45	894.96		895.01	0.00041	2.45	1011.94	692.98
Tributary	9932.969	50-YEAR	1089	887.45	895.07		895.12	0.000419	2.52	1085.53	700.91
Tributary	9932.969	100-YEAR	1218	887.45	895.23		895.28	0.000413	2.55	1201.3	712.96
Tributary	9888.318	2-YEAR	578	887.21	894.31	890.84	894.33	0.000164	1.52	837.02	667.63
Tributary	9888.318	5-YEAR	758	887.21	894.69	891.27	894.72	0.000163	1.6	1106.11	726.31
Tributary	9888.318	10-YEAR	865	887.21	894.81	891.49	894.83	0.000182	1.71	1190.23	738.68
Tributary	9888.318	25-YEAR	994	887.21	894.96	891.72	894.99	0.000196	1.81	1304.92	756.32
Tributary	9888.318	50-YEAR	1089	887.21	895.06	891.88	895.09	0.000206	1.88	1384.88	770.47
Tributary	9888.318	100-YEAR	1218	887.21	895.23	892.06	895.26	0.00021	1.94	1511.93	791.77
Tributary	9850.318		Bridge								
Tributary	9813.512	2-YEAR	578	886.87	893.03	891.6	893.23	0.002093	4.03	227.14	219.86
Tributary	9813.512	5-YEAR	758	886.87	893.76	892.13	893.89	0.001196	3.5	507	563.48
Tributary	9813.512	10-YEAR	865	886.87	894.01	892.56	894.12	0.000985	3.31	663.5	685.69
Tributary	9813.512	25-YEAR	994	886.87	894.46	892.83	894.52	0.000584	2.73	1006.27	839.79
Tributary	9813.512	50-YEAR	1089	886.87	894.78	893.16	894.82	0.000413	2.4	1283.69	887.35
Tributary	9813.512	100-YEAR	1218	886.87	895.16	893.12	895.19	0.000282	2.08	1630.25	934.5
Tributary	9728.044	2-YEAR	616	886.66	892.95		893.07	0.001188	3.11	330.59	315.24
Tributary	9728.044	5-YEAR	813	886.66	893.73		893.8	0.000637	2.63	738.04	685.41
Tributary	9728.044	10-YEAR	908	886.66	893.99		894.04	0.000503	2.44	921.46	735.15
Tributary	9728.044	25-YEAR	990	886.66	894.45		894.48	0.000279	1.94	1269.04	772.97
Tributary	9728.044	50-YEAR	1073	886.66	894.77		894.79	0.000206	1.74	1522.43	798.45
Tributary	9728.044	100-YEAR	1155	886.66	895.15		895.17	0.000146	1.54	1834.22	828.11
Tributary	9192.625	2-YEAR	616	886.15	892.75		892.78	0.000274	1.42	628.97	386.1
Tributary	9192.625	5-YEAR	813	886.15	893.62		893.64	0.000155	1.27	988.17	446.09
Tributary	9192.625	10-YEAR	908	886.15	893.88		893.9	0.000146	1.29	1111.28	478.29
Tributary	9192.625	25-YEAR	990	886.15	894.37		894.39	0.000105	1.18	1350.97	501.09
Tributary	9192.625	50-YEAR	1073	886.15	894.71		894.72	0.000091	1.15	1522.3	525.42
Tributary	9192.625	100-YEAR	1155	886.15	895.1		895.12	0.000076	1.11	1735.74	554.25
Tributary	8600.113	2-YEAR	1135	885.58	892	889.51	892.31	0.001784	4.54	250.2	451.81
Tributary	8600.113	5-YEAR	1855	885.58	893.28	890.68	893.4	0.000745	3.46	1164.43	661.19
Tributary	8600.113	10-YEAR	2328	885.58	893.49	891.32	893.63	0.000918	3.93	1302.02	679.01
Tributary	8600.113	25-YEAR	3181	885.58	893.96	892.74	894.12	0.00102	4.38	1630.11	719.73
Tributary	8600.113	50-YEAR	3749	885.58	894.3	892.95	894.46	0.001005	4.51	1881.6	750.44
Tributary	8600.113	100-YEAR	4402	885.58	894.72	893.15	894.88	0.000938	4.55	2205.84	788.45
Tributary	8197.604	2-YEAR	1135	885.58	891.4	888.81	891.65	0.001443	4.05	280.54	228.76
Tributary	8197.604	5-YEAR	1855	885.58	892.55	889.87	892.93	0.001766	4.98	422.59	529.47
Tributary	8197.604	10-YEAR	2328	885.58	892.97	890.46	893.2	0.001235	4.38	993.85	584.64
Tributary	8197.604	25-YEAR	3181	885.58	893.29	891.37	893.59	0.001638	5.24	1183.47	619.52
Tributary	8197.604	50-YEAR	3749	885.58	893.65	892.09	893.95	0.001568	5.36	1416.2	659.82
Tributary	8197.604	100-YEAR	4402	885.58	894.15	892.85	894.41	0.001345	5.24	1762.19	716.41
Tributary	7745.407	2-YEAR	1205	885.56	888.71	888.71	890.01	0.013612	9.16	131.51	258.46
Tributary	7745.407	5-YEAR	2024	885.56	890.23	890.23	891.33	0.007918	8.74	297.84	409.03
Tributary	7745.407	10-YEAR	2605	885.56	890.75	890.75	891.9	0.007465	9.19	399.76	545.11
Tributary	7745.407	25-YEAR	3634	885.56	892.31		892.69	0.002267	6.28	1263.9	669.23
Tributary	7745.407	50-YEAR	4252	885.56	892.94		893.21	0.001576	5.62	1698.33	704.51
Tributary	7745.407	100-YEAR	4899	885.56	893.65		893.84	0.001094	5.03	2206.57	745.16
Tributary	7120.867	2-YEAR	1205	879.57	888.06		888.2	0.000738	3.22	520.28	206.99
Tributary	7120.867	5-YEAR	2024	879.57	889.81		889.94	0.00052	3.33	1009.68	485.83
Tributary	7120.867	10-YEAR	2605	879.57	890.7		890.82	0.000448	3.37	1466.45	547.19
Tributary	7120.867	25-YEAR	3634	879.57	892.07		892.17	0.000343	3.3	2279.42	632.17
Tributary	7120.867	50-YEAR	4252	879.57	892.69		892.79	0.000321	3.34	2683.91	666.03
Tributary	7120.867	100-YEAR	4899	879.57	893.41		893.5	0.000285	3.3	3180.41	710.26

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	6661.149	2-YEAR	1205	879.56	887.39		887.68	0.001746	4.37	275.66	68.67
Tributary	6661.149	5-YEAR	2024	879.56	889.22		889.54	0.001559	4.64	539.82	359.07
Tributary	6661.149	10-YEAR	2605	879.56	890.29		890.52	0.000979	4.21	963.8	414.08
Tributary	6661.149	25-YEAR	3634	879.56	891.8		891.96	0.000605	3.86	1625.39	463.46
Tributary	6661.149	50-YEAR	4252	879.56	892.44		892.6	0.000547	3.88	1930.15	483.28
Tributary	6661.149	100-YEAR	4899	879.56	893.19		893.34	0.000471	3.82	2302.4	510.36
Tributary	6465.54	2-YEAR	1205	879.57	887.14		887.36	0.00135	3.83	314.23	78.14
Tributary	6465.54	5-YEAR	2024	879.57	889.01		889.26	0.001113	4.12	577.55	275.18
Tributary	6465.54	10-YEAR	2605	879.57	890.14		890.34	0.000765	3.88	997.59	415.25
Tributary	6465.54	25-YEAR	3634	879.57	891.7		891.85	0.000493	3.61	1700.38	476.84
Tributary	6465.54	50-YEAR	4252	879.57	892.35		892.5	0.000452	3.65	2016.72	493.95
Tributary	6465.54	100-YEAR	4899	879.57	893.12		893.25	0.000392	3.6	2401.71	514.1
Tributary	6300.468	2-YEAR	1209	879.31	887	883.41	887.17	0.000768	3.25	372.42	81.22
Tributary	6300.468	5-YEAR	2025	879.31	888.88	884.6	889.1	0.000718	3.77	594.39	235.25
Tributary	6300.468	10-YEAR	2597	879.31	890	885.25	890.22	0.000628	3.94	801.01	347.76
Tributary	6300.468	25-YEAR	3557	879.31	891.51	886.16	891.74	0.00054	4.14	1140.85	469.1
Tributary	6300.468	50-YEAR	4074	879.31	892.14	886.61	892.39	0.000528	4.29	1284.66	476.09
Tributary	6300.468	100-YEAR	4706	879.31	892.88	887.1	893.14	0.000513	4.44	1452.1	482.84
Tributary	6205.468		Bridge								
Tributary	6121.399	2-YEAR	1209	879.38	886.71	884.05	886.87	0.000786	3.58	504.48	277.93
Tributary	6121.399	5-YEAR	2025	879.38	888.59	885.35	888.74	0.000563	3.71	873.01	324.3
Tributary	6121.399	10-YEAR	2597	879.38	889.67	885.81	889.82	0.000494	3.81	1092.78	353.42
Tributary	6121.399	25-YEAR	3557	879.38	891.06	886.37	891.23	0.000471	4.13	1376.1	385.53
Tributary	6121.399	50-YEAR	4074	879.38	891.61	886.97	891.8	0.000488	4.36	1488.94	399.33
Tributary	6121.399	100-YEAR	4706	879.38	892.25	887.27	892.46	0.000504	4.62	1619.39	411.22
Tributary	6022.257	2-YEAR	1209	878.53	886.67	882.8	886.78	0.000546	2.75	439.09	91.61
Tributary	6022.257	5-YEAR	2025	878.53	888.51	884.12	888.68	0.000555	3.29	615.04	104.09
Tributary	6022.257	10-YEAR	2597	878.53	889.56	884.62	889.75	0.000558	3.57	783.71	257.35
Tributary	6022.257	25-YEAR	3557	878.53	890.95	885.37	891.16	0.000526	3.86	1154.93	333.85
Tributary	6022.257	50-YEAR	4074	878.53	891.5	885.76	891.73	0.000525	4.03	1330.08	369.28
Tributary	6022.257	100-YEAR	4706	878.53	892.15	886.19	892.4	0.000514	4.18	1555.76	413.52
Tributary	5679.313	2-YEAR	1209	878.09	886.44	883.03	886.57	0.000715	2.88	419.34	100.76
Tributary	5679.313	5-YEAR	2025	878.09	888.31	884.08	888.47	0.000689	3.21	631.57	126.37
Tributary	5679.313	10-YEAR	2597	878.09	889.36	884.64	889.54	0.000673	3.36	772.96	141.89
Tributary	5679.313	25-YEAR	3557	878.09	890.76	885.47	890.96	0.000663	3.6	1005.18	213.7
Tributary	5679.313	50-YEAR	4074	878.09	891.31	885.87	891.53	0.000669	3.76	1132.62	249.64
Tributary	5679.313	100-YEAR	4706	878.09	891.97	886.33	892.2	0.000634	3.91	1319.27	324.64
Tributary	5490.167	2-YEAR	1210	878.12	885.81	883.38	886.24	0.002601	5.31	227.72	56.16
Tributary	5490.167	5-YEAR	2028	878.12	887.6	884.96	888.14	0.002238	5.94	359.57	169.9
Tributary	5490.167	10-YEAR	2600	878.12	888.63	885.81	889.21	0.001953	6.24	457.01	205.35
Tributary	5490.167	25-YEAR	3536	878.12	889.93	886.88	890.62	0.001844	6.86	582.42	236.23
Tributary	5490.167	50-YEAR	4006	878.12	890.4	887.43	891.17	0.0019	7.25	629.38	247.91
Tributary	5490.167	100-YEAR	4689	878.12	890.89	888.02	891.8	0.002109	7.94	677.82	318.14
Tributary	5445.167		Bridge								
Tributary	5385.84	2-YEAR	1210	877.54	884.8	883.04	885.27	0.003145	5.5	219.93	60.26
Tributary	5385.84	5-YEAR	2028	877.54	886.51	884.37	887.09	0.002794	6.1	332.38	71.26
Tributary	5385.84	10-YEAR	2600	877.54	887.48	885.04	888.13	0.002666	6.42	404.78	77.52
Tributary	5385.84	25-YEAR	3536	877.54	888.7	886	889.46	0.002707	7.02	503.69	85.34
Tributary	5385.84	50-YEAR	4006	877.54	889.12	886.45	889.97	0.002871	7.42	543.58	191.4
Tributary	5385.84	100-YEAR	4689	877.54	889.51	887.05	890.54	0.003265	8.13	590.08	219.72
Tributary	5340.014	2-YEAR	1210	877.21	884.83	881.74	885.06	0.001347	3.82	316.6	80.06
Tributary	5340.014	5-YEAR	2028	877.21	886.57	883.15	886.86	0.001266	4.34	466.95	92.93
Tributary	5340.014	10-YEAR	2600	877.21	887.56	883.88	887.89	0.00124	4.62	562.34	100.24
Tributary	5340.014	25-YEAR	3536	877.21	888.8	884.81	889.2	0.001291	5.11	692.09	185.24
Tributary	5340.014	50-YEAR	4006	877.21	889.24	885.2	889.68	0.001326	5.37	797.05	233.38
Tributary	5340.014	100-YEAR	4689	877.21	889.67	885.7	890.19	0.001441	5.83	911.56	296.61
Tributary	5071.343	2-YEAR	1210	876.95	884.52		884.68	0.001337	3.16	382.32	127.41
Tributary	5071.343	5-YEAR	2028	876.95	886.4		886.55	0.000813	3.17	640.68	147.32
Tributary	5071.343	10-YEAR	2600	876.95	887.43		887.59	0.000726	3.26	797.85	161.44
Tributary	5071.343	25-YEAR	3536	876.95	888.72		888.9	0.000627	3.38	1176.84	383.73
Tributary	5071.343	50-YEAR	4006	876.95	889.19		889.37	0.000597	3.47	1362.11	409.36
Tributary	5071.343	100-YEAR	4689	876.95	889.65		889.85	0.00062	3.71	1554.57	434.12
Tributary	4700.785	2-YEAR	1210	876.26	883.69		884.06	0.001961	4.87	248.56	54.15
Tributary	4700.785	5-YEAR	2028	876.26	885.6		886.07	0.002088	5.48	369.81	71.88
Tributary	4700.785	10-YEAR	2600	876.26	886.6		887.13	0.002114	5.83	445.71	80.1
Tributary	4700.785	25-YEAR	3536	876.26	887.93		888.49	0.001906	6.1	716.51	328.31
Tributary	4700.785	50-YEAR	4006	876.26	888.46		888.99	0.001718	6.1	903.32	374.18
Tributary	4700.785	100-YEAR	4689	876.26	888.88		889.46	0.001781	6.46	1066.98	404.22

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	4278.65	2-YEAR	1210	875.42	882.71	879.8	883.13	0.002447	5.21	232.12	63.1
Tributary	4278.65	5-YEAR	2028	875.42	884.59	881.52	885.11	0.002444	5.76	352.05	95.48
Tributary	4278.65	10-YEAR	2600	875.42	885.58	882.56	886.15	0.002501	6.09	427.14	116.38
Tributary	4278.65	25-YEAR	3536	875.42	886.92	883.73	887.56	0.002529	6.42	551.95	190.8
Tributary	4278.65	50-YEAR	4006	875.42	887.45	884.21	888.13	0.002385	6.62	615.01	351.44
Tributary	4278.65	100-YEAR	4689	875.42	888.17	884.83	888.69	0.001773	6.15	1097.33	458.49
Tributary	3421.745	2-YEAR	1210	873.71	881.05		881.38	0.001694	4.61	262.5	58.49
Tributary	3421.745	5-YEAR	2028	873.71	883		883.43	0.001565	5.21	391.82	78.15
Tributary	3421.745	10-YEAR	2600	873.71	884.03		884.52	0.001467	5.63	482.43	99.01
Tributary	3421.745	25-YEAR	3536	873.71	885.37		885.96	0.001418	6.25	635.18	128.37
Tributary	3421.745	50-YEAR	4006	873.71	885.95		886.58	0.001409	6.52	712.52	139.54
Tributary	3421.745	100-YEAR	4689	873.71	886.64		887.35	0.001444	6.95	813.45	153.39
Tributary	2994.294	2-YEAR	1210	872.68	880.37	876.95	880.7	0.001477	4.63	261.1	50.43
Tributary	2994.294	5-YEAR	2028	872.68	882.23	878.39	882.71	0.001794	5.53	366.86	63.17
Tributary	2994.294	10-YEAR	2600	872.68	883.24	879.25	883.79	0.001931	5.99	433.86	70.06
Tributary	2994.294	25-YEAR	3536	872.68	884.53	880.6	885.22	0.002129	6.67	530.15	80.66
Tributary	2994.294	50-YEAR	4006	872.68	885.07	881.17	885.83	0.002196	6.98	576.43	88.26
Tributary	2994.294	100-YEAR	4689	872.68	885.7	881.89	886.57	0.002287	7.49	634.04	120.51
Tributary	2439.681	2-YEAR	1210	872.69	879.01		879.54	0.003054	5.86	206.6	50.16
Tributary	2439.681	5-YEAR	2032	872.69	880.63		881.36	0.00327	6.9	294.53	58.66
Tributary	2439.681	10-YEAR	2605	872.69	881.5		882.37	0.003386	7.49	348.49	69.66
Tributary	2439.681	25-YEAR	3535	872.69	882.64		883.7	0.003453	8.31	453.4	115.02
Tributary	2439.681	50-YEAR	4011	872.69	883.2		884.31	0.003369	8.55	523.72	135.27
Tributary	2439.681	100-YEAR	4679	872.69	883.95		885.08	0.003079	8.76	641.16	179.07
Tributary	2290.547	2-YEAR	1210	872.4	878.78	876.15	879.15	0.001801	4.92	245.75	224.63
Tributary	2290.547	5-YEAR	2032	872.4	880.37	877.46	880.92	0.002097	6.01	363.24	395.78
Tributary	2290.547	10-YEAR	2605	872.4	881.28	878.24	881.9	0.002129	6.47	475.19	498.22
Tributary	2290.547	25-YEAR	3535	872.4	882.59	879.44	883.2	0.001795	6.65	722.09	575.56
Tributary	2290.547	50-YEAR	4011	872.4	883.23	880.09	883.81	0.001619	6.66	842.08	595.43
Tributary	2290.547	100-YEAR	4679	872.4	884.04	880.88	884.61	0.001451	6.72	996.27	617.49
Tributary	1483.476	2-YEAR	1210	868.52	877.32		877.69	0.001816	4.89	252.14	71.57
Tributary	1483.476	5-YEAR	2032	868.52	879.34		879.67	0.001169	4.97	593.04	196.54
Tributary	1483.476	10-YEAR	2605	868.52	880.49		880.79	0.000925	4.91	835.37	221.56
Tributary	1483.476	25-YEAR	3535	868.52	882.06		882.32	0.000715	4.86	1190.51	231.65
Tributary	1483.476	50-YEAR	4011	868.52	882.76		883.02	0.000658	4.89	1354.26	236.06
Tributary	1483.476	100-YEAR	4679	868.52	883.63		883.89	0.000612	4.99	1562.06	241.55
Tributary	1052.839	2-YEAR	1210	868.24	876.64		876.98	0.001475	4.7	257.28	48.67
Tributary	1052.839	5-YEAR	2032	868.24	878.55		879.05	0.001709	5.68	358.03	56.82
Tributary	1052.839	10-YEAR	2605	868.24	879.62		880.22	0.001813	6.18	421.74	61.54
Tributary	1052.839	25-YEAR	3535	868.24	881.06		881.79	0.001972	6.86	515.04	68.31
Tributary	1052.839	50-YEAR	4011	868.24	881.7		882.5	0.00204	7.17	559.71	71.37
Tributary	1052.839	100-YEAR	4679	868.24	882.49		883.38	0.002046	7.59	617.09	75.13
Tributary	896.5909	2-YEAR	1210	868.9	875.75		876.45	0.003953	6.69	180.78	42.97
Tributary	896.5909	5-YEAR	2032	868.9	877.56		878.46	0.003926	7.65	265.74	51.21
Tributary	896.5909	10-YEAR	2605	868.9	878.6		879.62	0.003863	8.1	321.42	55.95
Tributary	896.5909	25-YEAR	3535	868.9	879.95		881.16	0.003906	8.8	401.62	62.15
Tributary	896.5909	50-YEAR	4011	868.9	880.55		881.85	0.003942	9.12	439.76	64.9
Tributary	896.5909	100-YEAR	4679	868.9	881.31		882.73	0.003826	9.55	490.38	68.49
Tributary	833.9909	2-YEAR	1210	868.58	875.58	873.61	876.18	0.00318	6.22	194.64	43.73
Tributary	833.9909	5-YEAR	2032	868.58	877.38	875.13	878.19	0.003334	7.25	280.24	51.51
Tributary	833.9909	10-YEAR	2605	868.58	878.41	875.98	879.35	0.003355	7.75	336.02	56
Tributary	833.9909	25-YEAR	3535	868.58	879.76	877.18	880.89	0.003488	8.51	415.47	61.84
Tributary	833.9909	50-YEAR	4011	868.58	880.36	877.72	881.58	0.003454	8.86	453.35	64.85
Tributary	833.9909	100-YEAR	4679	868.58	881.12	878.42	882.47	0.003356	9.34	504.15	68.58
Tributary	807.9909		Inl Struct								
Tributary	779.2909	2-YEAR	1219	868	873.46	871.38	873.93	0.002486	5.51	221.2	49.63
Tributary	779.2909	5-YEAR	2047	868	875.37	872.66	875.99	0.002394	6.36	321.87	56
Tributary	779.2909	10-YEAR	2623	868	876.44	873.42	877.17	0.002388	6.83	383.98	59.59
Tributary	779.2909	25-YEAR	3557	868	877.89	874.52	878.77	0.002435	7.5	474.02	64.43
Tributary	779.2909	50-YEAR	4037	868	878.53	875.02	879.49	0.002386	7.83	516.3	67.62
Tributary	779.2909	100-YEAR	4709	868	879.38	875.7	880.43	0.002316	8.25	575.31	72.08
Tributary	686.7909	2-YEAR	1219	866.36	872.37		873.41	0.006679	8.18	148.97	37.73
Tributary	686.7909	5-YEAR	2047	866.36	874.1		875.44	0.006456	9.27	220.8	44.87
Tributary	686.7909	10-YEAR	2623	866.36	875.11		876.6	0.006275	9.79	268.03	49.01
Tributary	686.7909	25-YEAR	3557	866.36	876.43		878.17	0.006122	10.58	336.33	55.04
Tributary	686.7909	50-YEAR	4037	866.36	876.99		878.88	0.005921	11.02	368.11	58.15
Tributary	686.7909	100-YEAR	4709	866.36	877.74		879.81	0.005687	11.57	412.99	62.27

Table C.14
Wilson Creek Results for Improvement Conditions

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)
Tributary	466.027	2-YEAR	1219	864.6	870.99		871.97	0.006158	7.96	153.19	38.76
Tributary	466.027	5-YEAR	2047	864.6	872.93		874.09	0.005362	8.63	237.18	47.68
Tributary	466.027	10-YEAR	2623	864.6	874.06		875.29	0.004971	8.93	293.57	52.84
Tributary	466.027	25-YEAR	3557	864.6	875.54		876.93	0.004367	9.46	377.14	59.69
Tributary	466.027	50-YEAR	4037	864.6	876.19		877.67	0.004118	9.78	416.95	62.69
Tributary	466.027	100-YEAR	4709	864.6	877.03		878.64	0.003884	10.21	471.2	66.57
Tributary	125.6782	2-YEAR	1219	862.03	868.29	867.49	869.6	0.007725	9.18	132.77	30.61
Tributary	125.6782	5-YEAR	2047	862.03	870.14	869.24	871.86	0.007721	10.53	194.4	36.07
Tributary	125.6782	10-YEAR	2623	862.03	871.19	870.23	873.14	0.00772	11.22	233.82	39.29
Tributary	125.6782	25-YEAR	3557	862.03	872.63	871.63	874.9	0.00772	12.11	293.62	43.78
Tributary	125.6782	50-YEAR	4037	862.03	873.27	872.24	875.71	0.00773	12.51	322.64	45.81
Tributary	125.6782	100-YEAR	4709	862.03	874.08	873.09	876.73	0.00772	13.06	360.58	48.79