APPENDIX D

Master Drainage Study

7991.10

REGIONAL MASTER DRAINAGE STUDY

FOR

SUNCREEK SPECIFIC PLAN

CITY OF RANCHO CORDOVA, CA

AUGUST 22, 2011

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TABLE OF CONTENTS

		Page
Table of Contents		**3**
Tables Index		**4**
Exhibits Index		**5**
Appendix Index		**6**
1.0	**Executive Summary**	**7**
2.0	**Introduction**	**8**
2.1	Overview	8
2.2	Purpose	8
2.3	Previous Studies	9
2.4	Land Use Changes	9
2.5	Existing Conditions	10
2.6	FEMA Information	12
2.7	US Army Corps of Engineers, Section 404 Permitting	12
2.8	Soils Information	12
2.9	Hydrologic Design Criteria	13
2.10	Hydro-modification Assessment	13
2.11	Hydro-modification Detention Basin Design	14
3.0	**Hydrologic Models**	**18**
3.1	Existing Conditions Model	18
3.2	Developed Conditions Model	22
3.3	Baseline Conditions Model	23
3.4	Anatolia III Modeling Alternatives	29
3.4.1	Anatolia III - Alternative 'A' Model	30
3.4.2	Anatolia III - Alternative 'B' Model	33
3.4.3	Anatolia III - Alternative 'C' Model	34
3.4.4	Anatolia III - Alternative 'D' Model	36
3.5	Modified Hydro-modification Basins Modeling Alternatives	37
3.5.1	Modified Hydro-modification Basins - Alternative 'A' Model	38
3.5.2	Modified Hydro-modification Basins – Alternative 'B' Model	41
4.0	**Basin Volume Sizing Contingency**	**43**
5.0	**Conclusion**	**44**
6.0	**Recommendations**	**45**
7.0	**References**	**46**
8.0	**Appendixes**	**47**

TABLES INDEX

	Page
Table 3.1: Existing Conditions Peak Flow Rates	20
Table 3.2: Developed Conditions Peak Flow Rates	22
Table 3.3: Baseline Conditions Peak Flow Rates	26
Table 3.3.1: Baseline Conditions Detention Basin Volumes	27
Table 3.3.2: Baseline Conditions Detention Basin Discharge Flow Rates	28
Table 3.4.1.0: Anatolia III - Alternative 'A' Peak Flow Rates	31
Table 3.4.1.1: Anatolia III - Alternative 'A' Detention Basin Volumes	32
Table 3.4.1.2: Anatolia III - Alternative 'A' Detention Basin Discharge Flow Rates	33
Table 3.4.2.0: Anatolia III - Alternative 'B' Peak Flow Rates	34
Table 3.4.3.0: Anatolia III - Alternative 'C' Peak Flow Rates	35
Table 3.4.4.0: Anatolia III - Alternative 'D' Peak Flow Rates	37
Table 3.5.1.0: Modified Hydro-modification Basin - Alternative 'A' Peak Flow Rates	39
Table 3.5.1.1: Modified Hydro-modification Basin - Alternative 'A' Detention Basin Volumes	40
Table 3.5.1.2: Modified Hydro-modification Basin - Alternative 'A' Detention Basin Discharge Flow Rates	41
Table 3.5.2.0: Modified Hydro-modification Basin - Alternative 'B' Peak Flow Rates	42
Table 4.0: Interim Minimum Detention Basin Volumes	43

EXHIBITS INDEX

		Appendix
Exhibit A:	SunCreek Specific Plan - Vicinity Map	B - 1
Exhibit B:	SunCreek Specific Plan - Land Use Plan, Reduced 11x17	B – 2
Exhibit C:	SunCreek Specific Plan - Drainage Study Area Map	B – 3
Exhibit D:	SunCreek Specific Plan – Typical Hydro-modification Detention ... Basin Plan	B – 4
Exhibit E:	SunCreek Specific Plan – Typical Hydro-modification Detention ... Basin Cross-Section	B – 5

APPENDIX INDEX

Appendix A: cbec Hydro-modification Planning Assessment for the SunCreek Specific Plan

Appendix B: Exhibits (See Exhibits Index)

Appendix C: Schematic Designs of Anatolia III – Alternatives 'A' thru 'D'

Appendix D: Schematic Design of Morrison Spill Pipeline

Appendix E: Technical Memorandum – Stand Alone Detention Basin Alternative

Appendix F Technical Memorandum – Community Park Detention Basin Alternative

Appendix G: Technical Memorandum – Shalako Detention Basin Alternatives

Appendix H: Technical Memorandum – Updated Storm Drain Demands

Appendix I: Summary of Sunrise Boulevard Flood Protection Study

Appendix J: SunCreek Specific Plan Area- Existing Conditions 100-year, 24-Hour Flood Plain Map

Appendix K: SunCreek Specific Plan Area- Baseline Conditions 100-year, 24-Hour Flood Plain Map

Appendix L: SunCreek Drainage Study Area - Existing Conditions Watershed Map

Appendix M: SunCreek Drainage Study Area - Baseline Conditions Watershed Map

Appendix N: SunCreek Specific Plan Area - Baseline Conditions Watershed Map

Appendix O: SunCreek Specific Plan Area – Contour Grading Plan

Appendix P: HEC-RAS Results

Appendix Q: Electronic Files

1.0 Executive Summary

The SunCreek Specific Plan is a proposed 1,266+/- acre development consisting of mostly single-family residential land uses within the Sunrise Douglas Community Plan. The project includes low to high-density single-family residential units, some multi-family residential units, a High/Middle School Site, an elementary school, parks, open space areas and commercial land uses.

The purpose of the study is to analyze, identify and document the SunCreek Drainage Study Area's existing drainage infrastructure deficiencies, required on-site and off-site drainage facilities that are necessary to maintain downstream drainage impacts to existing conditions or below existing conditions such that the Project develops in a safe and responsible manner. The SunCreek Specific Plan is located within the limits of the City of Rancho Cordova. Refer to **Exhibit A: SunCreek Specific Plan - Vicinity Map** to see the location of the SunCreek Specific Plan. The SunCreek Specific Plan is bounded by Sunrise Boulevard, the Anatolia III development and Rancho Cordova Parkway on the west. The eastern boundary is adjacent to Grant Line Road and undeveloped County of Sacramento property. Two SunRidge Specific Plan projects, Arista del Sol and the Preserve, are adjacent to the northern project boundary while the southern boundary is adjacent to the Arboretum Project. Refer to **Exhibit B: SunCreek Specific Plan - Land Use Plan** to see the SunCreek Specific Plan land uses and adjacent projects.

The SunCreek Specific Plan Area can develop as proposed by constructing the drainage infrastructure consisting of pipelines, open bottom con-span bridge crossings of Kite Creek and hydro-modification detention basins. The Hydro-modification Detention Basins include a combination wet-dry water quality basin which will be kept in the wet condition during the summer months due to the anticipated summer nuisance flows. Summer nuisance flows that exceed the evaporation rate and percolation rate of the wet water quality basin will be percolated into the ground through specially designed and constructed percolation trenches placed in the Hydro-modification Detention Basin floor. The impacts on Kite Creek due to hydro-modification is mitigated by slowly metering out storm runoff to match undeveloped runoff rates for storms ranging from 25% of the 2-year storm up to and including the 100-year storm using a flow duration control strategy. The Hydro-modification Detention Basin reduces the SunCreek Specific Plan Area developed storm runoff rates calculated by the Sacramento Method for the 10-year, 24-hour storm and the 100-year, 24-hour storms to less than the predevelopment storm runoff rates.

Therefore, the SunCreek Specific Plan Area can develop without impacting the predevelopment water quality, hydro-modification of Kite Creek and the downstream watercourses by constructing the SunCreek Plan Area drainage Infrastructure discussed and identified in this study. Additional studies may be required by the County during project implementation (including evaluating the volume related increase impacts associated development of the SunCreek Specific Plan Area on the downstream creek system).

2.0 Introduction

2.1 Overview

The SunCreek Specific Plan Area (SunCreek Plan Area) is a proposed 1,266+/- acre development project located in the City of Rancho Cordova. The proposed project is within the Sunrise Douglas Community Plan and consists of mostly single-family residential land uses. The project includes low to high-density single-family residential units, some multi-family residential units, a High/Middle School Site, an elementary school, parks, open space areas and commercial land uses. The project site is bounded by Sunrise Blvd., the Anatolia III development and Rancho Cordova Parkway on the west. The eastern boundary is adjacent to Grant Line Road and undeveloped County of Sacramento property. Two Sunridge Specific Plan projects, Arista del Sol and the Preserve are adjacent to the northern project boundary while the southern boundary is adjacent to the Arboretum Project.

The SunCreek Plan Area is undeveloped land with relatively poor agricultural soils. The area has been used for dry farming and grazing. The terrain is slightly rolling terraces with elevations ranging from 120 to 230 feet above sea level situated within the upper reaches of the Laguna Creek watershed. Kite Creek is a tributary to Laguna Creek and transverses through the middle of the SunCreek Plan Area generally sloping from the northeast to the southwest. Kite Creek and the adjacent grasslands will be set aside as a permanent open space preserve area. Kite Creek exits the SunCreek Plan Area's southern boundary and meanders in a southerly direction approximately 4,000 feet where it joins Laguna Creek.

Another tributary to Laguna Creek flows through the eastern portion of the SunCreek Plan Area and connects to Laguna Creek approximately 3,100 feet south of the SunCreek Plan Area boundary.

This Regional Master Drainage Study for SunCreek Specific Plan (SunCreek Drainage Study) area analyzes the Laguna Creek Watershed from the headwaters to a point approximately 3,500 feet south of Florin Road. Refer to **Exhibit C: SunCreek Specific Plan – Drainage Study Area** to see the limits of this drainage study. The SunCreek Drainage Study area is situated between the Morrison Creek Watershed located adjacent to the northern Laguna Creek watershed boundary and the Deer Creek Watershed located adjacent to the eastern and southern Laguna Creek watershed boundary.

2.2 Purpose

The purpose of the SunCreek Drainage Study is to analyze and document the existing undeveloped watershed characteristics and determine the interim and

permanent drainage facilities that are necessary to maintain downstream drainage impacts to existing or below existing conditions such that the SunCreek Plan Area develops in a safe and responsible manner. The SunCreek Drainage Study investigates several detailed modeling scenarios for the entire Drainage Study Area. The electronic data files utilized with this analysis will be provided to the Sacramento County Water Agency, who will update as development occurs within the Study Area. Therefore, as the SunCreek Drainage Study Area develops the Sacramento County Water Agency will have a comprehensive understanding of the drainage facilities necessary to meet the goals of maintaining downstream impacts to existing or below existing conditions.

2.3 Previous Studies

The hydrologic impacts from the development of the Sunrise Douglas Community Plan were determined in the "Final Master Drainage Study, Sunrise-Douglas Community Plan Area, Sacramento California" dated October 16, 1998 prepared by the Spink Corporation. The Spink Corporation study was used as a reference to compare existing condition flow volumes, developed condition flow volumes and detention basin volumes at coinciding combination points. Wood Rodgers also prepared an analysis titled "Drainage Study Montelena, Including Sections for Anatolia 1 & 2 Updated Ultimate Conditions and As-Built Facilities Summary" (Montelena Drainage Study) dated September 2007. The Montelena Drainage Study is a compilation of several detailed drainage analysis prepared for the numerous developments within the Sunrise-Douglas Community Plan. The Montelena Drainage Study primarily focused on the Morrison Creek watershed but did include some analysis of impacts to Laguna Creek. The Montelena Drainage Study is the most current analysis available that discusses development impacts to the Morrison Creek and Laguna Creek Watersheds adjacent to and/or within the SunCreek Plan Area.

Since the two drainage studies mentioned above do not provide sufficient detail of the Laguna Creek Watershed analyzed with this Study they are essentially used as references in the preparation of this SunCreek Drainage Study.

2.4 Land Use Changes

The preparation, review and approval of a specific plan is a very long extensive process. As a specific plan goes through the preparation, review and approval process they evolve and under go numerous revisions and changes. The SunCreek Specific Plan is typical of all specific plans going through the review and approval process; it has changed and evolved since the last review of the SunCreek Drainage Study was conducted by Sacramento County Water Resources. Since preparation of the December 2008 draft version of this report the SunCreek Specific Plan has undergone several minor land use changes in response to requirements imposed by various jurisdictional reviewing agencies. A new land use plan has been prepared for the project. While the new land use

plan now exists, a conscientious decision was made to prepare this report using the prior land use plan for the purposes of economy, as it wasn't cost efficient to reflect the relatively minor and insignificant land use changes in this report. These changes in land use, principally relating to the addition of more employment related land uses in favor of low density, medium density and compact density residential land uses. These changes in land uses have only a minor impact on the storm drainage runoff generated by the development project. To review a more detail analysis and discussion about the changes in the SunCreek Plan Area land uses and the impacts to the storm water runoff refer to **Appendix H: Updated Storm Drain Demands.** In fact the findings of Appendix H indicate that the total impervious area of the current land use plan is slightly less than that of the prior land use plan used for analysis in this report. Accordingly, the findings of this report are slightly conservative as compared to those that would have resulted from analyzing the current land use plan.

2.5 Existing Conditions

The SunCreek Plan Area is within the Laguna Creek watershed. The majority of the existing land within the SunCreek Drainage Study area is undeveloped property with approximately a dozen ranch style homes that use their land for dry farming and as grazing land for livestock. The terrain of the SunCreek Drainage Study area is comprised mostly of annual grasslands interspersed with occasional groups of non-native trees, seasonal wetlands and drainages typical of eastern Sacramento County

The SunCreek Drainage Study area can be characterized as rolling terrain with elevations above mean sea level ranging from 100 near Florin Road to 260 at the headwaters of Laguna Creek. The greatest surface relief occurs along Laguna Creek and its tributaries that traverse the SunCreek Drainage Study area, which generally slopes, from the northeast to the southwest. The main drainage feature that occurs within the SunCreek Plan Area is referred to as Kite Creek and is a tributary of Laguna Creek.

A portion of the SunCreek Drainage Study area is adjacent to an existing single-family development called Anatolia III. Anatolia III is a 200-acre subdivision and is the only developed land within the SunCreek Drainage Study Area. Prior to the Anatolia III development, Kite Creek entered the Anatolia III property's eastern boundary and meandered for approximately 3,000 feet through the undeveloped property until it exited the site through the southern boundary. The development of the Anatolia III project realigned the Kite Creek channel to follow the eastern and southern boundary thus allowing for more development to occur. The downstream connection of the realigned Kite Creek channel was constructed several feet below the existing Kite Creek channel flow line elevation. As a result, a backwater condition occurs within the Kiefer Boulevard box culverts and the lower reaches of the Anatolia III channel.

The Morrison Creek watershed is located north of the Laguna Creek watershed. The area adjacent to the SunCreek Plan Area within the Morrison Creek watershed has been developing the last several years. The Montelena Drainage Study states that a portion of the runoff from the 100-year, 24-hour storm occurring in the Morrison Creek watershed spills (Morrison Spill) into the Laguna Creek watershed. The Morrison Spill occurs within an open space preserve area located north of Kiefer Boulevard and east of Sunrise Boulevard. The Morrison Spill traverses through the open space preserve, cross's under Kiefer Boulevard, continues through the SunCreek Plan Area and eventually connects to Kite Creek.

Kite Creek joins Laguna Creek approximately 4,000 feet south of the SunCreek Plan Area boundary. Laguna Creek continues in a southerly direction towards State Route 16 also known as Jackson Road or Jackson Highway. Jackson Highway crosses over Laguna Creek near the lower reaches of the SunCreek Drainage Study area. There are two bridges at this location, which are approximately 300 feet east of the Sunrise Boulevard intersection. The northern bridge (Jackson Highway Bridge - North) is not currently used for vehicular traffic since the reconstruction of Jackson Highway several years ago. The southern bridge (Jackson Highway Bridge – South) spans the Laguna Creek Channel parallel to the north bridge. The two bridges are separated by approximately 37 feet.

Located downstream of the Jackson Highway bridges, Laguna Creek flows under Sunrise Boulevard. The Sunrise Boulevard Bridge is located approximately 450 feet south of the Jackson Highway intersection.

Laguna Creek continues flowing in a westerly direction where approximately 600 feet west of Sunrise Boulevard it crosses over the Folsom South Canal. The Folsom South Canal over crossing is another restriction to the Laguna Creek cross-section. The Folsom South Canal flows under Laguna Creek through an inverted siphon.

After crossing over the Folsom South Canal, Laguna Creek flows through a preserve area on the Triangle Rock Quarry Property. The Triangle Rock Quarry is located west of the Folsom South Canal and north of Florin Road. Laguna Creek flows through the preserve corridor on the Triangle Rock Quarry property in a southerly direction towards Florin Road. Laguna Creek flows under Florin Road at the Triangle Rock Quarry southern boundary and continues to the south. The area located south of Florin Road is the lowest downstream reach analyzed in the SunCreek Drainage Study Area.

2.6 FEMA Information

The most recent Federal Emergency Management Agency's (FEMA) Flood Insurance Study (FIS) Flood Insurance Rate Maps (FIRMs) revised September 30, 1988, situates the SunCreek Plan Area in the unshaded Zone X.

2.7 US Army Corps of Engineers, Section 404 Permitting

The SunCreek Specific Plan is required to secure a Section 404 permit under the Clean Water Act from the United States Army Corps of Engineers. The SunCreek Specific Plan approach to securing the Section 404 permit will be consistent with other large plan areas. The approach will consist of a bundled application consisting of a comprehensive overview of the Specific Plan and its associated infrastructure, a backbone infrastructure permit application and five individual permit applications for the private development projects within the Plan Area. The applications will be completed to enable each development project to proceed, relying on the common infrastructure improvements, but independent of the other development projects.

The SunCreek Specific Plan overall infrastructure plan has been designed to serve the comprehensive needs of the entire Plan Area. A separate backbone infrastructure permit for the backbone roadways, sewer pipelines, water transmission and distribution mains and storm drainage improvements required for any development project within the Plan Area to be able to proceed will be acquired. The City of Rancho Cordova will be the applicant for the backbone infrastructure permit.

The intent of this approach to the Corps of Engineers Section 404 permitting process is to enable the coordinated review of the Specific Plan Area and allow each development project to move forward with construction independent of the other projects once a permit is issued.

2.8 Soils Information

The soil type classification for each drainage sub shed was determined by using the soils survey of California, Sacramento County. Image files from U.S. Department of Agriculture were downloaded from their web site and referenced into the drainage exhibits for both pre and post conditions. The image files were scaled into the overall watershed plats and poly line areas established where the soils classification is identified as either type A, B, C, or D respectively. These areas are used in the SacCalc model for deriving the hydrology. The overall shed is predominately type D soil conditions. In some cases, due to lack of detailed information, sub sheds were assumed as type D soil in their entirety. The Waegell property, for example, an area under study by others and with limited information as to sub shed layout, has been assumed as type D soil for the entire shed area.

2.9 Hydrologic Design Criteria

This Regional Master Drainage Study has been prepared in accordance with the Sacramento County Improvement Standards, Hydrology Standards and Floodplain Management Ordinance, and the requirements of the City of Rancho Cordova.[1]

Hydraulics analyses have been performed using version 3.1.3 of the US Army Corps of Engineers HEC-RAS program using the unsteady state routines. Hydrographs were produced by one of the two following methods:

- Sacramento County Hydrologic Calculator, Sac Calc version 1.1 was used to develop drainage runoff hydrographs generated from drainage sheds.
- XPStorm version 10.6.2 was used to further refine various hydrographs by routing through proposed detention basins and pipe networks.

2.10 Hydro-modification Assessment

The County of Sacramento is in the process of renewing their MS 4 Permit with the Regional Water Quality Control Board (RWQCB). The RWQCB has been requiring jurisdictions seeking renewal of their MS 4 Permit to include hydro-modification mitigation as a requirement for receiving a renewed MS 4 Permit. Anticipating this new requirement by RWQCB and Sacramento County, the SunCreek Drainage Study includes hydro-modification mitigation measures.

The SunCreek Owners Group retained cbec. Inc to conduct a hydro-modification assessment of the potential hydro-modification impacts of the SunCreek Plan Area on Kite Creek. A complete copy of the cbec Inc. assessment is provided in **Appendix A: cbec Hydro-modification Planning Assessment for the SunCreek Specific Plan**.

Currently the County of Sacramento does not have standards for determining impacts due to hydro-modification. Therefore as part of the hydro-modification assessment for the SunCreek Plan Area ten hydro-modification criteria and objective standards where developed. These ten hydro-modification criteria and standards are used to evaluate the hydro-modification impacts caused by the SunCreek Plan Area and propose mitigation measures to reduce the impacts to predevelopment levels.

The SunCreek Drainage Study includes a hydro-modification assessment and mitigation plan for the hydro-modification impacts due to the development of the SunCreek Plan Area. The hydro-modification assessment will assess the hydrologic and geomorphic impact of the SunCreek Plan Area relative to existing

[1] References within this master plan to Sacramento County shall be understood to mean "Sacramento County and the City of Rancho Cordova", as appropriate.

conditions on the segments of Kite Creek and the Laguna Creek tributaries that are within the SunCreek Plan Area.

Continuous simulation is emerging as the standard approach for assessing hydro-modification because it takes into account the cumulative effect of geomorphically-significant medium sized events. A continuous simulation model in HEC-RAS (HMS) with a 49-year, 1-hour interval precipitation record was utilized for this analysis. The range of flows that is typically responsible for most channel erosion has been found to be flows that fall between some fraction of the 2-year storm and the 10-year storm.

Typically, three methods, flow duration control, low impact development and in-stream approaches are used to mitigate the impacts of hydro-modification on a water course. A permanent open space preserve area has been established along the Kite Creek corridor and adjacent grasslands that must be maintained in its current condition throughout the development of the SunCreek Plan Area. Therefore the in-stream approach to mitigate the impacts of hydro-modification can not be implemented or utilized by the SunCreek Plan Area. The low impact development approach requires a home builder to select materials and implement various techniques that improves the storm runoff water quality and also reduces the storm runoff volumes. Since the SunCreek Plan Area is several years from the start of home construction the specific low impact development techniques can not be determined at this time. Therefore, the SunCreek Plan Area will only utilize the flow duration control technique to mitigate the impacts of hydro-modification.

2.11 Hydro-modification Detention Basin Design

The approached utilized by the SunCreek Plan Area to mitigate hydro-modification impacts to Kite Creek is to employ flow duration control devices such that the post-development hydro-modification impacts do not exceed the predevelopment hydro-modification impacts to Kite Creek. The SunCreek Plan Area has designed its detention basins too slowly meter out storm runoff such that the release rate meets the hydro-modification criteria and objective standards developed to mitigate for hydro-modification impacts.

The SunCreek Plan Area has designed the detention basins with three separate types of storm water storage components. These separate storm water storage components are stacked on top of each other within the detention basin. The first type of storm water storage is strictly hydro-modification storage; the second component is both hydro-modification storage and storm water storage. This second storage component has its maximum water surface elevation set by the 10-year, 24-hour storm. The third storage component is additional storm water storage and has its maximum water surface elevation set by the 100-year, 24-hour storm.

Each detention basin has a specifically designed outlet control structure that attenuates the storm water runoff to comply with the hydro-modification criteria and objective standards as they apply to the detention basin watershed and the receiving water course. The detention basin outlet control structure detains a portion of the storm runoff generated up to a 100-year, 24-hour event and slowly releases the runoff through a series of varying diameter orifices set at varying elevations. The detention basin outlet control structure has one or more 12-inch or larger diameter orifices set 1.5 feet above the detention basin floor elevation. The first 1.5-feet of storm runoff stored in the detention basin comprises the first type of storm water storage; strictly hydro-modification storage. The storm water within this portion of the detention basin is slowly released out of the detention basin over an extended period of time through a 2-inch diameter orifice set at the same elevation as the detention basin floor. The hydro-modification component in the detention basin is considered a dead storage volume and therefore is not included in the storage volume calculations for storm water detention. The 10-year and 100-year detention basin volumes indicated in tables of this study are calculated above the 1.5 foot of dead storage.

As the water surface in the detention basin rises above the 1.5 foot hydro-modification storage component, the storm water runoff release rate is attenuated by the 12-inch and larger diameter orifices. The top of the outlet control structure will be an open grated opening. The opening will be sized to pass the 100-year, 24-hour peak flow rate. Therefore, In the event a storm larger than the 100-year, 24-hour storm occurs or if the outlet control structure orifices malfunction, the rising water level will reach the open top of the structure and then be discharge out of the basin. As a backup to the opening on the top of the outlet control structure a portion of the embankment separating the detention basin from the receiving watercourse will have a spillway that will allow storm runoff to pass through the basin.

Summer Nuisance flows have recently become another area of concern. Summer nuisance flows occur during the dry (summer) season and are mostly generated from the developments residents by over irrigation of landscaping, washing of vehicles and other domestic uses that results in water running off of the development. Ephemeral tributaries that did not typically receive water runoff during the summer could become a perennial tributary due to summer nuisance flows. A component of the Corps of Engineers Conceptual-Level Strategy for the SunCreek Plan Area is to retain the ephemeral nature of the creek system and to minimize the potential for an existing ephemeral tributary becoming a perennial tributary after development occurs in the watershed.

The SunCreek Plan Area has addressed the impacts of summer nuisance flows by retaining the summer nuisance flow runoff within the detention basin. The detention basins are designed as combination water quality basins. The storm drains pipes for each detention basin shed area discharge into a permanent wet water quality basin which treats the development runoff through gravitational

settling and biological processes. During the summer season the summer nuisance flows will assist in maintaining the proper water quality volume within the basin. Excess summer nuisance flows that enter the water quality basin and do not evaporate will enter a percolation trench field through a pipeline network constructed within the detention basin floor. There will be two separate percolation trench fields each sized to percolate 100% of the summer nuisance flows. As a routine maintenance procedure the percolation trench fields will be alternated on a yearly basis. A typical percolation trench for the SunCreek Plan Area is designed as follows:

Typical SunCreek Plan Area Percolation Trench Design

Total SunCreek Plan Area = 1,262 acres

Wetland Preserve Area = 235 acres

Net Developable Area = 1,027 acres

Total No. of Basins = 12

Average Development Area per Basin = 1,027 acre/12 basins = 85.6 acres

Dry Season Flow per Average Basin = 85.6 acres x 0.001525[(1)] AF / Day = 42,533 gallons per day.

Assumed Percolation Rate below hardpan layer of 1-inch / hour (24 inches/day) [(1)].

Assume 3-ft. wide x 200-ft. long Percolation Trench

Percolation Volume per trench per day = (3-ft x 200-ft x 24-inches per day / 12-inches per ft) x 7.48 gallons per cubic foot = 8,976 gallons per day.

No. of Percolation Trenches required = 42,533gpd / 8,976gpd = 4.73 Trenches.

Therefore, the average basin will include 5 percolation trenches 3-ft. wide x 200-ft. long.

(1) Stormwater Quality Design Manual for the Sacramento and South Placer Regions, dated May 2007, Table DB-2 Dry Weather Design Flows, Residential Basins 34, 63, 69, 132, average flow, page DB-8.

The above calculations for the percolation trenches show that the typical SunCreek Plan Area detention basin can mitigate the summer nuisance flow impacts. During the improvement plan phase more detailed calculations will be required to address the water quality volume, hydro-modification volume, summer nuisance flow volume, outlet control structure design, detailed grading

and landscaping requirements, and together with the detailing of the outlet discharge at the edge of the preserve area.

The combination water quality basins will be constructed below the hydro-modification storage component of the detention basin and as such the volume of water within the combination water quality component of the basin is also considered dead storage and is not included in the hydro-modification or storm runoff detention volumes indicated in the tables of this study.

Refer to **Exhibit D – Typical Hydro-modification Detention Basin Plan** to review a plan view of the typical SunCreek Plan Area detention basin and **Exhibit E – Hydro-modification Detention Basin Cross Section** to review a cross section view of a typical SunCreek Plan Area detention basin.

3.0 Hydrologic Models

The Regional Master Drainage Study for the SunCreek Specific Plan has been prepared in accordance with the Sacramento City / County Drainage Manual Volume 2: Hydrology Section. This drainage study utilizes a two step modeling process. The hydrology is derived from the Sacramento Hydrological Calculator (SacCalc) as required by the County hydrology standards. The hydrographs derived from SacCalc are incorporated into a HEC-RAS "unsteady state" analysis in order to determine the peak flow and hydraulic grade line. This study has utilized topography that is based on the National Geodetic Vertical Datum of 1929.

3.1 Existing Condition Model

In order to determine the hydrologic impacts of SunCreek Plan Area, an analysis needs to be performed that analyzes the "Existing Conditions" of the SunCreek Drainage Study Area. This Existing Conditions Model will provide a basis for comparison with the various "Developed" models prepared as part of this analysis. The Existing Conditions are defined by the current land uses within the 6,930-acre SunCreek drainage Study Area and the occurrence of the Morrison Spill. The Morrison Spill has a 100-year, 24-hour peak flow of approximately 127 cfs and a 100-year, 10-day peak flow of approximately 243 cfs spilling out of the Morrison Creek Watershed into the Laguna Creek Watershed. The only developed land within the SunCreek Drainage Study Area is a 200-acre subdivision known as Anatolia III. The Anatolia III development is modeled as a completed project while the remainder of the watershed is modeled as undeveloped land.

The Anatolia III development has filled approximately 2,400 feet of the original Kite Creek stream course and routed it around the perimeter of the Anatolia III Project in a trapezoidal cross section channel. The Anatolia III channel intercepts the existing Kite Creek channel at the developments eastern boundary and routes the channel through the Anatolia III development project and reconnects to the existing Kite Creek channel adjacent to the Anatolia III southern boundary. In addition to the on-site channel improvements, the Anatolia III project constructed a water quality basin and an off-channel detention basin. The water quality basin and off-channel detention basin are sized to treat and detain the developed Anatolia III design storm runoff to undeveloped water quality, runoff flow rates and volumes.

The Morrison Spill occurs within an open space preserve area located north of Kiefer Boulevard and east of Sunrise Boulevard. Storm runoff ponds on the east side of Sunrise Boulevard due to the limited carrying capacity of the drainage over-crossings spanning the Folsom South Canal. As the storm runoff ponding depth increases some runoff spills from the Morrison Creek watershed into the Laguna Creek watershed. The hydraulic modeling of the Morrison Spill was first

completed by Wood Rodgers and was reported in their Montelena Drainage Study. The information, in the form of DSS files, was provided for the 100-year 24-hour and 100-year, 10-day analyses. Since the Morrison Spill does not occur until approximately the 50-year, 24-hour storm it was not included in the SunCreek Drainage Study 10-year, 24-hour analysis. The provided DSS files include the Morrison Spill and the tributary flow for the subarea directly north of Kiefer into four existing 36" culverts that cross under Kiefer Boulevard. Therefore, drainage sub areas EX_KC10 under existing conditions (See Exhibit D) and subarea KCOS-12 under baseline and regional model conditions (See exhibit E) are not modeled as subareas in the SunCreek Drainage Study 100-year, 24-hour analyses. The SunCreek Drainage Study models the Morrison Spill from the outlet of the existing 36-inch culverts into a minor tributary channel to Kite Creek. This tributary channel crosses under Sunrise Boulevard approximately 600 feet south of the Kiefer Boulevard/Sunrise Boulevard intersection and runs southerly along the west side of Sunrise Boulevard until it crosses under Sunrise Boulevard again and then flows in a southeasterly direction where it finally connects to Kite Creek. This Morrison Spill tributary confluence with Kite Creek is approximately 900 feet upstream of the Kite Creek confluence with Laguna Creek. The Morrison Spill tributary has a limited flow capacity.

A segment of Laguna Creek, north of the Kite Creek confluence is being modeled by Wood Rodgers as part of a future development on the Waegell property called the Arboretum. A HEC-RAS "unsteady state" model was provided by Wood Rodgers that includes the portion of Laguna Creek from it's confluence with Kite Creek easterly and upstream to Kiefer Boulevard. Due to a difference in modeling simulations times between the Wood Rodgers and MacKay & Somps models and discussions with the County of Sacramento, MacKay & Somps incorporated the Wood Rodgers HEC-RAS data file for this segment of Laguna Creek into the MacKay & Somps model and then utilized the flows generated from the MacKay & Somps SacCalc model. This allowed the MacKay & Somps model to run without errors. MacKay & Somps made the following changes to the original Wood Rodgers data files:

- The number of Wood Rodgers interpolated cross sections between stations 62250 and 5400 was reduced by half.
- The flow-line elevation of Wood Rodgers station 180 was lowered from 115.00 to 114.00 in order to conform to the MacKay and Somps flow-line elevation. The interpolated sections between station 180 and the next upstream section were re-interpolated to conform to the adjusted flow-line elevation.
- Reduced the Wood Rodgers total minimum flows and distributed the minimum flow to various station locations.

Refer to **Appendix L: SunCreek Drainage Study Area - Existing Conditions Watershed Map** to review the map used as the basis for developing the Existing Conditions Model.

The Existing Conditions peak flows at several compliance points are summarized in **Table 3.1: Existing Conditions Peak Flow Rates**.

Table 3.1: Existing Conditions Peak Flow Rates

Compliance Point Location	Creek Section Station	10-Year, 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Yr., 24-hour Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	1,025	106.29	1,801	106.65
2	36+00	1,036	111.21	1,810	112.61
3	70+00	989	114.29	1,741	115.61
4	76+19	848	114.97	1,501	116.06
5	80+95	848	115.32	1,504	116.33
6	82+00	849	115.83	1,508	117.58
7	112+05	826	118.27	1,518	118.91
8	152+00	402	123.57	669	123.84
9	61+45	N/A	N/A	127	149.16
10	184+50	386	129.09	635	129.49
11	212+00	332	134.30	591	134.76
12		157	205.02	271	205.30
13		138	223.31	234	223.70

Note: Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.

The information shown in Table 1 is based on the HEC-RAS "unsteady state" model for existing conditions with the exception of section locations 12 and 13. These points are located along a sub-tributary to Laguna Creek. The HEC-RAS model received from Wood Rogers did not extend up to the limits of where this sub tributary line would drain into Laguna Creek. It is anticipated with the future development of the Cordova Hills site, located northeast of SunCreek, that a detailed HEC-RAS analysis will be compiled that will include this portion of Laguna Creek. At that time a more detailed analysis can be compiled. For the purposes of this study, the information shown for Compliance Points 12 and 13 are based on a normal depth calculation using the flows derived from SacCalc. These results shown should be conservative since no affects for attenuation are considered.

Refer to The Existing Conditions Model identified several undesirable impacts occur to the existing infrastructure within the SunCreek Drainage Study Area. The Existing Condition Model impacts are as follows:

- Due to the grade differences at the downstream end of the Anatolia III Channel and Kiefer Boulevard Box Culverts, a backwater condition occurs

within the box culverts and the lower reaches of the Anatolia III channel. Also, the existing Kite Creek channel downstream of Kiefer Boulevard box culverts will most likely erode until the invert of the natural stream course no longer causes a backwater effect, a condition that needs to be avoided. This condition can be corrected by re-grading the Anatolia III channel bottom with less channel slope such that the channel bottom elevation matches the existing downstream Kite Creek low flow channel elevation. This would reduce the Anatolia III channel slope from approximately 0.0027 to approximately 0.0014. The channel velocities would reduce and the water surface would increase but remain within the channel banks.

- During the 100-year, 24-hour storm, the Jackson Highway Bridge (North) creates a backwater condition upstream of the structure. This backwater condition causes ponding to occur north of Jackson Highway and east of Sunrise Boulevard. The backwater condition floods the field north of the Highway and encroaches near the Jackson Highway shoulder but maintains more than 1' freeboard at a sag location several hundred feet to the east of the Laguna Creek channel and Jackson Highway Bridge.

- During the 100-year, 24-hour storm, the Sunrise Boulevard Bridge is overtopped based on the models sectional dimensions. Since the storm runoff is constrained from passing under Sunrise Boulevard the storm runoff floods the field east the roadway and eventually reaches a depth that overtops Sunrise Boulevard. The overtopping occurs for approximately 7 hours with a flow width of 436 feet and a maximum flow depth a little less than 1 foot.

- Due to several conveyance constraints, Florin Road bridge and Folsom Canal Over-crossing, within the lower reaches Laguna Creek a backwater condition causes ponding to occur upstream of the Folsom Canal Overcrossing. The area of land situated between the Folsom Canal over-crossing and Sunrise bridge floods due to these constraints.

- Sacramento County Department of Water Resources retained West Yost Associates to perform a detailed study of the existing flooding problem at Sunrise Boulevard and Laguna Creek. The West Yost study (dated January 5, 2010) was commissioned to determine the appropriate solution to this existing flooding problem. The West Yost study found that raising the bridge and roadway above the 100-year water surface elevation appears to be a feasible approach for protecting the road. Refer to **Appendix I: Summary of Sunrise Boulevard Flood Protection Study** to review the West Yost findings.

  It is interesting to note that development of SunCreek Plan Area does not exacerbate the existing flooding problem south of Jackson Road and at the Sunrise Boulevard crossing of Laguna Creek. Any increases in peak flows

that result from development of the SunCreek Plan Area are mitigated through the use of on-site detention basins, with the peak flows after development being equal to or less than existing flows downstream of the SunCreek Plan Area project.

Accordingly, post-development flows from the SunCreek Plan Area neither increase depth of flooding nor significantly increase the duration of flooding that currently exists at Sunrise Boulevard. Additional studies may be required by the County during project implementation (including evaluating the volume related increase impacts associated development of the SunCreek Specific Plan Area on the downstream creek system).

3.2 Developed Conditions Model

The Developed Conditions Model is based on a fully developed SunCreek Drainage Study Area. This model utilized the existing conditions model as a starting point and added in the SunCreek Plan Area land use plan. The SunCreek Plan Area is modeled without peak flow attenuation. The Anatolia III development was modeled the same as the existing conditions model (developed) with its current channel, water quality and detention basins remaining in place. The remainder of the watershed is also be modeled the same as the existing conditions model (undeveloped).

The Developed Conditions peak flows are summarized in **Table 3.2: Developed Conditions Peak Flows**.

Table 3.2: Developed Conditions Peak Flows

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	1,292	106.42	2,076	106.52
2	36+00	1,306	111.43	2,086	112.47
3	70+00	1,244	114.79	1,957	115.89
4	76+19	1,040	115.31	1,607	116.40
5	80+95	1,045	115.66	1,607	116.62
6	82+00	1,048	116.52	1,607	118.14
7	112+05	1,050	118.50	1,773	119.08
8	152+00	700	123.88	1,155	124.18
9	61+45	N/A	N/A	127	149.16
10	184+50	600	129.66	994	130.21
11	212+00	499	134.93	835	136.53
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The results of the Developed Conditions Model confirm that a fully developed SunCreek Specific Plan Area generates peak flow storm runoff rates well above the Existing Conditions Model peak flow storm runoff rates. Therefore, in order for the SunCreek Specific Plan Area to develop it is desirable that the peak flow storm runoff rates be attenuated to be equal to or less than the Existing Conditions peak flow storm runoff rates.

3.3 Baseline Conditions Model

The Baseline Conditions Model is based on a fully developed SunCreek Plan Area. This model utilized the existing conditions model as a starting point and added in the SunCreek Plan Area.

The SunCreek Plan Area development has been divided into twelve separate drainage shed areas. Each one of these drainage shed areas have a detention basin designed based on the land uses, grading, boundary conditions and the receiving water courses characteristics. Each detention basin shed area is designed so the entire shed area drains either through a network of storm drain pipelines or by overland flow to the detention basin. Refer to **Appendix O: Contour Grading Plan Map** to review schematic contour grading plan of the SunCreek Specific Plan.

The Anatolia III development was modeled the same as the existing conditions model (developed). The remainder of the watershed will also be modeled the same as the existing conditions model (undeveloped).

This model includes the SunCreek Plan Area water quality and detention basins sized such that the flow rates exiting the SunCreek Plan Area boundaries does not exceed the existing conditions flow rates. XPStorm has been incorporated to analyze the detention basins. This modeling was accomplished by taking the flows derived from SacCalc importing them into XPStorm to analyze the detention basins. The XPStorm detention basin results were then imported into the HEC-RAS "unsteady state" model. The detention basins were analyzed for the 10-year, 24-hour and the 100-year, 24-hour storms for Basins 2 through 12.

Detention Basin No. 1 is within drainage sub-shed LCDV-01 and is comprised of 88.4+/- acres of development within the Plan Area. Drainage sub-shed LCDV-01 is the only SunCreek Plan Area sub-shed area that drains directly to Laguna Creek instead of Kite Creek. Detention Basin No. 1 serving sub-shed LCDV-01 has been modeled only in SacCalc due to the limits of the HEC-RAS data does not extend to the junction point where this basin and sub-shed area connect to Laguna Creek. Therefore, Detention Basin No. 1 was sized such that the resultant peak flow at Kiefer Boulevard just north of Blodgett Reservoir does not exceed the existing conditions peak flow.

The Morrison Spill is passed under Kiefer Boulevard by four 36-inch culverts. To minimize the impact to the SunCreek Project Area, the Morrison Spill will be

intercepted at the Kiefer Boulevard culverts and routed around the Project. To accomplish the rerouting of the Morrison Spill a junction structure located in-line with the four 36-inch culverts under Kiefer Boulevard will intercept these flows. A 72-inch diameter pipe will connect the junction structure to a new outlet structure constructed adjacent to the existing Kiefer Boulevard box culverts built with the Anatolia III Project. The 72-inch diameter pipeline is sized to convey the higher peak flow of 243 +/- cfs generated by the 100-year, 10-day storm rather than the peak flow rate of 127 +/- cfs generated by the 100-year, 24-hour storm. The velocity energy will be dissipated in the new outlet structure before the flow enters the preserve/open space area and Kite Creek. To review a schematic design of the Morrison Spill Pipeline refer to **Appendix D: Schematic Design of Morrison Spill Pipeline.**

Since the Morrison Spill is coming from the adjacent Morrison Creek watershed through existing water quality and detention basins by way of overland flow into the Laguna Creek watershed, the SunCreek Drainage Study treats the Morrison Spill as an existing condition flow. Therefore, the Morrison Spill flows do not require additional water quality treatment or detention within the SunCreek Plan Area. As discussed, the Morrison Spill will be conveyed through a proposed pipe system along Kiefer Boulevard and outfall into Kite Creek. Under existing conditions the Morrison Spill connects to Kite Creek approximately 1,600 feet south of the SunCreek southern boundary. A direct comparison between the Existing Conditions Model and Baseline Conditions Model at the SunCreek southern boundary is not possible; therefore the next downstream compliance point is used to compare the Existing Conditions flow rates with the Baseline Conditions flow rates.

The 102.3+/- acre Open Space Preserve (Sub-shed KCOS-05) located east of Rancho Cordova Parkway and north of the SunCreek Plan Area has been modeled in a similar fashion as the Morrison Spill. The storm related runoff from this sub-shed is from an undeveloped open space area and does not require water quality treatment or detention within the SunCreek Plan Area. The runoff from sub-shed KCOS-05 naturally drains towards the northeast corner of the Rancho Cordova Parkway-North Campus Drive intersection. An inlet structure will be constructed at this location and the storm runoff from sub-shed KCOS-05 is routed through a 48-inch diameter pipe located in Rancho Cordova Parkway. The 48-inch diameter pipeline is sized to convey the higher peak flow of 84 +/- cfs generated by the 100-year, 24-hour storm rather than the peak flow rate of 50 +/- cfs generated by the 100-year, 10-day storm. The 48-inch pipeline will follow Rancho Cordova Parkway to the south where it drops into a 72-inch diameter pipe. The drop into the 72-inch diameter pipeline will help to dissipate the velocity energy generated in the 48-inch pipeline before discharging into the preserve/open space area just upstream of the Rancho Cordova Parkway box culverts. Additional energy dissipation measures prior may be needed to discharge into the preserve/open space to prevent erosion of the streambed.

There are three upstream undeveloped off-site areas that drain into the SunCreek Plan Area. Two of these off-site areas are within the boundaries of "The Preserve Project" located north of North Campus Drive. The other upstream off-site area is located at the south east corner of Rancho Cordova Parkway and Kiefer Boulevard. This drainage study assumes that these three upstream off-site areas are developed. A portion of the runoff generated during a storm is collected in a pipeline system with the remaining runoff draining overland to the downstream SunCreek Plan Area detention basin. Therefore, these three upstream off-site areas are included in the sizing of the appropriate downstream SunCreek Plan Area Hydro-modification Detention Basin. Refer to the **Appendix E: Stand-Alone Detention Basin Alternative** to review the design assumptions and results of having these three upstream offsite areas being directly connected to the open space preserve area. The Stand-Alone Detention Basin Alternative allows the upstream areas to develop there own detention strategy and also determines the fair share contribution to the sizing of the SunCreek Plan Area Hydro-modification Detention Basins should it be decided that they ultimately get connected into the SunCreek drainage infrastructure.

Kite Creek sub-shed KCOS-03A is a 168.5+/- acre off-site area located north of Chrysanthy Boulevard has been modeled as unimproved land (Existing Conditions). This sub-shed area has been routed through the SunCreek Project in a dedicated 60-inch diameter pipeline that is connected to the preserve/open space area near the intersection of Americanos Boulevard and North Campus Drive. A majority of sub-shed KCOS-03A is currently planned to be developed as the Arista Del Sol subdivision. The Arista Del Sol development will be responsible to provide water quality treatment, peak flow attenuation and hydro-modification mitigation to meet the developments needs. The 60-inch diameter pipeline extended through the SunCreek Plan Area to the Arista Del Sol project is sized to convey the undeveloped 100-year, 24-hour runoff flow rate.

Laguna Creek sub-shed LCDV-00 is a 559.6+/- acre off-site area located north of Chrysanthy Boulevard has been modeled as an unimproved land (Existing Conditions). This sub-shed area has been routed around the SunCreek Project in an open trapezoidal channel. The channel follows the SunCreek Plan Area's eastern boundary adjacent to Grant Line Road, then turns west and follows the southern SunCreek Plan Area's southern boundary where it reconnects to a tributary of Laguna Creek.

The Arboretum project located south of the SunCreek Plan Area has been modeled based on the information provided in the report prepared by Wood Rodgers, Inc. titled "Waegell Property Hydro-modification Design Memorandum" dated September 21, 2007. A HEC-HMS model was compiled as a part of this report. The input parameters used in the Wood Rodgers analysis, were incorporated into the SunCreek Drainage Study SacCalc models. Additional information necessary for the SunCreek Drainage Study but not included in the Wood Rodgers analysis was assumed or estimated. The soils type for this area

has been assumed, conservatively, as Type D for this entire shed. The junction points along Laguna Creek where sub-sheds within the Waegell property connect had to be scaled based on the routing information provided in the Wood Rodgers HEC-HMS model.

The roadways within the SunCreek Plan Area cross Kite Creek at several locations. To comply with the US Corps of Engineers requirements, open bottom roadway crossings have been incorporated into the Baseline Conditions Model. There are three roadway crossings and one multi-use trail crossing of Kite Creek proposed within the SunCreek Plan Area. To maintain the channel velocities as close as possible to the Existing Conditions channel velocities each of the channel crossing have been modeled with twin Con-Span Bridges. The Con-Span Bridges consist of one 8-ft. high by 20-ft. wide span and one 5-ft. high by 20-ft. wide span set side-by-side with the tops of each span set at the same elevation and the higher span bridge set deeper over the low flow channel.

Refer to **Appendix M: SunCreek Drainage Study Area - Baseline Conditions Watershed Map** to review the map entire drainage study area used as the basis for developing the Baseline Conditions Model. To see a smaller scale map of just the SunCreek Plan Area used for developing the Baseline Conditions Model refer to **Appendix N: SunCreek Specific Plan Area – Baseline Conditions Water Shed Map.**

The Baseline Conditions peak flows at the compliance points are summarized in **Table 3.3.0: Baseline Conditions Peak Flow Rates**.

Table 3.3.0: Baseline Conditions Peak Flow Rates

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,737	106.41
2	36+00	N/A	N/A	1,740	112.03
3	70+00	N/A	N/A	1,632	115.43
4	76+19	808	114.95	1,354	115.84
5	80+95	809	115.27	1,354	116.13
6	82+00	811	115.86	1,354	117.43
7	112+05	763	118.20	1,321	118.77
8	152+00	372	123.55	631	123.83
9	61+45	N/A	N/A	127	149.16
10	184+50	293	129.02	512	129.49
11	212+00	216	133.59	347	134.24
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard.

The Baseline Conditions Model identified several undesirable impacts occur to the existing infrastructure within the SunCreek Drainage Study Area. To mitigate for these undesirable impacts the following infrastructure improvements need to occur:

- To mitigate for the impacts to water quality and increased runoff flow rates, detention basins need to be constructed to provide water quality treatment and detention storage to reduce the developed runoff flow rates to undeveloped runoff flow rates. The detention basins are designed with a water quality component. The water quality component is designed as a wet basin with a minimum depth of four feet. The water quality component of the detention basin is considered dead storage volume and therefore is not included in the detention storage volume calculations.

Refer to **Table 3.3.1: SunCreek Baseline Conditions Detention Basin Volumes** to review the detention basin storage volumes and water surface elevations.

Table 3.3.1: SunCreek Baseline Conditions Detention Basin Volumes

Basin No.	Basin Floor Elev.	Basin Foot-print Area (Ac.)	Water Quality Volume (AF)	Volume 10-Year 24-Hr. (AF)	Water Surface Elev. 10-Yr. 24-Hr.	Volume 100-Yr. 10-Day (AF)	Water Surface Elev. 100-Yr. 10-Day
1	207.0	2.22	2.5	4.6	212.05	6.7*	213.52
2	169.5	4.30	3.4	13.8	174.98	21.6	176.96
3	169.5	4.60	2.2	11.5	173.78	21.3	176.77
4	156.0	6.19	3.8	18.8	161.11	28.4	163.14
5	157.5	9.43	5.7	27.7	161.53	42.0	163.40
6	148.5	4.63	3.0	14.1	153.62	21.8	155.91
7	136.5	2.56	1.5	6.6	141.54	9.2*	143.08*
8	134.5	5.26	3.6	16.9	139.80	26.6	142.28
9	127.0	3.99	2.3	10.9	131.69	16.8	133.77
10	126.0	2.47	1.9	6.3	131.17	9.2*	133.02*
11	130.0	0.69	0.4	1.1	134.85	1.7*	136.45*
12	126.0	4.30	2.7	11.5	130.38	16.6	131.96
Totals		50.64	32.9	143.8		221.9	

Notes:
1) Basin locations can be found on the SunCreek Specific Plan Area - Baseline Conditions Watershed Map. See Appendix L.
2) Basin footprint area is calculated from the basin floor elevation, with 5:1 side slopes to the top of slope. The top of slope is set at 1.5 ft. above the max. water surface elevation. Area also includes a 20-foot perimeter road.
3) *Denotes that the volume and water surface are controlled by the 100-yr., 24-hr. storm.
4) Basin volumes indicated include the 1.5-ft of dead storage volume referred to as strictly hydro-modification storage.
5) Water Quality Basins sizes are based on combination basins, 12-hour drawdown and shed area average imperviousness of 60%.

- Each detention basin includes an outlet control structure designed to attenuate the release rates so they match the predevelopment flow rates for the same sized drainage shed area. The SunCreek Plan Area developed release rates are throttled down to predevelopment release rates by an appropriately sized orifice. The orifice is configured on the side of a concrete box structure which is connected to discharge pipes sized to convey up to the 100-yr, 24-hr. flow rate. The detention basin discharge pipes connect the outlet structure to an energy dissipation structure located adjacent to the open space preserve area. The energy dissipation structure reestablishes the storm runoff to sheet flow prior discharging to the open space preserve area. (Note: A few detention basins are connected to Kite Creek by a pipeline that discharges at a planned or existing Kite Creek crossing).

  Refer to **Table 3.3.2: SunCreek Baseline Conditions Detention Basins Discharge Flow Rates** to review the maximum detention basin discharge rates and the detention basin outlet structure orifice and outlet pipe configurations.

Table 3.3.2: SunCreek Baseline Conditions Detention Basin Discharge Flow Rates

Basin No.	No. of Orifice's & Diameter	No. of Outlet Pipes & Dia.	10-Yr., 24-Hour Flow (cfs)	100-Yr., 24-Hr. Flow (cfs)
1	2 - 18"	3 - 24"	26	34
2	1 - 21"	2 - 24"	17	24
3	1 - 12"	1 - 24"	5	7
4	1 - 21"	2 - 24"	14	23
5	4 - 12"	2 - 24"	20	27
6	2 - 12"	2 - 24"	13	17
7	2 - 12"	1 - 30"	11	14
8	1 - 21"	2 - 24"	16	22
9	1 - 15"	1 - 24"	9	12
10	2 - 12"	2 - 24"	13	17
11	1 - 12"	1 - 24"	5	7
12	3 - 12"	2 - 24"	16	20

- Since the SunCreek Plan Area is required to provide water quality treatment and maintain the Project's runoff flows to existing undeveloped flow rates at the Plan Area Boundary, which is accomplished with the SunCreek Detention Basin, all peak flow and hydromodification impacts to the existing off-site infrastructure have been mitigated.

The SunCreek Plan Area detention basins are designed to be utilized only as drainage infrastructure improvements with some enhancements that make them visually appealing. Detention Basin No. 5 is located on the Community Park Site

and is the largest detention basin within the SunCreek Specific Plan Area. As an alternative to encumbering the Community Park Site with a large detention basin that does not provide any other uses for a majority of the year, an alternative design was prepared for Detention Basin No. 5. This alternative design allows for the portion of the detention basin that is above the 10-year, 24-hour, hydro-modification water surface elevation to have joint use capabilities so it can function as a detention basin and a Community Park. Refer to **Appendix F: Community Park Detention Basin Alternative** to review the design assumptions, details and results of this analysis.

The Shalako property is located at the southwestern corner of the SunCreek Plan Area. The Shalako property is divided into two segments by Kite Creek and its associated open space preserve area. The existing topography of western segment of the Shalako property naturally slopes towards its southern boundary. The Shalako property southern property line is a common property line with the Arboretum Project. The Shalako project requires the existing topography along its southern property line to be filled with embankment material in order for the development to capture, treat, attenuate and direct the storm runoff to Detention Basin No. 12. The Arboretum Project can not accept a large slope embankment encroaching into its development. Therefore as an alternative design solution has been analyzed on how to reach and acceptable grading solution along the common project boundary while still being able capture, treat and attenuate the Shalako property storm runoff. Refer to **Appendix G: Shalako Detention Basin Alternative** to review the design assumptions, details and results of this analysis.

3.4 Anatolia III Modeling Alternatives

The Anatolia III development project based the design of their drainage system on a now outdated drainage study originally prepared for the Sunrise Douglas Community Plan Area titled "Final Master Drainage Study, Sunrise Douglas Community Plan Area, Sacramento County" dated October 16, 1998 prepared by The Spink Corporation. The Anatolia III development project based the drainage system design on the drainage standards and practices in use at the time the Project was being designed. The general approach of the Sunrise Douglas Community Plan Drainage Study was to use large in-stream community sized detentions basins to reduce the peak development runoff flow rates to predevelopment flow rates.

The Sunrise Douglas Community Plan Drainage Study located three in-stream community detention basins within the SunCreek Specific Plan Area to mitigate for the development in this portion of the Sunrise Douglas Community Plan Area. One Sunrise Douglas in-stream detention basin was proposed to be located at the southern SunCreek Plan Area boundary within the preserve area and another in-stream detention was proposed to be placed within the SunCreek preserve area just east of Rancho Cordova Parkway.

Sunrise Douglas Community Plan prepared a Conceptual-Level Strategy for Avoiding, Minimizing & Preserving Aquatic Resource Habitat with the United States Army Corps of Engineers (Conceptual-Level Strategy). The Corps of Engineers Conceptual-Level Strategy requires the formation of a permanent open space preserve area to protect the sensitive aquatic habitat and species. This open space preserve area includes the areas where the above mentioned Sunrise Douglas in-stream community detention basins were proposed to be built. Conditions placed on the open space preserve area make it infeasible to construct an in-stream detention basin at the SunCreek Specific Plan southern boundary.

The Anatolia III project drainage design and construction was based on the assumption that some of the proposed Anatolia III drainage improvements would be interim improvements until such time that downstream off-site improvements can be feasibly implemented.

Therefore, as requested by the City of Rancho Cordova and the County of Sacramento, several drainage scenarios where developed during the preparation of this study that would remove the interim drainage improvements from the Anatolia III project and incorporated into the drainage infrastructure improvements within the SunCreek Specific Plan area. These scenarios were reviewed for viability and four were found to be feasible for studying. The four separate drainage scenarios were then subjected to hydraulic and hydrology modeling.

3.4.1 Anatolia III – Alternative 'A' Model

This model uses the Baseline Conditions Model as a starting point and is modified in order to analyze impacts to the SunCreek Drainage Study Area that are the result of removing portions of the existing Anatolia III drainage infrastructure. This alternative removes the existing Anatolia III detention basin from the model. Since the Anatolia III development would be discharging post development storm runoff directly into Kite Creek, the SunCreek Plan Area detention basin volumes were increased in size to sufficiently offset the increase in storm runoff from the Anatolia III development in order to maintain flow rates at the SunCreek Plan Area southern boundary to Existing Conditions flow rates. Refer to Alternative 'A' in **Appendix C: Schematic Designs of Anatolia III – Alternative 'A' thru 'D'** to review the revised Anatolia III drainage infrastructure associated with this alternative. The 10-year, 24-hr storm runoff from the Anatolia III development will discharge into the existing Anatolia III water quality basin and then release into Kite Creek through the existing Kiefer Boulevard box culverts. Runoff from the 100-yr, 24-hr storm will spill directly into Kite Creek at the Kiefer Boulevard box culvert location.

Refer to **Table 3.4.1.0: Anatolia III - Alternative 'A', Peak Flows** to review the peak flows for this alternative.

Table 3.4.1.0: Anatolia III - Alternative 'A', Peak Flows

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,702	106.40
2	36+00	N/A	N/A	1,707	111.99
3	70+00	N/A	N/A	1,575	115.35
4	76+19	773	114.88	1,247	115.74
5	80+95	774	115.20	1,281	116.03
6	82+00	779	115.85	1,283	117.35
7	112+05	727	118.16	1,266	118.73
8	152+00	374	123.56	631	123.83
9	61+45	N/A	N/A	127	149.16
10	184+50	317	129.07	543	129.54
11	212+00	186	133.44	310	134.07
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on changes made to the SunCreek Plan Area detention basins. The SunCreek Plan Area detention basins had to be increased in size and the peak flow release rates out of the detention basin needed to be reduced to account for the direct discharge of the Anatolia III runoff into Kite Creek.

Refer to **Table 3.4.1.1: Anatolia III - Alternative 'A', Detention Basin Volumes** to review the revised detention basin volumes requirements to mitigate for this alternative.

Table 3.4.1.1: Anatolia III - Alternative 'A', Detention Basin Volumes

Basin No.	Basin Floor Elev.	Basin Foot-print Area (Ac.)	Water Quality Volume (AF)	Volume 10-Year 24-Hr. (AF)	Water Surface Elev. 10-Yr. 24-Hr.	Volume 100-Yr. 10-Day (AF)	Water Surface Elev. 100-Yr. 10-Day
1	207.0	2.22	2.5	4.6	212.05	6.7*	213.52*
2	169.5	4.72	3.4	15.0	174.92	23.4	177.36
3	169.5	4.79	2.2	11.5	173.55	19.5	175.67
4	156.5	6.55	3.8	20.1	161.15	31.4	163.41
5	157.5	10.22	5.7	31.2	161.71	50.5	164.03
6	148.5	6.69	3.0	19.2	152.79	30.5	154.97
7	136.5	2.78	1.5	7.3	141.48	10.2*	143.00*
8	134.5	5.73	3.6	18.5	139.78	29.7	142.34
9	127.0	4.54	2.3	12.4	131.59	20.2	133.95
10	126.0	2.95	1.9	7.8	131.19	12.1	133.35
11	130.0	0.90	0.4	1.2	134.61	1.8*	136.08*
12	126.0	5.03	2.7	15.3	130.37	21.2*	132.33
Totals		57.42	32.9	164.1		257.2	

Notes: 1) Basin locations can be found on the SunCreek Specific Plan Area - Baseline Conditions Watershed Map. See Appendix L.
2) Basin area is calculated from the basin bottom elevation, with 5:1 side slopes to the top of slope. Top of slope is set 1.5 ft above the max. water surface. Area also includes a 20-foot perimeter road.
3) *Denotes that volume and water surface elevation are controlled by the 100-yr, 24-hr. storm.
4) Basin volumes indicated include the 1.5-ft of dead storage volume referred to as strictly hydro-modification storage.
5) Water Quality Basins sizes are based on combination basins, 12-hour drawdown and shed area average imperviousness of 60%.

Refer to **Table 3.4.1.2: Anatolia III - Alternative 'A', Detention Basin Discharge Flow Rates** to review the maximum detention basin discharge rates and the detention basin outlet structure orifice and outlet pipe configurations for this alternative.

Table 3.4.1.2: Anatolia III - Alternative 'A', Detention Basin Discharge Flow Rates

Basin No.	No. of Orifice's & Diameter	No. of Outlet Pipes & Dia.	10-Yr., 24-Hour Flow (cfs)	100-Yr., 24-Hr. Flow (cfs)
1	2 - 18"	3 - 24"	26	34
2	1 – 18"	2 - 24"	14	19
3	1 – 12"	1 - 24"	5	7
4	1 – 18"	2 - 24"	11	16
5	2 – 15"	2 - 24"	12	18
6	1 – 15"	1 - 24"	8	11
7	1 – 15"	1 - 30"	9	11
8	1 – 18"	2 - 24"	12	16
9	1 – 12"	1 - 24"	6	8
10	1 – 15"	1 - 24"	9	13
11	1 – 12"	1 - 24"	5	7
12	2 - 12"	2 - 24"	11	14

The relocation of the Anatolia III detention basins to the SunCreek Plan Area allows the Anatolia III Project to reclaim 29 single family lots.

The SunCreek Plan Area loses 6.78 acres of development area due to the increase in detention basin area that is necessary to accommodate Anatolia III – Alternative 'A'.

3.4.2 Anatolia III – Alternative 'B' Model

This model uses the Anatolia III - Alternative 'A' model as a starting point. The model has been revised to determine channel and culvert sizing requirements for relocating a portion of the existing on-site Anatolia III channel to the southern right-of-way of Kiefer Boulevard. Similar to the Alternative 'A' model, the 10-year, 24-hour runoff from the Anatolia III development will discharge into the existing Anatolia III water quality basin and then release into Kite Creek through the existing Kiefer Boulevard box culverts. Runoff from the 100-year, 24-hour storm will spill directly into Kite Creek at the Kiefer Boulevard box culvert location. The Anatolia III channel would be directed to the south side of Kiefer Boulevard through a new box culvert built approximately 400 feet west of the Kiefer Boulevard/Rancho Cordova Parkway Intersection. The channel would turn to the west and follow Kiefer Boulevard passing through another box culvert that provides access to the Shalako development and then connects to Kite Creek.

Refer to **Table 3.4.2: Anatolia III - Alternative 'B', Peak Flow Rates** to review the peak flows for this alternative.

Table 3.4.2: Anatolia III - Alternative 'B', Peak Flow Rates

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,688	106.43
2	36+00	N/A	N/A	1,692	112.40
3	70+00	N/A	N/A	1,568	115.36
4	76+19	740	114.79	1,252	115.74
5	80+95	741	115.12	1,271	116.07
6	82+00	744	115.87	1,276	117.29
7	112+05	699	118.13	1,263	118.73
8	152+00	372	123.56	627	123.83
9	61+45	N/A	N/A	127	149.16
10	184+50	319	129.03	544	129.43
11	212+00	183	134.65	309	134.15
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on the relocation of the Anatolia III storm water detention basin and a portion of the Anatolia III drainage channel to the Kiefer Boulevard southern right-of-way. The relocation of the Anatolia III detention basin and channel to the SunCreek Plan Area allows the Anatolia III Project to reclaim 42 single family lots. Refer to Alternative 'B' in **Appendix C: Schematic Designs of Anatolia III – Alternative 'A' thru 'D'** to review the revised Anatolia III drainage infrastructure associated with this alternative.

The relocation of the Anatolia III channel to the SunCreek Plan Area requires 3.60 acres of development land within the SunCreek Plan Area. These 3.60 acres are in addition to the 6.78 acres required to accommodate larger detention basins associated with Alternative 'A'. Therefore, relocating the Anatolia III storm water detention and channel to the SunCreek Plan Area allows the Anatolia III Project to reclaim 42 single family lots. The SunCreek Plan Area loses 10.38 acres of development area to accommodate this Alternative.

3.4.3 Anatolia III – Alternative 'C' Model

This is an unsteady flow HEC-RAS model of the entire watershed above Florin Road. This model will use the Anatolia III - Alternative 'A' Model as a starting point. The model will be revised to model the both the existing on-site Anatolia III detention basin and channel completely removed from the Anatolia III

development allowing for the detention basin and channel to be filled and developed. The SunCreek Plan Area detention basins will be increased in size to account for the loss of the Anatolia III detention basin. The Anatolia III channel will be relocated to the east of Rancho Cordova Parkway graded to drain to the south under Kiefer Blvd. than turn to the west, cross under Rancho Cordova Parkway and run parallel along the southern Kiefer Blvd. right-of-way and connecting to the open space preserve. The 10-year, 24-hr runoff from the Anatolia III development will discharge into the existing Anatolia III water quality basin and then release in to Kite Creek through the existing Kiefer Blvd. box culverts. Runoff from the 100-yr, 24-hr storm will spill directly into Kite Creek at the Kiefer Blvd. box culvert location. The relocated channel will require three new box culverts. Assumed size of the new proposed culverts are the same as the existing Anatolia III box culverts (twin 8-ft high by 10-ft. wide boxes). This assumption is based on the existing Anatolia III box culverts are sized to pass the existing conditions flow.

Refer to Alternative 'C' in **Appendix C: Schematic Designs of Anatolia III – Alternative 'A' thru 'D'** to review the revised Anatolia III drainage infrastructure associated with this alternative.

Refer to **Table 3.4.3: Anatolia III - Alternative 'C', Peak Flow Rates** to review the peak flows for this alternative.

Table 3.4.3: Anatolia III - Alternative 'C', Peak Flow Rates

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,675	106.39
2	36+00	N/A	N/A	1,677	112.37
3	70+00	N/A	N/A	1,574	115.37
4	76+19	776	114.89	1,320	115.77
5	80+95	777	115.21	1,320	116.07
6	82+00	782	115.85	1,320	117.39
7	112+05	734	118.16	1,312	118.76
8	152+00	376	123.56	525	123.75
9	61+45	N/A	N/A	127	149.16
10	184+50	316	128.07	407	129.28
11	212+00	187	133.67	304	135.35
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on changes made to the SunCreek Plan Area drainage infrastructure and rerouting Kite Creek around the Anatolia III development. The relocation of the Anatolia III channel to the SunCreek Plan Area requires 5.30 acres of development land within the SunCreek Plan Area and 1.10 acres of land within the Arboretum Project.

The impacts due to the loss of the Anatolia III detention basin are the same as the impacts discussed in Anatolia III – Alternative 'A'. The SunCreek Plan Area losses 6.78 acres of development area due to the increase in detention basin area that is necessary to accommodate the removal of the Anatolia III detention basin.

The relocation of the Anatolia III drainage channel and detention basin allows for 42 single family lots to be reclaimed while the SunCreek Plan Area loses 12.08 acres and the Arboretum Project loses 1.10 acres of development land.

3.4.4 Anatolia III – Alternative 'D' Model

This is an unsteady flow HEC-RAS model of the entire watershed above Florin Road. This model will use the Baseline Conditions Model with Anatolia III-Alternative C as a starting point. The model will be revised to replace the Anatolia III channel will with twin 72-inch culverts. The twin 72-inch culverts intercept the runoff east of Rancho Cordova Parkway at the current twin 8-x10 culverts location. The twin 72-inch pipelines route the storm runoff south to Kiefer Blvd. then west under Kiefer Blvd to the existing 8x10 box culverts located in Kiefer Blvd. where the runoff then enters the open space preserve. The 10-year, 24-hr runoff from the Anatolia III development will discharge into the existing Anatolia III water quality basin and then release in to Kite Creek through the existing Kiefer Blvd. box culverts. Runoff from the 100-yr, 24-hr storm will spill directly into Kite Creek at the Kiefer Blvd. box culvert location. Similar to Anatolia III - Alternatives 'A', 'B' and 'C', the SunCreek detention basins will need to be sized such that the flow rates exiting the SunCreek project boundaries does not exceed the existing conditions flow rates.

Refer to Alternative 'D' in **Appendix C: Schematic Designs of Anatolia III – Alternative 'A' thru 'D'** to review the revised Anatolia III drainage infrastructure associated with this alternative

Refer to **Table 3.4.4: Anatolia III - Alternative 'D', Peak Flow Rates** to review the peak flows for this alternative.

Table 3.4.4: Anatolia III - Alternative 'D', Peak Flow Rates

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,685	106.39
2	36+00	N/A	N/A	1,689	112.39
3	70+00	N/A	N/A	1,564	115.36
4	76+19	773	114.89	1,240	115.75
5	80+95	774	115.21	1,272	116.03
6	82+00	781	115.85	1,277	117.35
7	112+05	728	118.15	1,259	118.73
8	152+00	388	123.58	620	123.83
9	61+45	N/A	N/A	127	149.16
10	184+50	135	129.08	292	129.49
11	212+00	182	134.74	292	135.96
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on changes made to the SunCreek Plan Area drainage infrastructure and rerouting Kite Creek around the Anatolia III development through twin 72-inch culverts. The twin 72-inch culverts are assumed to fit within the right-of-way and landscape corridors for Rancho Cordova Parkway and Kiefer Boulevard, the SunCreek Plan Area does not lose any developable land.

The impacts due to the loss of the Anatolia III detention basin are the same as the impacts discussed in Anatolia III – Alternative 'A'. The SunCreek Plan Area losses 6.78 acres of development area due to the increase in detention basin area that is necessary to accommodate the removal of the Anatolia III detention basin.

The relocation of the Anatolia III drainage channel and detention basin allows for 42 single family lots to be reclaimed while the SunCreek Plan Area loses 6.78 acres of development land.

3.5 Modified Hydro-modification Basins Modeling Alternatives

The Baseline Conditions modeling results indicate that the peak 100-year, 24-hour flow rates within Kite Creek are substantially below the Existing Conditions peak 100-year, 24-hour flow rates. This large reduction in peak flow rate is due to the large amount of attenuation occurring within the detention basin. The Baseline Conditions detention basins have a footprint larger than the typical detention basin as they have been oversized in the Baseline Conditions Model to accommodate hydro-modification requirements. Since the hydro-modification objectives and standards criteria developed and stated in the cbec Inc. hydro-

modification analysis that, as the flow rates exceed the 10-year, 24-hour peak flow rates the hydro-modification impacts to Kite Creek are significantly reduced due to overbank flows reducing the scour and erosion potential of the Kite Creek thalwag. Therefore, to improve the efficiency of the Land Use plan to more closely match the Exiting Conditions peak flow rate within Kite Creek this modeling scenario was developed.

3.5.1 Modified Hydro-modification Basin – Alternative 'A' Model

This is an unsteady flow HEC-RAS model of the entire watershed above Florin Road. This model will use the Baseline Conditions Model as a starting point. The model will be revised to add 30% [(1)] more detention basin volume to each of the 'Baseline Conditions' 10-year, 24-hour storm detention basins. The calculated 130% 'Baseline Conditions' 10-year, 24-hour storm detention basin volume will set a maximum water surface elevation within each basin. The detention basin outlet structure will have an opening set at this maximum water surface elevation such that the flows in excess 130% of the 'Baseline Conditions' 10-year, 24-hour storm will spill into the outlet structure and out of the basin to Kite Creek. The revised SunCreek detention basins will be analyzed to verify that the flow rates exiting the SunCreek project boundaries do not exceed the existing conditions flow rates. Under this alternative the Anatolia III water quality basins, detention basin and channel will be modeled as they are currently constructed.

Refer to **Table 3.5.1.0: Modified Hydro-modification Basin - Alternative 'A', Peak Flows** to review the peak flows for this alternative.

(1) The Baseline Model was originally derived by first determining the detention basin volumes required to attenuate the 10-yr, 24-hr and the 100-yr, 24-hr post development peak flows to pre-development levels and then running the extended simulation analysis to determine how much additional storage volume was required to mitigate for hydro-modification impacts. The resulting combined storage volumes were then included in the Baseline Conditions Model. On December 12, 2009, Chris Campbell of cbec prepared a comparison of the water surface areas and storage volumes of each detention basin contained in the Baseline Conditions Model. Refer to Appendix A cbec Hydro-modification Planning Assessment for the SunCreek Specific Plan. An analysis of this comparison indicates that hydro-modification increased the water surface area of the basins by an average of about 26% and the storage volume by an average of about 21%. For purposes of this analysis, it has been conservatively assumed that a 30% increase in detention volume is required to achieve hydro-modification mitigation.

Table 3.5.1.0: Modified Hydro-modification Basin - Alternative 'A', Peak Flows

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,669	106.39
2	36+00	N/A	N/A	1,674	112.37
3	70+00	N/A	N/A	1,553	115.34
4	76+19	808	114.95	1,248	115.73
5	80+95	809	115.27	1,282	116.02
6	82+00	811	115.86	1,284	117.34
7	112+05	763	118.20	1,267	118.73
8	152+00	372	123.55	523	123.74
9	61+45	N/A	N/A	127	149.16
10	184+50	293	129.02	458	129.39
11	212+00	216	133.59	246	134.75
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on changes made to the SunCreek Plan Area detention basins. The SunCreek Plan Area detention basin outlet structures was revised while maintaining the peak flow release rates out of the detention basin to remain below the predevelopment peak flow rates within Kite Creek.

Refer to **Table 3.5.1.1: Modified Hydro-modification Basin - Alternative 'A' Model, Detention Basins** to review the revised detention basin volumes associated with this alternative.

Table 3.5.1.1: Modified Hydro-modification Basin - Alternative 'A', Detention Basins

Basin No.	Basin Floor Elev.	Basin Foot-print Area (Ac.)	Water Quality Volume (AF)	Volume 10-Year 24-Hr. (AF)	Water Surface Elev. 10-Yr. 24-Hr.	Volume 100-Yr. 10-Day (AF)	Water Surface Elev. 100-Yr. 10-Day
1	207.0	2.22	2.5	4.6	212.05	6.7*	213.52*
2	169.5	4.30	3.4	13.8	174.98	15.3	176.51
3	169.5	4.60	2.2	11.5	173.78	15.8	175.15
4	156.0	6.19	3.8	18.8	161.11	25.5	162.55
5	157.5	9.43	5.7	27.7	161.53	38.1	162.90
6	148.5	4.63	3.0	14.1	153.62	19.2	155.17
7	136.5	2.56	1.5	6.6	141.54	8.8	142.86*
8	134.5	5.26	3.6	16.9	139.80	23.0	141.39
9	127.0	3.99	2.3	10.9	131.69	15.1	133.19
10	126.0	2.47	1.9	6.3	131.17	8.4	132.52*
11	130.0	0.69	0.4	1.1	134.85	1.5	136.06*
12	126.0	4.30	2.7	11.5	130.38	15.4	131.60*
Totals		50.64	32.9	143.8		192.8	

Notes: 1) Basin locations can be found on the SunCreek Specific Plan Area - Baseline Conditions Watershed Map. See Appendix L.
2) Basin area is calculated from the basin bottom elevation, with 5:1 side slopes to the top of slope. Top of slope is set 1.5 ft above the max. water surface. Area also includes a 20-foot perimeter road.
3) *Denotes that volume and water surface elevation are controlled by the 100-yr, 24-hr. storm.
4) Basin volumes indicated include the 1.5-ft of dead storage volume referred to as strictly hydro-modification storage.
5) Water Quality Basins sizes are based on combination basins, 12-hour drawdown and shed area average imperviousness of 60%.

The Modified Hydro-modification Basin – Alternative 'A' basin floor elevation, water quality volume, detention basin volumes, water surface elevations, and peak flow release rates for the 10-year, 24-hour storm are the same as the 'Baseline Conditions' results. The 100-year, 10-day volume, water surface elevations, peak flow release rates and basin footprint area are the only basin parameters that changed under this alternative.

Refer to **Table 3.5.1.2: Modified Hydro-modification Basin - Alternative 'A', Detention Basin Discharge Flow Rates** to review the maximum detention basin discharge rates and the detention basin outlet structure orifice and outlet pipe configurations for this alternative.

Table 3.5.1.2: Modified Hydro-modification Basin - Alternative 'A', Detention Basin Discharge Flow Rates

Basin No.	No. of Orifice's & Diameter	No. of Outlet Pipes & Dia.	10-Yr., 24-Hour Flow (cfs)	100-Yr., 24-Hr. Flow (cfs)
1	2 - 18"	3 - 24"	26	34
2	1 – 18"	2 - 30"	13	49
3	1 – 12"	2 - 24"	3	18
4	1 – 18"	3 - 24"	10	35
5	2 – 15"	2 - 30"	11	45
6	1 – 15"	3 - 24"	9	35
7	1 – 15"	1 - 30"	6	24
8	1 – 18"	3 - 24"	12	38
9	1 – 12"	2 - 24"	5	22
10	1 – 15"	3 - 24"	10	31
11	1 – 12"	2 - 24"	4	23
12	3 - 12"	3 - 24"	8	38

The above listed peak flow rates are based on changes made to the detention basin outlet structure and incorporated into the SunCreek Drainage Study HEC-RAS model.

The Changes made to the SunCreek Drainage Infrastructure and analyzed under this alternative provide results that this alternative meets the water quality and hydro-modification requirements while maintaining the storm runoff flow volumes and peak flow rates to less than the current "Existing Conditions' peak flow rates and volumes. Therefore the Modified Hydro-modification Basin - Alternative 'A' Model is an acceptable SunCreek Plan Area storm drainage infrastructure alternative.

3.5.2 Modified Hydro-modification Basin – Alternative 'B' Model

This is an unsteady flow HEC-RAS model of the entire watershed above Florin Road. This model will use the Modified Hydro-modification Basin – Alternative 'A' Model as a starting point. The model will be revised to fill and develop the Anatolia III detention basin. The SunCreek Modified Hydro-modification Basin Alternative 'A' Model will be run to determine the impacts to Kite Creek and the existing downstream infrastructure. If necessary the Modified Hydro-modification Basin – Alternative 'A' detention basins will be increased in size to account for the loss of the Anatolia III detention basin such that the flow rates exiting the SunCreek project boundaries does not exceed the existing conditions flow rates.

Refer to **Table 3.5.2.0: Modified Hydro-modification Basin - Alternative 'B', Peak Flows** to review the peak flows for this alternative.

Table 3.5.2.0: Modified Hydro-modification Basin - Alternative 'B', Peak Flows

Compliance Point No.	Creek Section Station	10-Year 24-hr. Flow Rate (cfs)	WSE 10-year, 24-hour	100-Year 24-hr. Flow Rate (cfs)	WSE 100-year, 24-hour
1	0+00	N/A	N/A	1,674	106.39
2	36+00	N/A	N/A	1,678	112.37
3	70+00	N/A	N/A	1,556	115.34
4	76+19	773	114.88	1,242	115.73
5	80+95	774	115.20	1,285	116.03
6	82+00	779	115.85	1,287	117.35
7	112+05	727	118.16	1,268	118.73
8	152+00	374	123.56	536	123.76
10	184+50	N/A	N/A	127	149.16
11	212+00	317	129.07	243	133.75
12		161	205.03	266	205.29
13		138	223.31	234	223.70

Notes: 1) Compliance Point Locations can be found on the Existing Conditions Watershed Map. See Appendix L.
2) Baseline Peaks Flows include the rerouting of the Morrison Spill through the proposed 72-inch diameter pipeline in Kiefer Boulevard,

The above listed peak flow rates are based on changes made to the SunCreek Drainage Study HEC-RAS model. The Modified Hydro-modification Basin – Alternative 'A' detention basin sizes did not need to be increased in size to account for the direct discharge of the Anatolia III runoff into Kite Creek. The reclamation of the Anatolia III detention allows the Anatolia III Project to reclaim 29 single family lots.

The Changes made to the SunCreek Drainage Infrastructure and analyzed under this alternative provide results that this alternative meets the water quality, hydro-modification requirements while maintaining the storm runoff flow volumes and peak flow rates to less than the current "Existing Conditions' peak flow rates and volumes. Therefore the Modified Hydro-modification Basin - Alternative 'B' Model is an acceptable SunCreek Plan Area storm drainage infrastructure alternative.

4.0 Basin Volume Sizing Contingency

Notwithstanding the analysis presented in this master plan, Sacramento County Department of Water Resources (DWR) has not established standards to determine hydro-modification mitigation requirements and as such DWR Staff doesn't have complete confidence in the approach being used herein for determining the required hydro-modification volumes in the detention basins. DWR Staff, believing that some measure of tolerance in basin sizing is appropriate at this preliminary stage, has asked that an allowance of plus or minus 30% be used to create sufficient flexibility in basin volumes at this level of planning. Obviously, any such increase would only be triggered by necessity as demonstrated during future analyses.

The 100-year, 10-day detention basin volumes determined in this master plan are already 34% larger than the Baseline Conditions for the 10-year, 24-hour detention volumes. Nonetheless, in accordance with the requirements of DWR Staff, the basin volumes determined in this master plan will be increased by another 30% to establish the minimum 100-year; 10-day event detention basin volumes for the project on an interim basis until a greater level of confidence in the methodology of determining flow duration control volumes are achieved.

Accordingly, the interim minimum 100-year, 10-day storm event volumes of the detention basins is set as follows:

Table 4.0: Interim Minimum Detention Basin Volumes

Basin No.	Basin Volume 100 Year/10-Day Calculated Volume (AF) - Not Including WQ Volume	County's 30% Allowance (AF)	Interim Minimum Volume (AF)
1	6.7	2.0	8.7
2	15.3	4.6	19.9
3	9.6	2.9	12.5
4	25.5	7.7	33.2
5	22.7	6.8	29.5
6	19.2	5.8	25.0
7	8.8	2.6	11.4
8	23	6.9	29.9
9	7.7	2.3	10.0
10	8.4	2.5	10.9
11	1.5	0.5	2.0
12	15.4	4.6	20.0
Totals	163.8	49.1	212.9

Note: "Calculated Volume" is based on the results of "Modified Hyrdo-modification Basin - Alternative 'A' " and "Stand Alone Basin" Alternatives.

5.0 Conclusion

The SunCreek Plan Area can develop as proposed, the 1,266+/- acres within its boundaries consisting mostly of single-family residential land uses with some multi-family residential units, a High/Middle School Site, an elementary school site, parks, open space areas and commercial land uses.

The SunCreek Drainage Study has analyzed the existing and required on-site and off-site drainage facilities that are necessary to maintain downstream drainage, water quality, hydro-modification and summer nuisance flow impacts to existing or below existing conditions. Additional studies may be required by the County during project implementation (including evaluating the volume related increase impacts associated development of the SunCreek Specific Plan Area on the downstream creek system).

The SunCreek Plan Area can develop the plan area as proposed by constructing Hydro-modification Detention Basins that mitigate for the developments impacts. The Hydro-modification Detention Basins include a combination water quality basin which will retain the irrigation runoff in the summer months. Summer nuisance flows that exceed the evaporation rate and percolation rate of the combination water quality basin will be percolated into the ground through specially designed and constructed percolation trenches placed in the Hydro-modification Detention Basin bottom. The impacts on Kite Creek due to hydro-modification is mitigated by increasing the Hydro-modification Detention Basin volume and slowly metering out storm runoff to match undeveloped runoff rates for storms ranging from 25% of the 2-year storm up to and including the 10-year storm. The Hydro-modification Detention Basin reduces the SunCreek Plan Area developed storm runoff rates calculated by the Sacramento Method for the 10-year, 24-hour storm and the 100-year, 24-hour storms to less than the predevelopment storm runoff rates.

In conclusion, the SunCreek Plan Area can develop without impacting the predevelopment water quality, hydro-modification of Kite Creek and existing bridges and channels in the SunCreek Drainage Study Area by constructing the SunCreek drainage infrastructure.

6.0 Recommendations

A review of the various storm drainage alternatives analyzed in this report to mitigate the peak flow and hydro-modification impacts of developing the SunCreek Plan Area indicates that one of the alternatives is the preferred alternative. In fact this preferred alternative is, in reality, a hybrid of two of the alternatives studied herein:

- Modified Hydro-modification Basin – Alternative "A" Model, and
- Stand-Alone Detention Basin Alternative

This hybrid alternative has the benefit of yielding the smallest detention basins of any of the alternatives evaluated herein. Additionally, it results in a significant reclamation of developable lots within Anatolia III development and avoids the need to relocate the Anatolia III drainage channel – a very costs undertaking for very little yield in net developable area. Fortunately, any combination of the alternatives studied herein has the capability to fully mitigate peak flooding, hydro-modification and water quality impacts associated with developing the SunCreek Specific Plan.

7.0 References

County of Sacramento, "Hydrology Standards Volume 2 of the Sacramento City/ County Drainage Manual," December 1996.

Spink Corporation, "Final Master Drainage Study, Sunrise Douglas Community Plan Area, Sacramento, California," October 16, 1998, (SDCPA Study).

Wood Rodgers, Inc., "Master Drainage Study for Anatolia I & II," December 4, 2003.

Wood Rodgers, Inc., "Master Drainage Study for Anatolia III, County of Sacramento, California," June 2004.

Wood Rodgers, Inc., "Drainage Report for Anatolia III – Major Roads, City of Rancho Cordova and County of Sacramento, California," July 16, 2004.

County of Sacramento, "Stormwater Quality Design Manual for the Sacramento and South Placer Regions," May 2007,

Wood Rodgers, Inc., "Drainage Study Montelena Including Sections for Anatolia 1 & 2 Updated Ultimate Conditions and As-Built Facilities Summary," September 2007.

Wood Rodgers, Inc. "Waegell Property Hydro-modification Design Memorandum" dated September 21, 2007.

Geosyntec Consultants, "A Technical Study of Hydrology, Geomorphology & Water Quality in the Laguna Creek Watershed," November 2007.

8.0 Appendixes

Appendix A: cbec Hydromodification Planning Assessment for the SunCreek Specific Plan

cbec
eco engineering

Hydraulics | Hydrology | Geomorphology | Design

MEMORANDUM

Date:	November 11, 2008
To:	Craig Zoller and Ken Giberson (MacKay & Somps)
From:	Chris Campbell and Chris Bowles
Project:	08-1003 – SunCreek Hydromodification Planning
Subject:	Hydromodification Planning Assessment for the SunCreek Specific Plan

The SunCreek Stormwater Plan is currently being developed as part of the SunCreek Specific Plan. The SunCreek Owners Group (Owners) have identified that hydromodification planning should be incorporated into the stormwater planning in anticipation of upcoming modifications to Sacramento County's (County) MS 4 Permit, which is in the process of being renewed by the RWQCB.

cbec, inc. (cbec) has completed hydromodification assessment and mitigation planning for the potential hydromodification impacts of the SunCreek Specific Plan on Kite Creek, a tributary to Laguna Creek in Sacramento County, California. The details of this assessment and planning effort are described in this memorandum report.

Approach Summary

cbec sub-consulted with PWA, Ltd. (PWA) to assist with geomorphic reconnaissance and assessment for this project. cbec were sub-consultants to Mackay & Somps Civil Engineers (M&S). cbec were responsible for all project management, coordination and technical reporting with M&S for the hydromodification component of this project. M&S were the prime consultant for the project, and were primarily responsible for the hydrology and hydraulics for the stormwater design to the standards of the County. cbec has supplied technical analysis and conceptual hydromodification mitigation plans to M&S for incorporation into the stormwater master plan for the SunCreek development.

cbec assessed the hydrologic and geomorphic impact of the SunCreek Specific Plan relative to existing conditions by addressing the following questions:

1. Do the proposed offline detention basins sized by M&S significantly alter the flow duration and inundation frequency of Kite Creek within and downstream of the SunCreek development?
2. Will the development and subsequent flow alterations significantly affect the geomorphic stability of Kite Creek by reducing sediment supply, generating excess sediment from channel erosion, and/or creating a larger than natural downstream sedimentation impact?

cbec addressed these questions by adapting the SacCalc and HEC-RAS (RAS) models developed by M&S. M&S used SacCalc and XPSWMM, as recommended by the County, to develop the stormwater plans for the SunCreek Specific Plan. cbec ran a continuous simulation model in HEC-HMS (HMS) with a 49-year precipitation record to identify potential hydrologic impacts of the proposed stormwater plan. Continuous simulation is emerging as the standard approach for addressing hydromodification because it takes into account the cumulative effect of geomorphically-significant medium sized events more effectively than event simulation of larger capital flood events. The continuous simulations were used to compare pre- and post-project flow duration curves to minimize the potential that the project did not increase the frequency of events corresponding to 'dominant' or 'channel forming' discharge, and to inform the detention basin outlet design.

Hydrology generated from the continuous simulation model was then implemented in a 1-dimensional hydrodynamic model, MIKE 11, to assess the stability of Kite Creek under existing and baseline (with project) conditions.

The cbec team also conducted additional geomorphic reconnaissance of the site to evaluate existing channel stability and vulnerability to hydrograph modification using a channel vulnerability assessment. Sediment samples were collected for laboratory analysis to characterize the existing bed conditions for shear stress analysis.

GEOMORPHOLOGY

PWA visited Kite Creek on May 30, 2008 and observed the geomorphic character of the creek, collected hydraulic parameters to inform channel vulnerability (risk of erosion) classification (i.e. low, medium, high), and performed limited sediment sampling. The geomorphic assessment included visual observations, recorded by photography and hand-held GPS, followed by office correlation with NRCS soils mapping. The channel vulnerability, or risk of erosion classification, included field observations such as bed width, estimation of bankfull depth and width, floodprone width, channel bed and bank materials, and Manning's roughness. A visual classification of the Schumm Channel Evolution was made (this model, described in 1976 by Schumm, characterizes the morphological evolution of channels in six stages, from a natural channel through constructed, incising, widening, aggrading, and new dynamic equilibrium channel). It also included subsequent post-processing of channel gradient, bed critical shear stress, hydraulic parameters (i.e. area of bankfull flow, wetted perimeter, hydraulic radius), bankfull velocity and discharge using automated spreadsheet routines. The combination of these assessment techniques led to entrainment and entrenchment classifications, which in turn led to an overall erodibility risk classification.

Figure 1 shows the limit of the field observations and the specific locations (marked with an "X") where data was collected to coincide with surveyed creek sections. Kite Creek was delineated into two (2) reaches, lower and upper, relative to Anatolia III. The following is a brief summary of that work effort augmented with cbec's understanding of the creek.

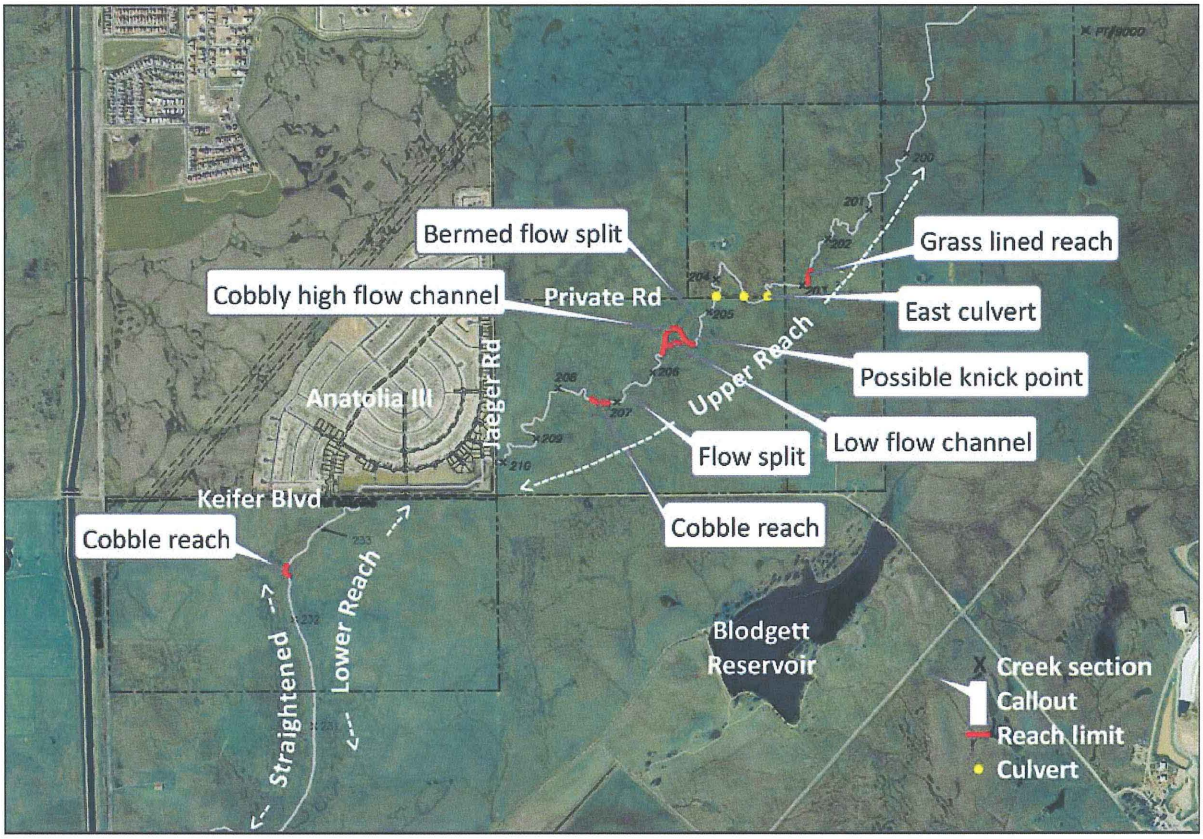


Figure 1. Field observations

LOWER REACH

The lower reach extends from downstream of Kiefer Blvd and Anatolia III to the limit of field observations at section 231. The creek through this reach is surrounded by heavily grazed grasslands with abundant cattle trails into and crossing the creek. The creek, approximately 1,200 feet downstream of Kiefer Blvd, appears to have been realigned to accommodate land drainage downstream to Laguna Creek. The straightened channel appears to bisect a relatively wide corridor through which Kite Creek and local perched runoff created seasonal flooding.

Partly due to straightening and realignment, the lower reach has incised up to 3 to 4 feet and its banks continue to slump (see Figure 2). The bed of the creek typically alternates between exposures of duripan and deep deposits of sand. Exposures of duripan (see Figure 3) may in fact be associated with realignment of the creek to the interface between the creek corridor soils (*Hicksville Loam* and *Hicksville Gravelly Loam*) lacking a duripan (but underlain with stratified sandy to very gravelly sandy loam, respectively) and the upslope soils containing a duripan (e.g. *Fiddyment Fine Sandy Loam*, *Hedge Loam*, *Redding Loam*). Often, the duripan is acting as a knick point, which may be slowing incision, but is an indication toward continued incision. In one isolated location, midway between sections 232 and 233, incision has exposed the very gravelly sandy loam, winnowed away the fines and smaller gravels,

possibly armoring the creek bed (see Figure 4), which tends to minimize incision. This location coincides with the downstream transition from the *Hicksville Gravelly Loam* to the *Hicksville Loam*.

Table 1 shows a summary of the risk classification for the observed creek sections through the lower reach.

Table 1. Lower reach risk classification

Section	Entrainment	Entrenchment	Bank Erosion	Width:Depth	Schumm Class	Overall Risk
233	High	High	Medium	High	Medium	High
232	High	High	Medium	High	Medium	High
231	High	High	Medium	High	Medium	High

Overall, the lower reach is actively incising with slumping and eroding banks. The overall erodibility risk classification of the lower reach is high meaning that the creek has already undergone significant levels of degradation and therefore will be highly susceptible to future anthropogenic disturbances. It could be hypothesized that the impacts of the development that has already occurred at the upstream extent of the lower reach (Anatolia III) have impacted the creek since construction was completed.

Figure 2. Lower reach slumping banks

Figure 3. Lower reach exposed duripan

Figure 4. Lower reach exposed very gravelly sandy loam (looking downstream)

UPPER REACH

The upper reach extends upstream of Jaeger Road and Anatolia III to creek section 200 (which represents the upstream preserve limit). The creek through this reach is dimensionally smaller with lower banks in relatively more stable condition than the lower reach. The upper reach has not been artificially straightened and the impact of cattle on the creek is not as prevalent, but there is some bank slumping and a few creek modifications. Such modifications include berming a flow split downstream of section 205 and three (3) culvert crossings between sections 203 and 205 associated with a single private road (see Figure 1). While all three (3) culvert crossings have localized bed and bank erosion associated with their outfalls, of particular interest is the probability that the undersized culvert furthest to the east has actually promoted the preservation of a small grass-covered reach of Kite Creek upstream of section 203 (see Figure 5) due to backwater effects dampening erosive forces during flooding.

Similar to the lower reach, the creek corridor soils in the upper reach, specifically upstream of the midway point between sections 207 and 208, consist of a gravelly clay loam underlain with stratified very gravelly sandy loam (*Hicksville Gravelly Loam*). Downstream of this midway point, the creek corridor soils consist of loam overtop a cemented duripan (*Hedge Loam*). At this midway point, which coincides with the downstream transition from *Hicksville Gravelly Loam* to a non-gravelly soil (i.e. *Hedge Loam*), and similar to our observation in the lower reach, incision has eroded away the fines, leaving behind the coarser substrate that helps to slow incision.

Table 2 shows a summary of the risk classification for the observed creek sections through the upper reach.

Table 2. Upper reach risk classification

Section	Entrainment	Entrenchment	Bank Erosion	Width:Depth	Schumm Class	Overall Risk
200	Medium	High	Medium	High	Medium	Medium
201	High	High	Medium	High	Medium	High
202	High	Medium	Medium	High	Medium	Medium
203	Medium	Medium	Medium	High	Medium	Medium
205	Medium	Medium	Medium	High	Medium	Medium
206	Medium	Medium	Medium	High	Medium	Medium
207	Medium	Medium	Medium	High	Medium	Medium
208	Medium	Medium	Medium	High	Medium	Medium
209	Medium	High	Medium	High	Medium	Medium
210	High	Medium	Medium	High	Medium	Medium

Overall, the upper reach is partly more stable and less anthropogenically impacted than the lower reach. Little development has occurred to date in the upper reach and therefore this reach has only been impacted to date by some grazing and other agricultural activities. The overall erodibility risk

classification of the channel is medium meaning that the channel has undergone partial degradation. However, through comparison with the lower reach, it is clear that with additional upstream development through the upper reach, and without hydromodification mitigation, degradation of the creek could occur at a similar rate to that observed through the lower reach.

Figure 5. Upper reach preservation of grass covered reach (looking upstream)

SEDIMENT SAMPLES

Sediment samples were collected at sections 200, 201, 206, 208, 209, 231, and 233. Sections 206 and 208 represent bank material samples, whereby the remaining are bed material samples. Table 3 and Figure 6 depict the laboratory results. Depending on the location, the creek bed consists of silty sand absent of gravels to a gravel bed with fines.

Table 3. Particle size distributions for sediment samples (from upstream to downstream)

Section #	d85 (mm)	d50 (mm)	d15 (mm)	Notes
200	49.7	18.9	1.06	Gravel bed with fines
201	14.8	2.33	0.08	Silty sand bed with gravels
206	12.6	0.34	0.01	Silty sand bank with gravels
208	0.24	0.05	---	Sandy silt bank
209	22.2	9.49	0.30	Gravel bed with fines
232	26.4	11.3	0.29	Gravel bed with fines
231	0.84	0.35	0.03	Silty sand bed without gravels

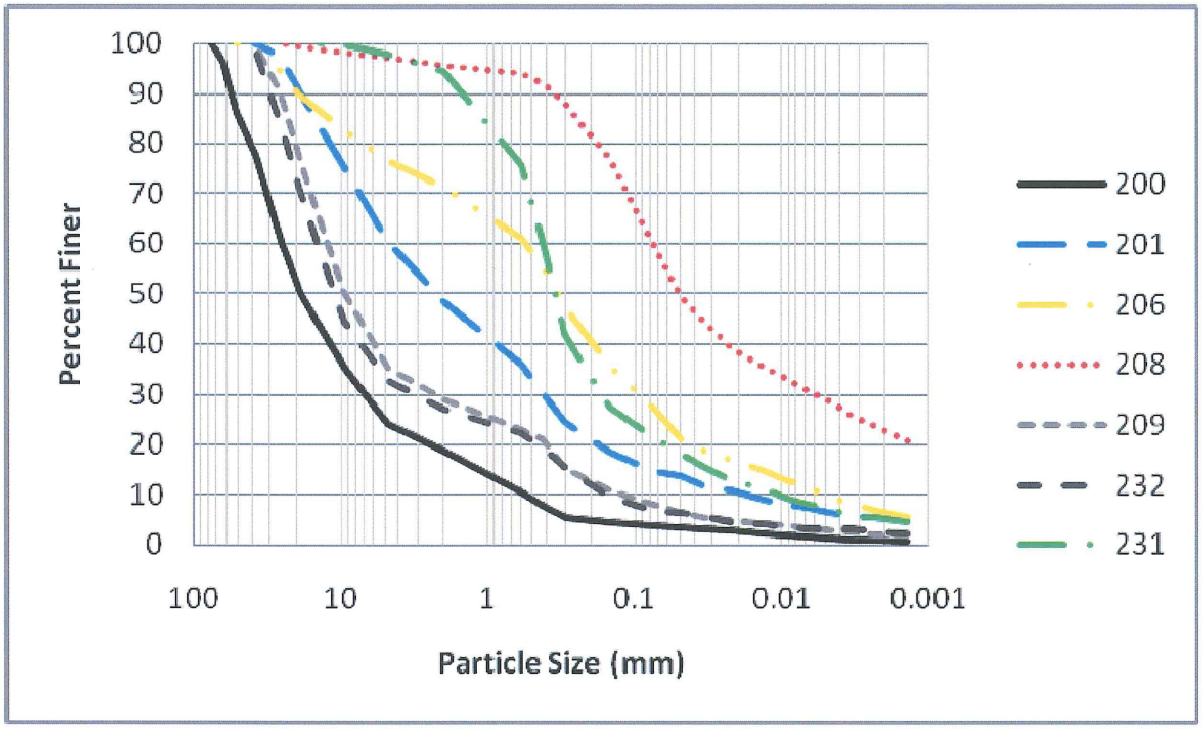


Figure 6. Particle size distributions for sediment samples

The bed material sample at section 209 was used to estimate the critical shear stress at compliance point #12. The critical shear stress was estimated to be 0.12 lbf/ft^2. For compliance point #8, the erodibility of the bank material was considered over the bed material due to the resistant nature of the duripan in the lower reach. The critical shear stress for the banks was not estimated from the bank samples, but rather estimated from values developed by Geosyntec (2007) using a jet test (0.20 to 0.38 lbf/ft^2).

CREEK STAGE MEASUREMENT

During March 2008, a pressure transducer was installed in the vicinity of section 201 (see Figure 7). The pressure transducer measured depth of water in the creek. However, no significant storm events occurred after March 2008, and therefore the pressure transducer was removed in June 2008. The intention of measuring storm water levels in the creek was to provide additional data for the geomorphic assessment and calibration/verification data for the hydrodynamic models.

Figure 7. Installation of pressure transducer in stilling well at KIte Creek

HYDROMODIFICATION ASSESSMENT

HYDROMODIFICATION STANDARDS AND OBJECTIVE CRITERIA

In developing the hydromodification plan for the SunCreek Specific Plan, and in the absence of specific guidance on hydromodification standards by the County's DWR, the following Objective Standards (or Hydromodification Criteria) have been developed to provide methods by which to assess the results of this study.

TYPICAL APPROACHES FOR MANAGEMENT AND MITIGATION OF HYDROMODIFICATION

Typically, three broad approaches are used to manage and mitigate the impacts of hydromodification:

1. Flow Control Approach - the use of modified storm detention basins (often called Flow Duration Control Basins or FDCs) or infiltration facilities (e.g. swales with underdrains) to control discharge into receiving waters in the range that are responsible for most channel erosion. In other parts of Northern California these flows have been found to lie between some fraction of the Q2 (2-year return period event) up to the Q10 (10-year return period event). Flows in this range are managed so that the pre- and post-development flow duration curves match within a defined tolerance.

2. Landscape Approach – or sometimes referred to as Low Impact Development (LID), or source control approaches, in which impervious areas drain to a series of highly pervious landscaping areas that act as dispersed infiltration facilities. These infiltration facilities are sized based on pre-determined ratios (typically around 5% of the developed area) that have been found to infiltrate the excess runoff within the range of erosive flows.

3. In-stream Approach – the use of stream restoration approaches to stabilize and restore already heavily anthropogenically impacted receiving waters to better withstand the potential future impacts of hydromodification (reducing slope gradient by increasing sinuosity (where geomorphically-appropriate) or introducing step-pool drop structures, or conducting biotechnical bank stabilization, etc.).

Due to limitations of working in the wetland preserve areas, the consultant team did not focus on in-stream approaches. Therefore, the criteria developed here refer generally to FDC techniques for managing and mitigating hydromodification impacts using flow duration curve matching approaches, or similar.

HYDROMODIFICATION CRITERIA AND OBJECTIVE STANDARDS

1. Event-based existing and baseline (with project) hydrology to satisfy flood control criteria will be developed by M&S using SacCalc. SacCalc is a Sacramento City and County preprocessor for the hydrologic model HEC-1 and is the accepted standard in Sacramento County.

2. To assess the long-term hydrologic conditions in the watershed, and to take account of antecedent conditions appropriate for hydromodification planning, a long-term, continuous hydrologic simulation using a 49-year precipitation record will be used to develop existing baseline hydrology. Long-term simulation has become the standard for comparing pre- and post-development flow duration characteristics within the range of geomorphically-significant flows. For this purpose, the soil moisture accounting (SMA) algorithm in HMS will be used. This model will be developed by adapting the SacCalc model into a form similar to the HMS model developed by Geosyntec (2007) for Laguna Creek.

3. The long-term hydrology developed using HMS will be used to provide the boundary conditions to assess the hydraulic impacts of the SunCreek development on Kite Creek using a hydraulic model. For reasons explained later, the hydraulic model will be MIKE 11, not RAS.

4. The hydraulic model output will be used to imply the erosive or depositional impacts to Kite Creek. In the absence of standards stating otherwise, and as a guide, runoff should be controlled in the range between 25% of Q2 and Q10. In other areas that have recently developed HMP standards, a range of values from as low as 10% of Q2 have been used as the lower threshold. However, these thresholds were based on field measurements of bed and bank shear resistance for watersheds that have different topographic and soil properties from Laguna Creek. In a recent study in the Laguna Creek watershed (Geosyntec, 2007), it was concluded through an assessment of cumulative sediment transport that 95% of the total erosion and sediment transport in the creek is accomplished by flows less than Q10. This study also concluded through field measurements of critical shear stress and modeling that erosion does not commence until flows are approximately 25% of Q2; hence our recommendation of this as the lower threshold.

5. For the flow range specified (25% of Q2 through Q10), the post-project discharge rates and durations should not deviate above the pre-project discharge rates and durations by more than 10% over more than 10% of the length of the flow duration curve. The flow duration curve relates to the percentage of time of the total period of record that a particular flow is equaled or exceeded. It does not refer to the duration of that particular flow event. Thus, using the flow duration technique gives an indication of how the average flows are hydromodified between a specific flow range (area under the curve). Flow duration curves are the most commonly accepted method of analyzing the response of watershed to perturbations; hence, we recommend their use in this application.

6. For the flow range specified, the post-project peak flows should not exceed pre-project peak flows by more than 10%.

7. In terms of possible erosive forces experienced by the receiving waters as a result of hydromodification, a preliminary standard could be based on the erosion potential methodology as proposed by a recent study in the Laguna Creek watershed (Geosyntec, 2007). In this study, an objective standard was stated that stormwater discharges from development projects shall not cause an increase in the erosion potential in the receiving channels by more than 20%. Based on field data collected and hydraulic modeling conducted in this study, the objective standard may be modified subsequently. However, it is initially recommend that this as a reasonable objective standard. A note of caution, if the project results in decreased sediment loads and size, it may be necessary to assess the implications of (up to) a 20% increase in erosion potential, and whether this increase will be detrimental (will there be less "resisting forces" for the project-related flow increase?) Generally, the objective is to determine the range of flows over a long period of record that does not exceed (or significantly alter) the existing equilibrium of supply and transport of sediment.

8. The FDC curve matching approach will be used iteratively in an effort to manage and mitigate hydromodification impacts. However, based on the size of FDC basins predicted (if too large to be accommodated in current plans) it may be necessary to resort to other methods of management and mitigation, such as landscape or in-stream approaches, in conjunction with FDCs. The goal is primarily the use of FDCs, as instructed by the Owners. Coordination with cbec, M&S and the Owners will be required through this decision making process.

9. When the impacts of hydromodification have been mitigated through FDC the proposed improvements to the stormwater plan will be checked for stormwater detention purposes. The resulting plan will constitute the proposed plan.

10. Design concepts will be derived to minimize perennial "nuisance" flows from entering the Kike Creek preserves. These flows typically occur in the summer months and are entirely caused by irrigation runoff from lawns and other planted areas that are frequently irrigated. This runoff is typically nutrient laden with nitrates and phosphates and could cause unfavorable conditions in Kite Creek. In an effort to mitigate for these flows, concepts will be derived that can be incorporated into the FDC basins which may include complete retention of summer low flows, bioaccumulation and evapotranspiration using wetland vegetation, deep well percolation and other hydraulic control devices, as appropriate.

Figure 8 shows a flow chart to summarize how the process outlined was applied to the project. cbec worked cooperatively and collaboratively with M&S through this process.

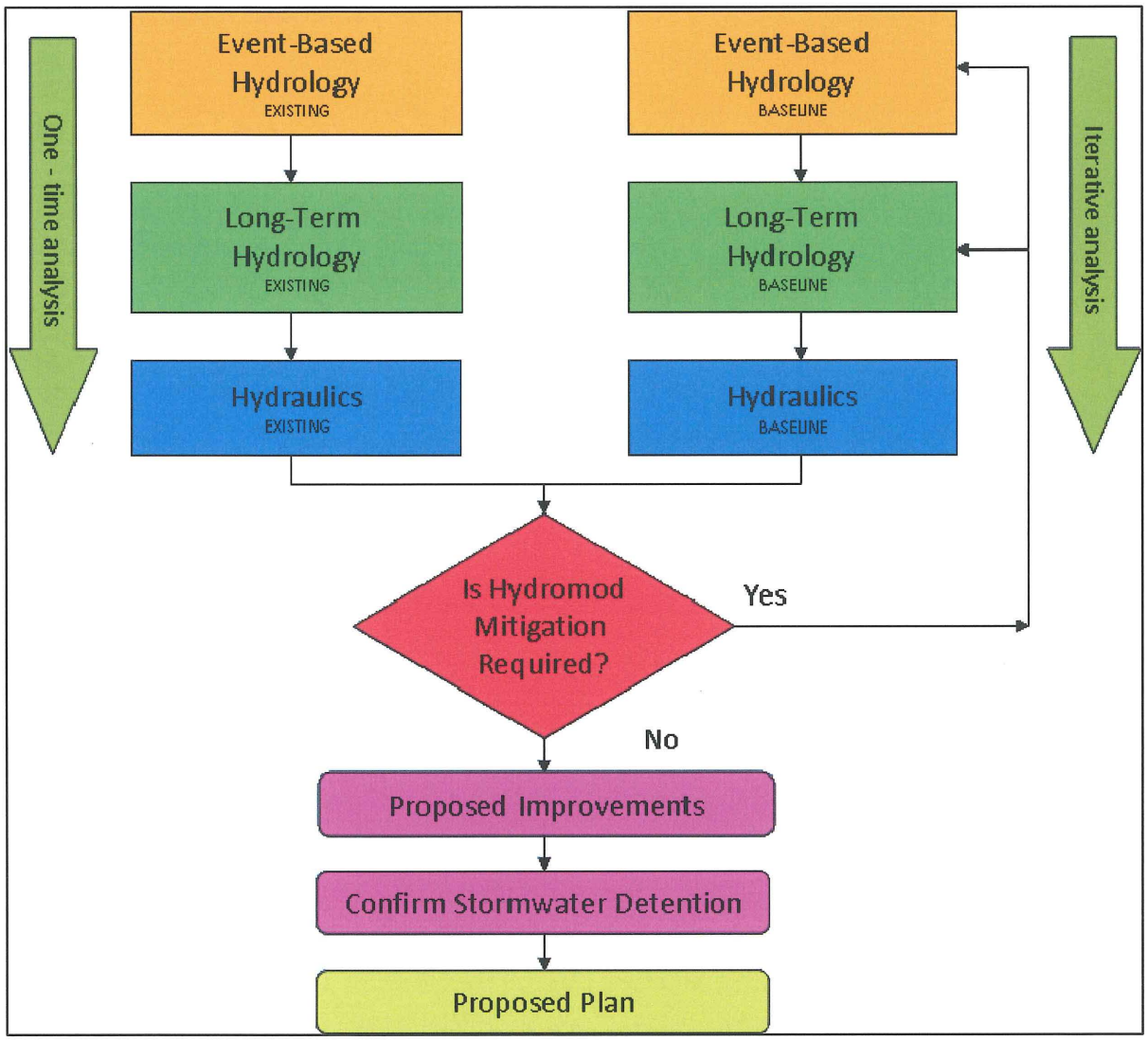


Figure 8. Flow process chart for hydromodification planning for the Sun Creek Specific Plan

LONG-TERM HYDROLOGY

The event-based HEC-1 (SacCalc) models for **existing** and **baseline** (with project) conditions were provided by M&S for Kite Creek and portions of Laguna Creek. The HEC-1 models were imported directly into HMS from their HEC-1 and HEC-DSS (DSS) formats. The following modifications to the HEC-1 models were implemented to convert them from event-based models developed to assess flood control to long-term continuous simulation models to assess hydromodification:

1. The loss method was changed from initial and constant to the SMA algorithm and applied in a manner consistent with the calibrated HMS model developed by Geosyntec (2007). The following SMA parameter values were adopted from the calibrated HMS model and uniformly applied to each subwatershed:

Canopy Storage (in)	Surface Storage (in)	Soil Storage (in)	Tension Storage (in)	GW 1 Storage (in)	GW 1 Coeff. (hr)
0.08	0.30	6.0	4.8	10	200

The following SMA parameter values were derived from the HEC-1 LU record for each subwatershed and applied in a manner consistent with the calibrated HMS model:

Maximum Infiltration (in/hr)	Imperviousness (%)	Soil Percolation (in/hr)	GW 1 Percolation (in/hr)
CNSTL	RTIMP	CNSTL	CNSTL

Two notes regarding CNSTL are that 1) it is on average 0.01 in/hr lower for the existing model than the calibrated HMS model, and 2) the value for the Laguna Creek headwater subwatershed was multiplied by a factor of 3 to be consistent with the calibrated HMS model due to the high saturated hydraulic conductivity of the headwater soils.

2. For simplicity, the runoff transformation method was kept the same as that generated by SacCalc. SacCalc uses the USBR dimensionless urban unit hydrograph method. The calibrated HMS model uses the Clark unit hydrograph method, the use of which was to aid in HMS model calibration by means of the Clark storage coefficient, and originally consisted of a conversion of the USBR dimensionless urban unit hydrographs. Since the existing and baseline subwatersheds differ significantly from those assumed in the calibrated HMS model, it would not be reasonable to apply the calibrated Clark parameters.

3. Baseflow was added using the linear reservoir option and applied in a manner consistent with the calibrated HMS model:

Initial Type	GW 1 Initial (cfs/mi^2)	GW 1 Coeff. (hr)	GW 1 Reservoirs
Discharge/Unit Area	0	1450	1

4. The Muskingum-Cunge routing method was unchanged and is consistent with the method employed in the calibrated HMS model.

5. Detention basin routing was changed from a description of outflow structures to a prescription of outflow curves for each basin.

6. Blodgett Reservoir was added to the existing model using the storage-discharge curve prescribed in the calibrated HMS model.

7. The 49-year hourly precipitation record for Eagles Nest was imported into the HMS model and applied to each subwatershed along with monthly evapotranspiration rates.

The following HMS models were created as shown by Table 3 below. The **baseline (as existing)** model is a surrogate for existing conditions to allow for comparisons at the detention basin scale. The **baseline (without detention)** was simulated to quantify the effect of the flood control detention basins.

Table 3. Description of HMS Models

HMS Model	Description
Existing	Existing conditions model
Baseline (as existing)	Baseline conditions model, but assumes imperviousness is 2% (surrogate for existing conditions at detention basin scale)
Baseline (w/out detention)	Baseline conditions model, but assumes no flood control detention basins
Baseline (w/ detention)	Baseline conditions model with flood control detention basins modified for flow duration control

HYDRAULICS

The hourly output from the HMS models was processed to produce flow duration curves and annualized flow duration hydrographs. The flow duration hydrographs were then implemented in two (2) at-a-station hydraulic models coincident with compliance points #8 (Kite Creek at downstream property boundary) and #12 (Kite Creek immediately upstream of Anatolia III) and surveyed cross sections (XS) 231 and 210, respectively. At-a-station hydraulic models were developed using the 1-dimensional hydrodynamic model MIKE 11 in a manner consistent with the unsteady RAS models. This included the use of surveyed cross sections augmented with floodplain topography, flow duration hydrographs at the upstream boundaries, normal depth rating curves at the downstream boundaries, and appropriate description of Manning's n-values. RAS was not used due to instabilities associated with low flow wetting and drying and write errors associated with the volume of output generated.

TOTAL WORK CALCULATIONS

The MIKE 11 models were then used to calculate the total work done and erosion potential index to assess the hydromodification impacts of the SunCreek development on Kite Creek. Total work done was calculated based on integrating effective stream power from the MIKE 11 hydraulic model outputs as:

$$W = \sum_{i=1}^{n} (\tau_i - \tau_c) \cdot V_i \cdot \Delta t_i$$

where W is the total work done (ft-lbf/ft^2), τ is the average channel shear stress, τ_c is the critical shear stress to initiate erosion, V is the velocity (ft/sec), and Δt is the numerical time step (sec). The critical shear stress was estimated for compliance point #12 (XS 210) to be 0.12 lbf/ft^2 based on representative sampled bed material for the reach and for compliance point #8 (XS 231) to be 0.20 lbf/ft^2 based on the minimum value in the range (0.20 to 0.38 lbf/ft^2) of shear stress needed to erode bank material since this reach has incised down to the hardpan. The erosion potential index was calculated as the ratio of $W_{baseline}$ / $W_{existing}$. The target index is 1 ± 20%, based on the guidance provided by Geosyntec in their report for the Laguna Creek watershed (Geosyntec, 2007).

FLOW DURATION CONTROL

Flow duration control, initially based on the recommendations reported by Geosyntec (2007), was combined with flood control through review of several model iterations. The flow duration control, as implemented for all detention basins, consisted of a variable length weir structure in front of the flood control orifices with a 2-inch low flow orifice at the basin invert and a crest elevation 1.5 feet above the basin invert (schematic depicted elsewhere by M&S). For flood control purposes, the volume of water below the weir crest was treated as dead storage and was added to the flood control storage above 1.5 feet. As a result, the detention basin footprint size increased on average 27% from that originally developed for pure flood control. In addition, evaporation and percolation losses from the detention basins was not incorporated into the long-term simulations due to limitations in HMS, but the effect of those losses was analyzed and is discussed in the following results section. The flood control function for each basin was checked through hydraulic modeling by M&S.

RESULTS

At the subwatershed scale (refer to watershed and detention figures by M&S), Figures 9 and 10 show the flow duration curves for developed subwatersheds #4 and #8. Using **baseline (as existing)** as a surrogate for **existing** conditions, the difference between **baseline (as existing)** and **baseline (w/out detention)** represents the increase in surface runoff due to development that needs to be captured and released at a rate below the critical rate for erosion. By comparison, **baseline (w/ detention)** demonstrates the redistribution of that increase in surface runoff to meet both flood control and flow duration control criteria. For flows that occur less than 0.5% of the time, the detention basins (as designed with flood control in mind) act to reduce peak discharges for infrequent floods (e.g. 100-year). The counter effect of reducing flood peaks would result in elevating the discharge level for flows in the 5% to 20% range (not shown here). But due to flow duration control, this is offset by approximately maintaining the increased duration of developed flows in the 0.5% to 10% range and increasing the duration of very low flows.

Regarding the increased duration of very low flows, Figures 9 and 10 (and 12 and 13 below) ignore the benefits of evaporation and artificial percolation intended to combat summertime nuisance flows due to limitations in HMS detention routines. Figure 11 addresses the concern of extend baseflow by demonstrating that evaporation and percolation effectively drawdown the dead storage below the weir such that baseflow is not augmented beyond what would occur naturally.

Evaporation was approximated by the evapotranspiration rates developed by Geosyntec (2007) and as implemented in the HMS model. Percolation rates per basin, which were developed by M&S to manage summertime nuisance flows, were based on guidance in the Stormwater Quality Design Manual (2007) for residential only as 41,860 $ft^3/mi^2/day$.

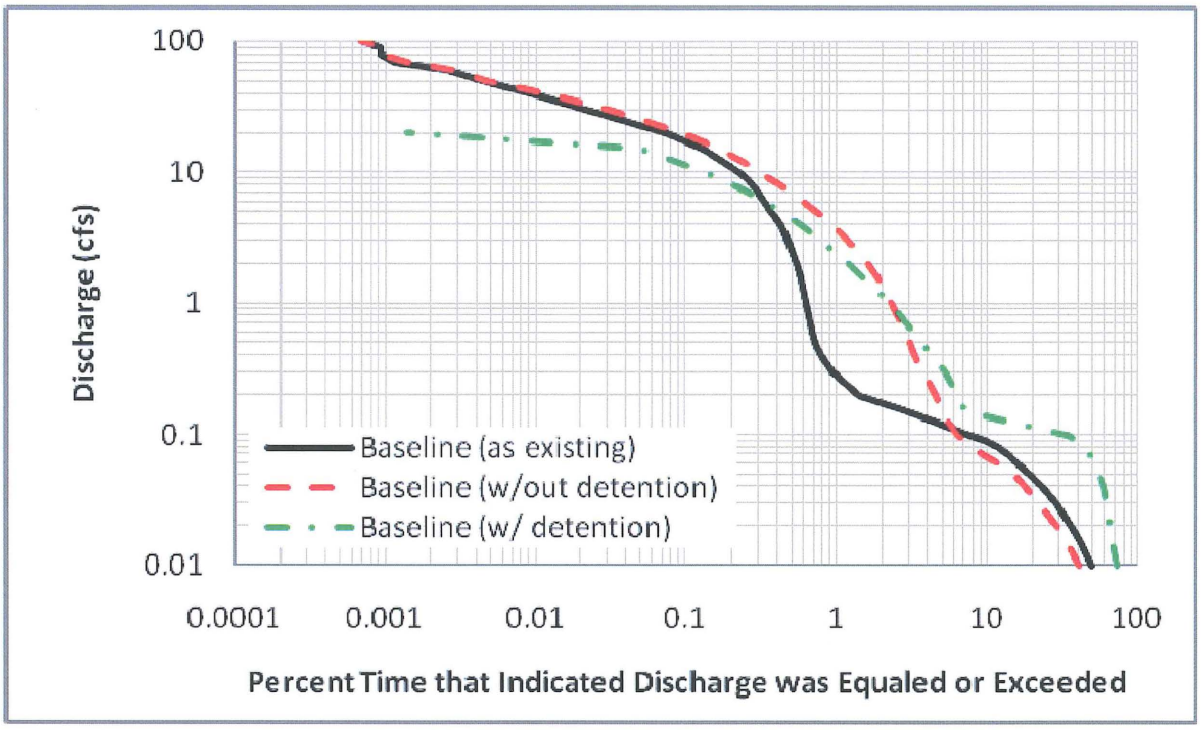


Figure 9. Flow duration curve for detention basin #4 (detention includes flow duration control)

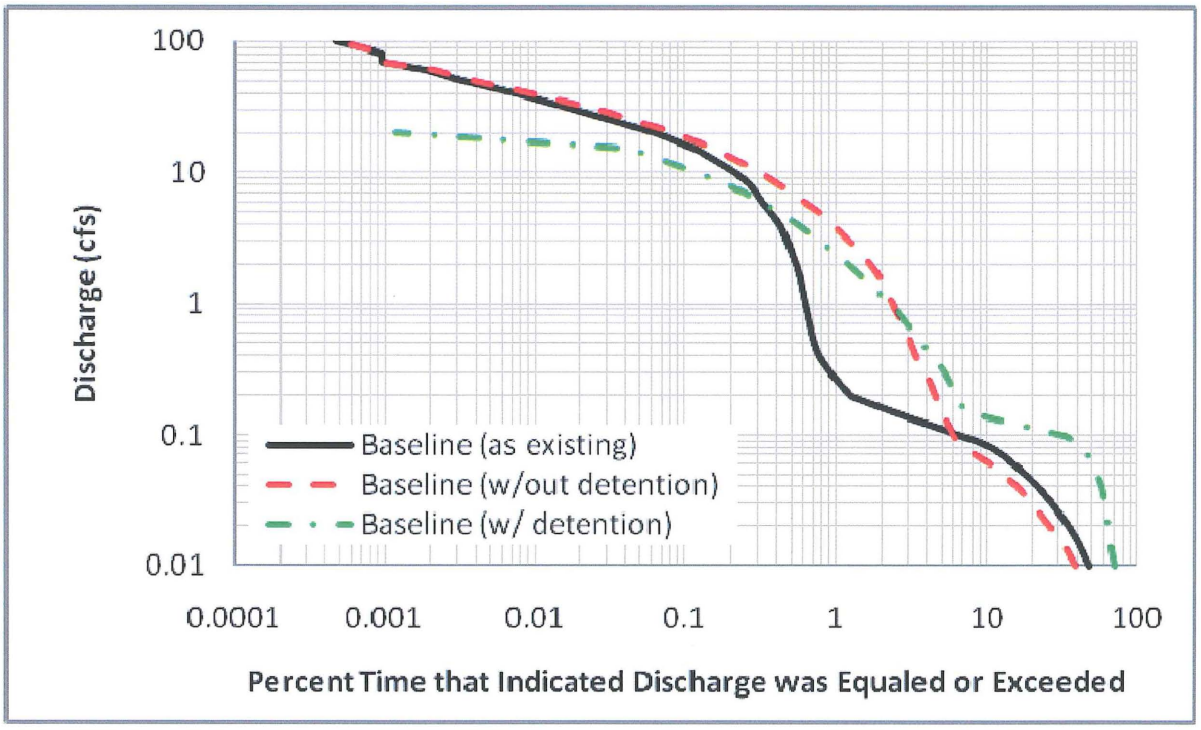


Figure 10. Flow duration curve for detention basin #8

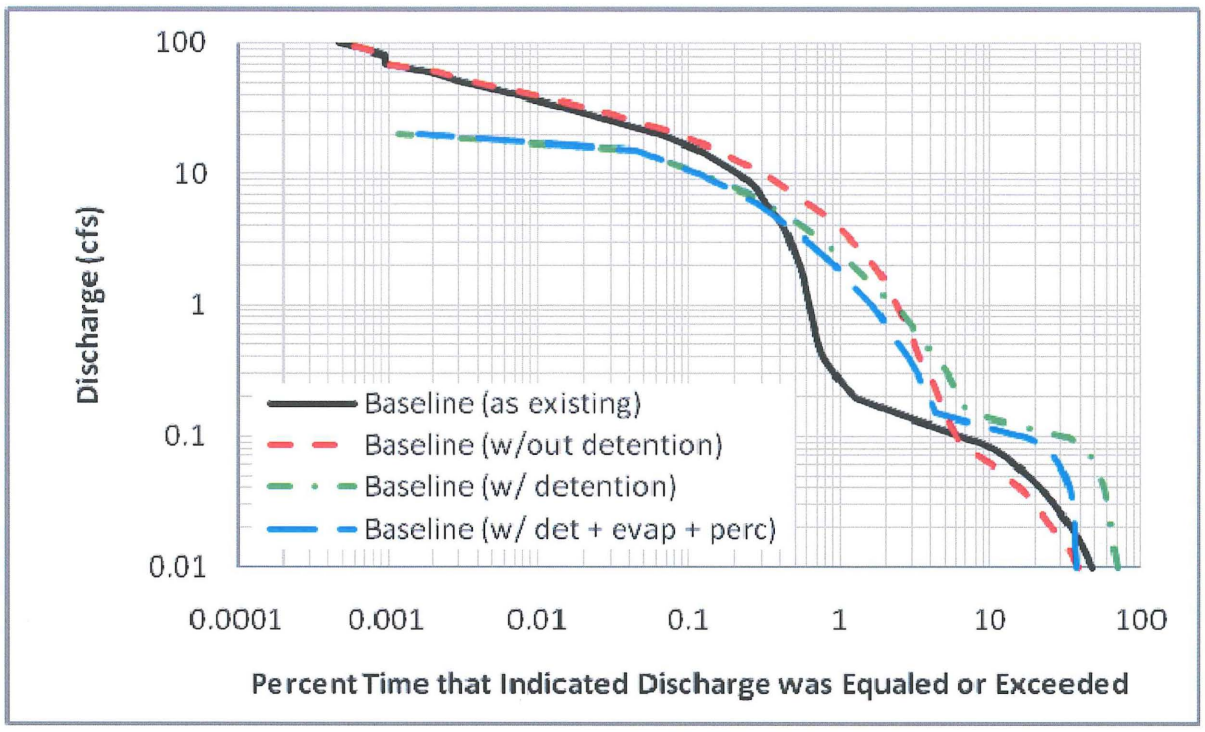


Figure 11. Flow duration curve for detention basin #8 including evaporation and percolation

At the reach scale, Figures 12a and 13a show the flow duration curves for compliance points #12 and #8, respectively (refer to compliance point figure by M&S). The same patterns discussed above also apply here. These figures are reiterated at Figures 12b and 13b to highlight the differences for the infrequent (larger) flows.

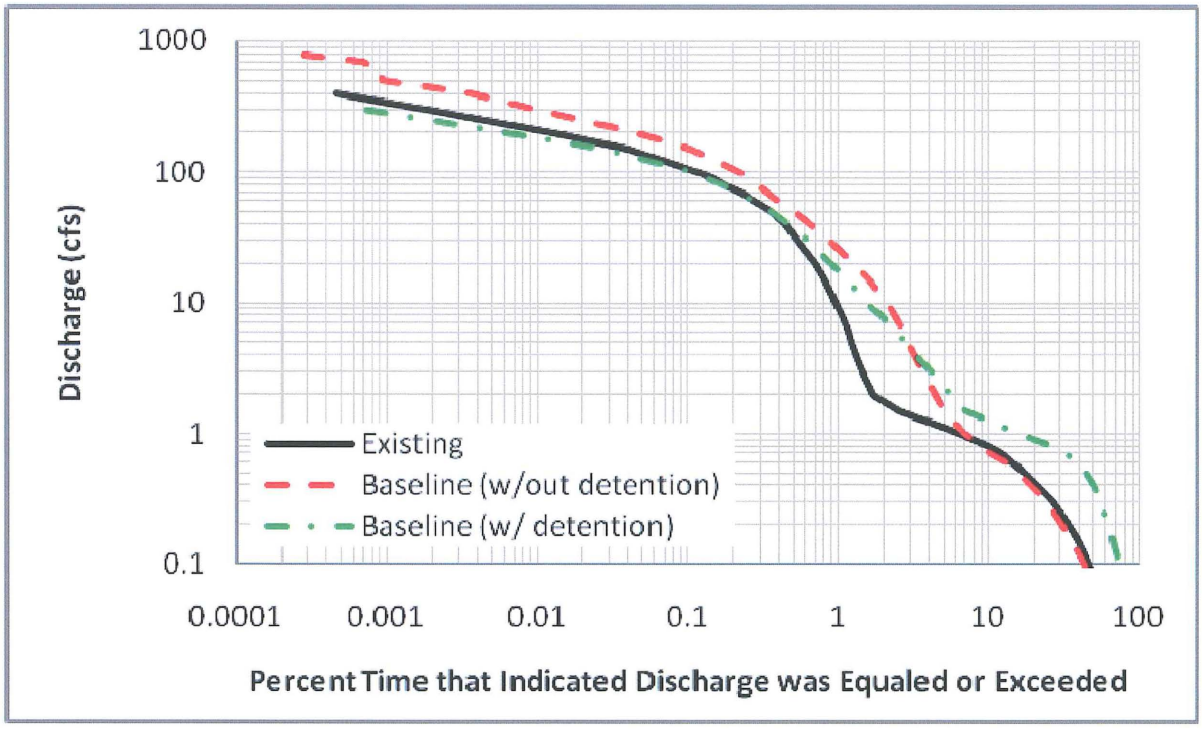


Figure 12a. Flow duration curve for compliance point #12 (upstream of Anatolia III)

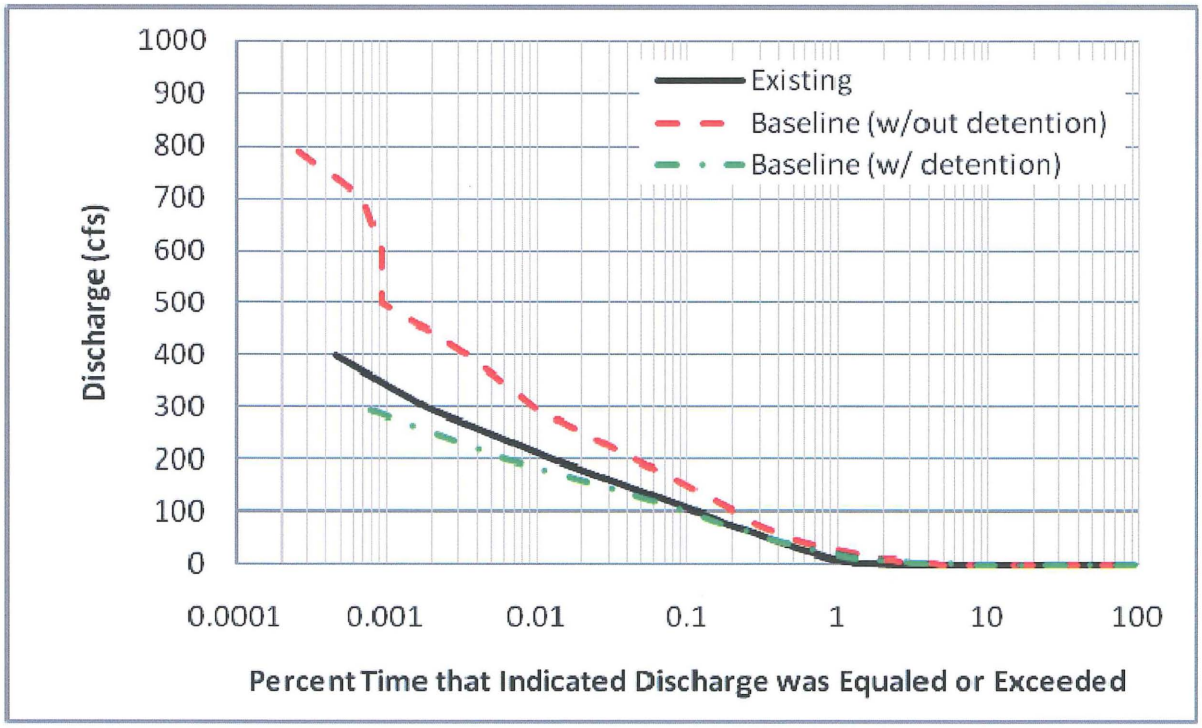


Figure 12b. Flow duration curve for compliance point #12 (upstream of Anatolia III)

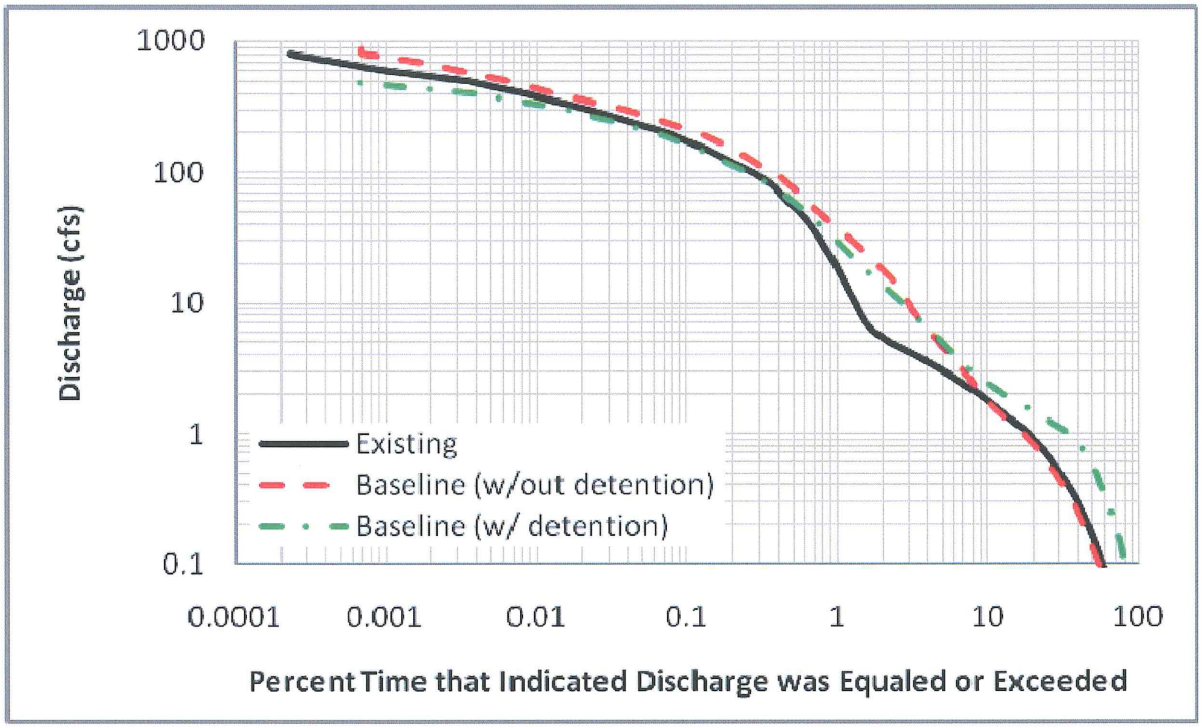


Figure 13a. Flow duration curve for compliance point #8 (downstream property boundary)

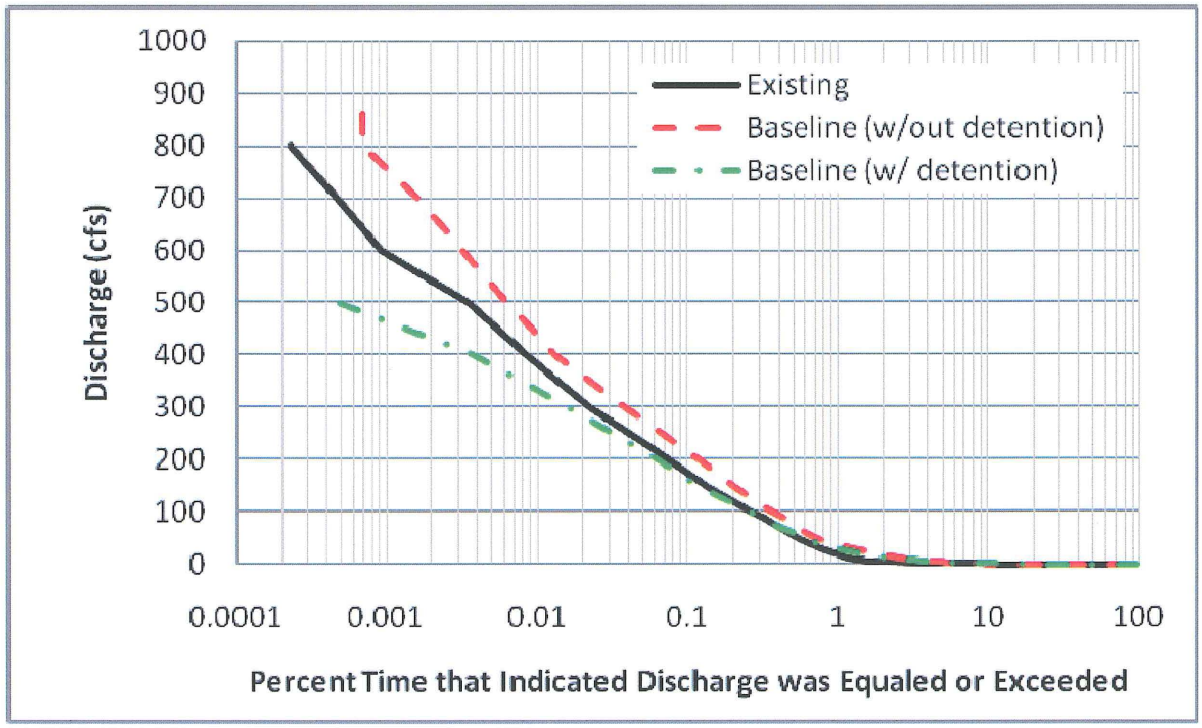


Figure 13b. Flow duration curve for compliance point #8 (downstream property boundary)

In addition, Figures 14 and 15 show the total work done for compliance points #12 and #8, respectively (refer to compliance point figure by M&S). These curves, based on the critical shear stress values defined earlier, show that the critical flow rates to initiate erosion are approximately 20 cfs and 60 cfs for compliance points #12 and #8, respectively. These values correspond to 11% and 21% of the 2-year peak flow as estimated from the HMS output; the 2-year discharges are 170 cfs and 280 cfs for compliance points #12 and #8, respectively.

Table 5 below integrates the total work done curves over the entire range of flows and tabulates the erosion potential index for each compliance point. The **baseline (w/ detention)** scenario has an erosion potential index close to unity at both compliance points. Since the **baseline (w/ detention)** scenario closely matches the total work curve for existing conditions through the range of flow conditions, as depicted in Figures 14 and 15, should the range of geomorphically significant flows, yet to be set by the County, deviate from the standards established here, the project should theoretically meet that criteria.

Table 5. Total work done and erosion potential ratios at compliance points

	Total Work Done (ft-lbf/ft^2) Compliance Point (Creek Section)		Erosion Potential Index Compliance Point	
HMS Model	**#12 (XS 210)**	**#8 (XS 231)**	**#12 (XS 210)**	**#8 (XS 231)**
Existing	32372	22068	---	---
Baseline (w/out detention)	49571	31178	1.53	1.41
Baseline (w/ detention)	33630	20823	1.04	0.94

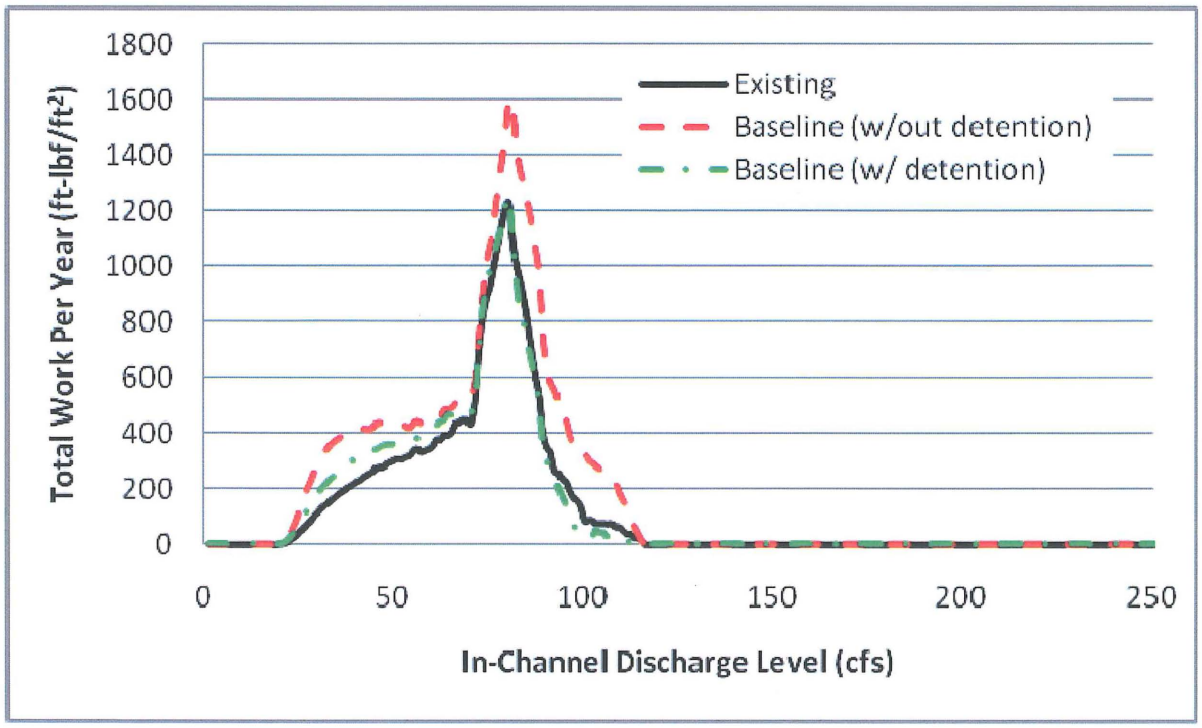


Figure 14. Total work done at compliance point #12 (upstream of Anatolia III)

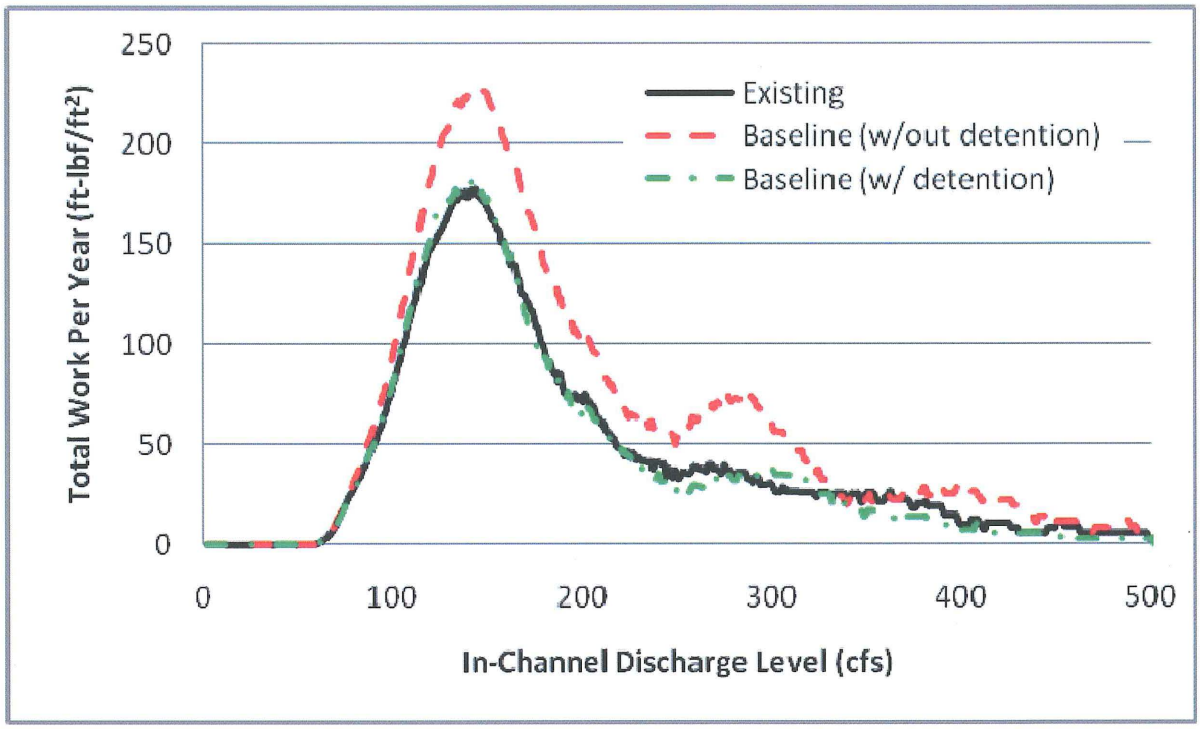


Figure 15. Total work done at compliance point #8 (downstream property boundary)

SUMMARY

The conclusions and recommendation of this study can be summarized as follows:

1. The upper reach of Kite Creek (upstream of Keifer Boulevard and Anatolia III development) was classified as medium erodibility risk. Therefore, it has undergone some limited anthropogenic disturbance historically, primarily as a result of grazing and other agricultural practices.
2. The lower reach of Kite Creek (downstream of Keifer Boulevard and Anatolia III development) was classified as high erodibility risk. This reach has undergone substantial erosion and incision and is relatively unstable.
3. Both the upper and lower reaches of Kite Creek will be geomorphically susceptible to future development unless hydromodification mitigation is used. In this project, flow duration control was specified to mitigate for hydromodification.
4. Traditional stormwater detention methods were found to be unsatisfactory in mitigating for hydromodification impacts. Flow duration control was required to maintain, or reduce, flow duration and total work done on the creek between existing and baseline (with project) conditions.
5. The flow duration control, as implemented for all detention basins, consisted of a variable length weir structure in front of the flood control orifices with a 2-inch low flow orifice at the basin invert and a crest elevation 1.5 feet above the basin invert (schematic depicted elsewhere by M&S).

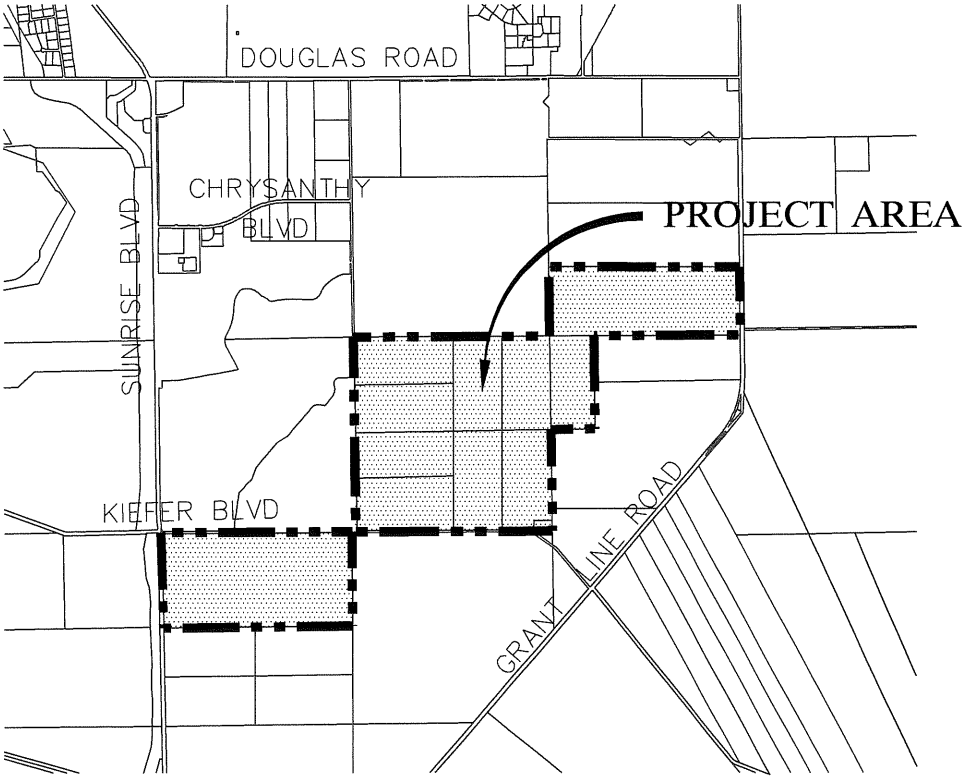
6. For flood control purposes, the volume of water below the weir crest was treated as dead storage and was added to the flood control storage above 1.5 feet.
7. Modification of the detention basins for flow duration control generally required the basins to be increased by approximately 27% in plan area.
8. The critical shear stress was estimated for compliance point #12 to be 0.12 lbf/ft^2 based on representative sampled bed material for the reach and for compliance point #8 to be 0.20 lbf/ft^2 based on the minimum value in the range (0.20 to 0.38 lbf/ft^2) of shear stress needed to erode bank material since this reach has incised down to the hardpan.
9. The critical flow rates to initiate erosion are approximately 20 cfs and 60 cfs for compliance points #12 and #8, respectively. These values correspond to 11% and 21% of the 2-year peak flow as estimated from the HMS output; the 2-year discharges are 170 cfs and 280 cfs for compliance points #12 and #8, respectively.
10. The methods of flow duration control specified by this project should result in the total work for baseline conditions, done throughout the majority of the flow ranges, to closely match existing conditions. Should the range of geomorphically significant flows, yet to be set by the County, deviate from the standards proposed in this project, the project should theoretically meet those criteria.
11. The basins have been designed to meet the requirements of both flood control and hydromodification mitigation. Water quality function of the basins should also be possible through design and we recommend that the basins include measures to mitigate for summer-time nuisance or irrigation runoff flows, thus minimizing the possibility of Kite Creek being converted from an ephemeral to perennial stream.
12. We understand that protection of Kite Creek is currently enforced by regulatory agencies through implementation of multiple preserves, and realizing that there are serious limitations to working within the preserves, we recommend that the flow duration control as described earlier in this memorandum be implemented in final design to avoid further anthropogenic impacts to Kite Creek beyond what has already occurred to present.

REFERENCES

Geosyntec. 2007. A Technical Study of Hydrology, Geomorphology, and Water Quality in the Laguna Creek Watershed.

Appendix B: Exhibits

Appendix B–1: Exhibit A: SunCreek Specific Plan – Vicinity Map



NO SCALE

EXHIBIT A
Vicinity Map

SunCreek Specific Plan

County of Sacramento, California *September 2010*

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ENGINEERS PLANNERS SURVEYORS

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Appendix B–2: Exhibit B: SunCreek Specific Plan – Land Use Plan

Legend

- HIGH DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- COMPACT DENSITY RESIDENTIAL
- COMMERCIAL MIXED USE
- STORMWATER CANAL
- DETENTION BASIN
- PUBLIC/QUASI PUBLIC
- PARK
- SCHOOL
- VILLAGE CENTER
- WETLAND
- WETLAND BUFFER/BIKE PATH CORRIDOR

0' 600' 1200' 2400'

EXHIBIT B
Landuse Exhibit

SunCreek Specific Plan

County of Sacramento, California

December 2008

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

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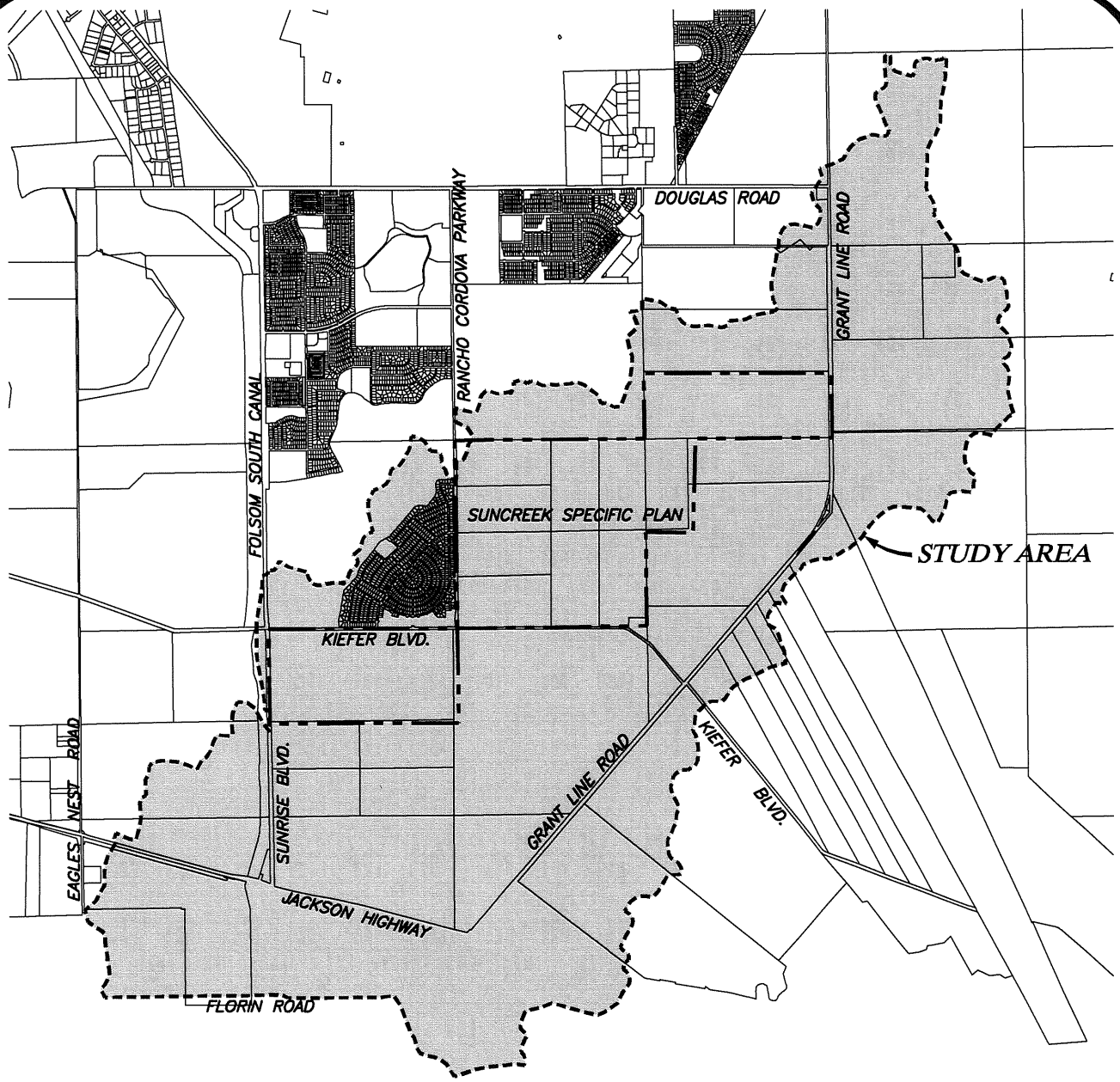
Appendix B–3: Exhibit C: SunCreek Specific Plan – Drainage Study Area Map



NO SCALE

EXHIBIT C
Drainage Study Area Map

SunCreek Specific Plan

County of Sacramento, California *December 2008*

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ENGINEERS PLANNERS SURVEYORS

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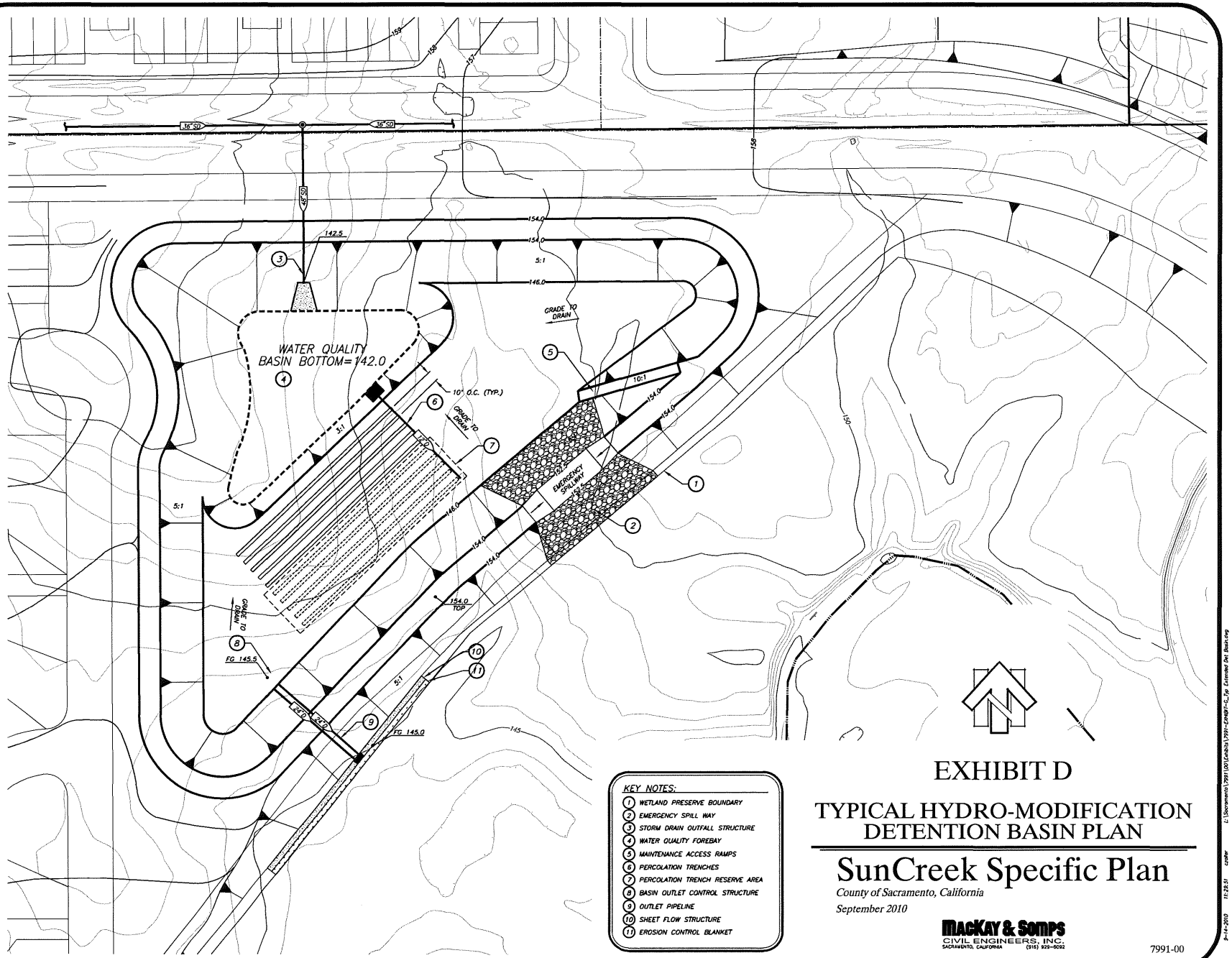
Appendix B–4: Exhibit D: SunCreek Specific Plan – Typical Hydro-modification Detention Basin Plan



KEY NOTES:

1. WETLAND PRESERVE BOUNDARY
2. EMERGENCY SPILL WAY
3. STORM DRAIN OUTFALL STRUCTURE
4. WATER QUALITY FOREBAY
5. MAINTENANCE ACCESS RAMPS
6. PERCOLATION TRENCHES
7. PERCOLATION TRENCH RESERVE AREA
8. BASIN OUTLET CONTROL STRUCTURE
9. OUTLET PIPELINE
10. SHEET FLOW STRUCTURE
11. EROSION CONTROL BLANKET

EXHIBIT D

TYPICAL HYDRO-MODIFICATION DETENTION BASIN PLAN

SunCreek Specific Plan

County of Sacramento, California

September 2010

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CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

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Appendix B–5: Exhibit E: SunCreek Specific Plan – Typical Hydro-modification Detention Basin Cross-Section

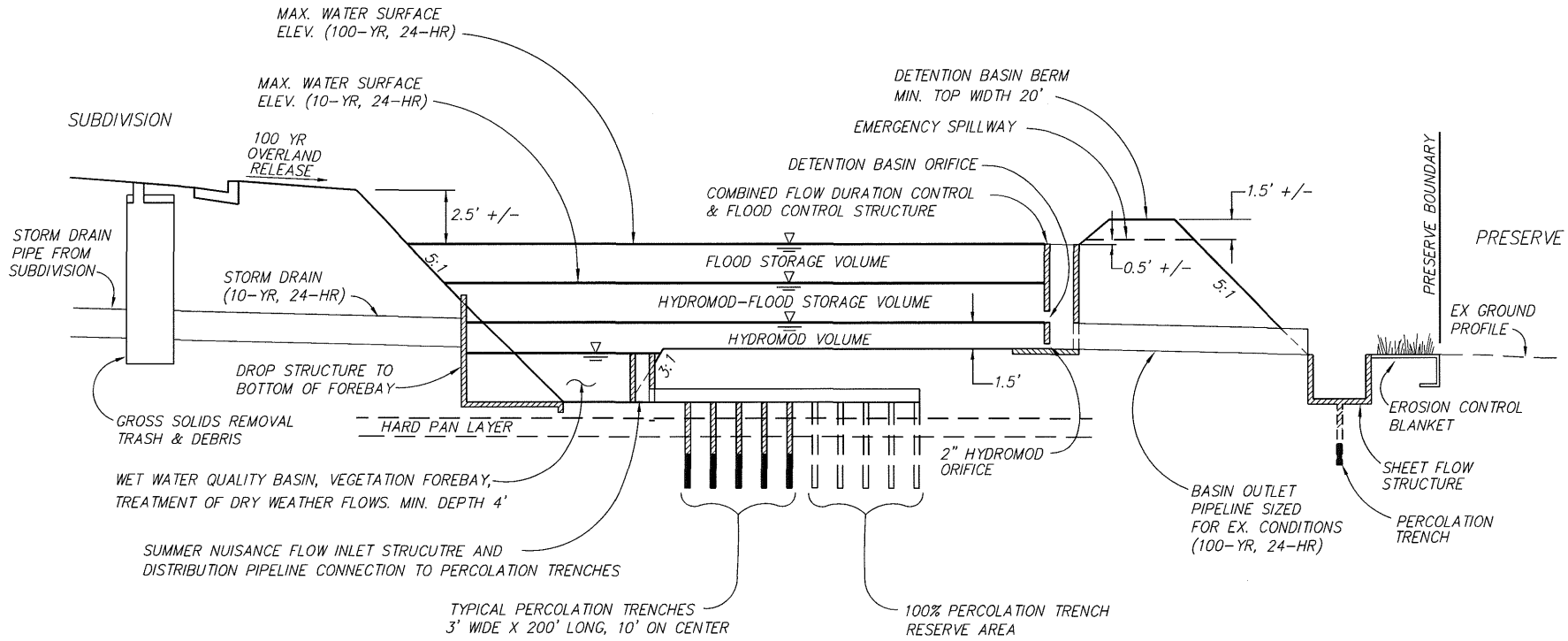

EXHIBIT E

TYPICAL HYDRO-MODIFICATION DETENTION BASIN CROSS-SECTION

SunCreek Specific Plan

County of Sacramento, California *September, 2010*

Scale: N.T.S.

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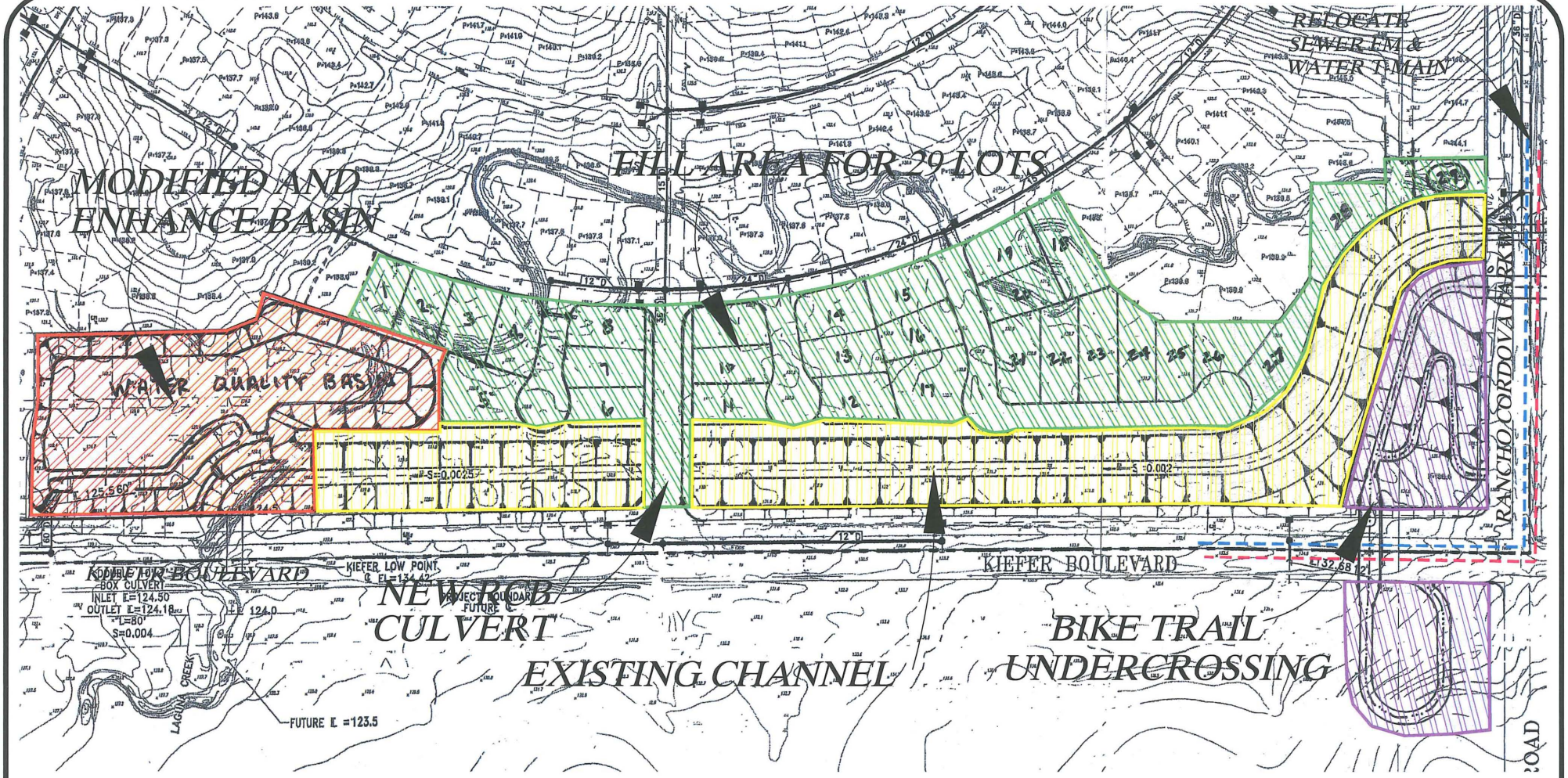
Appendix C: Schematic Design of Anatolia III – Alternatives 'A', 'B', 'C' and 'D'



ANATOLIA III - ALTERNATIVE A

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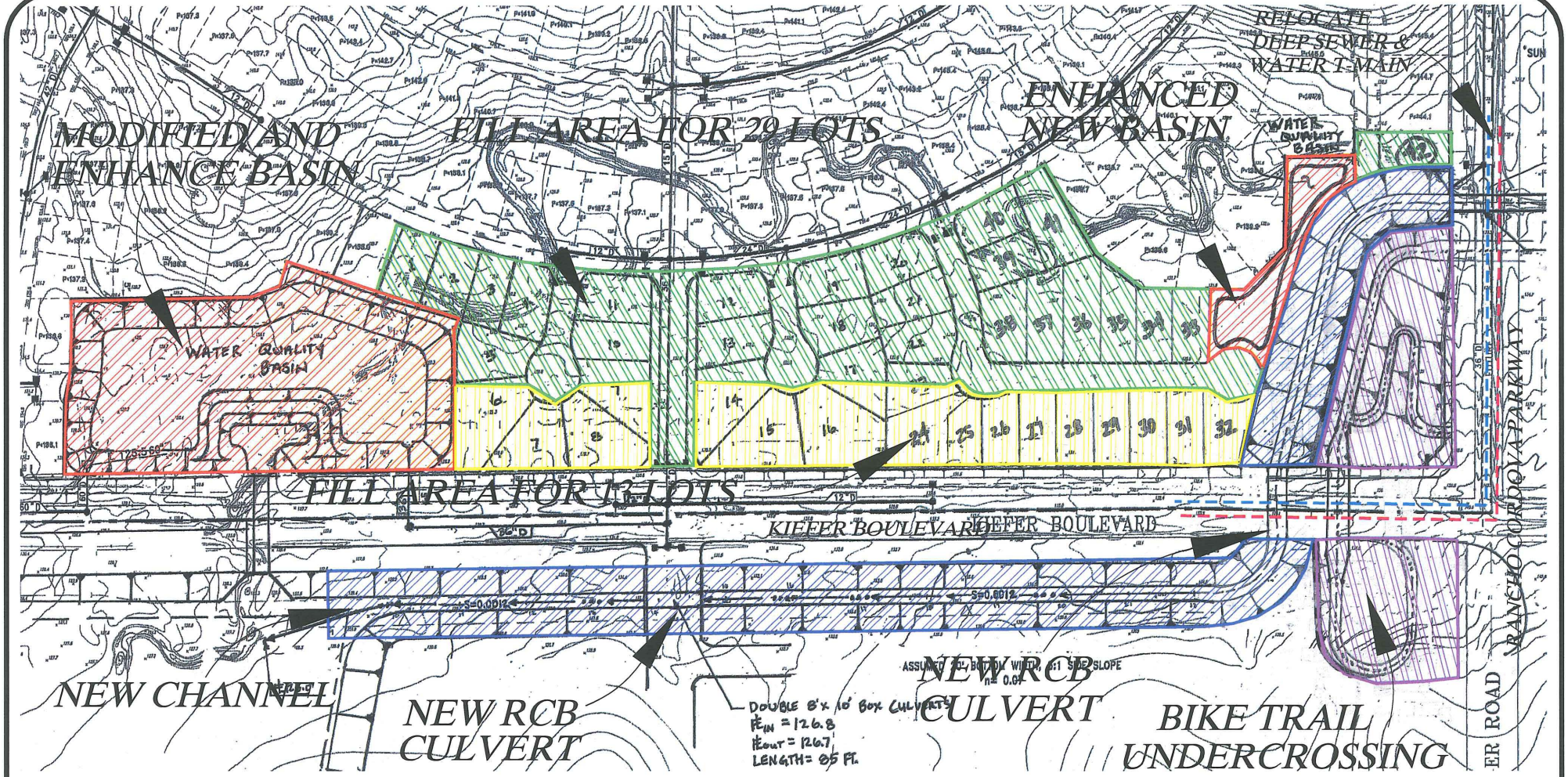

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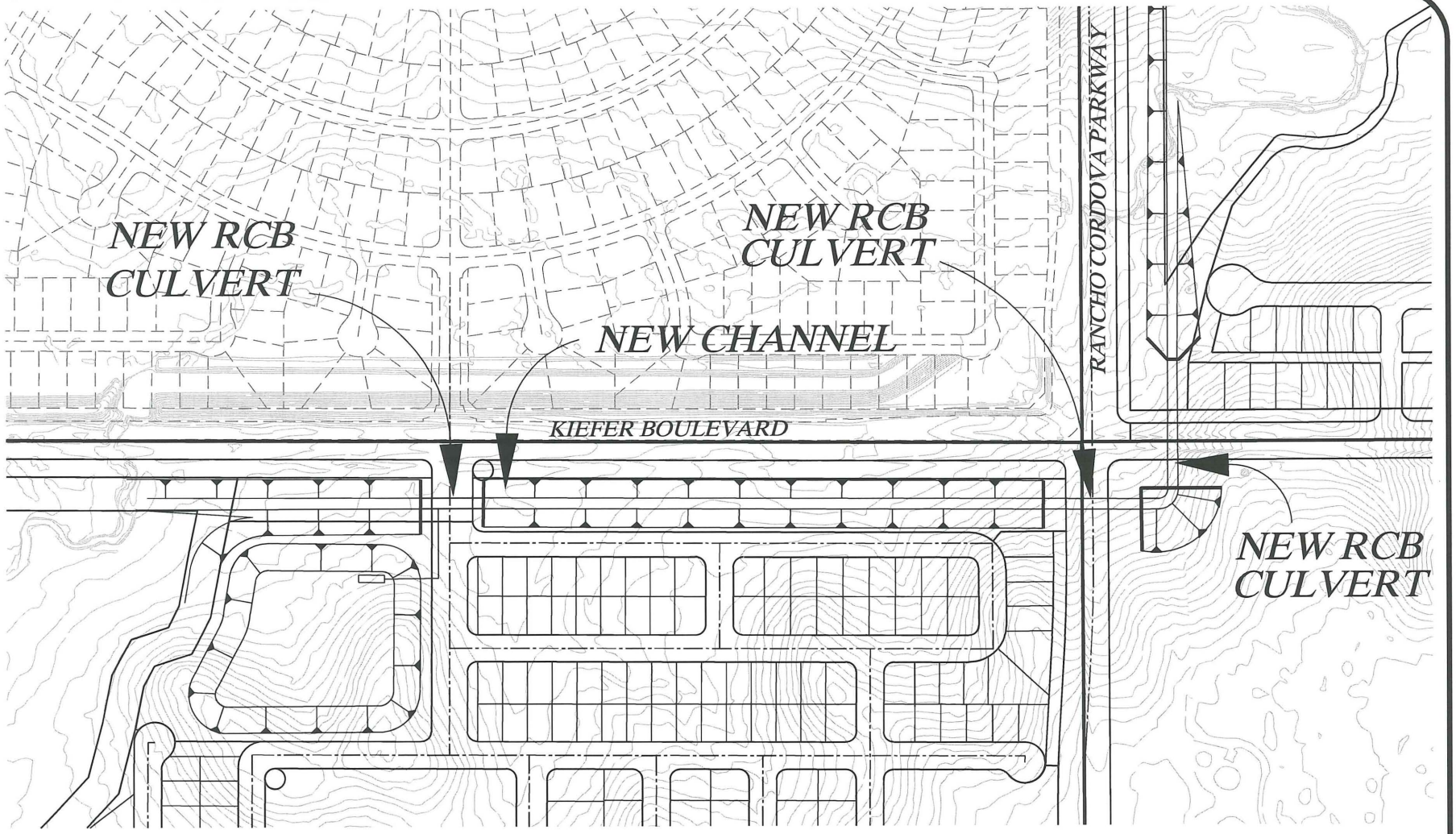

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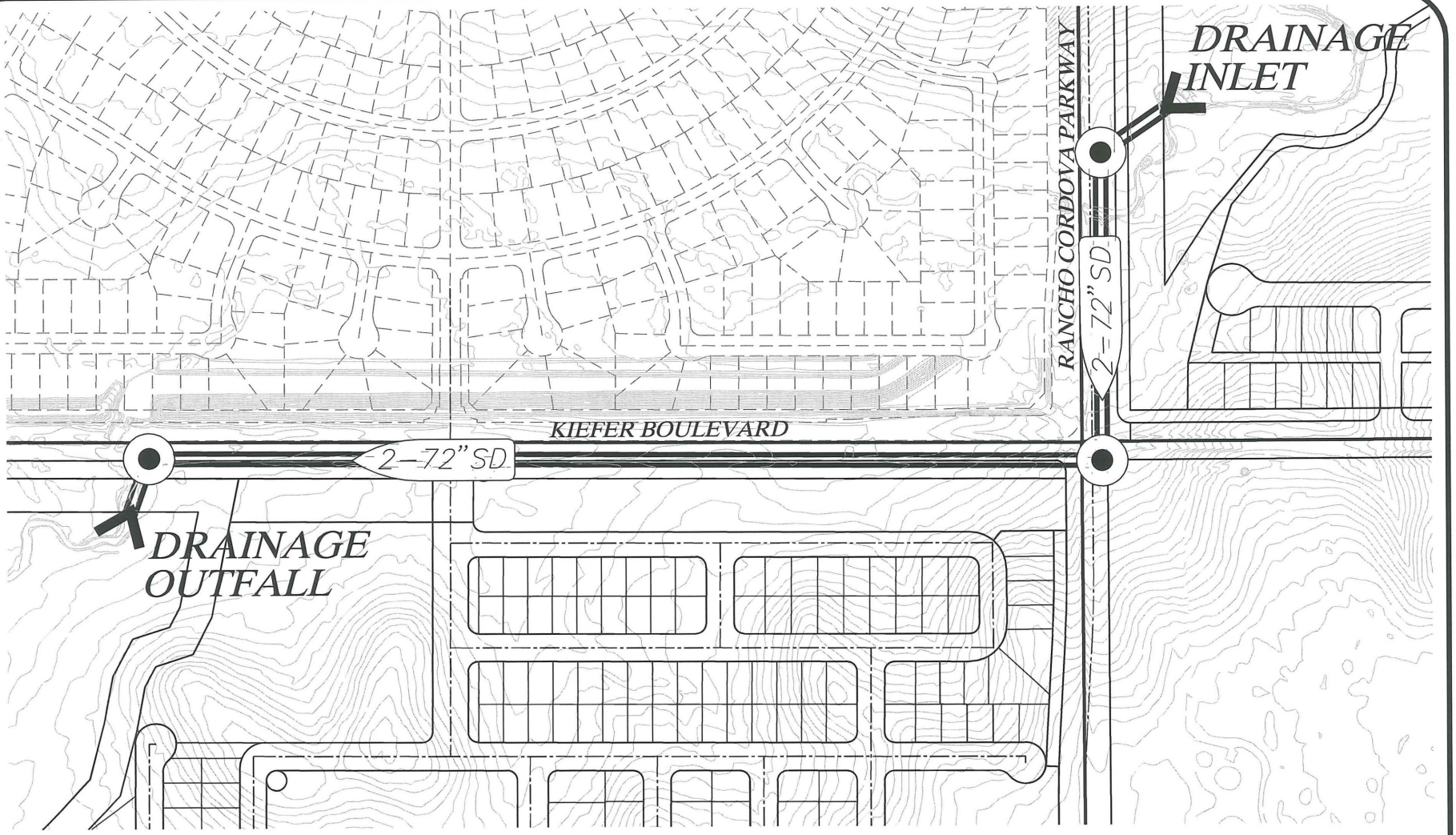

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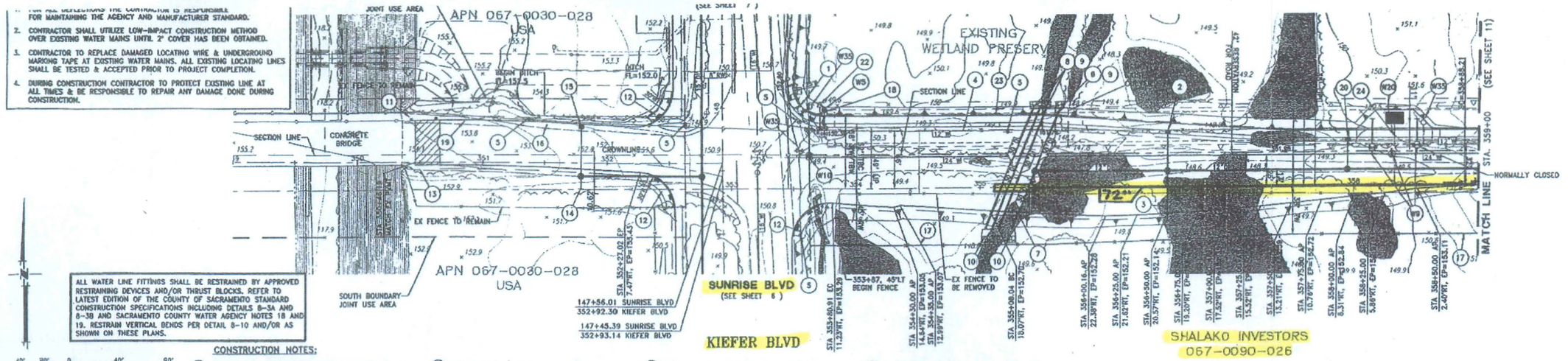
Appendix D: Schematic Design of Morrison Spill Pipeline

FOR ALL DEFICIENCIES THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE AGENCY AND MANUFACTURER STANDARD.

2. CONTRACTOR SHALL UTILIZE LOW-IMPACT CONSTRUCTION METHOD OVER EXISTING WATER MAINS UNTIL 2' COVER HAS BEEN OBTAINED.
3. CONTRACTOR TO REPLACE DAMAGED LOCATING WIRE & UNDERGROUND MARKING TAPE AT EXISTING WATER MAINS. ALL EXISTING LOCATING LINES SHALL BE TESTED & ACCEPTED PRIOR TO PROJECT COMPLETION.
4. DURING CONSTRUCTION CONTRACTOR TO PROTECT EXISTING LINE AT ALL TIMES & BE RESPONSIBLE TO REPAIR ANY DAMAGE DONE DURING CONSTRUCTION.

ALL WATER LINE FITTINGS SHALL BE RESTRAINED BY APPROVED RESTRAINING DEVICES AND/OR THRUST BLOCKS. REFER TO LATEST EDITION OF THE COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS INCLUDING DETAILS 8-3A AND 8-3B AND SACRAMENTO COUNTY WATER AGENCY NOTES 18 AND 19. RESTRAIN VERTICAL BENDS PER DETAIL 8-10 AND/OR AS SHOWN ON THESE PLANS.



40' 20' 0 40' 80'
SCALE: 1" = 40'

CONSTRUCTION NOTES:

1. CONSTRUCT DOUBLE SIDEWALK RAMP PER COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS DWG 4-23A & 4-24.
2. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/30 LF OF 12" RCP CL-V (ONLY) FL @ D.I.=148.92, FL @ MH=148.77 S=0.005 GFL=151.80
3. PLACE 40 LF OF 12" RCP CL-V (ONLY) @ S=0.005 PLUG & MARK END FL @ MH = 148.77 FL @ END = 148.97
4. REMOVE & DISPOSE OF EXISTING FENCE
5. EX UTILITY POLES TO BE RELOCATED BY OTHERS
6. PLACE 55 LF 30" RCP CL-V (ONLY) @ S=0.002 FL @ INLET=148.11 FL @ MH=148.00
7. PLACE 49 LF 30" RCP CL-V (ONLY) @ S=0.002 FL @ OUTLET=147.90 FL @ MH=148.00
8. PLACE 3-30" RCP CL-V (ONLY) CULVERTS L=105' 5' SEPARATION @ S=0.002 FL @ INLETS= 148.14 FL @ OUTLETS= 147.93
9. PLACE 30" PIPE HEADWALL, END WALL AND WINGWALL STRUCTURE W/ TRASH RACK PER STD. DTL. 9-26H & 9-26G. IN ADDITION, PLACE 5' OF CALTRANS FACING ROCK (34kg) & 18" GEOTEXTILE FABRIC AT INLET.
10. PLACE 30" PIPE HEADWALL, ENDWALL AND WINGWALL STRUCTURE PER STD. DTL. 9-26H AND 5' OF CALTRANS FACING ROCK (34kg) & 18" GEOTEXTILE FABRIC AT OUTLET.
11. EX METAL BEAM GUARDRAIL TO REMAIN
12. CONSTRUCT DOUBLE PEDESTRIAN LANDING PER DETAIL SHT. 31
13. GRIND AND CONFORM EX. PAVEMENT MINIMUM OVERLAY 0.15' PER DETAIL SHEET 31 (STA 350+37 TO 350+57)
14. PLACE 10 LF PVC SDR-35 DRAIN PIPE S=0.005 FL@MH=149.00 FL@ENO=149.15 PLUG END
15. CONST. TYPE B DI & CONNECT TO MH W/34 LF PVC SDR-35 DRAIN PIPE FL@DI=149.17 FL@MH=149.00 S=0.005 GFL=152.80
16. CONSTRUCT CALTRANS TYPE A DIKE AT EP PER STD PLAN A87.
17. PLACE WM FENCE PER STD DTL 9-29 @ RIGHT OF WAY OR AS SHOWN.
18. SEE FH/ARV WORK AREA DETAIL, SHT 31.
19. 30' OPENING IN AC DIKE
20. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/22 LF OF 12" RCP CL-V (ONLY) FL @ D.I.=149.26, FL @ MH=149.15 S=0.005 GFL=152.13
21. CONFORM AC SIDEWALK TO EXISTING BRIDGE DECK @ S=5%
22. REMOVE EXISTING 1" ARV.
23. PLACE POST & CABLE FENCE PER STD DTL L-20 AT TBW. PLACE SIGNS @ 200' O.C. STATING "WETLAND PRESERVE-NO ACCESS".
24. CONSTRUCT 60' TYPE A-6 DRIVEWAY. CL STA 358+32.17. SEE SHEET 68.
25. PLACE 5' OF CALTRANS FACING ROCK (34kg) & 18" GEOTEXTILE FABRIC AT INLET/OUTLET.

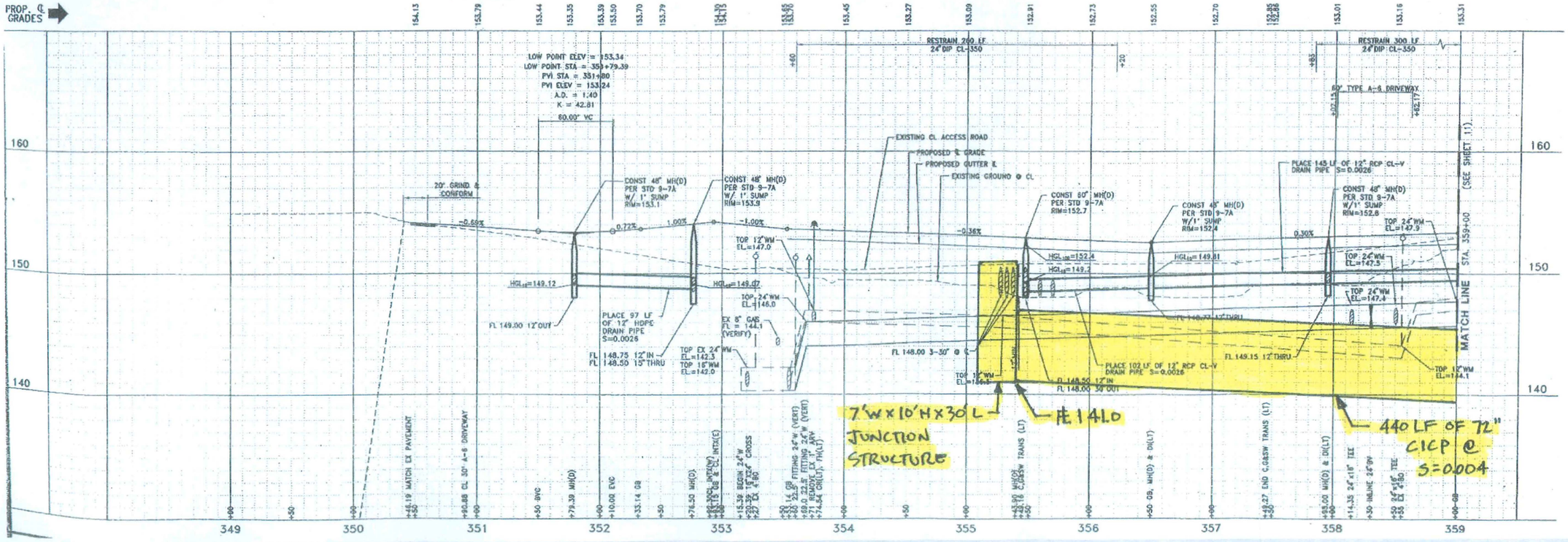
STORM DRAIN PIPE ALTERNATIVES

AS FOLLOWS UNLESS INDICATED ON PLANS AS "ONLY"

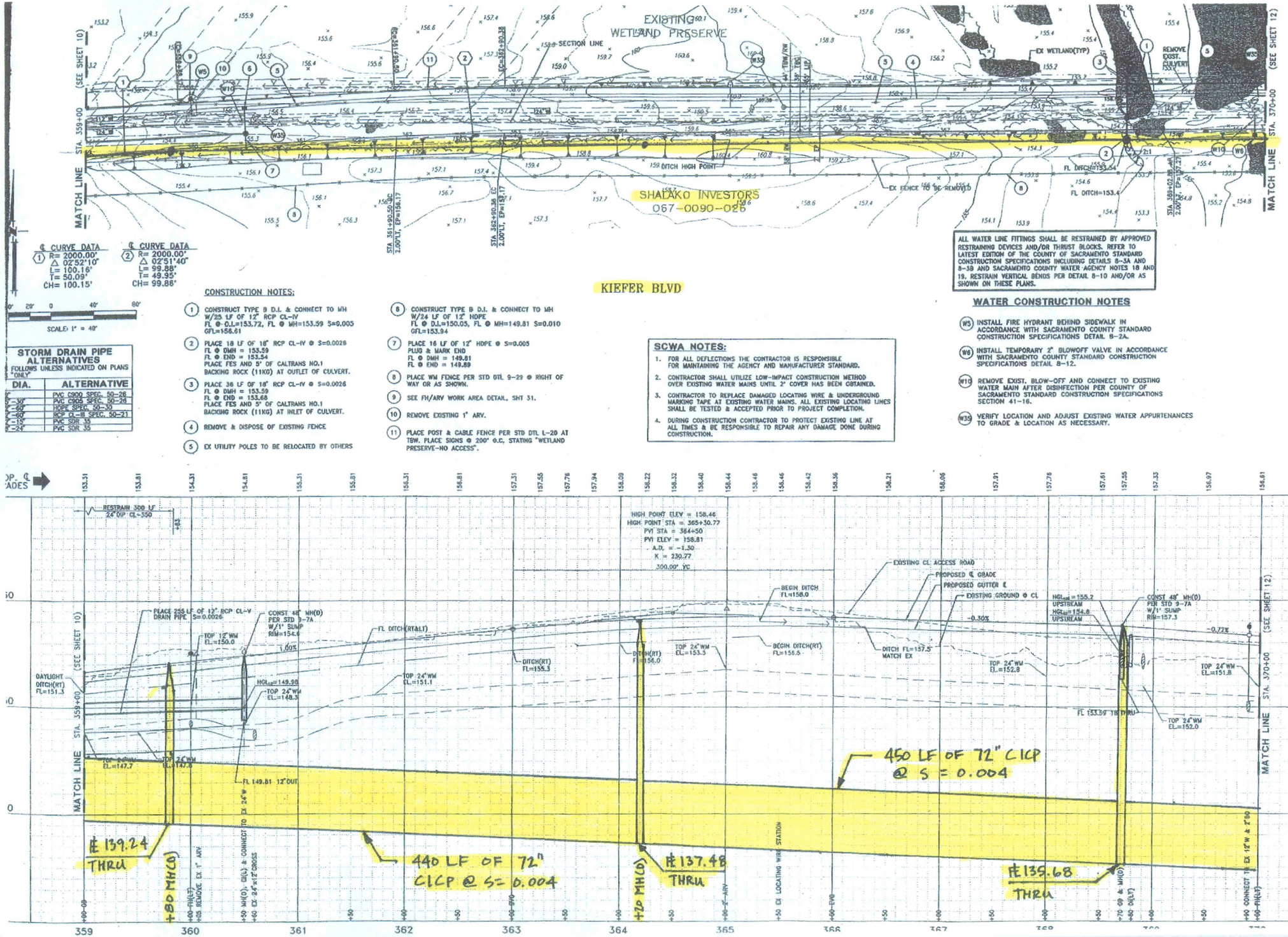
DIA.	ALTERNATIVE
12"	PVC C900 SPEC. 50-26
15"-30"	PVC C905 SPEC. 50-26
12"-60"	HDPE SPEC. 50-30
12"-60"	RCP CL-III SPEC. 50-21
12"-15"	PVC SDR 35
18"-24"	PVC SDR 35

WATER CONSTRUCTION NOTES

- W5 INSTALL FIRE HYDRANT BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-2A.
- W9 INSTALL BUTTERFLY VALVE WITH ACTUATOR VALVE AS SHOWN.
- W10 REMOVE EXIST. BLOW-OFF AND CONNECT TO EXISTING WATER MAIN AFTER DISINFECTION PER COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS SECTION 41-16.
- W20 PRESSURE REDUCING STATION. (SEE SHT 68 FOR DETAILS)
- W35 VERIFY LOCATION AND ADJUST EXISTING WATER APPURTENANCES TO GRADE & LOCATION AS NECESSARY.



SCHEMATIC DESIGN OF MORRISON SPILL PIPELINE, SHEET 1 OF 4



℄ CURVE DATA ① R= 2000.00' Δ 02°52'10" L= 100.16' T= 50.09' CH= 100.15'

℄ CURVE DATA ② R= 2000.00' Δ 02°51'40" L= 99.88' T= 49.95' CH= 99.88'

ALL WATER LINE FITTINGS SHALL BE RESTRAINED BY APPROVED RESTRAINING DEVICES AND/OR THRUST BLOCKS. REFER TO LATEST EDITION OF THE COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS INCLUDING DETAILS 8-3A AND 8-3B AND SACRAMENTO COUNTY WATER AGENCY NOTES 18 AND 19. RESTRAIN VERTICAL BENDS PER DETAIL 8-10 AND/OR AS SHOWN ON THESE PLANS.

CONSTRUCTION NOTES:

1. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/25 LF OF 12" RCP CL-IV FL @ D.I.=153.72, FL @ MH=153.59 S=0.005 GFL=156.61
2. PLACE 18 LF OF 18" RCP CL-IV @ S=0.0026 FL @ DMH = 153.59 FL @ END = 153.54 PLACE FES AND 5' OF CALTRANS NO.1 BACKING ROCK (11KG) AT OUTLET OF CULVERT.
3. PLACE 36 LF OF 18" RCP CL-IV @ S=0.0026 FL @ DMH = 153.59 FL @ END = 153.68 PLACE FES AND 5' OF CALTRANS NO.1 BACKING ROCK (11KG) AT INLET OF CULVERT.
4. REMOVE & DISPOSE OF EXISTING FENCE.
5. EX UTILITY POLES TO BE RELOCATED BY OTHERS
6. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/24 LF OF 12" HDPE FL @ D.I.=150.05, FL @ MH=149.81 S=0.010 GFL=153.94
7. PLACE 16 LF OF 12" HDPE @ S=0.005 PLUG & MARK END FL @ DMH = 149.81 FL @ END = 149.89
8. PLACE WM FENCE PER STD DTL 9-29 @ RIGHT OF WAY OR AS SHOWN.
9. SEE FH/ARV WORK AREA DETAIL, SHT 31.
10. REMOVE EXISTING 1" ARV.
11. PLACE POST & CABLE FENCE PER STD DTL L-20 AT TBW. PLACE SIGNS @ 200' O.C. STATING "WETLAND PRESERVE-NO ACCESS".

STORM DRAIN PIPE ALTERNATIVES

FOLLOWS UNLESS INDICATED ON PLANS "ONLY"

DIA.	ALTERNATIVE
6"	PVC C900 SPEC. 50-26
8"-30"	PVC C905 SPEC. 50-26
8"-60"	HDPE SPEC. 50-30
8"-60"	RCP CL-III SPEC. 50-21
8"-15"	PVC SDR 35
18"-24"	PVC SDR 35

SCWA NOTES:

1. FOR ALL DEFLECTIONS THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE AGENCY AND MANUFACTURER STANDARD.
2. CONTRACTOR SHALL UTILIZE LOW-IMPACT CONSTRUCTION METHOD OVER EXISTING WATER MAINS UNTIL 2' COVER HAS BEEN OBTAINED.
3. CONTRACTOR TO REPLACE DAMAGED LOCATING WIRE & UNDERGROUND MARKING TAPE AT EXISTING WATER MAINS. ALL EXISTING LOCATING LINES SHALL BE TESTED & ACCEPTED PRIOR TO PROJECT COMPLETION.
4. DURING CONSTRUCTION CONTRACTOR TO PROTECT EXISTING LINE AT ALL TIMES & BE RESPONSIBLE TO REPAIR ANY DAMAGE DONE DURING CONSTRUCTION.

WATER CONSTRUCTION NOTES

- (WS) INSTALL FIRE HYDRANT BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-2A.
- (W6) INSTALL TEMPORARY 2" BLOWOFF VALVE IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-12.
- (W10) REMOVE EXIST. BLOW-OFF AND CONNECT TO EXISTING WATER MAIN AFTER DISINFECTION PER COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS SECTION 41-16.
- (W39) VERIFY LOCATION AND ADJUST EXISTING WATER APPURTENANCES TO GRADE & LOCATION AS NECESSARY.

SCHEMATIC DESIGN OF MORRISON SPILL PIPELINE, SHEET 2 OF 4

℄ CURVE DATA
(1) R= 2000.00'
Δ 02°24'16"
L= 83.93'
T= 41.97'
CH= 83.92'

℄ CURVE DATA
(2) R= 2000.00'
Δ 02°24'16"
L= 83.93'
T= 41.97'
CH= 83.92'

EXISTING WETLAND PERSERVE

(SEE SHEET 25)

ANATOLIA III & IV VILLAGE 8

P=150.7 | P=149.3 | P=143.7 | P=143.1 | P=141.8 | P=140.1 | P=139.2 | P=138.7 | P=137.9

END-POST & CABLE FENCE

MATCH LINE STA. 370+00 (SEE SHEET 11)

MATCH LINE STA. 381+00 (SEE SHEET 13)

DITCH FL=154.8

DITCH FL=152.3

DITCH FL=146.8

REMOVE EX FENCE

375+24.12 KIEFER BLVD
10+00.03 CRYSTAL COVE DRIVE

SHALAKO INVESTORS
067-0090=026

KIEFER BLVD

SCALE: 1" = 40'

STORM DRAIN PIPE ALTERNATIVES

AS FOLLOWS UNLESS INDICATED ON PLANS AS "ONLY"

DIA.	ALTERNATIVE
12"	PVC C900 SPEC. 50-26
15"-30"	PVC C905 SPEC. 50-26
12"-60"	HDPE SPEC. 50-30
12"-60"	RCP CL-III SPEC. 50-21
12"-15"	PVC SDR 35
18"-24"	PVC SDR 35

CONSTRUCTION NOTES:

1. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/24 LF OF 12" HDPE FL @ D.I.=146.37, FL @ MH=146.25 S=0.005 GFL=150.07
2. PLACE 24 LF OF 12" HDPE @ S=0.005 PLUG & MARK END FL @ DMH = 148.25 FL @ END = 146.37
3. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/24 LF OF 12" HDPE FL @ D.I.=132.30, FL @ MH=132.06 S=0.010 GFL=136.30
4. PLACE 26 LF OF 12" RCP CL-III (ONLY) @ S=0.005 PLUG & MARK END FL @ DMH = 132.06 FL @ END = 132.19
5. CONSTRUCT 30" TYPE I D.I. & CONNECT TO MH W/47 LF OF 12" PVC SDR-35 FL @ D.I.=147.22, FL @ MH=148.75 S=0.010 8" HIGH OPENING TO NORTH, FL @ OPENING=151.00
6. REMOVE & DISPOSE OF EXISTING FENCE
7. EX UTILITY POLES TO BE RELOCATED BY OTHERS
8. PLACE MONUMENT WELL PER STD DTL SHT 31.
9. CONSTRUCT MEANDERING SIDEWALK PER STD DTL 4-29.
10. CONSTRUCT 30" HIGH KEYSTONE RETAINING WALL PER DTL SHT 31.
11. PLACE WM FENCE PER STD DTL 9-29 @ RIGHT OF WAY OR AS SHOWN.
12. PLACE POST & CABLE FENCE PER STD DTL L-20 AT TBW. PLACE SIGNS @ 200' O.C. STATING "WETLAND PRESERVE-NO ACCESS".

WATER CONSTRUCTION NOTES

- (W2) INSTALL 4" BLOWOFF BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-13C.
- (W5) INSTALL FIRE HYDRANT BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-2A.
- (W6) INSTALL TEMPORARY 2" BLOWOFF VALVE IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-12.
- (W10) REMOVE EXIST. BLOW-OFF AND CONNECT TO EXISTING WATER MAIN AFTER DISINFECTION PER COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS SECTION 41-18.
- (W8) INSTALL 2" COMBINATION AIR/VACUUM VALVE BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-14B.
- (W2) INSTALL 4"& 6" PVC IRRIGATION CONDUITS MAINTAINING A MINIMUM 3' OF COVER. PLACE 4"x4" POST PAINTED BLUE AT EACH END EXTENDING 2' ABOVE FINISHED GRADE.

ALL WATER LINE FITTINGS SHALL BE RESTRAINED BY APPROVED RESTRAINING DEVICES AND/OR THRUST BLOCKS. REFER TO LATEST EDITION OF THE COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS INCLUDING DETAILS 8-3A AND 8-3B AND SACRAMENTO COUNTY WATER AGENCY NOTES 18 AND 19. RESTRAIN VERTICAL BENDS PER DETAIL 8-10 AND/OR AS SHOWN ON THESE PLANS.

SCWA NOTES:

1. FOR ALL DEFLECTIONS THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE AGENCY AND MANUFACTURER STANDARD.
2. CONTRACTOR SHALL UTILIZE LOW-IMPACT CONSTRUCTION METHOD OVER EXISTING WATER MAINS UNTIL 2' COVER HAS BEEN OBTAINED.
3. CONTRACTOR TO REPLACE DAMAGED LOCATING WIRE & UNDERGROUND MARKING TAPE AT EXISTING WATER MAINS. ALL EXISTING LOCATING LINES SHALL BE TESTED & ACCEPTED PRIOR TO PROJECT COMPLETION.
4. DURING CONSTRUCTION CONTRACTOR TO PROTECT EXISTING LINE AT ALL TIMES & BE RESPONSIBLE TO REPAIR ANY DAMAGE DONE DURING CONSTRUCTION.

(W34) INSTALL LOCATING WIRE STATION IN ACCORDANCE WITH SACRAMENTO COUNTY CONSTRUCTION SPECIFICATIONS DETAIL 8-4B.

(W35) VERIFY LOCATION AND ADJUST EXISTING WATER APPURTENANCES TO GRADE & LOCATION AS NECESSARY.

PROP. ℄ GRADES

PVI STA = 372+30
PVI ELEV = 154.81
A.D. = -2.56
K = 156.44
400.00' VC

EXISTING CL ACCESS ROAD
PROPOSED ℄ GRADE
PROPOSED GUTTER E.
EXISTING GROUND @ CL
DITCH E. (RT)
BEGIN DITCH (RT) FL=154.8
DITCH (RT) FL=152.3
CONST 48" MH(D) PER STD 9-7A W/1' SUMP RIM=150.7
TOP 24"WM EL=151.8
TOP 24"WM EL=151.0
HGL=146.49
END DITCH FL=146.8
FL 146.25 18" OUT
TOP 24"WM EL=144.9
PLACE 259 LF OF 18" HDPE DRAIN PIPE S=0.0426
530 LF OF 72" CICP @ S=0.004
E 133.56 THRU

RESTRAIN 94 LF 24" DIP CL-350

PVI STA = 377+50
PVI ELEV = 138.42
A.D. = 2.76
K = 143.99
400.00' VC

REINFORCED TYPE 2 CURB & GUTTER(LT) PER STD. DTL. 4-22

CONST 72" MH(D) PER STD 9-7A RIM=142.6
PROPOSED ℄ GRADE
PROPOSED GUTTER E.
EXISTING GROUND @ CL
TOP 24"WM EL=136.0
REMOVE EX 12" DRAIN PIPE
HGL=134.89
FL 135.22 18" IN
FL 133.22 42" THRU
TOP 24"WM EL=135.9
TOP 24"WM EL=131.2
TOP 24"WM EL=131.1
300 LF OF 72" CICP @ S=0.0172
PLACE 382 LF OF 42" HDPE DRAIN PIPE S=0.0103
E 128.40 THRU
550 LF OF 72" CICP @ S=0.004
FL 129.21 42" THRU
TOP 24"WM EL=131.0
CONST 72" MH(D) PER STD 9-7A RIM=136.9
TOP 24"WM EL=130.8

F 7.2'

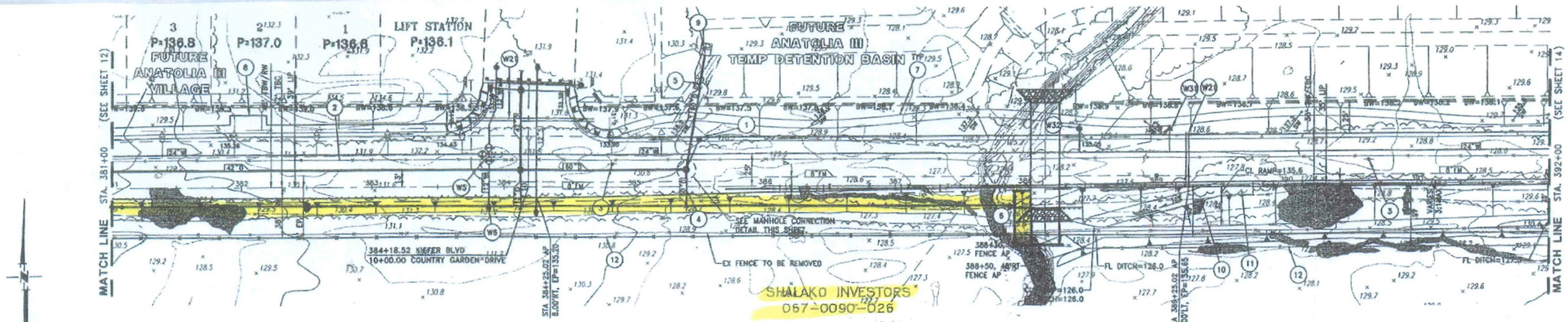
STA. 375+81.05

MH(O) MH(O)

370 371 372 373 374 375 376 377 378 379 380 381

160 150 140 145 135 125

SCHEMATIC DESIGN OF MORRISON SPILL PIPELINE, SHEET 3 OF 4



SCALE: 1" = 40'

STORM DRAIN PIPE ALTERNATIVES

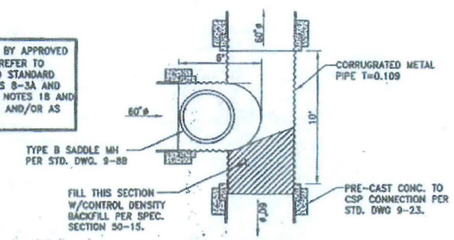
AS FOLLOWS UNLESS INDICATED ON PLANS AS "ONLY"

DIA.	ALTERNATIVE
12"	PVC C900 SPEC. 50-26
15"-30"	PVC C905 SPEC. 50-26
12"-60"	HDPE SPEC. 50-30
12"-60"	RCP CL-III SPEC. 50-21
12"-15"	PVC SDR 35
18"-24"	PVC SDR 35

CONSTRUCTION NOTES:

1. CONSTRUCT TYPE B D.I. & CONNECT TO MH W/26 LF OF 12" PVC SDR-35 FL @ D.I.=129.55, FL @ MH=129.29 S=0.010 GFL=133.55
2. REMOVE & DISPOSE OF EXISTING FENCE
3. EX UTILITY POLES TO BE RELOCATED BY OTHERS
4. PLACE 29 LF OF 60" RCP CL-III (ONLY) @ S=0.001, FL @ MH=125.00 FL @ OUTLET=124.97 PLUG & MARK END.
5. PLACE 83 LF OF 60" RCP CL-III (ONLY) @ S=0.0003, FL @ MH=125.00 FL @ OUTLET=124.97
6. CONSTRUCT 80 LF TWIN 8' HIGH X 10' WIDE CAST-IN-PLACE CONCRETE BOX CULVERT PER CALTRANS STANDARD PLAN D81 (SEE SHEET 28)
7. CONSTRUCT MEANDERING SIDEWALK PER STD DTL 4-29.
8. CONSTRUCT BUS STOP PAD PRE STD DTL 4-22.
9. PLACE 60" PIPE HEADWALL, ENDWALL, AND WINGWALL STRUCTURE WITH TRASH RACK PER STD. DTL. 9-26G & 9-26H. FOR STD DETAIL 9-26H, L=n/a=T. IN ADDITION, PLACE 5' OF CALTRANS FACING ROCK (34kg) & 18" GEOTEXTILE FABRIC AT OUTLET.
10. CONSTRUCT 10' WIDE CHANNEL ACCESS RAMP PER STD. DTL. 9-25
11. PLACE 14' WIDE SINGLE PIPE GATE PER STD. DTL L-29 AT TOP OF RAMP
12. PLACE WM FENCE PER STD DTL 9-29 @ RIGHT OF WAY OR AS SHOWN.

ALL WATER LINE FITTINGS SHALL BE RESTRAINED BY APPROVED RESTRAINING DEVICES AND/OR THRUST BLOCKS. REFER TO LATEST EDITION OF THE COUNTY OF SACRAMENTO STANDARD CONSTRUCTION SPECIFICATIONS INCLUDING DETAILS 8-3A AND 8-3B AND SACRAMENTO COUNTY WATER AGENCY NOTES 18 AND 19. RESTRAIN VERTICAL BENDS PER DETAIL 8-10 AND/OR AS SHOWN ON THESE PLANS.

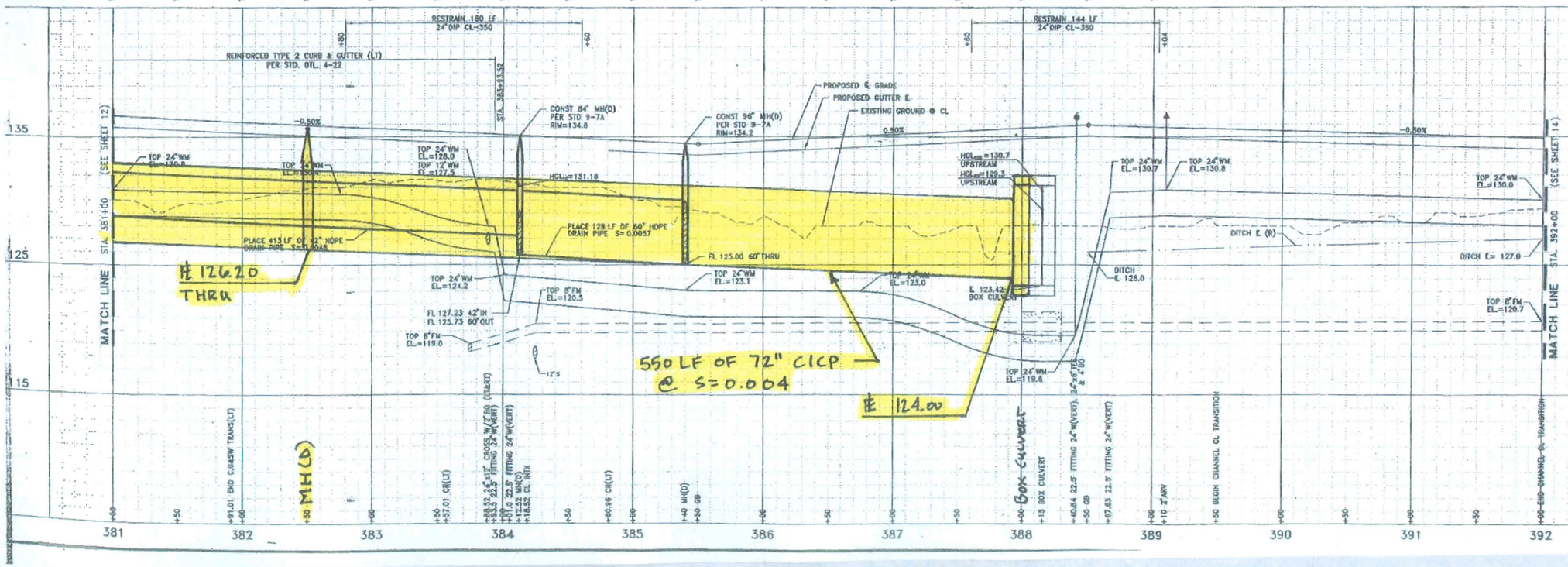


60" TEE CONNECTION DETAIL

N.T.S.

WATER CONSTRUCTION NOTES

- (W5) INSTALL FIRE HYDRANT BEHIND SIDEWALK IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-2A.
- (W6) INSTALL TEMPORARY 2" BLOWOFF VALVE IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-12.
- (W21) INSTALL 4"& 6" PVC IRRIGATION CONDUITS MAINTAINING A MINIMUM 3' OF COVER. PLACE 4"x4" POST PAINTED BLUE AT EACH END EXTENDING 2' ABOVE FINISHED GRADE.
- (W31) INSTALL 2" COMBINATION AIR/VACUUM VALVE BEHIND CURB IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-14B.
- (W32) INSTALL 4" BLOWOFF BEHIND CURB IN ACCORDANCE WITH SACRAMENTO COUNTY STANDARD CONSTRUCTION SPECIFICATIONS DETAIL 8-13C.



SCHEMATIC DESIGN OF MORRISON SPILL PIPELINE, SHEET 4 OF 4

Appendix E: Technical Memorandum – Stand Alone Detention Basin Alternative

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 773-1189

TECHNICAL MEMORANDUM

Date:	September 15, 2010
To:	Bob Shattuck, Lennar Communities
From:	Craig Zoller, MacKay & Somps
TM No.:	Technical Memorandum No. 15
Subject:	Stand-Alone Detention Basin Alternative SunCreek Specific Plan Rancho Cordova, CA
Job No.:	7991-10
Task No.:	Task B.7

A. Introduction

The Regional Master Drainage Study for SunCreek Specific Plan (SunCreek SDMP) divided the SunCreek Specific Plan Area (Plan Area) into twelve separate watersheds. Each watershed is designed to drain to a hydro-modification basin that provides water quality treatment, summertime nuisance runoff retention and peak runoff attenuation for storms up to the 100-year, 10-day event.

Three of the twelve watershed boundaries extend beyond the Plan Area boundaries. The SunCreek SDMP "Baseline Conditions" model included these "off-site" sub-watersheds as future development areas and connected them hydraulically to their watershed's hydro-modification basin. Therefore, the SunCreek SDMP watersheds that have contributing off-site areas are oversized to accommodate the future development of these off-site areas. The SunCreek SDMP assumed these off-site areas will develop utilizing the SunCreek detention for peak flow attenuation, hydro-modification flow duration control and water quality storage.

The intent of this technical memorandum is to document the size of these three basins (Basin's 3, 5 and 7) if these three off-site areas were to mitigate their peak flow, hydro-modification and water quality impacts within their own development ("on-site") and not in the SunCreek basins.

B. Methodology

Building on the storm drainage Sac-Calc 'Baseline Conditions' modeling contained in the SunCreek SDMP, the approach to this analysis is briefly summarized as follows:

1. Prepare a revised watershed map that creates three additional sub-watersheds for the 'off-site' areas. Connect these 'off-site' sub-watershed areas to the open space preserve with a dedicated pipe that is sized to convey undeveloped flows.
2. Revise the SDMP 'Baseline Conditions' model to determine the hydro-modification basin sizes as if the Plan Area was to develop as a Stand-Alone Project that provides water quality treatment, summertime nuisance retention and peak flow attenuation for only the portion of the development within it's boundary.
3. Compare the hydro-modification basin sizes calculated with the Stand-Alone Detention Basin Alternative to the SDMP 'Baseline Conditions' hydro-modification basins. If these three off-site watershed areas are to be included in the final basin sizing for SunCreek, then the increase in hydro-modification basin volume from the Stand-Alone Detention Basin Alternative would represent the proportionate share of the costs to accommodate the off-site sub-watersheds into the 'Baseline Conditions' hydro-modification basins.

C. Analysis

In accordance with the methodology outlined above, the following analysis was performed:

The SDMP 'Baseline Condition' model was revised to a new Stand-Alone Detention Basin Model and included new upstream off-site, undeveloped grassland, sub-watershed areas. The Stand-Alone Detention Basin Model was run, routing each of the three upstream off-site areas runoff through dedicated pipelines to the open space preserve, effectively passing the upstream off-site existing condition runoff through the Plan Area. The Stand-Alone Detention Basin Model hydro-modification basin sizes where compared to the hydro-modification basin sizes from the SDMP 'Baseline Conditions' model. Reference **Figure 1: Revised Detention Basin Sheds No. 3 and No. 5** and **Figure 2: Revised Detention Basin Shed No. 9**; to review the reconfigured portion of the SDMP for this Alternative.

D. Summary of Results

The SDMP 'Baseline Conditions' Alternative provides water quality treatment, summertime nuisance flow retention and hydro-modification detention for three upstream off-site areas. **Table 1: Hydro-modification Basin Fair Share Contributions** summarizes the increases in water quality treatment, summertime nuisance flow retention and hydro-modification basin volumes attributed to each of the upstream off-site areas.

Table 1: Hydro-modification Basin Offsite Shed Area's Fair Share Contribution

Basin No. 3	Stand-Alone (AF)	Baseline Conditions (AF)	Offsite Shed Area's % Share of Baseline
Shed Area (Acres)	56.0	76.9	27.2
Water Quality	1.6	2.2	27.3
Summertime Nuisance Flow (per day)	0.09	0.12	25.0
10-Year, 24-Hour Storm	4.7	11.5	59.1
100-Year, 10-Day Storm	9.6	21.3	54.9

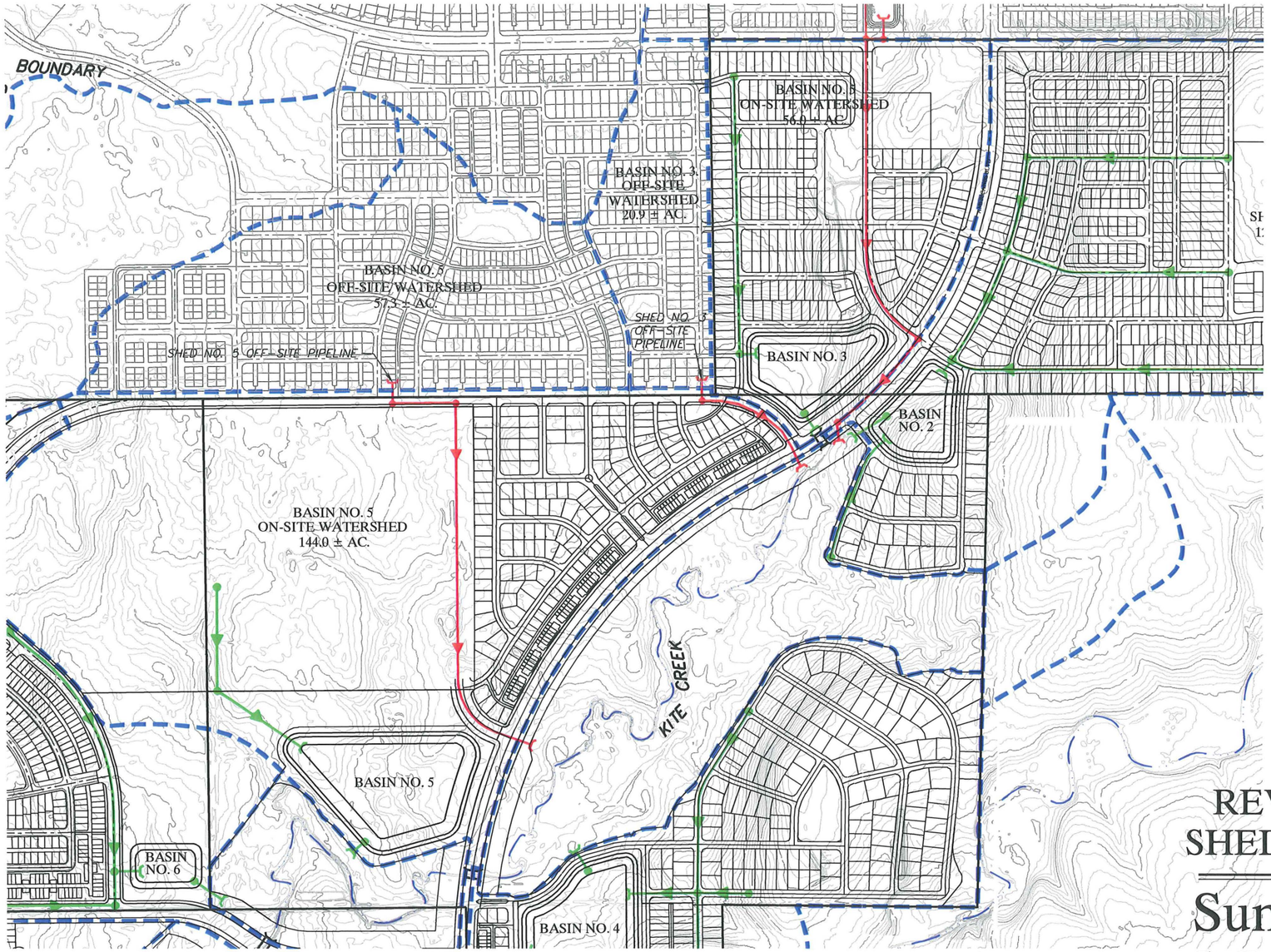
Basin No. 5	Stand-Alone (AF)	Baseline Conditions (AF)	Offsite Shed Area's % Share of Baseline
Shed Area (Acres)	144.0	201.3	28.5
Water Quality	4.1	5.7	28.1
Summertime Nuisance Flow (per day)	0.22	0.31	29.0
10-Year, 24-Hour Storm	11.4	27.7	58.8
100-Year, 10-Day Storm	22.7	42.0	46.0

Basin No. 9	Stand-Alone (AF)	Baseline Conditions (AF)	Offsite Shed Area's % Share of Baseline
Shed Area (Acres)	54.0	82.2	34.3
Water Quality	1.5	2.3	34.8
Summertime Nuisance Flow (per day)	0.08	0.13	38.5
10-Year, 24-Hour Storm	4.0	10.9	63.3
100-Year, 10-Day Storm	7.7	16.8	54.2

E. Conclusion

The SDMP 'Baseline Condition Alternative' provides water quality treatment, summertime nuisance flow retention and peak flow attenuation for three off-site areas. This analysis provides the revised sizing of these basins if the off-site areas were to mitigate their own peak flow, hydro-modification and water quality impacts. The conclusions also provide a basis for preparing fair share agreements to include the developed runoff generated from these off-site areas in the Plan Area's hydro-modification basins if that eventuality occurs.

Appendix A



0' 600' 1200'

Legend

- PROPOSED CHANNEL
- EXISTING CHANNEL
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN (DEDICATED TO OPEN SPACE)
- PROPOSED STORM DRAIN (INCLUDES OFFSITE DEVELOPED FLOWS)
- DEVELOPED SHED BOUNDARY

FIGURE 1
REVISED DETENTION BASIN SHEDS NO. 3 AND NO. 5 EXHIBIT

SunCreek Specific Plan

City of Rancho Cordova, California

September 2010

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

7991-00

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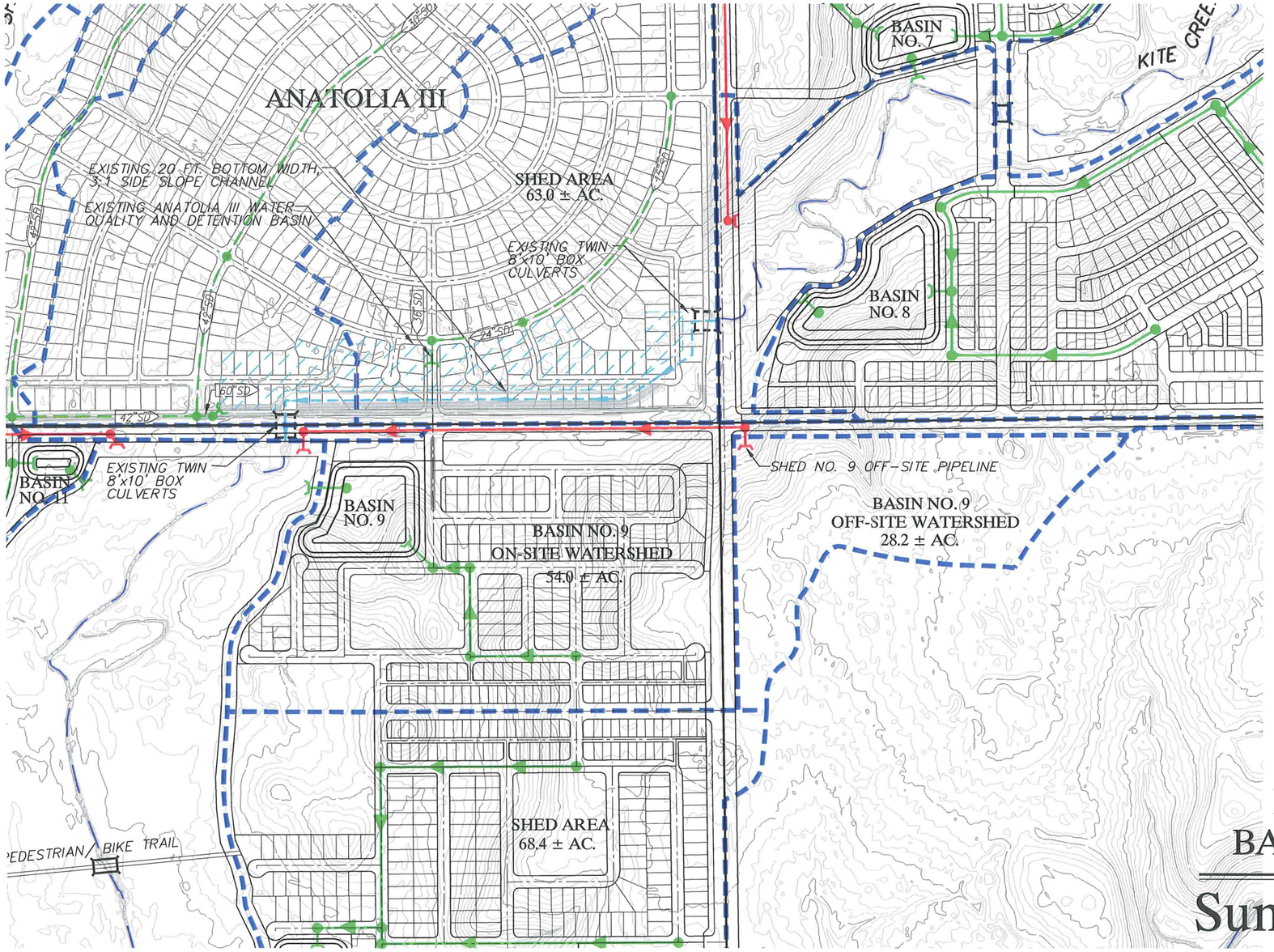

0' 500' 1000'

Legend

- PROPOSED CHANNEL
- EXISTING CHANNEL
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN (DEDICATED TO OPEN SPACE)
- PROPOSED STORM DRAIN (INCLUDES OFFSITE DEVELOPED FLOWS)
- DEVELOPED SHED BOUNDARY

FIGURE 2
REVISED DETENTION BASIN SHED NO. 9 EXHIBIT

SunCreek Specific Plan

City of Rancho Cordova, California *September 2010*

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

7991-00

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Sac-Calc Results

Sacramento Hydrologic Calculator Report

September 15, 2010 16:10

Project Title: Basin n Proposed Conditions
Method: Sacramento County HEC-1 method
Comments: Proposed Conditions, with local detention - Baseline Condition 10 yr and 100 yr 24 hour storms Revise tributaries to detention basins 3, 5, and 9
Date: 8/6/2008
Prepared by: KEC

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
KCOS1	16.8	203.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV2	120.2	199.7	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV3	56	185	Basin "n"	-	Computed	-	Computed	-	Computed	-
KCDV5	144	175	Basin "n"	-	Specified	0.051	Computed	-	Computed	-
KCDV4	134.1	174	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV7	52	153.5	Basin "n"	-	Specified	0.037	Computed	-	Computed	-
KCDV8	126.2	152.9	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV9	54	144.2	Basin "n"	-	Specified	.051	Computed	-	Computed	-
KCOS02	54.9	166.3	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS03	17.7	153	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
OSKC05	102.3	181.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV06	106.9	166.5	Basin "n"	-	Specified	0.039	Computed	-	Computed	-
KCOS04	29.3	145.2	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS06	20.3	166	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCA3	297.3	151	Basin "n"	-	Specified	0.049	Computed	-	Computed	-
KCOS11	11.1	157.5	Basin "n"	-	Specified	0 07	Computed	-	Computed	-
KCDV11	13.8	145.1	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV10	68.4	140.1	Basin "n"	-	Specified	0.045	Computed	-	Computed	-
KCDV12	96.8	138.3	Basin "n"	-	Specified	.042	Computed	-	Computed	-
KCOS12	65	156.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS13	21	154	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS14	14	145.5	Basin "n"	-	Specified	.115	Computed	-	Computed	-
KCOS15	68.2	122.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS3A	168.5	213	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
EXKC13	73.3	140	Basin "n"	-	Computed	-	Computed	-	Computed	-
EXKC14	95.1	120	Basin "n"	-	Computed	-	Computed	-	Computed	-
LCDV00	559.6	239.5	Basin "n"	-	Specified	0.115	Computed	-	Computed	-
LCDV02	630.9	226	Basin "n"	-	Specified	0.115	Computed	-	Computed	-
LCDV04	821.1	194	Basin "n"	-	Specified	0.115	Computed	-	Computed	-
LCDV10	777.5	163.5	Basin "n"	-	Specified	0.115	Computed	-	Specified	0
DVLC01	88.4	218.4	Basin "n"	-	Specified	0.05	Computed	-	Computed	-
KC3	20.9	183.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KC5	57.3	184.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KC9	28.2	160.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																	
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	1576	850	0.0159	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV2	3940	750	0.0156	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV3	1920	444	0.0042	Undeveloped	2.6	6.8					8.1	21.4							12.9	4.2		
				Developed	0	0					0	0							0	0		
KCDV5	4464	1907	0.0103	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV4	3297	917	0.003	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV7	1655	580	0.0091	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV8	4054	2363	0.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV9	4360	2120	.0083	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS02	3900	2145	.005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS03	2089	586	.0048	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OSKC05	4804	2082	.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV06	3313	1851	.0063	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS04	2745	1385	005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS06	2377	1387	0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCA3	7016	3899	.006	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS11	726	572	.0069	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV11	850	322	.0213	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV10	2474	1482	.0178	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV12	3407	1720	.0119	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS12	2632	1237	.0057	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS13	1370	566	.0088	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS14	1990	1076	.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS15	3317	1334	.0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS3A	3787	1555	.0132	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXKC13	4651	2747	0105	Undeveloped																100		
				Developed																0		
EXKC14	79700	3064	.003	Undeveloped																100		
				Developed																0		
LCDV00	11854	5528	.0041	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCDV02	11176	6192	.0054	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCDV04	14480	4400	.0055	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCDV10	12751	5366	.007	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DVLC01	2203	1102	.0108	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KC3	1371	693	.0124	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KC5	2074	1553	.013	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KC9	1927	1115	0.0161	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	B																		
	C																4.8		
	D																12		
KCDV2	B																		
	C	1.1						26.2	12.2							8.2	2.2		
	D	2						36.7	21.6							2.2	7.8		
KCDV3	B																		
	C																		
	D	2.6	6.8					8.1	21.4							12.9	4.2		
KCDV5	B																		
	C															1.1			
	D	7.2					3.7	25.9	81.2							23.7	1.2		
KCDV4	B																		
	C																4.7		
	D						6.4	57.5	6.4	41						14	5.3		
KCDV7	B																		
	C	2.6														1			
	D	4.2	12.4				11.6	15.7								4.5			
KCDV8	B																		
	C	1.6																	
	D	5						58.9	37.2							18.3	5.2		
KCDV9	B																		
	C																		
	D	16.2	2.5						24.5	1						9.8			
KCOS02	B																		
	C																16.3		
	D																38.6		
KCOS03	B																		
	C																12.7		
	D																5		
OSKC05	B																		
	C																		
	D																102.3		
KCDV06	B																		
	C	0.9																	
	D	23					10.9	53.9								5.5	12.7		
KCOS04	B																		
	C																20.4		
	D																8.9		
KCOS06	B																		
	C																		
	D																20.3		
KCA3	B																		
	C								120							0.6	26.3		
	D								78.4							4.4	67.6		
KCOS11	B																		
	C																5.9		
	D																5.2		
KCDV11	B																		
	C																		
	D	2.1							8.9							2.8			
KCDV10	B																		
	C																		
	D	5	5						13.2	32.5						8	4.7		
KCDV12	B																		
	C	1.5															1		
	D	5.5	24						23.2	24.9						15.8	1.3		
KCOS12	B																		
	C																27.1		
	D																37.9		
	B																		

KCOS13	C																1.3		
	D																19.7		
KCOS14	B																		
	C																		
	D																14		
KCOS15	B																		
	C																		
	D																68.2		
KCOS3A	B																		
	C																32.6		
	D																135.9		
EXKC13	B																		
	C																6.5		
	D																66.8		
EXKC14	B																		
	C																4.1		
	D																91		
LCDV00	B																		
	C																307.2		
	D																252.4		
LCDV02	B																		
	C																182.3		
	D																448.6		
LCDV04	B																		
	C																99.4		
	D																721.7		
LCDV10	B																		
	C																637.9		
	D																139.6		
DVLC01	B																		
	C							1.8	23.8							2.8	4.5		
	D							23.6	8.2								23.7		
KC3	B																		
	C																		
	D																20.9		
KC5	B																		
	C																		
	D																57.3		
KC9	B																		
	C																		
	D																28.2		

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum-Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R1	DET03	JKC3	Pipe	2814	0.005	3	3:1	0.015
R6A	OSKC05	J06	Trapezoidal	555	0.007	20	4:1	0.030
R4	J03	J04	Trapezoidal	2319	0.0048	30	4:1	0.014
R5	J04	J05	Trapezoidal	2582	0.0039	20	3:1	0.015
R7	J06	J7	Trapezoidal	2058	0.0025	20	3:1	0.025
R2A	KCOS1	J02	Trapezoidal	1510	0.0159	05	3:1	0.03
R2	J1	J02	Trapezoidal	644	0.0047	5	3:1	0.03
R3	J02	J03	Trapezoidal	3485	.0313	5	3:1	0.03
R6	J05	J06	Trapezoidal	2283	0.0031	20	3:1	0.03
R8	J7	J08	Trapezoidal	95	0.0025	10	1:1	0.025
R8A	KCOS11	J08	Pipe	1147	0.005	3		0.015
R9	J08	J9	Trapezoidal	3214	0.0019	20	3:1	0.03
R10B	KCOS12	J08	Trapezoidal	524	0.005	20	3:1	0.03
R10C	KCOS13	J10C	Trapezoidal	1398	0.005	10	3:1	0.03
R10D	J10C	J10	Pipe	2907	0.0034	4		0.015
R3A	KCOS3A	JKC3	Pipe	2628	0.005	5		0.015
R10	J10	J11	Trapezoidal	1028	0.0022	15	2.5:1	0.07
R11	J11	J12	Trapezoidal	2966	0.0022	15	2.5:1	0.07
R21A	J20	R21B	Trapezoidal	6000	0.0032	20	4:1	0.03
R21B	R21A	J21	Trapezoidal	5933	0.0032	20	4:1	0.03
R22	J21	J22	Trapezoidal	7495	0.0055	20	3:1	0.03
R23	J22		Trapezoidal	1171	0.0026	10	2:1	0.03
R20	LCDV00	J20A	Trapezoidal	2721	.0026	20	3:1	0.015
R20B	J20A	J20	Trapezoidal	2119	0.00566	20	3:1	0.07
KC3R	KC3	J1	Pipe	818	.005	4		0.013
KC5R	KC5	JKC5	Pipe	2330	0.005	4		0.013
KC9R	KC9	JKC9	Pipe	1972	0.005	4		0.013

Detention Basin Data

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
A3DET	Elevation (ft)	0	Elevation (ft)	127.4	128.5	128.5	130.5	131.5						124.41	.54	.61	0.5
			Area (ac)	6.38	6.61	6.89	7.23	7.81						128.50	84	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET02	Elevation (ft)	172	Elevation (ft)	172	173	174	175	176	177	178	179	180	181	172.875	2.41	.61	0.5
			Area (ac)	2.108	2.249	2.395	2.546	2.701	2.861	3.025	3.194	3.368	3.546	180.5	230	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET03	Elevation (ft)	171.5	Elevation (ft)	171.5	172.5	173.5	174.5	175.5	176.5	177.5	178.5	179		171.91	.545	.61	0.5
			Area (ac)	1.435	1.552	1.674	1.8	1.931	2.066	2.206	2.351	2.425		178.5	190	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET04	Elevation (ft)	162	Elevation (ft)	162	163	164	165	166	167	168	169	170	170.5	162.875	2.41	.61	0.5
			Area (ac)	3.636	3.821	4.011	4.205	4.404	4.608	4.816	5.028	5.245	5.356	170	251	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
	Elevation	159	Elevation (ft)	159	160	161	162	163	164	165	166			159.5	1.57	.61	0.5

	(ft)		Area (ac)	3.954	4.147	4.344	4.546	4.753	4.964	5.18	5.4			165.5	315	2.6	1.5
DET05	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET06	Elevation (ft)	146.5	Elevation (ft)	146.5	147.5	148.5	149.5	150.5	151.5	152.5	153.5	154		147	1.57	.61	0.5
			Area (ac)	3.143	3.315	3.492	3.673	3.859	4.05	4.245	4.444	4.546		153.5	170	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET07	Elevation (ft)	139.5	Elevation (ft)	139.5	140.5	143.5	141.5	142.5	144.5	145.5	146.5	147		140.	1.57	.61	0.5
			Area (ac)	1.042	1.142	1.246	1.356	1.469	1.588	1.711	1.839	1.904		146.5	135	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET08	Elevation (ft)	137.5	Elevation (ft)	137.5	138.5	139.5	140.5	141.5	142.5	143.5	144.5	145.5	146	138.375	2.41	.61	0.5
			Area (ac)	2.748	2.909	3.075	3.246	3.42	3.6	3.784	3.973	4.166	4.264	145.5	235	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET09	Elevation (ft)	130.5	Elevation (ft)	130.5	131.5	132.5	133.5	134.5	135.5	136.5	137.5	138.5		131.	.785	.61	0.5
			Area (ac)	1.322	1.435	1.552	1.674	1.8	1.931	2.066	2.206	2.351		138	130	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns													

		On (ft)														
		Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition	Pond Storage Relation											Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET11	Elevation (ft) 130.5	Elevation (ft)	132.5	133.5	134.5	135.5	136.5	137.5	138.5	139.5			133	.785	.61	0.5
		Area (ac)	0.119	0.154	0.194	0.239	0.288	0.342	0.4	0.463			139	50	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
		Pump Discharge (cfs)														
		Elevation at which Pump Turns On (ft)														
		Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition	Pond Storage Relation											Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET10	Elevation (ft) 127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5	134.5	135.5	136	128.0	1.57	.61	0.5
		Area (ac)	0.946	1.042	1.142	1.246	1.356	1.469	1.588	1.711	1.839	1.904	135.5	150	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
		Pump Discharge (cfs)														
		Elevation at which Pump Turns On (ft)														
		Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition	Pond Storage Relation											Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET12	Elevation (ft) 127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5	134.5	135		128.0	2.355	.61	0.5
		Area (ac)	2.321	2.47	2.623	2.78	2.942	3.109	3.28	3.456	3.546		134.5	200	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
		Pump Discharge (cfs)														
		Elevation at which Pump Turns On (ft)														
		Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition	Pond Storage Relation											Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET01	Elevation (ft) 207.5	Elevation (ft)	207.5	208.5	209.5	210.5	211.5	212.5	213.5	214.5	215.5	216.5	208.125	1.23	.61	0.5
		Area (ac)	1.214	1.322	1.435	1.552	1.674	1.8	1.931	2.066	2.206	2.351	216	190	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
		Pump Discharge (cfs)														
		Elevation at which Pump Turns On (ft)														
		Elevation at which Pump Turns Off (ft)														

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	82.	12:30	.11			
KCA3	336.	12:34	.46			
A3DET	276.	12:46	.46	130.	15.	
OSKC05	116.	12:33	.16			
R6A	116.	12:34	.16			
KCOS06	60.	12:04	.03			
KCOS02	61.	12:34	.09			
KCOS1	31.	12:14	.03			
R2A	31.	12:18	.03			
KCDV2	253.	12:11	.19			
DET02	27.	13:42	.19	178.	16.	
KC3	40.	12:13	.03			
KC3R	40.	12:14	.03			
KCDV3	88.	12:19	.09			
DET03	5.6	17:19	.09	177.	10.	
R1	5.6	17:25	.09			
KCOS3A	224.	12:25	.26			
R3A	224.	12:28	.26			
JKC3	228.	12:28	.35			
J1	276.	12:28	.57			
R2	276.	12:29	.57			
J02	297.	12:28	.60			
R3	297.	12:32	.60			
KCDV4	238.	12:15	.21			
DET04	24.	15:04	.21	167.	21.	
J03	379.	12:33	.89			
R4	378.	12:36	.89			
KCOS03	29.	12:17	.03			
KCDV5	217.	12:21	.23			
DET05	18.	15:47	.23	165.	25.	
KC5	87.	12:20	.09			
KC5R	86.	12:23	.09			
JKC5	99.	12:23	.31			
J04	474.	12:34	1.24			
R5	472.	12:38	1.24			

KCOS04	74.	12:07	.05			
KCDV06	193.	12:15	.17			
DET06	17.	15:20	.17	152.	18.	
J05	504.	12:37	1.45			
R6	500.	12:42	1.45			
KCDV7	138.	12:06	.08			
DET07	16.	13:07	.08	144.	6.0	.00
KCDV8	201.	12:19	.20			
DET08	26.	14:33	.20	143.	18.	.00
J06	653.	12:41	1.92			
R7	649.	12:45	1.92			
J7	925.	12:45	2.38			
R8	924.	12:45	2.38			
KCOS11	23.	12:10	.02			
R8A	23.	12:13	.02			
KCOS12	89.	12:23	.10			
R10B	89.	12:25	.10			
KCDV11	43.	12:04	.02			
DET11	8.0	12:34	.02	137.	1.0	.00
KCDV9	79.	12:23	.08			
DET09	8.6	15:28	.08	136.	8.8	
KC9	47.	12:17	.04			
KC9R	47.	12:20	.04			
JKC9	53.	12:20	.13			
J08	1025.	12:44	2.65			
R9	1005.	12:52	2.65			
J9	1059.	12:51	2.76			
KCOS14	16.	12:32	.02			
KCOS13	40.	12:13	.03			
R10C	39.	12:18	.03			
J10C	51.	12:19	.05			
R10D	51.	12:26	.05			
KCDV10	137.	12:12	.11			
DET10	19.	13:37	.11	134.	7.7	
KCDV12	178.	12:14	.15			
DET12	24.	13:52	.15	132.	13.	.00
J10	1129.	12:51	3.07			
R10	1113.	12:54	3.07			
EXKC13	151.	12:11	.11			
J11	1145.	12:54	3.19			
R11	1106.	13:04	3.19			

EXKC14	34.	15:09	.15			
J12	1122.	13:04	3.33			
LCDV02	314.	13:52	.99			
DVLC01	170.	12:13	.14			
DET01	15.	14:28	.14	215.	12.	
LCDV00	269.	13:55	.87			
R20	269.	14:01	.87			
J20A	284.	14:01	1.01			
R20B	284.	14:09	1.01			
J20	591.	14:01	2.00			
R21A	590.	14:14	2.00			
R21B	588.	14:28	2.00			
LCDV04	421.	13:49	1.28			
J21	944.	14:15	3.28			
R22	943.	14:27	3.28			
LCDV10	386.	13:47	1.21			
J22	1263.	14:15	4.50			
R23	1262.	14:17	4.50			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	44.	12:30	.11			
KCA3	184.	12:34	.46			
A3DET	142.	12:51	.46	129.	12.	
OSKC05	63.	12:33	.16			
R6A	63.	12:35	.16			
KCOS06	30.	12:04	.03			
KCOS02	33.	12:33	.09			
KCOS1	16.	12:14	.03			
R2A	16.	12:19	.03			
KCDV2	132.	12:11	.19			
DET02	21.	13:36	.19	176.	9.9	
KC3	21.	12:13	.03			
KC3R	21.	12:14	.03			
KCDV3	47.	12:19	.09			
DET03	4.4	15:37	.09	175.	6.2	
R1	4.4	15:46	.09			
KCOS3A	119.	12:25	.26			
R3A	119.	12:29	.26			
JKC3	122.	12:29	.35			

J1	154.	12:28	.57			
R2	153.	12:30	.57			
J02	165.	12:29	.60			
R3	165.	12:34	.60			
KCDV4	127.	12:15	.21			
DET04	18.	14:03	.21	165.	13.	
J03	214.	12:34	.89			
R4	213.	12:38	.89			
KCOS03	15.	12:17	.03			
KCDV5	117.	12:21	.23			
DET05	14.	15:23	.23	163.	15.	
KC5	46.	12:20	.09			
KC5R	46.	12:24	.09			
JKC5	56.	12:24	.31			
J04	266.	12:36	1.24			
R5	266.	12:41	1.24			
KCOS04	37.	12:07	.05			
KCDV06	103.	12:15	.17			
DET06	13.	14:39	.17	150.	11.	
J05	287.	12:40	1.45			
R6	284.	12:47	1.45			
KCDV7	72.	12:06	.08			
DET07	13.	13:10	.08	143.	3.6	.00
KCDV8	108.	12:19	.20			
DET08	20.	14:05	.20	141.	12.	.00
J06	375.	12:45	1.92			
R7	373.	12:50	1.92			
J7	515.	12:50	2.38			
R8	515.	12:50	2.38			
KCOS11	12.	12:10	.02			
R8A	12.	12:13	.02			
KCOS12	47.	12:23	.10			
R10B	47.	12:26	.10			
KCDV11	22.	12:04	.02			
DET11	6.0	12:27	.02	135.	.5	
KCDV9	43.	12:22	.08			
DET09	6.8	15:03	.08	134.	5.4	
KC9	25.	12:17	.04			
KC9R	25.	12:20	.04			
JKC9	30.	12:20	.13			
J08	570.	12:49	2.65			

R9	562.	12:58	2.65			
J9	590.	12:58	2.76			
KCOS14	8.7	12:32	.02			
KCOS13	21.	12:13	.03			
R10C	21.	12:20	.03			
J10C	27.	12:21	.05			
R10D	27.	12:28	.05			
KCDV10	72.	12:12	.11			
DET10	15.	13:28	.11	131.	4.4	
KCDV12	95.	12:14	.15			
DET12	19.	13:43	.15	131.	7.7	.00
J10	637.	12:57	3.07			
R10	630.	13:02	3.07			
EXKC13	78.	12:11	.11			
J11	652.	13:01	3.19			
R11	634.	13:14	3.19			
EXKC14	20.	15:11	.15			
J12	644.	13:14	3.33			
LCDV02	182.	13:54	.99			
DVLC01	90.	12:13	.14			
DET01	12.	13:49	.14	212.	7.0	
LCDV00	155.	13:57	.87			
R20	155.	14:03	.87			
J20A	166.	14:03	1.01			
R20B	166.	14:14	1.01			
J20	344.	14:03	2.00			
R21A	343.	14:19	2.00			
R21B	342.	14:36	2.00			
LCDV04	245.	13:51	1.28			
J21	546.	14:23	3.28			
R22	546.	14:37	3.28			
LCDV10	218.	13:49	1.21			
J22	720.	14:26	4.50			
R23	720.	14:28	4.50			

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 10-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
OSKC05	58.	153:11	.16			
R6A	58.	153:14	.16			
KCOS06	13.	152:48	.03			
KCOS02	30.	153:12	.09			
KCOS1	11.	153:01	.03			
R2A	11.	153:07	.03			
KCDV2	82.	153:00	.19			
DET02	26.	154:13	.19	178.	15.	.00
KC3	13.	153:01	.03			
KC3R	13.	153:03	.03			
KCDV3	37.	153:03	.09			
DET03	5.8	154:48	.09	178.	11.	
R1	5.8	154:56	.09			
KCOS3A	100.	153:06	.26			
R3A	100.	153:10	.26			
JKC3	105.	153:10	.35			
J1	142.	153:09	.57			
R2	142.	153:11	.57			
J02	153.	153:10	.60			
R3	153.	153:15	.60			
KCDV4	89.	153:02	.21			
DET04	24.	154:23	.21	167.	21.	
J03	206.	153:15	.89			
R4	206.	153:19	.89			
KCOS03	11.	153:02	.03			
KCDV5	93.	153:04	.23			
DET05	18.	154:45	.23	165.	27.	
KC5	35.	153:03	.09			
KC5R	35.	153:07	.09			
JKC5	52.	153:09	.31			
J04	266.	153:15	1.24			
R5	265.	153:19	1.24			
KCOS04	19.	153:00	.05			
KCDV06	73.	153:02	.17			
DET06	17.	154:27	.17	152.	19.	.00

J05	292.	153:18	1.45			
R6	292.	153:23	1.45			
KCDV7	37.	153:00	.08			
DET07	15.	154:06	.08	144.	5.1	.00
KCDV8	83.	153:03	.20			
DET08	25.	154:27	.20	143.	18.	.00
J06	394.	153:20	1.92			
R7	394.	153:24	1.92			
KCOS15	39.	153:10	.11			
KCA3	171.	153:12	.46			
A3DET	162.	153:26	.46	129.	13.	
KCOS11	7.1	153:00	.02			
R8A	7.1	153:03	.02			
KCOS12	38.	153:05	.10			
R10B	38.	153:08	.10			
KCDV11	9.7	152:47	.02			
DET11	6.5	153:09	.02	136.	.6	.00
KCDV9	35.	153:05	.08			
DET09	8.7	154:41	.08	136.	9.0	.00
KC9	18.	153:02	.04			
KC9R	18.	153:06	.04			
JKC9	26.	153:07	.13			
J08	233.	153:16	.73			
R9	231.	153:28	.73			
J9	267.	153:25	.84			
KCOS14	8.0	153:11	.02			
KCOS13	14.	153:01	.03			
R10C	13.	153:08	.03			
J10C	21.	153:09	.05			
R10D	21.	153:16	.05			
KCDV10	46.	153:01	.11			
DET10	17.	154:13	.11	133.	6.6	.00
KCDV12	66.	153:01	.15			
DET12	23.	154:17	.15	132.	11.	.00
J10	327.	153:24	1.15			
R10	325.	153:28	1.15			
EXKC13	48.	153:00	.11			
J11	353.	153:26	1.27			
R11	349.	153:39	1.27			
EXKC14	28.	155:29	.15			
J12	368.	153:40	1.42			

LCDV02	233.	154:22	.99			
DVLC01	59.	153:01	.14			
DET01	15.	154:19	.14	215.	12.	.00
LCDV00	200.	154:25	.87			
R20	200.	154:31	.87			
J20A	215.	154:30	1.01			
R20B	215.	154:40	1.01			
J20	445.	154:30	2.00			
R21A	444.	154:46	2.00			
R21B	444.	155:01	2.00			
LCDV04	312.	154:19	1.28			
J21	728.	154:44	3.28			
R22	728.	154:57	3.28			
LCDV10	280.	154:18	1.21			
J22	982.	154:45	4.50			
R23	982.	154:47	4.50			

Appendix F: Technical Memorandum – Community Park Detention Basin Alternatives

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 773-1189

TECHNICAL MEMORANDUM

Date:	August 6, 2010
To:	Bob Shattuck, Lennar Communities
From:	Craig Zoller, MacKay & Somps
TM No.:	Technical Memorandum No. 5
Subject:	Community Park Detention Basin SunCreek Specific Plan Rancho Cordova, CA
Job No.:	7991-10
Task No.:	Task B.1

A. Introduction

The SunCreek Community Park is located in the center of the Plan Area. The area located north of the Community Park is planned for development with various types of land uses which include a high school and middle school that abut the northern boundary. The area located to the south of the Community Park is planned as a wetland preserve that is centered over a tributary to Laguna Creek. The Community Park is located in a 214 acre watershed that drains from the north to the south through the Community Park site towards the wetland preserve and the Laguna Creek tributary.

The United States Army Corps of Engineers (Corps) established a Conceptual Level Strategy (Strategy) for preserving the natural resources within the SunCreek Specific Plan Area which mandates that runoff from developed areas cannot drain directly into a preserve area. Instead the runoff must be directed to strategically located detention basins for water quality treatment and peak flow attenuation. Since the Community Park is located adjacent to a wetland preserve and is within a large developed watershed that drains through it, a water quality/detention basin needs to be located within the park.

The SunCreek Master Drainage Study (SDMP) has designated the Community Park detention basin as Detention Basin no. 5 (DB 5). The SDMP has designed the water quality/detention basins as a single use component of the plan area that will be improved as a visual amenity. However, they do not include any type of park improvement that could be used by the Plan Area residents. The SDMP has determined that DB 5 has a basin footprint area of approximately 9.43 areas. This footprint is the area necessary to provide water quality treatment and peak flow

attenuation for all storms occurring within the watershed up to and including the 100-year, 10-day storm.

The Community Park site is 39.04 acres with approximately 24% of that area being utilized as DB 5. The large area needed to be set aside as DB 5 severely impacts the area that can be used for park amenities.

The Cordova Park and Recreation District (CPRD) will allow for a portion of the Community Park to be designed as a joint use park/storm runoff water quality treatment detention facility allowing inundation of the park turf areas for no more than 72 hours during a peak storm event.

The intent of this technical memorandum is to document that BD 5 can be designed as a joint use facility reducing the basin footprint area and increasing the useable community park area and not exceed the CPRD requirements of maximum turf area inundation duration of 72 hours.

B. Methodology

Building on the storm drainage Sac-Calc Baseline Conditions modeling contained in the SDMP, the approach to this analysis is briefly summarized as follows:

1. Prepare a schematic Community Park - DB 5 layout and design to maximize the recreational use of the park.
2. Utilize the schematic Community Park - DB 5 design to prepare area-elevation curves for incorporation into the SDMP Sac-Calc model.
3. Run the SDMP Sac-Calc model and develop time stage duration graphs for the various storm durations modeled to determine how much of the park is inundated with runoff and how long the inundation last.
4. Utilize the Sac-Calc results to determine how much partial park credit the Community Park site will provide when used as a joint use facility.

The CRPD has the following criteria for a park site to meet and still receive partial credit as a park.

Table 1: Floodplain Limits on Park Acres

Accepted park acreage based on flood plain level	Percentage of acreage accepted*
100 year flood or above	100%
50 year flood to 100 year flood	90%
25 year to 50 year flood	70%
10 year to 25 year	50%
10 year flood and below	0%

* Inundation is limited to only turf areas with duration not to exceed 72 hours.

C. Analysis

In accordance with the methodology outlined above, the following analysis was performed:

Utilizing a schematic Community Park site plan and the adjacent land use plan, the preparation of a schematic Community Park rough grading contour plan was completed. The adjacent development areas schematic contour grading was adjusted so the overland releases from the development releases into the detention basin and not the preserve area. The Community Park site plan schematic contour grading plan was designed so only the turf play fields would be inundated with runoff and features such as shade structures, bathrooms, parking lots, play structures, amphitheaters and courts where above the 100-year, 10-day water surface. The schematic rough grading contour plan was used to develop an area-volume curve for the joint use Community Park detention basin. Refer to Exhibit 1: Community Park –Detention Basin Site Plan in the Appendix.

In compliance with the Corps Strategy, a permanent water quality basin must be provided. The water quality basin will treat all runoff from the developed area of the watershed including the summertime irrigation runoff. The summertime irrigation runoff is required to be withheld from discharging into the preserve areas. Therefore, it is highly likely that some water would always be within the water quality basin. In order to maintain the health of the aquatic plants and species within the water quality basin, a minimum water depth of 4 feet is desirable. DB 5 water quality basin is sized to hold up to 4.0 acre-feet of water. DB 5 water quality basin will be lined to prevent infiltration and loss of water and will have an outlet set at an elevation of 7 feet above the basin floor. Should the water quality basin reach is its capacity; the basin will have an outfall structure and pipeline that connects to the hydro-modification basin. The hydro-

modification basin will have a leach field constructed in the basin floor that will percolate any excess summertime irrigation runoff. Refer to Exhibit 2: Detention Basin No. 5, Schematic Cross Section in the Appendix

The Corps Strategy also suggests that the existing tributaries and creeks within the Plan Area should not be modified hydraulically due to development occurring within the watershed. The existing tributaries and creeks within the Plan Area should not experience an increase in erosive energy during any storm up to and including the 10-year, 24-hour storm the due to development occurring within the watershed. To achieve this goal, a hydro-modification basin is required that will meter the release rate out of the basin so it mimics the undeveloped watershed. The hydro-modification basin slowly meters the runoff out through an outlet structure designed so the pre- and post-development flow duration curves for the receiving water course is within the allowed tolerance.

The Baseline Conditions Sac-Calc model was modified to incorporate the changes in DB 5 and rerun. The nearest downstream compliance point will be used to compare peak flows from the Baseline Conditions Model and the revised DB 5 model to insure that there is a "No Net Change" condition.

D. Summary of Results

The Sac-Calc technical results together with the schematic contour grading plan of the Community Park demonstrates that it is technically feasible to have a joint use park-water quality-detention facility. The Sac-Calc program indicates that the Community Park would be inundated as shown in Table 2:

Table 2: Community Park Inundation – Duration

Water Surface Elevation	Hours Water is Above Elevation (100-Year, 24-Hour)	Hours Water is Above Elevation (100-Year, 10-Day)
162.5	0	2
162.0	0	6
161.0	3	10
160.0	10	22
159.0	14	52

The DB 5 hydro-modification basin has a holding capacity of 26.3 acre-feet of water below elevation 159.0 The SDMP 10-year, 24-hour hydro-modification storage volume for DB 5 is 19.0 acre-feet.

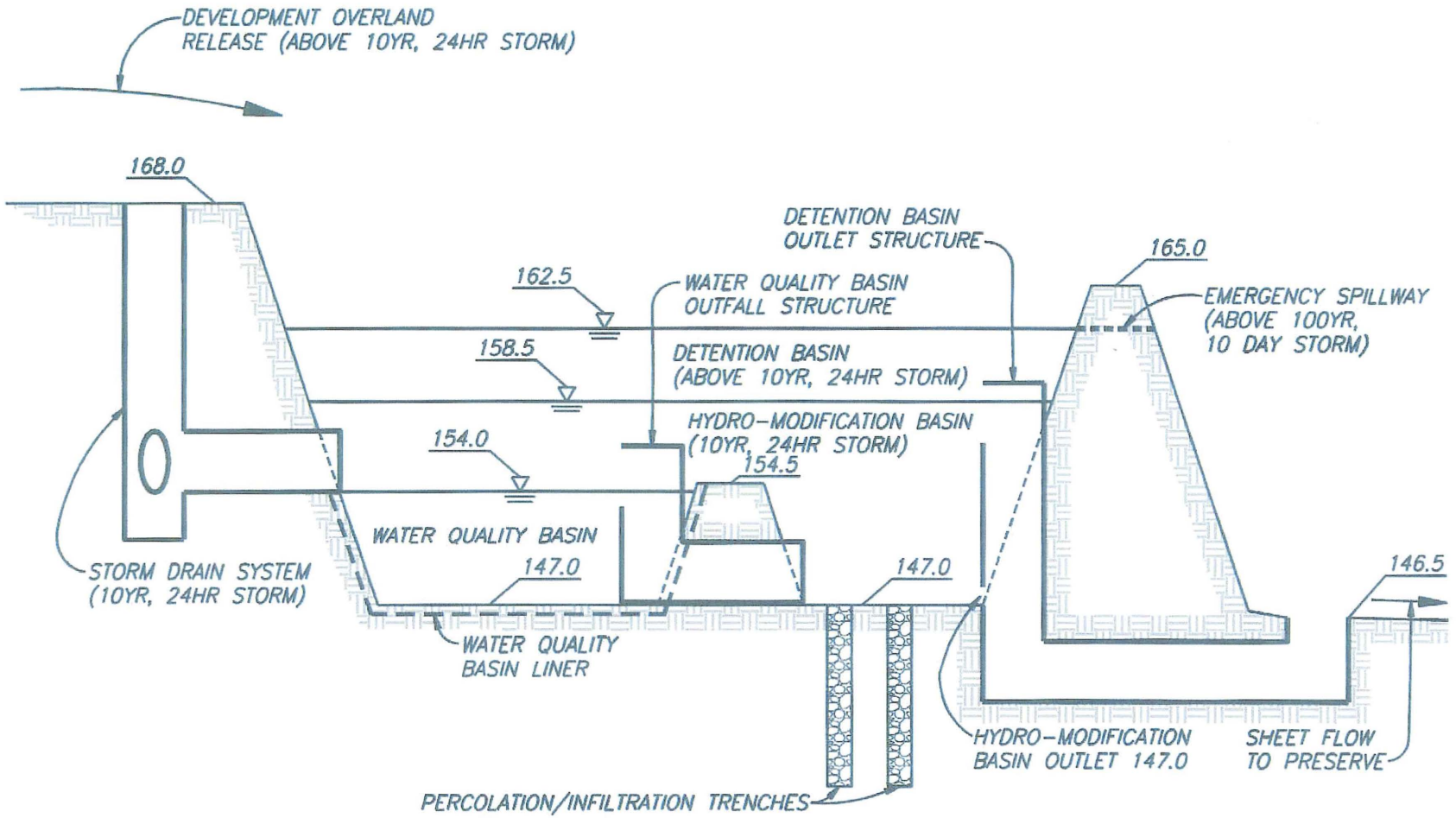
Once the water surface elevation drops below the invert elevation of the Detention Basin Outlet Structure, the remaining runoff is dissipated at a rate of approximately 5 cfs over a 48-hour period. The runoff will enter the Outlet Structure through a series of small orifices set at various elevations to control the release rate. Depending on the final design elevations of the basin bottom, the runoff will be discharged in one of two ways; a gravity pipeline or a pump station. A gravity outfall pipe could be extended downstream approximately 2,000 feet where it will discharge into the preserve area or a small 5 cubic foot per second pump station be could be constructed adjacent to BD 5 and discharged to the preserve area.

E. Conclusion

The SDMP DB 5 can be designed in conjunction with the SunCreek Community Park Site to meet the Corps Strategy and CRPD recreational needs of the SunCreek Specific Plan Area.

Appendix A

BASIN 'D'
100 Year 10 Day Storm
Surface. Elev. 162.5
BASIN 'B'
Permanent Hydro-modification
10 Year, 24 Hour Storm
Surface Elevation 159'
BASIN 'C'
100 Year, 24 Hour Storm
Surface Elev. 161.5'
Discharge to Natural
Drainage
Berm Elev. 165.0'
BASIN 'A'
Permanent Water Quality Basin
Surface Elevation 154'
SPILLWAY to open space
Elevation 163.0'
above 100 Year, 10 Day Storm



DETENTION BASIN NO. 5

SCHEMATIC CROSS-SECTION
COMMUNITY PARK-JOINT USE DETENTION BASIN

NOT TO SCALE

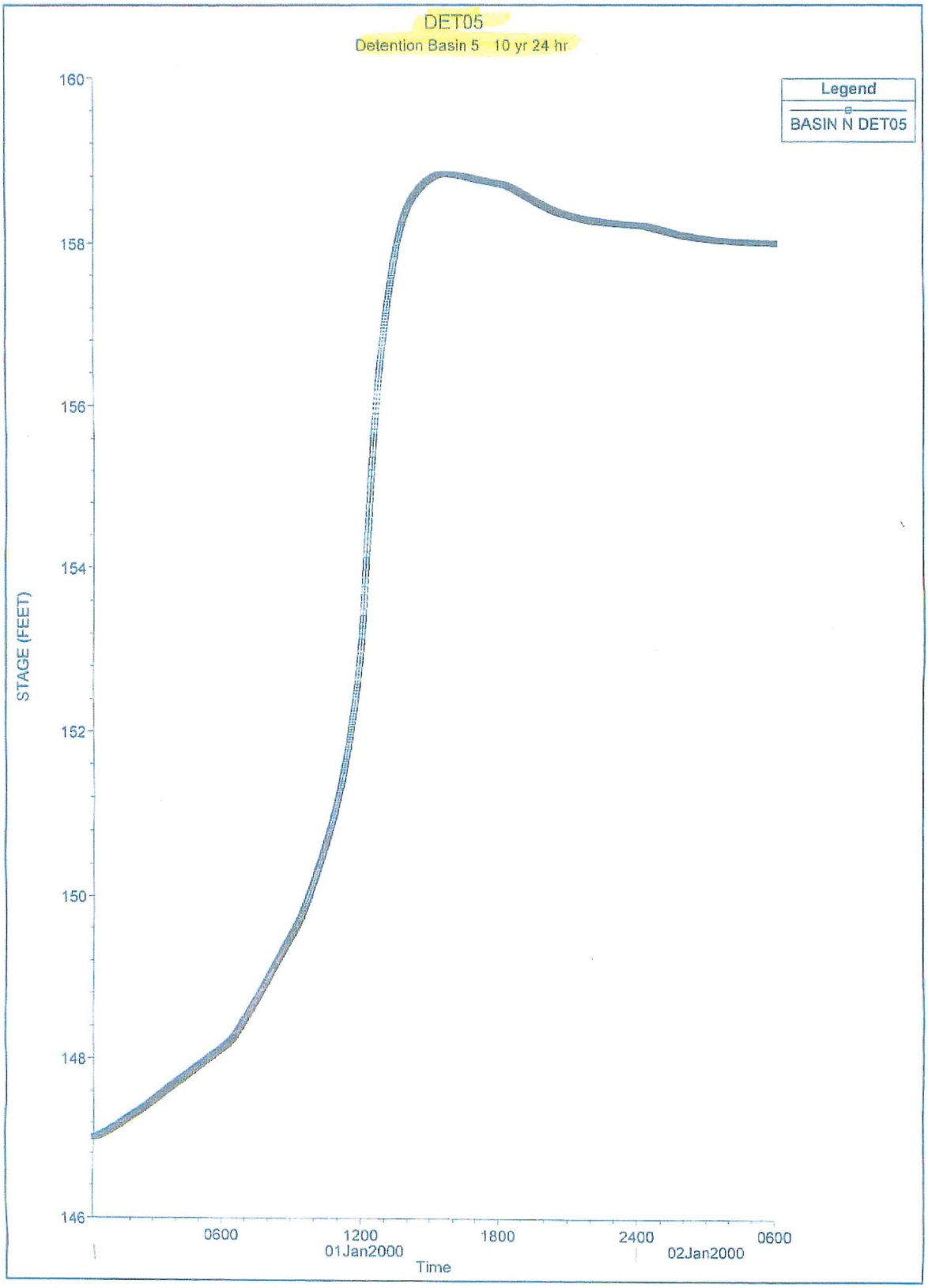
MacKay & Somps
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 772-1686

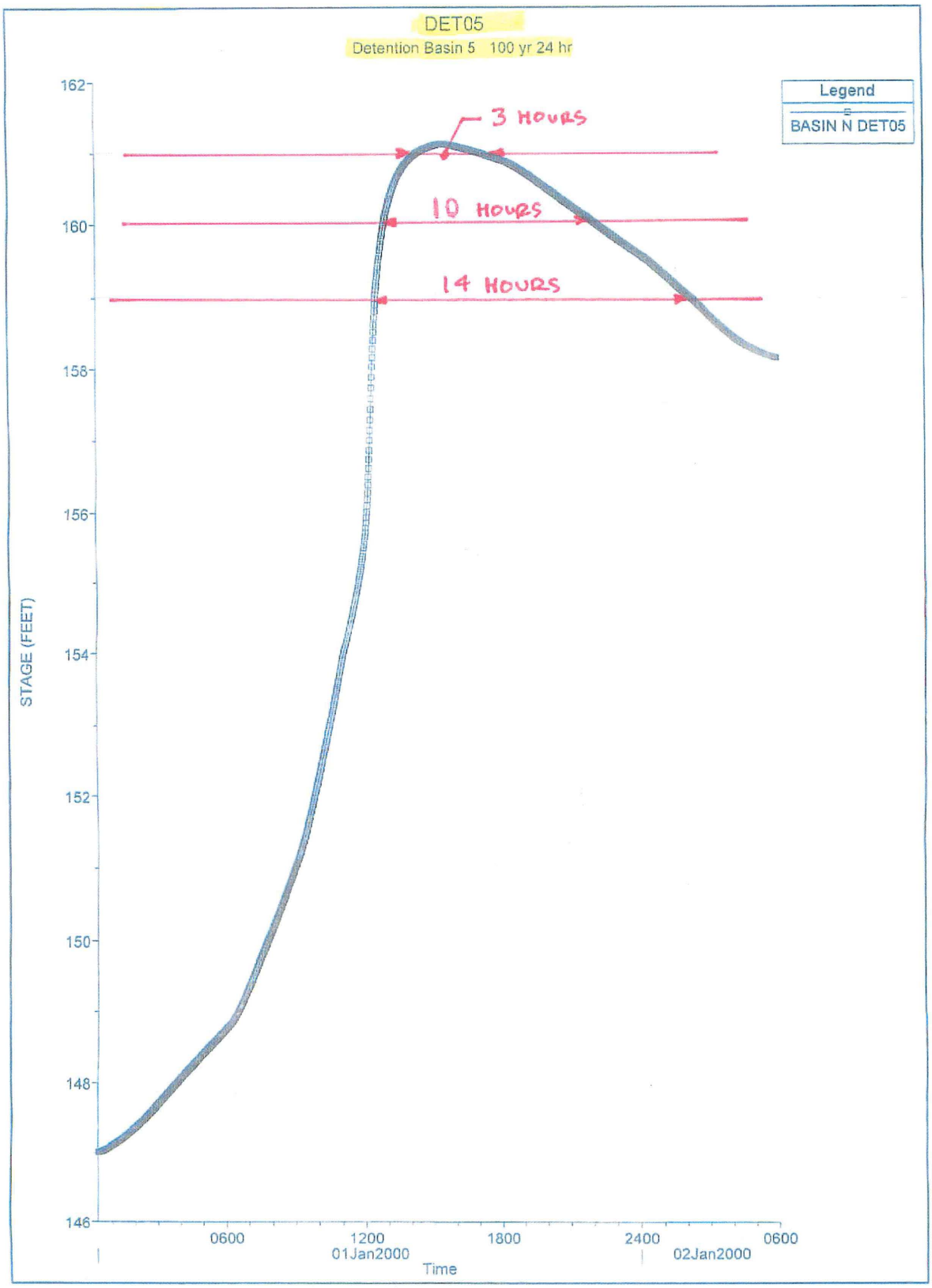
8-03-2010 08:18:49 ddenzer L:\Sacramento\7991\00\Master Plans\Drainage\Exhibits\DB_5_Cross_Section.dwg
There are no xreferences in this drawing.

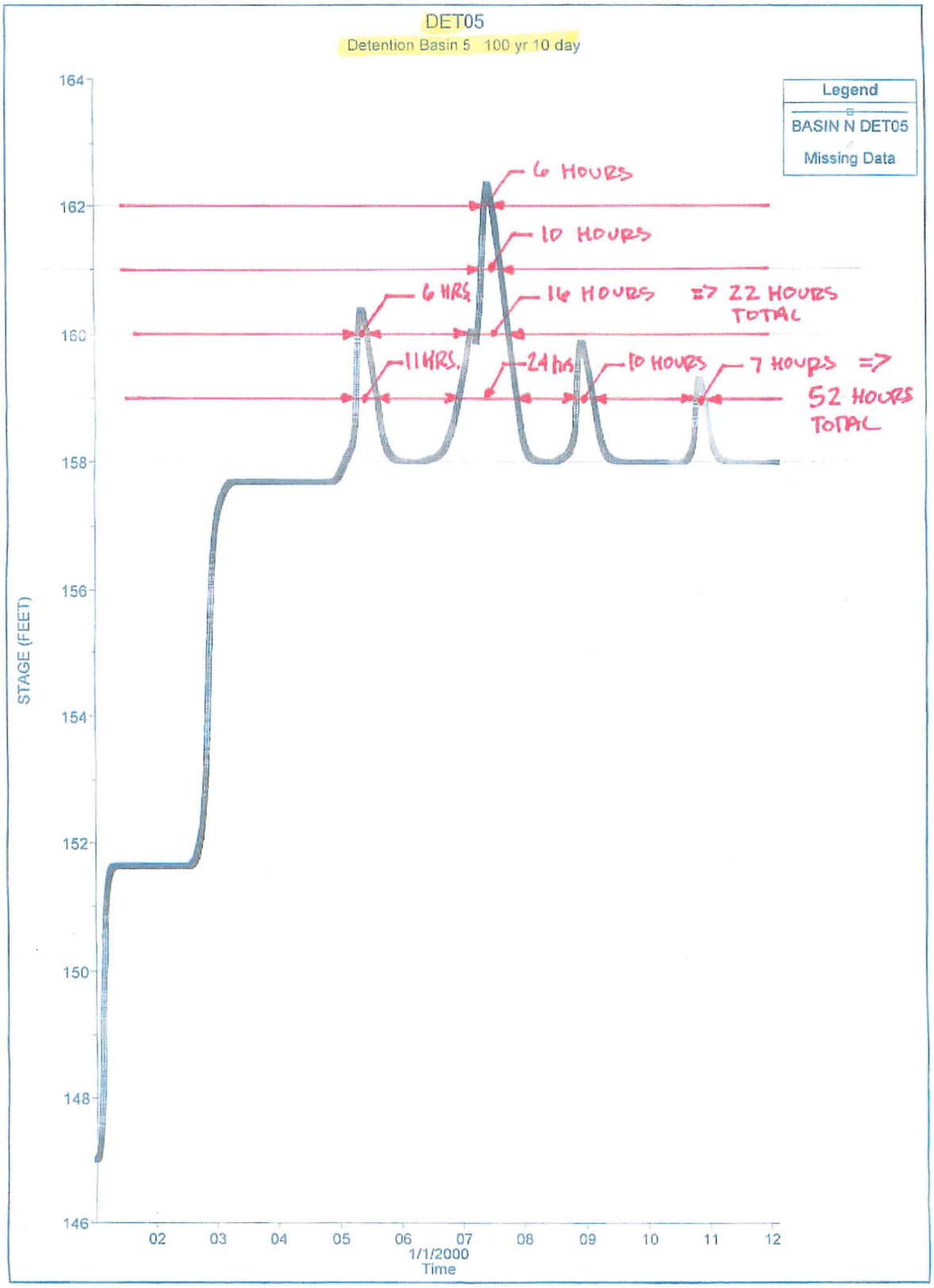
Technical Memorandum
August 6, 2010

Sac-Calc Results

-SINCE 1953-
1552 EUREKA ROAD SUITE 100 ROSEVILLE, CALIFORNIA 95661-3040 PHONE (916) 773-1189 FAX (916) 773-2595
OFFICES: PLEASANTON ROSEVILLE
www.msce.com


DET05
Detention Basin 5 10 yr 24 hr
Legend
BASIN N DET05
160
158
156
154
152
150
148
146
STAGE (FEET)
0600
1200
01Jan2000
1800
2400
02Jan2000
0600
Time


DET05
Detention Basin 5 100 yr 24 hr
Legend
BASIN N DET05
3 HOURS
10 HOURS
14 HOURS
STAGE (FEET)
162
160
158
156
154
152
150
148
146
0600
1200
01Jan2000
1800
2400
02Jan2000
0600
Time


DET05
Detention Basin 5 100 yr 10 day
Legend
BASIN N DET05
Missing Data
6 HOURS
10 HOURS
6 HRS
16 HOURS
=7 22 HOURS TOTAL
11HRS.
24 hrs
10 HOURS
7 HOURS =7
52 HOURS TOTAL
164
162
160
158
156
154
152
150
148
146
STAGE (FEET)
02
03
04
05
06
07
08
09
10
11
12
1/1/2000
Time

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	82.	12:30	.11			
KCA3	338.	12:34	.46			
A3DET	278.	12:46	.46	130.	15.	
OSKC05	117.	12:33	.16			
R6A	117.	12:34	.16			
KCOS06	60.	12:04	.03			
KCOS02	61.	12:33	.09			
KCOS1	31.	12:14	.03			
R2A	31.	12:18	.03			
KCDV3	115.	12:21	.12			
DET03	7.9	16:02	.12	175.	14.	
R1	7.9	16:09	.12			
KCDV2	253.	12:11	.19			
DET02	24.	13:55	.19	176.	18.	
KCOS3A	225.	12:25	.26			
R3A	224.	12:28	.26			
J1	251.	12:28	.57			
R2	250.	12:30	.57			
J02	271.	12:29	.60			
R3	271.	12:33	.60			
KCDV4	239.	12:15	.21			
DET04	23.	15:07	.21	166.	22.	
J03	353.	12:33	.89			
R4	352.	12:37	.89			
KCOS03	54.	12:15	.05			
KCDV5	302.	12:21	.31			
DET05	32.	15:18	.31	161.	31.	
J04	404.	12:36	1.25			
R5	403.	12:40	1.25			
KCOS04	74.	12:07	.05			
KCDV06	170.	12:15	.15			
DET06	16.	15:15	.15	157.	16.	.00
J05	433.	12:40	1.45			
R6	428.	12:45	1.45			
KCDV7	138.	12:06	.08			

DET07	16.	13:08	.08	144.	6.1	.00
KCDV8	201.	12:19	.20			
DET08	22.	15:14	.20	140.	22.	.00
J06	571.	12:44	1.92			
R7	567.	12:48	1.92			
J7	844.	12:48	2.38			
R8	844.	12:48	2.38			
KCOS11	23.	12:10	.02			
R8A	23.	12:13	.02			
KCDV9	119.	12:23	.13			
DET09	12.	15:27	.13	136.	14.	
KCDV11	43.	12:04	.02			
DET11	7.9	12:35	.02	136.	1.0	
J08	868.	12:48	2.55			
R9	851.	12:56	2.55			
J9	901.	12:55	2.66			
KCOS14	23.	12:18	.02			
KCOS13	40.	12:13	.03			
KCOS12	89.	12:23	.10			
R10B	89.	12:25	.10			
J10B	115.	12:23	.13			
R10C	115.	12:27	.13			
J10C	133.	12:26	.16			
R10D	132.	12:31	.16			
KCDV10	137.	12:12	.11			
DET10	16.	13:43	.11	132.	8.8	.00
KCDV12	179.	12:14	.15			
DET12	24.	13:52	.15	131.	13.	.00
J10	1020.	12:54	3.07			
R10	1007.	12:57	3.07			
EXKC13	151.	12:11	.11			
J11	1039.	12:57	3.19			
R11	1008.	13:07	3.19			
EXKC14	34.	15:09	.15			
J12	1024.	13:07	3.33			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	48.	12:30	.11			
KCA3	199.	12:34	.46			

A3DET	153.	12:51	.46	129.	12.	
OSKC05	68.	12:33	.16			
R6A	68.	12:35	.16			
KCOS06	33.	12:04	.03			
KCOS02	36.	12:34	.09			
KCOS1	17.	12:14	.03			
R2A	17.	12:19	.03			
KCDV3	67.	12:21	.12			
DET03	6.1	15:28	.12	173.	8.4	
R1	6.1	15:36	.12			
KCDV2	145.	12:11	.19			
DET02	18.	13:41	.19	174.	12.	
KCOS3A	130.	12:25	.26			
R3A	130.	12:29	.26			
J1	150.	12:29	.57			
R2	150.	12:31	.57			
J02	162.	12:30	.60			
R3	162.	12:35	.60			
KCDV4	138.	12:15	.21			
DET04	18.	14:04	.21	165.	14.	.00
J03	213.	12:35	.89			
R4	212.	12:39	.89			
KCOS03	30.	12:15	.05			
KCDV5	176.	12:21	.31			
DET05	24.	14:34	.31	160.	19.	.00
J04	248.	12:38	1.25			
R5	247.	12:43	1.25			
KCOS04	41.	12:07	.05			
KCDV06	99.	12:15	.15			
DET06	13.	14:12	.15	156.	9.8	
J05	268.	12:42	1.45			
R6	265.	12:49	1.45			
KCDV7	79.	12:06	.08			
DET07	13.	13:06	.08	143.	3.7	.00
KCDV8	117.	12:19	.20			
DET08	16.	14:30	.20	139.	15.	
J06	352.	12:48	1.92			
R7	350.	12:53	1.92			
J7	502.	12:53	2.38			
R8	502.	12:53	2.38			
KCOS11	13.	12:10	.02			

R8A	13.	12:13	.02			
KCDV9	70.	12:23	.13			
DET09	9.3	15:00	.13	135.	8.3	.00
KCDV11	24.	12:04	.02			
DET11	6.2	12:30	.02	134.	.6	.00
J08	520.	12:53	2.55			
R9	510.	13:02	2.55			
J9	538.	13:01	2.66			
KCOS14	13.	12:18	.02			
KCOS13	23.	12:13	.03			
KCOS12	51.	12:23	.10			
R10B	51.	12:26	.10			
J10B	66.	12:24	.13			
R10C	66.	12:28	.13			
J10C	76.	12:27	.16			
R10D	76.	12:33	.16			
KCDV10	79.	12:12	.11			
DET10	13.	13:36	.11	131.	5.4	.00
KCDV12	104.	12:14	.15			
DET12	19.	13:41	.15	130.	7.8	.00
J10	613.	13:00	3.07			
R10	605.	13:04	3.07			
EXKC13	86.	12:11	.11			
J11	625.	13:04	3.19			
R11	607.	13:16	3.19			
EXKC14	20.	15:09	.15			
J12	617.	13:16	3.33			

Sacramento Hydrologic Calculator Report

July 27, 2010 18:41

Project Title: Basin n Proposed Conditions
Comments: Proposed Conditions. with local detention - Baseline Condition 10 yr and 100 yr 24 hour storms
Prepared by: KEC
Method: Sacramento County HEC-1 method
Date: 8/6/2008

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
KCOS1	16.8	203.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV2	120.2	199.7	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV3	76.9	185	Basin "n"	-	Computed	-	Computed	-	Computed	-
KCDV5	201.3	175	Basin "n"	-	Specified	0.051	Computed	-	Computed	-
KCDV4	134.1	174	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV7	52	153.5	Basin "n"	-	Specified	0.037	Computed	-	Computed	-
KCDV8	126.2	152.9	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV9	82.2	144.2	Basin "n"	-	Specified	.051	Computed	-	Computed	-
KCOS02	54.9	166.3	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS03	30.4	153	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
OSKC05	102.3	181.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV06	94.2	166.5	Basin "n"	-	Specified	0.039	Computed	-	Computed	-
KCOS04	29.3	145.2	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS06	20.3	166	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCA3	297.3	151	Basin "n"	-	Specified	0.049	Computed	-	Computed	-
KCOS11	11.1	157.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV11	13.8	145.1	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV10	68.4	140.1	Basin "n"	-	Specified	0.045	Computed	-	Computed	-
KCDV12	96.8	138.3	Basin "n"	-	Specified	.042	Computed	-	Computed	-
KCOS12	65	156.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS13	21	154	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS14	14	145.5	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS15	68.2	122.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS3A	168.5	213	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
EXKC13	73.3	140	Basin "n"	-	Computed	-	Computed	-	Computed	-
EXKC14	95.1	120	Basin "n"	-	Computed	-	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	1576	850	0.0159	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV2	3940	750	0.0156	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV3	1920	444	0.0042	Undeveloped	2.6	6.8					8.1	21.4							12.9	25.1		
				Developed	0	0					0	0							0	0		
KCDV5	4464	1907	0.0103	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV4	3297	917	0.003	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV7	1655	580	0.0091	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV8	4054	2363	0.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV9	4360	2120	.0083	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS02	3900	2145	.005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS03	2089	415	.0048	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OSKC05	4804	2082	.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV06	3313	1851	.0063	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS04	2745	1385	005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS06	2377	1387	0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCA3	7016	3899	.006	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS11	726	572	.0069	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV11	850	322	.0213	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV10	2474	1482	.0178	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV12	3407	1720	.0119	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS12	2632	1237	.0057	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS13	1370	566	.0088	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS14	1990	908	.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS15	3317	1334	.0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS3A	3787	1555	.0132	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXKC13	4651	2747	0105	Undeveloped																100		
				Developed																0		
EXKC14	79700	3064	.003	Undeveloped																100		
				Developed																0		

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																		
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	B																		
	C																4.8		
	D																12		
KCDV2	B																		
	C	1.1						26.2	12.2							8.2	2.2		
	D	2						36.7	21.6							2.2	7.8		
KCDV3	B																		
	C																		
	D	2.6	6.8					8.1	21.4							12.9	25.1		
KCDV5	B																		
	C															1.1			
	D	7.2					3.7	25.9	81.2							23.7	58.5		
KCDV4	B																		
	C																4.7		
	D						6.4	57.5	6.4	41						14	5.3		
KCDV7	B																		
	C	2.6														1			
	D	4.2	12.4				11.6	15.7								4.5			
KCDV8	B																		
	C	1.6																	
	D	5						58.9	37.2							18.3	5.2		
KCDV9	B																		
	C																		
	D	16.2	2.5						24.5	1						9.8	28		
KCOS02	B																		
	C																16.3		
	D																38.6		
KCOS03	B																		
	C																12.7		
	D																17.7		
OSKC05	B																		
	C																		
	D																102.3		
KCDV06	B																		
	C	0.9																	
	D	23					10.9	46.9								5.5	7		
KCOS04	B																		
	C																20.4		
	D																8.9		
KCOS06	B																		
	C																		
	D																20.3		
KCA3	B																		
	C								120							0.6	26.3		
	D								78.4							4.4	67.6		
KCOS11	B																		
	C																5.9		
	D																5.2		
KCDV11	B																		
	C																		
	D	2.1							8.9							2.8			
KCDV10	B																		
	C																		
	D	5	5						13.2	32.5						8	4.7		
KCDV12	B																		
	C	1.5															1		
	D	5.5	24						23.2	24.9						15.8	1.3		
KCOS12	B																		
	C																27.1		
	D																37.9		
	B																		

KCOS13	C															1.3		
	D															19.7		
KCOS14	B																	
	C																	
	D															14		
KCOS15	B																	
	C																	
	D															68.2		
KCOS3A	B																	
	C															32.6		
	D															135.9		
EXKC13	B																	
	C															6.5		
	D															66.8		
EXKC14	B																	
	C															4.1		
	D															91		

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum-Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R1	DET03	J1	Pipe	2814	0.005	3	3:1	0.015
R6A	OSKC05	J06	Trapezoidal	555	0.007	20	4:1	0.030
R4	J03	J04	Trapezoidal	2319	0.0048	30	4:1	0.014
R5	J04	J05	Trapezoidal	2582	0.0039	20	3:1	0.015
R7	J06	J7	Trapezoidal	2058	0.0025	20	3:1	0.025
R2A	KCOS1	J02	Trapezoidal	1510	0.0159	05	3:1	0.03
R2	J1	J02	Trapezoidal	644	0.0047	5	3:1	0.03
R3	J02	J03	Trapezoidal	3485	.0313	5	3:1	0.03
R6	J05	J06	Trapezoidal	2283	0.0031	20	3:1	0.03
R8	J7	J08	Trapezoidal	95	0.0025	10	1:1	0.025
R8A	KCOS11	J08	Pipe	1147	0.005	3		0.015
R9	J08	J9	Trapezoidal	3214	0.0019	20	3:1	0.03
R10B	KCOS12	J10B	Trapezoidal	524	0.005	20	3:1	0.03
R10C	J10B	J10C	Trapezoidal	1398	0.005	10	3:1	0.03
R10D	J10C	J10	Pipe	2907	0.0034	4		0.015
R3A	KCOS3A	J1	Pipe	2628	0.005	5		0.015
R10	J10	J11	Trapezoidal	1028	0.0022	15	2.5:1	0.07
R11	J11	J12	Trapezoidal	2966	0.0022	15	2.5:1	0.07

Detention Basin Data

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
A3DET	Elevation (ft)	0	Elevation (ft)	127.4	128.5	128.5	130.5	131.5					124.41	.54	.61	0.5
			Area (ac)	6.38	6.61	6.89	7.23	7.81					128.50	84	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET02	Elevation (ft)	171	Elevation (ft)	171	172	173	174	175	176	177			171.875	2.41	.61	0.5
			Area (ac)	3.228	3.403	3.582	3.765	3.954	4.147	4.344			176.5	230	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET03	Elevation (ft)	170.5	Elevation (ft)	170.5	171.5	172.5	173.5	174.5	175.5	176.5			171.	.785	.61	0.5
			Area (ac)	2.654	2.812	2.975	3.143	3.315	3.492	3.673			176	190	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET04	Elevation (ft)	161.5	Elevation (ft)	161.5	162.5	163.5	164.5	165.5	166.5	167.5			162.375	2.41	.61	0.5
			Area (ac)	3.954	4.147	4.344	4.546	4.753	4.964	5.18			167	251	2.6	1.5
	Pump Data															
	Pump Hydrograph Name						Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
	Elevation	156.5	Elevation (ft)	156.5	157.5	158.5	159.5	160.5	161.5	162.5			157.0	3.14	.61	0.5

	(ft)		Area (ac)	5.739	5.971	6.208	6.449	6.694	6.944	7.199				162	315	2.6	1.5
DET05	Pump Data																	
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5		
				Pump Discharge (cfs)														
				Elevation at which Pump Turns On (ft)														
				Elevation at which Pump Turns Off (ft)														

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET06	Elevation (ft)	152.5	Elevation (ft)	152.5	153.5	154.5	155.5	156.5	157.5	158.5				153.	1.57	.61	0.5
			Area (ac)	2.812	2.975	3.143	3.315	3.492	3.676	3.859				158	170	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET07	Elevation (ft)	139.5	Elevation (ft)	139.5	140.5	143.5	141.5	142.5	144.5	145.5				140.	1.57	.61	0.5
			Area (ac)	0.965	1.061	1.162	1.268	1.378	1.493	1.612				145	135	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET08	Elevation (ft)	135.5	Elevation (ft)	135.5	136.5	137.5	139.5	138.5	140.5	141.5				136.875	2.41	.61	0.5
			Area (ac)	4.147	4.344	4.546	4.753	4.964	5.18	5.4				141	235	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET09	Elevation (ft)	131.5	Elevation (ft)	131.5	132.5	133.5	134.5	135.5	136.5	137.5				132.125	1.23	.61	0.5
			Area (ac)	2.425	2.576	2.732	2.893	3.058	3.228	3.403				137	130	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns													

			On (ft)														
			Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET11	Elevation (ft)	130.5	Elevation (ft)	130.5	131.5	132.5	133.5	134.5	135.5	136.5				131.5	.785	.61	0.5
			Area (ac)	0.112	0.147	0.186	0.23	0.278	0.331	0.388				136	50	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET10	Elevation (ft)	127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5				128.0	1.57	.61	0.5
			Area (ac)	1.493	1.612	1.736	1.865	1.998	2.136	2.278				133	150	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														
Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET12	Elevation (ft)	126.5	Elevation (ft)	126.5	127.5	128.5	129.5	130.5	131.5	132.5				127.0	2.355	.61	0.5
			Area (ac)	2.278	2.425	2.576	2.732	2.893	3.058	3.228				132	200	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														

Sacramento Hydrologic Calculator Report

August 9, 2010 8:03

Project Title: Basin n Proposed Conditions
Comments: Proposed Conditions, with local detention Detention Basin 5 modified 10 yr and 100 yr 24 hr
Prepared by: KEC

Method: Sacramento County HEC-1 method
Date: 8/6/2008

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
KCOS1	16.8	203.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV2	120.2	199.7	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV3	76.9	185	Basin "n"	-	Computed	-	Computed	-	Computed	-
KCDV5	201.3	175	Basin "n"	-	Specified	0.051	Computed	-	Computed	-
KCDV4	134.1	174	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV7	52	153.5	Basin "n"	-	Specified	0.037	Computed	-	Computed	-
KCDV8	126.2	152.9	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV9	82.2	144.2	Basin "n"	-	Specified	.051	Computed	-	Computed	-
KCOS02	54.9	166.3	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS03	30.4	153	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
OSKC05	102.3	181.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV06	94.2	166.5	Basin "n"	-	Specified	0.039	Computed	-	Computed	-
KCOS04	29.3	145.2	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS06	20.3	166	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCA3	297.3	151	Basin "n"	-	Specified	0.049	Computed	-	Computed	-
KCOS11	11.1	157.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV11	13.8	145.1	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV10	68.4	140.1	Basin "n"	-	Specified	0.045	Computed	-	Computed	-
KCDV12	96.8	138.3	Basin "n"	-	Specified	.042	Computed	-	Computed	-
KCOS12	65	156.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS13	21	154	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS14	14	145.5	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS15	68.2	122.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS3A	168.5	213	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
EXKC13	73.3	140	Basin "n"	-	Computed	-	Computed	-	Computed	-
EXKC14	95.1	120	Basin "n"	-	Computed	-	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																	
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	1576	850	0.0159	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV2	3940	750	0.0156	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV3	1920	444	0.0042	Undeveloped	2.6	6.8					8.1	21.4							12.9	25.1		
				Developed	0	0					0	0							0	0		
KCDV5	4464	1907	0.0103	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV4	3297	917	0.003	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV7	1655	580	0.0091	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV8	4054	2363	0.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV9	4360	2120	.0083	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS02	3900	2145	.005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS03	2089	415	.0048	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OSKC05	4804	2082	.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV06	3313	1851	.0063	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS04	2745	1385	005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS06	2377	1387	0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCA3	7016	3899	.006	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS11	726	572	.0069	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV11	850	322	.0213	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV10	2474	1482	.0178	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV12	3407	1720	.0119	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS12	2632	1237	.0057	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS13	1370	566	.0088	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS14	1990	908	.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS15	3317	1334	.0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS3A	3787	1555	.0132	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXKC13	4651	2747	0105	Undeveloped																100		
				Developed																0		
EXKC14	79700	3064	.003	Undeveloped																100		
				Developed																0		

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	B																		
	C																4.8		
	D																12		
KCDV2	B																		
	C	1.1						26.2	12.2							8.2	2.2		
	D	2						36.7	21.6							2.2	7.8		
KCDV3	B																		
	C																		
	D	2.6	6.8					8.1	21.4							12.9	25.1		
KCDV5	B																		
	C															1.1			
	D	7.2					3.7	25.9	81.2							23.7	58.5		
KCDV4	B																		
	C																4.7		
	D						6.4	57.5	6.4	41						14	5.3		
KCDV7	B																		
	C	2.6														1			
	D	4.2	12.4				11.6	15.7								4.5			
KCDV8	B																		
	C	1.6																	
	D	5						58.9	37.2							18.3	5.2		
KCDV9	B																		
	C																		
	D	16.2	2.5						24.5	1						9.8	28		
KCOS02	B																		
	C																16.3		
	D																38.6		
KCOS03	B																		
	C																12.7		
	D																17.7		
OSKC05	B																		
	C																		
	D																102.3		
KCDV06	B																		
	C	0.9																	
	D	23					10.9	46.9								5.5	7		
KCOS04	B																		
	C																20.4		
	D																8.9		
KCOS06	B																		
	C																		
	D																20.3		
KCA3	B																		
	C								120							0.6	26.3		
	D								78.4							4.4	67.6		
KCOS11	B																		
	C																5.9		
	D																5.2		
KCDV11	B																		
	C																		
	D	2.1							8.9							2.8			
KCDV10	B																		
	C																		
	D	5	5						13.2	32.5						8	4.7		
KCDV12	B																		
	C	1.5															1		
	D	5.5	24						23.2	24.9						15.8	1.3		
KCOS12	B																		
	C																27.1		
	D																37.9		
	B																		

KCOS13	C															1.3			
	D															19.7			
KCOS14	B																		
	C																		
	D															14			
KCOS15	B																		
	C																		
	D															68.2			
KCOS3A	B																		
	C															32.6			
	D															135.9			
EXKC13	B																		
	C															6.5			
	D															66.8			
EXKC14	B																		
	C															4.1			
	D															91			

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum-Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R1	DET03	J1	Pipe	2814	0.005	3	3:1	0.015
R6A	OSKC05	J06	Trapezoidal	555	0.007	20	4:1	0.030
R4	J03	J04	Trapezoidal	2319	0.0048	30	4:1	0.014
R5	J04	J05	Trapezoidal	2582	0.0039	20	3:1	0.015
R7	J06	J7	Trapezoidal	2058	0.0025	20	3:1	0.025
R2A	KCOS1	J02	Trapezoidal	1510	0.0159	05	3:1	0.03
R2	J1	J02	Trapezoidal	644	0.0047	5	3:1	0.03
R3	J02	J03	Trapezoidal	3485	.0313	5	3:1	0.03
R6	J05	J06	Trapezoidal	2283	0.0031	20	3:1	0.03
R8	J7	J08	Trapezoidal	95	0.0025	10	1:1	0.025
R8A	KCOS11	J08	Pipe	1147	0.005	3		0.015
R9	J08	J9	Trapezoidal	3214	0.0019	20	3:1	0.03
R10B	KCOS12	J10B	Trapezoidal	524	0.005	20	3:1	0.03
R10C	J10B	J10C	Trapezoidal	1398	0.005	10	3:1	0.03
R10D	J10C	J10	Pipe	2907	0.0034	4		0.015
R3A	KCOS3A	J1	Pipe	2628	0.005	5		0.015
R10	J10	J11	Trapezoidal	1028	0.0022	15	2.5:1	0.07
R11	J11	J12	Trapezoidal	2966	0.0022	15	2.5:1	0.07

Detention Basin Data

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
A3DET	Elevation (ft)	0	Elevation (ft)	127.4	128.5	128.5	130.5	131.5						124.41	.54	.61	0.5
			Area (ac)	6.38	6.61	6.89	7.23	7.81						128.50	84	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET02	Elevation (ft)	171	Elevation (ft)	171	172	173	174	175	176	177				171.875	2.41	.61	0.5
			Area (ac)	3.228	3.403	3.582	3.765	3.954	4.147	4.344				176.5	230	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET03	Elevation (ft)	170.5	Elevation (ft)	170.5	171.5	172.5	173.5	174.5	175.5	176.5				171.	.785	.61	0.5
			Area (ac)	2.654	2.812	2.975	3.143	3.315	3.492	3.673				176	190	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET04	Elevation (ft)	161.5	Elevation (ft)	161.5	162.5	163.5	164.5	165.5	166.5	167.5				162.375	2.41	.61	0.5
			Area (ac)	3.954	4.147	4.344	4.546	4.753	4.964	5.18				167	251	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
			Pump Discharge (cfs)														
			Elevation at which Pump Turns On (ft)														
			Elevation at which Pump Turns Off (ft)														

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
	Elevation	147	Elevation (ft)	147	153.9	154	158.5	158.9	159	160	161	162	163	158.0	3.14	.61	0.5

	(ft)		Area (ac)	1.263	2.138	2.424	3.243	3.464	4.591	5.005	6.887	8.655	10.686	162.9	315	2.6	1.5

DET05	Pump Data						
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET06	Elevation (ft)	152.5	Elevation (ft)	152.5	153.5	154.5	155.5	156.5	157.5	158.5				153.	1.57	.61	0.5
			Area (ac)	2.812	2.975	3.143	3.315	3.492	3.676	3.859				158	170	2.6	1.5

DET06	Pump Data						
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET07	Elevation (ft)	139.5	Elevation (ft)	139.5	140.5	143.5	141.5	142.5	144.5	145.5				140.	1.57	.61	0.5
			Area (ac)	0.965	1.061	1.162	1.268	1.378	1.493	1.612				145	135	2.6	1.5

DET07	Pump Data						
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET08	Elevation (ft)	135.5	Elevation (ft)	135.5	136.5	137.5	139.5	138.5	140.5	141.5				136.875	2.41	.61	0.5
			Area (ac)	4.147	4.344	4.546	4.753	4.964	5.18	5.4				141	235	2.6	1.5

DET08	Pump Data						
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET09	Elevation (ft)	131.5	Elevation (ft)	131.5	132.5	133.5	134.5	135.5	136.5	137.5				132.125	1.23	.61	0.5
			Area (ac)	2.425	2.576	2.732	2.893	3.058	3.228	3.403				137	130	2.6	1.5

DET09	Pump Data						
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns					

			On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET11	Elevation (ft)	130.5	Elevation (ft)	130.5	131.5	132.5	133.5	134.5	135.5	136.5			131.5	.785	.61	0.5
			Area (ac)	0.112	0.147	0.186	0.23	0.278	0.331	0.388			136	50	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name						
	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET10	Elevation (ft)	127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5			128.0	1.57	.61	0.5
			Area (ac)	1.493	1.612	1.736	1.865	1.998	2.136	2.278			133	150	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name						
	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET12	Elevation (ft)	126.5	Elevation (ft)	126.5	127.5	128.5	129.5	130.5	131.5	132.5			127.0	2.355	.61	0.5
			Area (ac)	2.278	2.425	2.576	2.732	2.893	3.058	3.228			132	200	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name						
	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	82.	12:30	.11			
KCA3	338.	12:34	.46			
A3DET	278.	12:46	.46	130.	15.	
OSKC05	117.	12:33	.16			
R6A	117.	12:34	.16			
KCOS06	60.	12:04	.03			
KCOS02	61.	12:33	.09			
KCOS1	31.	12:14	.03			
R2A	31.	12:18	.03			
KCDV3	115.	12:21	.12			
DET03	7.9	16:02	.12	175.	14.	
R1	7.9	16:09	.12			
KCDV2	253.	12:11	.19			
DET02	24.	13:55	.19	176.	18.	
KCOS3A	225.	12:25	.26			
R3A	224.	12:28	.26			
J1	251.	12:28	.57			
R2	250.	12:30	.57			
J02	271.	12:29	.60			
R3	271.	12:33	.60			
KCDV4	239.	12:15	.21			
DET04	23.	15:07	.21	166.	22.	
J03	353.	12:33	.89			
R4	352.	12:37	.89			
KCOS03	54.	12:15	.05			
KCDV5	302.	12:21	.31			
DET05	27.	15:28	.31	161.	38.	
J04	394.	12:37	1.25			
R5	393.	12:40	1.25			
KCOS04	74.	12:07	.05			
KCDV06	170.	12:15	.15			
DET06	16.	15:15	.15	157.	16.	.00
J05	424.	12:40	1.45			
R6	418.	12:46	1.45			
KCDV7	138.	12:06	.08			

DET07	16.	13:08	.08	144.	6.1	.00
KCDV8	201.	12:19	.20			
DET08	22.	15:14	.20	140.	22.	.00
J06	561.	12:44	1.92			
R7	556.	12:49	1.92			
J7	833.	12:48	2.38			
R8	833.	12:48	2.38			
KCOS11	23.	12:10	.02			
R8A	23.	12:13	.02			
KCDV9	119.	12:23	.13			
DET09	12.	15:27	.13	136.	14.	
KCDV11	43.	12:04	.02			
DET11	7.9	12:35	.02	136.	1.0	
J08	857.	12:48	2.55			
R9	840.	12:56	2.55			
J9	889.	12:55	2.66			
KCOS14	23.	12:18	.02			
KCOS13	40.	12:13	.03			
KCOS12	89.	12:23	.10			
R10B	89.	12:25	.10			
J10B	115.	12:23	.13			
R10C	115.	12:27	.13			
J10C	133.	12:26	.16			
R10D	132.	12:31	.16			
KCDV10	137.	12:12	.11			
DET10	16.	13:43	.11	132.	8.8	.00
KCDV12	179.	12:14	.15			
DET12	24.	13:52	.15	131.	13.	.00
J10	1007.	12:54	3.07			
R10	993.	12:58	3.07			
EXKC13	151.	12:11	.11			
J11	1025.	12:57	3.19			
R11	993.	13:08	3.19			
EXKC14	34.	15:09	.15			
J12	1009.	13:08	3.33			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	48.	12:30	.11			
KCA3	199.	12:34	.46			

A3DET	153.	12:51	.46	129.	12.	
OSKC05	68.	12:33	.16			
R6A	68.	12:35	.16			
KCOS06	33.	12:04	.03			
KCOS02	36.	12:34	.09			
KCOS1	17.	12:14	.03			
R2A	17.	12:19	.03			
KCDV3	67.	12:21	.12			
DET03	6.1	15:28	.12	173.	8.4	
R1	6.1	15:36	.12			
KCDV2	145.	12:11	.19			
DET02	18.	13:41	.19	174.	12.	
KCOS3A	130.	12:25	.26			
R3A	130.	12:29	.26			
J1	150.	12:29	.57			
R2	150.	12:31	.57			
J02	162.	12:30	.60			
R3	162.	12:35	.60			
KCDV4	138.	12:15	.21			
DET04	18.	14:04	.21	165.	14.	.00
J03	213.	12:35	.89			
R4	212.	12:39	.89			
KCOS03	30.	12:15	.05			
KCDV5	176.	12:21	.31			
DET05	14.	15:40	.31	159.	26.	
J04	227.	12:38	1.25			
R5	227.	12:43	1.25			
KCOS04	41.	12:07	.05			
KCDV06	99.	12:15	.15			
DET06	13.	14:12	.15	156.	9.8	
J05	247.	12:42	1.45			
R6	244.	12:49	1.45			
KCDV7	79.	12:06	.08			
DET07	13.	13:06	.08	143.	3.7	.00
KCDV8	117.	12:19	.20			
DET08	16.	14:30	.20	139.	15.	
J06	331.	12:48	1.92			
R7	329.	12:53	1.92			
J7	481.	12:53	2.38			
R8	481.	12:53	2.38			
KCOS11	13.	12:10	.02			

R8A	13.	12:13	.02			
KCDV9	70.	12:23	.13			
DET09	9.3	15:00	.13	135.	8.3	.00
KCDV11	24.	12:04	.02			
DET11	6.2	12:30	.02	134.	.6	.00
J08	499.	12:53	2.55			
R9	490.	13:02	2.55			
J9	517.	13:01	2.66			
KCOS14	13.	12:18	.02			
KCOS13	23.	12:13	.03			
KCOS12	51.	12:23	.10			
R10B	51.	12:26	.10			
J10B	66.	12:24	.13			
R10C	66.	12:28	.13			
J10C	76.	12:27	.16			
R10D	76.	12:33	.16			
KCDV10	79.	12:12	.11			
DET10	13.	13:36	.11	131.	5.4	.00
KCDV12	104.	12:14	.15			
DET12	19.	13:41	.15	130.	7.8	.00
J10	591.	13:00	3.07			
R10	584.	13:04	3.07			
EXKC13	86.	12:11	.11			
J11	603.	13:04	3.19			
R11	586.	13:16	3.19			
EXKC14	20.	15:09	.15			
J12	596.	13:17	3.33			

(100-year, 10-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	39.	153:10	.11			
KCA3	171.	153:12	.46			
A3DET	162.	153:26	.46	129.	13.	
OSKC05	58.	153:11	.16			
R6A	58.	153:14	.16			
KCOS06	13.	152:48	.03			
KCOS02	30.	153:12	.09			
KCOS1	11.	153:01	.03			
R2A	11.	153:07	.03			
KCDV3	49.	153:04	.12			

DET03	8.2	154:49	.12	175.	15.	.00
R1	8.2	154:57	.12			
KCDV2	82.	153:00	.19			
DET02	23.	154:15	.19	176.	18.	.00
KCOS3A	100.	153:06	.26			
R3A	100.	153:10	.26			
J1	129.	153:11	.57			
R2	129.	153:13	.57			
J02	139.	153:12	.60			
R3	139.	153:17	.60			
KCDV4	89.	153:02	.21			
DET04	24.	154:24	.21	166.	22.	.00
J03	191.	153:16	.89			
R4	191.	153:21	.89			
KCOS03	19.	153:02	.05			
KCDV5	128.	153:04	.31			
DET05	32.	154:35	.31	162.	48.	.00
J04	236.	153:16	1.25			
R5	236.	153:21	1.25			
KCOS04	19.	153:00	.05			
KCDV06	64.	153:02	.15			
DET06	16.	154:25	.15	157.	16.	.00
J05	262.	153:18	1.45			
R6	262.	153:24	1.45			
KCDV7	37.	153:00	.08			
DET07	15.	154:06	.08	144.	5.1	.00
KCDV8	83.	153:03	.20			
DET08	22.	154:30	.20	141.	23.	
J06	361.	153:18	1.92			
R7	361.	153:23	1.92			
J7	524.	153:25	2.38			
R8			2.38			
KCOS11			.02			
R8A			.02			
KCDV9			.13			
DET09			.13			.00
KCDV11			.02			
DET11			.02			.00
J08			2.55			
R9			2.55			
J9			2.66			

KCOS14	.02	
KCOS13	.03	
KCOS12	.10	
R10B	.10	
J10B	.13	
R10C	.13	
J10C	.16	
R10D	.16	
KCDV10	.11	
DET10	.11	.00
KCDV12	.15	
DET12	.15	.00
J10	3.07	
R10	3.07	
EXKC13	.11	
J11	3.19	
R11	3.19	
EXKC14	.15	
J12	3.33	

Appendix G: Technical Memorandum – Shalako Detention Basin Alternatives

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 773-1189

TECHNICAL MEMORANDUM

Date:	July 28, 2010
To:	Bob Shattuck, Lennar Communities
From:	Ken Giberson, MacKay & Somps
TM No.:	Technical Memorandum No. 4
Subject:	Shalako Detention Basin Alternatives SunCreek Specific Plan Rancho Cordova, CA
Job No.:	7991-10
Task No.:	Task B.3

A. Introduction

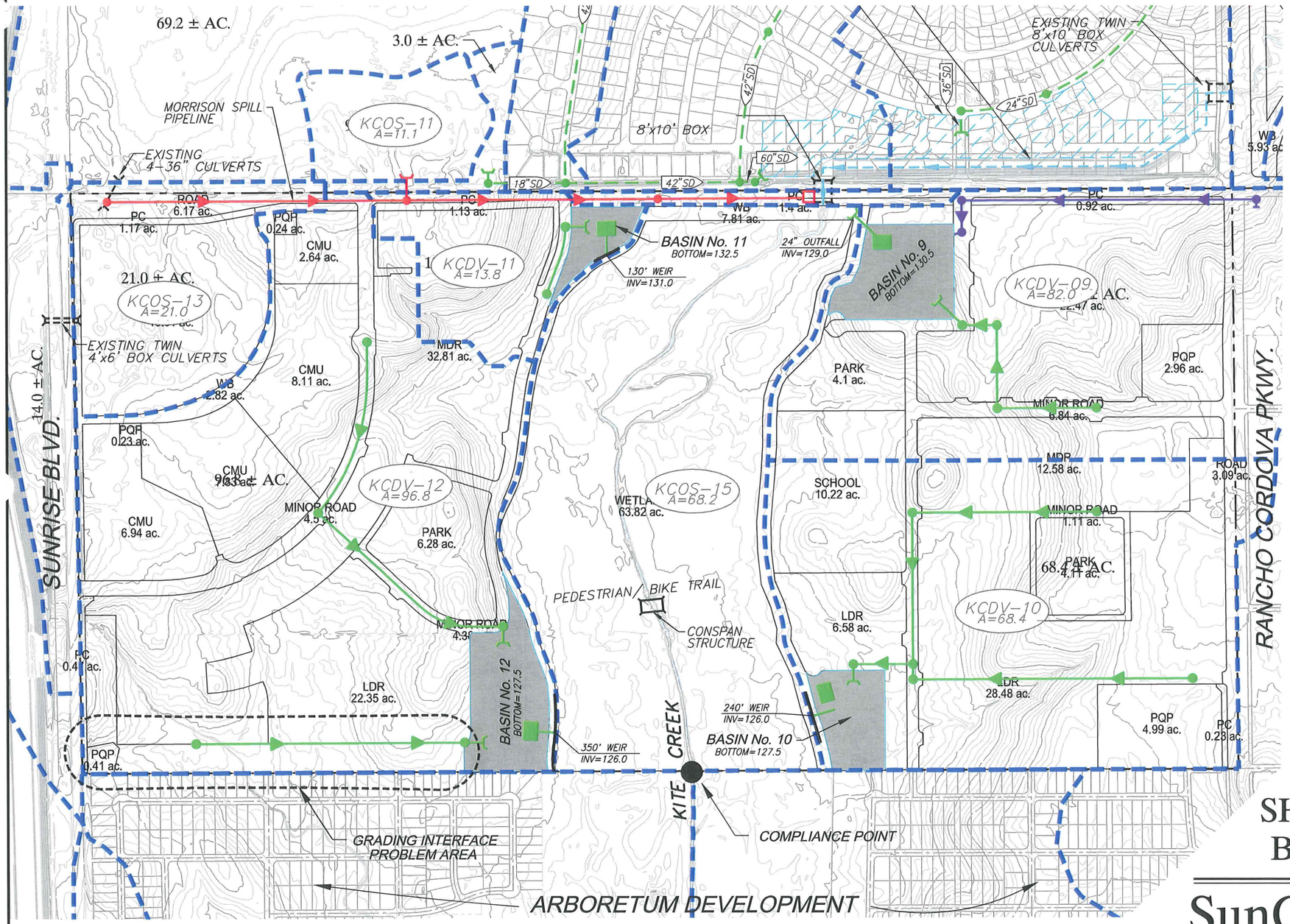
The Shalako property is located in the most southwestern corner of the SunCreek Specific Plan area. The southern boundary of the Shalako property abuts the northwestern portions of the Arboretum project. Figure 1 depicts the Shalako and the northwestern portions Arboretum projects.

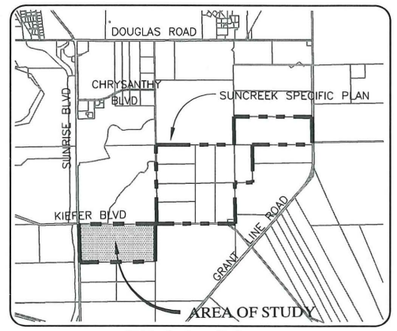
A tributary to Laguna Creek, Kite Creek, bisects the Shalako property in a north-south direction dividing the development into two separate areas – a western area and an eastern area. The southern portion of the western area Shalako property naturally drains towards the Arboretum project.

Development of the Shalako property will redirect this southern portion of the western area watershed easterly to a proposed detention basin located at the western edge of the Kite Creek preserve area near the south boundary of the Shalako property. This redirection would assure that the Shalako property will not drain onto the Arboretum project post development.

This redirection is, also, required to conform to the requirements of the Conceptual Level Strategy for wetland preservation for the SunCreek Specific Plan area that, in part, mandates that runoff from the developed portions of the SunCreek project not drain directly to the preserve area. Instead, these flows are to be directed to strategically located detention basins for water quality treatment and peak flow attenuation prior to discharge to Kite Creek and the preserve areas.

In order to accomplish this redirection, several feet of fill will need to be placed along the most southern tier of lots of the Shalako property. The resulting lot pad





Vicinity Map

Legend

- PROPOSED CHANNEL
- EXISTING CHANNEL
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN (DEDICATED TO OPEN SPACE)
- PROPOSED STORM DRAIN (INCLUDES OFFSITE DEVELOPED FLOWS)
- DEVELOPED SHED BOUNDARY

0' 500' 1000'

FIGURE #1
SHALAKO DETENTION BASIN ALTERNATIVE

SunCreek Specific Plan

County of Sacramento, California

July, 2010

MacKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

7991-00

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[1] L:\Sacramento\7991\00\Master Plans\7991-00 Master Plan Base.dwg [2] L:\Sacramento\7991\00\Topo\WC#029\CompositeTopo29.dwg

elevations would be 2± to 6± feet higher than the adjoining tier of lots on the Arboretum site.[1]

This difference in elevations between adjoining lots will create a significant slope between adjoining lots, an undesirable condition requiring slopes and excessive lot depths on the lower lots or the construction of expensive retaining walls to retain the slope.

In an effort to resolve this situation, the question has been raised whether a redesign of the basic grading/drainage concepts incorporated into the Storm Drainage Master Plan (SDMP) for SunCreek in this portion of the Shalako property could alleviate this problem. The intent would be to achieve a more compatible grading interface between the two projects.

The solution to this problem lies in determining whether the detention basin (Basin 12) that will serve this portion of the Shalako development can be reduced in size (depth) to lower the pad grades of the most southern tier of lots along the south boundary of the Shalako development. Figure 1 also shows the location of the Shalako detention basins in relation to the grading interface problem area, as well as the wetland preserve and Kite Creek areas. To compensate for the loss in flood storage volume in Basin 12, Basins 9, 10 and 11 will be increased in the size to over-detain post development flows sufficiently to compensate for the elimination of the 100-year peak flow storage volume of the basin in question (Basin 12).[2]

The intent of this technical memorandum is to document the analysis necessary to determine whether redistribution of storage volumes in these four detention basins is feasible. For purposes of this analysis, a compliance point in Kite Creek at the southern boundary of the Shalako property will be used to test whether reconfiguration of the flood control volumes of these four basins is feasible. The test for feasibility will be whether one can achieve a "no-net change" condition in the flows exiting the site at the point Kite Creek crosses the south boundary of the Shalako property.

B. **Methodology**

Building on the storm drainage Sac-Calc Baseline Conditions modeling contained in the SDMP, the approach to this analysis is briefly summarized as follows:

1. The stand-alone hydromodification flow duration control volume requirements for Basin 12 will be quantified and separated from the total

[1] Personal Conversation with Sean Davis of RJA Engineers on July 27, 2010.
[2] Water quality and hydromodification flow duration control volumes in Basin 12 would not change under this scenario.

detention volume of the basin.

2. Basin 12 will be reduced in size sufficiently to allow the overland release from the southwestern portion of the Shalako property to pass through the basin unattenuated and discharge directly into Kite Creek while retaining the requisite water quality and hydromodification volumes. This will allow the magnitude of filling that is needed to occur along the common property line between the two adjoining projects to be reduced to minimize and/or eliminate the grading interface problem.
3. The flood control volumes in the three remaining basins will be increased on an incremental basis until the hydraulic model reflects a "no net change" condition at the compliance point mentioned above.
4. Compare the magnitude of the flows at the compliance point to demonstrate a "no net change" condition at the compliance point.

C. **Analysis**

In accordance with the methodology outlined above, the following analysis was performed:

1. Determine Requisite Stand-Alone Hydromodification Flow Duration Control Volumes For Basin 12.

   The detention basins shown on the Baseline Conditions Model for SunCreek were designed as combined water quality, hydromodification flow duration control and flood control basins. As such, because of the timing of flows entering these detention basins from the developed portions of the SunCreek project some of the storage volume above the 1.5 foot deep hydromodification weir is jointly used for additional hydromodification storage and peak flow attenuation storage for the 100-year design event.

   Since hydromodification includes design events up to the 10-year design event, Basin 12 can only be reduced by the amount of the jointly used volume. Based on the hydromodification analysis performed by CBEC for the SDMP, CBEC estimated that magnitude of this joint storage volume to be approximately 50% of the flood storage volume of the detention basin plus the 1.5 foot high hydromodification weir.[3][4]

[3] Personal communication between Ken Giberson of MacKay & Somps and Chris Campbell of CBEC on December 14, 2009 (approximately 50% for 10-year/24-hour storm).

This joint storage volume was then estimated for each of the four basins under study. Also, the water quality and 1.5' pool volumes of each of the basins were determined. The results of this analysis are summarized in Table 1.

Table 1
Requisite Detention Basin Volumes
(Assuming Baseline Conditions Model)

Basin No.	1.5' Hydro-Modification Storage Volume (AF)	Baseline Conditions Model 100-Year Storage Volume (AF)	Total Storage Volume (AF)	Joint Detention Volume (AF)	Water Quality Volume (AF)
9	3.0	14.0	17.0	5.5	1.5
10	1.5	10.1	11.5	7.1	1.7
11	0.2	1.0	1.2	0.4	0.4
12	3.5	13.0	16.5	4.8	3.0
Total	8.1	38.8	46.1	17.8	6.6

2. Redesign Basin 12 To Minimize And/Or Eliminate The Grading Interface Problem.

   An effort was then undertaken to redesign Basin 12 to lower the overland release elevation for the southwest portion of the Shalako property and, thereby, lower the basin depth and the pad elevations of the southern tier of Shalako lots along the common boundary line with the Arboretum property. This redesign effort reduced the pad elevations in question in the magnitude of 1± to 3± feet.[5] This effectively eliminated and/or minimizes the grading interface problem between the two projects.

3. Determine Additional Peak Flow Storage Volumes in Basins 9, 10 and 11 Required To Achieve A "No Net Change" Condition.

   The storage volumes of Basins 9, 10 and 11 were then incrementally increased and the model re-run each time until a "no-net change" condition was achieved at the compliance point. Figure 2 is a tabular

[4] Design level analysis should be performed prior to approval of improvement plans for the project to verify this accuracy of this analysis.
[5] Personal conversation with Sean Davis at RJA Engineers on July 27, 2010.

computation and pictorial representation of this analysis. Table 3 shows the resulting storage volumes in the basins under study.

Table 2
Requisite Detention Basin Volumes
(Assuming Current Scenario)

Basin No.	1.5' Hydro-Modification Storage Volume (AF)	Current Scenario 100-Year Storage Volume (AF)	Total Storage Volume (AF)	Joint Detention Volume (AF)	Water Quality Volume (AF)
9	3.0	26.0	29.0	5.5	1.5
10	1.5	20.0	21.5	7.1	1.7
11	0.2	2.3	2.5	0.4	0.4
12	3.5	0.0	8.2	4.8	3.0
Total	8.1	48.3	46.1	17.8	6.6

4. Compare the Magnitude of the Flows at the Compliance Point to Demonstrate a "No Net Change" Condition at the Compliance Point.

   The results of this analysis were then tabulated to demonstrate that a "no-net change" condition was achieved. Table 3 includes the results of this analysis demonstrating a "no-net change" condition. The final results of the Baseline Conditions Model SAC-CALC analysis are included in Appendix A.

D. Summary of Results

This technical memorandum demonstrates that it is technically feasible to achieve an increase the peak flow storage volumes of Basins 9, 10 and 11 such that the peak flow storage volume of Basin 12 can be reduced sufficiently to minimize and/or eliminate the grading interface problem between the Shalako and Arboretum projects. As shown in Table 2, this can be accomplished while meeting the "no-net change" requirement at the compliance point.

Table 3
"No-Net Change" at Compliance Point Tabulation

Scenario	10-Year Flow at Compliance Point	100-Year/24 Hour Flow at Compliance Point
Baseline Conditions Model	617 cfs	1,024 cfs
Current Scenario	613 cfs	1,034 cfs[6]

One significant result of such a redistribution of storage volumes between Basins 9, 10, 11 and 12 is the significant increase in storage volumes in Basins 9, 10 and 11 required to achieve a "no-net change" condition. The increase in the aggregate storage volumes of Basins 9, 10 and 11 significantly exceed the reduction in volume in Basin 12.

This phenomenon is principally due the differences in response time of the drainage system and the fact that placing additional storage volumes upstream to compensate for the elimination of downstream storage volumes is inefficient. That is to say that it takes a greater amount of upstream storage to mitigate the effect of unattenuated downstream discharges.

E. Conclusion

Notwithstanding the adverse impacts on developable area within the Shalako property, it appears technically achievable to eliminate and/or minimize the grading interface problem. This can be done by reducing the size of Basin 12 and providing a compensating increase in storage volumes in Basins 9, 10 and 11 while still achieving a "no-net change" condition at the compliance point.

[6] Based on professional experience this flow rate will actually be lower than the Baseline Conditions Model results when using HEC-RAS Unsteady State analysis. Accordingly, this result is acceptable and deemed to meet the "no-net change" standard utilized in this analysis.

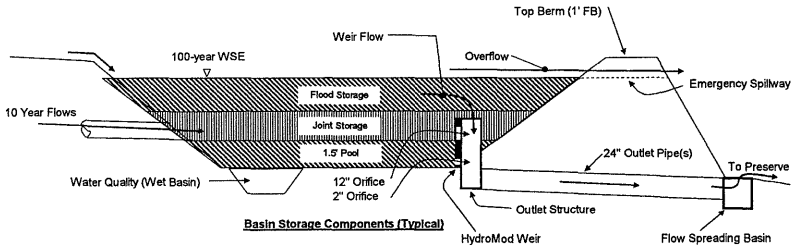
Figure 2

Shalako Detention Requirements
Excluding Basin 12 For Flood Detention
SunCreek Drainage Master Plan

Basin No.	Baseline Conditions Model														Current Scenario											
	Acreage	Bottom (Ac)	100-Year Flood Detention Volume, (Ac.-Ft.)			HydroMod Volume (Ac.-Ft.)					Subtotal Flood Volume + 1.5' Pool (Ac.-Ft.)		Water Quality Volume (Ac.-Ft.)	Total (Ac.-Ft.)	100-Year Flood Detention Volume, (Ac.-Ft.)			HydroMod Volume, Ac.-Ft. (2)					Subtotal Flood Volume + 1.5' Pool (Ac.-Ft.) (3)		Water Quality Volume (Ac.-Ft.)	Total (Ac.-Ft.)
						Total (1)		Joint Use	1.5' Pool									Total		Joint Use	1.5' Pool					
9	4.00	2.00	14.0	82%	100 Year/ 24 Hour	8.5	50%	5.5	3.0	18%	17.0	100%	1.5	**18.5**	26.0	90%	100 Year/ 10 Day	8.5	29%	5.5	3.0	10%	29.0	100%	1.5	**30.5**
10	2.50	1.00	10.0	87%	100 Year/ 10 Day	5.8	50%	4.3	1.5	13%	11.5	100%	1.7	**13.2**	20.0	93%	100 Year/ 10 Day	5.8	27%	4.3	1.5	7%	21.5	100%	1.7	**23.2**
11	0.80	0.12	1.0	85%	100 Year/ 24 Hour	0.6	50%	0.4	0.2	15%	1.2	100%	0.4	**1.6**	2.3	93%	100 Year/ 10 Day	0.6	24%	0.4	0.2	7%	2.5	100%	0.4	**2.9**
12	4.20	2.30	13.0	79%	100 Year/ 24 Hour	8.2	50%	4.8	3.5	21%	16.5	100%	3.0	**19.5**	0.0	0%	n/a	8.2	100%	4.8	3.5	n/a	8.2	100%	3.0	**11.2**
Total	11.50	5.42	38.0	82%		23.1		14.9	8.1		46.1		6.6	**52.7**	48.3			23.1		14.9	8.1		61.2		6.6	**67.8**

Notes:

1. HydroMod Volume for Current Scenario = Approx. 50% of "Subtotal Flood Volume + 1.5' Pool" for 10-Year/24 Hour Storm (Approx. 75% for 100-Year/10 Day Storm).
2. HydroMod Volume for Proposed Scenario = Baseline Model Volumes.
3. Basin 12 volume controlled by total hydromod volume requirement.
4. Numbers may not total due to round-off error.



Appendix A

Baseline Conditions Modeling

Current Scenario Modeling Results

Sacramento Hydrologic Calculator Report

July 28, 2010 11:24

Project Title: Basin n Proposed Conditions
Comments: Proposed Conditions. with local detention - Baseline Condition 10 yr and 100 yr 24 hour storms
Prepared by: KEC
Method: Sacramento County HEC-1 method
Date: 8/6/2008

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
KCOS1	16.8	203.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV2	120.2	199.7	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV3	76.9	185	Basin "n"	-	Computed	-	Computed	-	Computed	-
KCDV5	201.3	175	Basin "n"	-	Specified	0.051	Computed	-	Computed	-
KCDV4	134.1	174	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV7	52	153.5	Basin "n"	-	Specified	0.037	Computed	-	Computed	-
KCDV8	126.2	152.9	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV9	82.2	144.2	Basin "n"	-	Specified	.051	Computed	-	Computed	-
KCOS02	54.9	166.3	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS03	30.4	153	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
OSKC05	102.3	181.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV06	94.2	166.5	Basin "n"	-	Specified	0.039	Computed	-	Computed	-
KCOS04	29.3	145.2	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS06	20.3	166	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCA3	297.3	151	Basin "n"	-	Specified	0.049	Computed	-	Computed	-
KCOS11	11.1	157.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV11	13.8	145.1	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV10	68.4	140.1	Basin "n"	-	Specified	0.045	Computed	-	Computed	-
KCDV12	96.8	138.3	Basin "n"	-	Specified	.042	Computed	-	Computed	-
KCOS12	65	156.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS13	21	154	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS14	14	145.5	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS15	68.2	122.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS3A	168.5	213	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
EXKC13	73.3	140	Basin "n"	-	Computed	-	Computed	-	Computed	-
EXKC14	95.1	120	Basin "n"	-	Computed	-	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	1576	850	0.0159	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV2	3940	750	0.0156	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV3	1920	444	0.0042	Undeveloped	2.6	6.8					8.1	21.4							12.9	25.1		
				Developed	0	0					0	0							0	0		
KCDV5	4464	1907	0.0103	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV4	3297	917	0.003	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV7	1655	580	0.0091	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV8	4054	2363	0.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV9	4360	2120	.0083	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS02	3900	2145	.005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS03	2089	415	.0048	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OSKC05	4804	2082	.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV06	3313	1851	.0063	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS04	2745	1385	005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS06	2377	1387	0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCA3	7016	3899	.006	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS11	726	572	.0069	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV11	850	322	.0213	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV10	2474	1482	.0178	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV12	3407	1720	.0119	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS12	2632	1237	.0057	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS13	1370	566	.0088	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS14	1990	908	.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS15	3317	1334	.0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS3A	3787	1555	.0132	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXKC13	4651	2747	0105	Undeveloped																100		
				Developed																0		
EXKC14	79700	3064	.003	Undeveloped																100		
				Developed																0		

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	B																		
	C																4.8		
	D																12		
KCDV2	B																		
	C	1.1						26.2	12.2							8.2	2.2		
	D	2						36.7	21.6							2.2	7.8		
KCDV3	B																		
	C																		
	D	2.6	6.8					8.1	21.4							12.9	25.1		
KCDV5	B																		
	C															1.1			
	D	7.2					3.7	25.9	81.2							23.7	58.5		
KCDV4	B																		
	C																4.7		
	D						6.4	57.5	6.4	41						14	5.3		
KCDV7	B																		
	C	2.6														1			
	D	4.2	12.4				11.6	15.7								4.5			
KCDV8	B																		
	C	1.6																	
	D	5						58.9	37.2							18.3	5.2		
KCDV9	B																		
	C																		
	D	16.2	2.5						24.5	1						9.8	28		
KCOS02	B																		
	C																16.3		
	D																38.6		
KCOS03	B																		
	C																12.7		
	D																17.7		
OSKC05	B																		
	C																		
	D																102.3		
KCDV06	B																		
	C	0.9																	
	D	23					10.9	46.9								5.5	7		
KCOS04	B																		
	C																20.4		
	D																8.9		
KCOS06	B																		
	C																		
	D																20.3		
KCA3	B																		
	C								120							0.6	26.3		
	D								78.4							4.4	67.6		
KCOS11	B																		
	C																5.9		
	D																5.2		
KCDV11	B																		
	C																		
	D	2.1							8.9							2.8			
KCDV10	B																		
	C																		
	D	5	5						13.2	32.5						8	4.7		
KCDV12	B																		
	C	1.5															1		
	D	5.5	24						23.2	24.9						15.8	1.3		
KCOS12	B																		
	C																27.1		
	D																37.9		
	B																		

KCOS13	C															1.3			
	D															19.7			
KCOS14	B																		
	C																		
	D															14			
KCOS15	B																		
	C																		
	D															68.2			
KCOS3A	B																		
	C															32.6			
	D															135.9			
EXKC13	B																		
	C															6.5			
	D															66.8			
EXKC14	B																		
	C															4.1			
	D															91			

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum-Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R1	DET03	J1	Pipe	2814	0.005	3	3:1	0.015
R6A	OSKC05	J06	Trapezoidal	555	0.007	20	4:1	0.030
R4	J03	J04	Trapezoidal	2319	0.0048	30	4:1	0.014
R5	J04	J05	Trapezoidal	2582	0.0039	20	3:1	0.015
R7	J06	J7	Trapezoidal	2058	0.0025	20	3:1	0.025
R2A	KCOS1	J02	Trapezoidal	1510	0.0159	05	3:1	0.03
R2	J1	J02	Trapezoidal	644	0.0047	5	3:1	0.03
R3	J02	J03	Trapezoidal	3485	.0313	5	3:1	0.03
R6	J05	J06	Trapezoidal	2283	0.0031	20	3:1	0.03
R8	J7	J08	Trapezoidal	95	0.0025	10	1:1	0.025
R8A	KCOS11	J08	Pipe	1147	0.005	3		0.015
R9	J08	J9	Trapezoidal	3214	0.0019	20	3:1	0.03
R10B	KCOS12	J10B	Trapezoidal	524	0.005	20	3:1	0.03
R10C	J10B	J10C	Trapezoidal	1398	0.005	10	3:1	0.03
R10D	J10C	J10	Pipe	2907	0.0034	4		0.015
R3A	KCOS3A	J1	Pipe	2628	0.005	5		0.015
R10	J10	J11	Trapezoidal	1028	0.0022	15	2.5:1	0.07
R11	J11	J12	Trapezoidal	2966	0.0022	15	2.5:1	0.07

Detention Basin Data

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
A3DET	Elevation (ft)	0	Elevation (ft)	127.4	128.5	128.5	130.5	131.5					124.41	.54	.61	0.5
			Area (ac)	6.38	6.61	6.89	7.23	7.81					128.50	84	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET02	Elevation (ft)	171	Elevation (ft)	171	172	173	174	175	176	177			171.875	2.41	.61	0.5
			Area (ac)	3.228	3.403	3.582	3.765	3.954	4.147	4.344			176.5	230	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET03	Elevation (ft)	170.5	Elevation (ft)	170.5	171.5	172.5	173.5	174.5	175.5	176.5			171.	.785	.61	0.5
			Area (ac)	2.654	2.812	2.975	3.143	3.315	3.492	3.673			176	190	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET04	Elevation (ft)	161.5	Elevation (ft)	161.5	162.5	163.5	164.5	165.5	166.5	167.5			162.375	2.41	.61	0.5
			Area (ac)	3.954	4.147	4.344	4.546	4.753	4.964	5.18			167	251	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
	Elevation	156.5	Elevation (ft)	156.5	157.5	158.5	159.5	160.5	161.5	162.5			157.0	3.14	.61	0.5

	(ft)		Area (ac)	5.739	5.971	6.208	6.449	6.694	6.944	7.199				162	315	2.6	1.5

DET05	Pump Data					
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET06	Elevation (ft)	152.5	Elevation (ft)	152.5	153.5	154.5	155.5	156.5	157.5	158.5				153.	1.57	.61	0.5
			Area (ac)	2.812	2.975	3.143	3.315	3.492	3.676	3.859				158	170	2.6	1.5

DET06	Pump Data					
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET07	Elevation (ft)	139.5	Elevation (ft)	139.5	140.5	143.5	141.5	142.5	144.5	145.5				140.	1.57	.61	0.5
			Area (ac)	0.965	1.061	1.162	1.268	1.378	1.493	1.612				145	135	2.6	1.5

DET07	Pump Data					
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET08	Elevation (ft)	135.5	Elevation (ft)	135.5	136.5	137.5	139.5	138.5	140.5	141.5				136.875	2.41	.61	0.5
			Area (ac)	4.147	4.344	4.546	4.753	4.964	5.18	5.4				141	235	2.6	1.5

DET08	Pump Data					
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns On (ft)					
		Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET09	Elevation (ft)	131.5	Elevation (ft)	131.5	132.5	133.5	134.5	135.5	136.5	137.5				132.125	1.23	.61	0.5
			Area (ac)	2.425	2.576	2.732	2.893	3.058	3.228	3.403				137	130	2.6	1.5

DET09	Pump Data					
	Pump Hydrograph Name		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
		Pump Discharge (cfs)					
		Elevation at which Pump Turns					

			On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET11	Elevation (ft)	130.5	Elevation (ft)	130.5	131.5	132.5	133.5	134.5	135.5	136.5				131.5	.785	.61	0.5
			Area (ac)	0.112	0.147	0.186	0.23	0.278	0.331	0.388				136	50	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET10	Elevation (ft)	127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5				128.0	1.57	.61	0.5
			Area (ac)	1.493	1.612	1.736	1.865	1.998	2.136	2.278				133	150	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET12	Elevation (ft)	126.5	Elevation (ft)	126.5	127.5	128.5	129.5	130.5	131.5	132.5				127.0	2.355	.61	0.5
			Area (ac)	2.278	2.425	2.576	2.732	2.893	3.058	3.228				132	200	2.6	1.5

Pump Data						
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5
Pump Hydrograph Name	Pump Discharge (cfs)					
	Elevation at which Pump Turns On (ft)					
	Elevation at which Pump Turns Off (ft)					

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	82.	12:30	.11			
KCA3	338.	12:34	.46			
A3DET	278.	12:46	.46	130.	15.	
OSKC05	117.	12:33	.16			
R6A	117.	12:34	.16			
KCOS06	60.	12:04	.03			
KCOS02	61.	12:33	.09			
KCOS1	31.	12:14	.03			
R2A	31.	12:18	.03			
KCDV3	115.	12:21	.12			
DET03	7.9	16:02	.12	175.	14.	
R1	7.9	16:09	.12			
KCDV2	253.	12:11	.19			
DET02	24.	13:55	.19	176.	18.	
KCOS3A	225.	12:25	.26			
R3A	224.	12:28	.26			
J1	251.	12:28	.57			
R2	250.	12:30	.57			
J02	271.	12:29	.60			
R3	271.	12:33	.60			
KCDV4	239.	12:15	.21			
DET04	23.	15:07	.21	166.	22.	
J03	353.	12:33	.89			
R4	352.	12:37	.89			
KCOS03	54.	12:15	.05			
KCDV5	302.	12:21	.31			
DET05	32.	15:18	.31	161.	31.	
J04	404.	12:36	1.25			
R5	403.	12:40	1.25			
KCOS04	74.	12:07	.05			
KCDV06	170.	12:15	.15			
DET06	16.	15:15	.15	157.	16.	.00
J05	433.	12:40	1.45			
R6	428.	12:45	1.45			
KCDV7	138.	12:06	.08			

DET07	16.	13:08	.08	144.	6.1	.00
KCDV8	201.	12:19	.20			
DET08	22.	15:14	.20	140.	22.	.00
J06	571.	12:44	1.92			
R7	567.	12:48	1.92			
J7	844.	12:48	2.38			
R8	844.	12:48	2.38			
KCOS11	23.	12:10	.02			
R8A	23.	12:13	.02			
KCDV9	119.	12:23	.13			
DET09	12.	15:27	.13	136.	14.	
KCDV11	43.	12:04	.02			
DET11	7.9	12:35	.02	136.	1.0	
J08	868.	12:48	2.55			
R9	851.	12:56	2.55			
J9	901.	12:55	2.66			
KCOS14	23.	12:18	.02			
KCOS13	40.	12:13	.03			
KCOS12	89.	12:23	.10			
R10B	89.	12:25	.10			
J10B	115.	12:23	.13			
R10C	115.	12:27	.13			
J10C	133.	12:26	.16			
R10D	132.	12:31	.16			
KCDV10	137.	12:12	.11			
DET10	16.	13:43	.11	132.	8.8	.00
KCDV12	179.	12:14	.15			
DET12	24.	13:52	.15	131.	13.	.00
J10	1020.	12:54	3.07			
R10	1007.	12:57	3.07			
EXKC13	151.	12:11	.11			
J11	1039.	12:57	3.19			
R11	1008.	13:07	3.19			
EXKC14	34.	15:09	.15			
J12	1024.	13:07	3.33			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	48.	12:30	.11			
KCA3	199.	12:34	.46			

A3DET	153.	12:51	.46	129.	12.	
OSKC05	68.	12:33	.16			
R6A	68.	12:35	.16			
KCOS06	33.	12:04	.03			
KCOS02	36.	12:34	.09			
KCOS1	17.	12:14	.03			
R2A	17.	12:19	.03			
KCDV3	67.	12:21	.12			
DET03	6.1	15:28	.12	173.	8.4	
R1	6.1	15:36	.12			
KCDV2	145.	12:11	.19			
DET02	18.	13:41	.19	174.	12.	
KCOS3A	130.	12:25	.26			
R3A	130.	12:29	.26			
J1	150.	12:29	.57			
R2	150.	12:31	.57			
J02	162.	12:30	.60			
R3	162.	12:35	.60			
KCDV4	138.	12:15	.21			
DET04	18.	14:04	.21	165.	14.	.00
J03	213.	12:35	.89			
R4	212.	12:39	.89			
KCOS03	30.	12:15	.05			
KCDV5	176.	12:21	.31			
DET05	24.	14:34	.31	160.	19.	.00
J04	248.	12:38	1.25			
R5	247.	12:43	1.25			
KCOS04	41.	12:07	.05			
KCDV06	99.	12:15	.15			
DET06	13.	14:12	.15	156.	9.8	
J05	268.	12:42	1.45			
R6	265.	12:49	1.45			
KCDV7	79.	12:06	.08			
DET07	13.	13:06	.08	143.	3.7	.00
KCDV8	117.	12:19	.20			
DET08	16.	14:30	.20	139.	15.	
J06	352.	12:48	1.92			
R7	350.	12:53	1.92			
J7	502.	12:53	2.38			
R8	502.	12:53	2.38			
KCOS11	13.	12:10	.02			

R8A	13.	12:13	.02			
KCDV9	70.	12:23	.13			
DET09	9.3	15:00	.13	135.	8.3	.00
KCDV11	24.	12:04	.02			
DET11	6.2	12:30	.02	134.	.6	.00
J08	520.	12:53	2.55			
R9	510.	13:02	2.55			
J9	538.	13:01	2.66			
KCOS14	13.	12:18	.02			
KCOS13	23.	12:13	.03			
KCOS12	51.	12:23	.10			
R10B	51.	12:26	.10			
J10B	66.	12:24	.13			
R10C	66.	12:28	.13			
J10C	76.	12:27	.16			
R10D	76.	12:33	.16			
KCDV10	79.	12:12	.11			
DET10	13.	13:36	.11	131.	5.4	.00
KCDV12	104.	12:14	.15			
DET12	19.	13:41	.15	130.	7.8	.00
J10	613.	13:00	3.07			
R10	605.	13:04	3.07			
EXKC13	86.	12:11	.11			
J11	625.	13:04	3.19			
R11	607.	13:16	3.19			
EXKC14	20.	15:09	.15			
J12	617.	13:16	3.33			

Current Scenario Modeling Results

Sacramento Hydrologic Calculator Report

July 28, 2010 8:22

Project Title: Basin n Proposed Conditions
Method: Sacramento County HEC-1 method
Comments: Proposed Conditions. with local detention Basin 12 removed, Basins 9, 10 and 11 upsized
Date: 8/6/2008
Prepared by: KEC

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
KCOS1	16.8	203.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV2	120.2	199.7	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV3	76.9	185	Basin "n"	-	Computed	-	Computed	-	Computed	-
KCDV5	201.3	175	Basin "n"	-	Specified	0.051	Computed	-	Computed	-
KCDV4	134.1	174	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV7	52	153.5	Basin "n"	-	Specified	0.037	Computed	-	Computed	-
KCDV8	126.2	152.9	Basin "n"	-	Specified	0.043	Computed	-	Computed	-
KCDV9	82.2	144.2	Basin "n"	-	Specified	.051	Computed	-	Computed	-
KCOS02	54.9	166.3	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS03	30.4	153	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
OSKC05	102.3	181.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV06	94.2	166.5	Basin "n"	-	Specified	0.039	Computed	-	Computed	-
KCOS04	29.3	145.2	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS06	20.3	166	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCA3	297.3	151	Basin "n"	-	Specified	0.049	Computed	-	Computed	-
KCOS11	11.1	157.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCDV11	13.8	145.1	Basin "n"	-	Specified	0.044	Computed	-	Computed	-
KCDV10	68.4	140.1	Basin "n"	-	Specified	0.045	Computed	-	Computed	-
KCDV12	96.8	138.3	Basin "n"	-	Specified	.042	Computed	-	Computed	-
KCOS12	65	156.5	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS13	21	154	Basin "n"	-	Specified	0.070	Computed	-	Computed	-
KCOS14	14	145.5	Basin "n"	-	Specified	.070	Computed	-	Computed	-
KCOS15	68.2	122.5	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
KCOS3A	168.5	213	Basin "n"	-	Specified	0.07	Computed	-	Computed	-
EXKC13	73.3	140	Basin "n"	-	Computed	-	Computed	-	Computed	-
EXKC14	95.1	120	Basin "n"	-	Computed	-	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	1576	850	0.0159	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV2	3940	750	0.0156	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV3	1920	444	0.0042	Undeveloped	2.6	6.8					8.1	21.4							12.9	25.1		
				Developed	0	0					0	0							0	0		
KCDV5	4464	1907	0.0103	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV4	3297	917	0.003	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV7	1655	580	0.0091	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV8	4054	2363	0.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV9	4360	2120	.0083	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS02	3900	2145	.005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS03	2089	415	.0048	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OSKC05	4804	2082	.0081	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV06	3313	1851	.0063	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS04	2745	1385	005	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS06	2377	1387	0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCA3	7016	3899	.006	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS11	726	572	.0069	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV11	850	322	.0213	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV10	2474	1482	.0178	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCDV12	3407	1720	.0119	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS12	2632	1237	.0057	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS13	1370	566	.0088	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS14	1990	908	.0085	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS15	3317	1334	.0027	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KCOS3A	3787	1555	.0132	Undeveloped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Developed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXKC13	4651	2747	0105	Undeveloped																100		
				Developed																0		
EXKC14	79700	3064	.003	Undeveloped																100		
				Developed																0		

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																	
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
KCOS1	B																		
	C																4.8		
	D																12		
KCDV2	B																		
	C	1.1						26.2	12.2							8.2	2.2		
	D	2						36.7	21.6							2.2	7.8		
KCDV3	B																		
	C																		
	D	2.6	6.8					8.1	21.4							12.9	25.1		
KCDV5	B																		
	C															1.1			
	D	7.2					3.7	25.9	81.2							23.7	58.5		
KCDV4	B																		
	C																4.7		
	D						6.4	57.5	6.4	41						14	5.3		
KCDV7	B																		
	C	2.6														1			
	D	4.2	12.4				11.6	15.7								4.5			
KCDV8	B																		
	C	1.6																	
	D	5						58.9	37.2							18.3	5.2		
KCDV9	B																		
	C																		
	D	16.2	2.5						24.5	1						9.8	28		
KCOS02	B																		
	C																16.3		
	D																38.6		
KCOS03	B																		
	C																12.7		
	D																17.7		
OSKC05	B																		
	C																		
	D																102.3		
KCDV06	B																		
	C	0.9																	
	D	23					10.9	46.9								5.5	7		
KCOS04	B																		
	C																20.4		
	D																8.9		
KCOS06	B																		
	C																		
	D																20.3		
KCA3	B																		
	C								120							0.6	26.3		
	D								78.4							4.4	67.6		
KCOS11	B																		
	C																5.9		
	D																5.2		
KCDV11	B																		
	C																		
	D	2.1							8.9							2.8			
KCDV10	B																		
	C																		
	D	5	5						13.2	32.5						8	4.7		
KCDV12	B																		
	C	1.5															1		
	D	5.5	24						23.2	24.9						15.8	1.3		
KCOS12	B																		
	C																27.1		
	D																37.9		
	B																		

KCOS13	C															1.3			
	D															19.7			
KCOS14	B																		
	C																		
	D															14			
KCOS15	B																		
	C																		
	D															68.2			
KCOS3A	B																		
	C															32.6			
	D															135.9			
EXKC13	B																		
	C															6.5			
	D															66.8			
EXKC14	B																		
	C															4.1			
	D															91			

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum-Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R1	DET03	J1	Pipe	2814	0.005	3	3:1	0.015
R6A	OSKC05	J06	Trapezoidal	555	0.007	20	4:1	0.030
R4	J03	J04	Trapezoidal	2319	0.0048	30	4:1	0.014
R5	J04	J05	Trapezoidal	2582	0.0039	20	3:1	0.015
R7	J06	J7	Trapezoidal	2058	0.0025	20	3:1	0.025
R2A	KCOS1	J02	Trapezoidal	1510	0.0159	05	3:1	0.03
R2	J1	J02	Trapezoidal	644	0.0047	5	3:1	0.03
R3	J02	J03	Trapezoidal	3485	.0313	5	3:1	0.03
R6	J05	J06	Trapezoidal	2283	0.0031	20	3:1	0.03
R8	J7	J08	Trapezoidal	95	0.0025	10	1:1	0.025
R8A	KCOS11	J08	Pipe	1147	0.005	3		0.015
R9	J08	J9	Trapezoidal	3214	0.0019	20	3:1	0.03
R10B	KCOS12	J10B	Trapezoidal	524	0.005	20	3:1	0.03
R10C	J10B	J10C	Trapezoidal	1398	0.005	10	3:1	0.03
R10D	J10C	J10	Pipe	2907	0.0034	4		0.015
R3A	KCOS3A	J1	Pipe	2628	0.005	5		0.015
R10	J10	J11	Trapezoidal	1028	0.0022	15	2.5:1	0.07
R11	J11	J12	Trapezoidal	2966	0.0022	15	2.5:1	0.07

Detention Basin Data

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
A3DET	Elevation (ft)	0	Elevation (ft)	127.4	128.5	128.5	130.5	131.5					124.41	.54	.61	0.5
			Area (ac)	6.38	6.61	6.89	7.23	7.81					128.50	84	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET02	Elevation (ft)	171	Elevation (ft)	171	172	173	174	175	176	177			171.875	2.41	.61	0.5
			Area (ac)	3.228	3.403	3.582	3.765	3.954	4.147	4.344			176.5	230	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET03	Elevation (ft)	170.5	Elevation (ft)	170.5	171.5	172.5	173.5	174.5	175.5	176.5			171.	.785	.61	0.5
			Area (ac)	2.654	2.812	2.975	3.143	3.315	3.492	3.673			176	190	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET04	Elevation (ft)	161.5	Elevation (ft)	161.5	162.5	163.5	164.5	165.5	166.5	167.5			162.375	2.41	.61	0.5
			Area (ac)	3.954	4.147	4.344	4.546	4.753	4.964	5.18			167	251	2.6	1.5
	Pump Data															
	Pump Hydrograph Name			Pump 1		Pump 2		Pump 3		Pump 4		Pump 5				
			Pump Discharge (cfs)													
			Elevation at which Pump Turns On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation										Outlet Data			
													Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
	Elevation	156.5	Elevation (ft)	156.5	157.5	158.5	159.5	160.5	161.5	162.5			157.0	3.14	.61	0.5

	(ft)		Area (ac)	5.739	5.971	6.208	6.449	6.694	6.944	7.199				162	315	2.6	1.5
DET05	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET06	Elevation (ft)	152.5	Elevation (ft)	152.5	153.5	154.5	155.5	156.5	157.5	158.5				153.	1.57	.61	0.5
			Area (ac)	2.812	2.975	3.143	3.315	3.492	3.676	3.859				158	170	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET07	Elevation (ft)	139.5	Elevation (ft)	139.5	140.5	143.5	141.5	142.5	144.5	145.5				140.	1.57	.61	0.5
			Area (ac)	0.965	1.061	1.162	1.268	1.378	1.493	1.612				145	135	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET08	Elevation (ft)	135.5	Elevation (ft)	135.5	136.5	137.5	139.5	138.5	140.5	141.5				136.875	2.41	.61	0.5
			Area (ac)	4.147	4.344	4.546	4.753	4.964	5.18	5.4				141	235	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns On (ft)													
				Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET09	Elevation (ft)	131.5	Elevation (ft)	131.5	132.5	133.5	134.5	135.5	136.5	137.5				131.83	.349	.61	0.5
			Area (ac)	4.753	4.954	5.18	5.4	5.625	5.855	6.089				137	130	2.6	1.5
	Pump Data																
	Pump Hydrograph Name							Pump 1		Pump 2		Pump 3		Pump 4		Pump 5	
				Pump Discharge (cfs)													
				Elevation at which Pump Turns													

			On (ft)													
			Elevation at which Pump Turns Off (ft)													

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET11	Elevation (ft)	130.5	Elevation (ft)	130.5	131.5	132.5	133.5	134.5	135.5	136.5				130.75	.197	.61	0.5
			Area (ac)	0.304	0.359	0.418	0.483	0.552	0.625	0.703				136	50	2.6	1.5

Pump Data							
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5	
Pump Hydrograph Name	Pump Discharge (cfs)						
	Elevation at which Pump Turns On (ft)						
	Elevation at which Pump Turns Off (ft)						

Detention Basin	Initial Condition		Pond Storage Relation											Outlet Data			
														Elev. (ft)	Area (sq ft)	Q Coef.	Exponent
DET10	Elevation (ft)	127.5	Elevation (ft)	127.5	128.5	129.5	130.5	131.5	132.5	133.5				127.83	.349	.61	0.5
			Area (ac)	3.582	3.765	3.954	4.147	4.344	4.546	4.753				133	150	2.6	1.5

Pump Data							
		Pump 1	Pump 2	Pump 3	Pump 4	Pump 5	
Pump Hydrograph Name	Pump Discharge (cfs)						
	Elevation at which Pump Turns On (ft)						
	Elevation at which Pump Turns Off (ft)						

View HEC-1 output

Sacramento method results
(Project: Basin n Proposed Conditions)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	82.	12:30	.11			
KCA3	338.	12:34	.46			
A3DET	278.	12:46	.46	130.	15.	
OSKC05	117.	12:33	.16			
R6A	117.	12:34	.16			
KCOS06	60.	12:04	.03			
KCOS02	61.	12:33	.09			
KCOS1	31.	12:14	.03			
R2A	31.	12:18	.03			
KCDV3	115.	12:21	.12			
DET03	7.9	16:02	.12	175.	14.	
R1	7.9	16:09	.12			
KCDV2	253.	12:11	.19			
DET02	24.	13:55	.19	176.	18.	
KCOS3A	225.	12:25	.26			
R3A	224.	12:28	.26			
J1	251.	12:28	.57			
R2	250.	12:30	.57			
J02	271.	12:29	.60			
R3	271.	12:33	.60			
KCDV4	239.	12:15	.21			
DET04	23.	15:07	.21	166.	22.	
J03	353.	12:33	.89			
R4	352.	12:37	.89			
KCOS03	54.	12:15	.05			
KCDV5	302.	12:21	.31			
DET05	32.	15:18	.31	161.	31.	
J04	404.	12:36	1.25			
R5	403.	12:40	1.25			
KCOS04	74.	12:07	.05			
KCDV06	170.	12:15	.15			
DET06	16.	15:15	.15	157.	16.	.00
J05	433.	12:40	1.45			
R6	428.	12:45	1.45			
KCDV7	138.	12:06	.08			

DET07	16.	13:08	.08	144.	6.1	.00
KCDV8	201.	12:19	.20			
DET08	22.	15:14	.20	140.	22.	.00
J06	571.	12:44	1.92			
R7	567.	12:48	1.92			
J7	844.	12:48	2.38			
R8	844.	12:48	2.38			
KCOS11	23.	12:10	.02			
R8A	23.	12:13	.02			
KCDV9	119.	12:23	.13			
DET09	2.7	24:20	.13	135.	19.	
KCDV11	43.	12:04	.02			
DET11	2.1	15:06	.02	135.	2.2	
J08	854.	12:48	2.55			
R9	837.	12:56	2.55			
J9	887.	12:55	2.66			
KCDV12	179.	12:14	.15			
KCOS14	23.	12:18	.02			
KCOS13	40.	12:13	.03			
KCOS12	89.	12:23	.10			
R10B	89.	12:25	.10			
J10B	115.	12:23	.13			
R10C	115.	12:27	.13			
J10C	133.	12:26	.16			
R10D	132.	12:31	.16			
KCDV10	137.	12:12	.11			
DET10	2.8	24:06	.11	131.	16.	
J10	1025.	12:53	3.07			
R10	1013.	12:56	3.07			
EXKC13	151.	12:11	.11			
J11	1046.	12:56	3.19			
R11	1019.	13:05	3.19			
EXKC14	34.	15:09	.15			
J12	1034.	13:05	3.33			

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
KCOS15	48.	12:30	.11			
KCA3	199.	12:34	.46			
A3DET	153.	12:51	.46	129.	12.	

OSKC05	68.	12:33	.16			
R6A	68.	12:35	.16			
KCOS06	33.	12:04	.03			
KCOS02	36.	12:34	.09			
KCOS1	17.	12:14	.03			
R2A	17.	12:19	.03			
KCDV3	67.	12:21	.12			
DET03	6.1	15:28	.12	173.	8.4	
R1	6.1	15:36	.12			
KCDV2	145.	12:11	.19			
DET02	18.	13:41	.19	174.	12.	
KCOS3A	130.	12:25	.26			
R3A	130.	12:29	.26			
J1	150.	12:29	.57			
R2	150.	12:31	.57			
J02	162.	12:30	.60			
R3	162.	12:35	.60			
KCDV4	138.	12:15	.21			
DET04	18.	14:04	.21	165.	14.	.00
J03	213.	12:35	.89			
R4	212.	12:39	.89			
KCOS03	30.	12:15	.05			
KCDV5	176.	12:21	.31			
DET05	24.	14:34	.31	160.	19.	.00
J04	248.	12:38	1.25			
R5	247.	12:43	1.25			
KCOS04	41.	12:07	.05			
KCDV06	99.	12:15	.15			
DET06	13.	14:12	.15	156.	9.8	
J05	268.	12:42	1.45			
R6	265.	12:49	1.45			
KCDV7	79.	12:06	.08			
DET07	13.	13:06	.08	143.	3.7	.00
KCDV8	117.	12:19	.20			
DET08	16.	14:30	.20	139.	15.	
J06	352.	12:48	1.92			
R7	350.	12:53	1.92			
J7	502.	12:53	2.38			
R8	502.	12:53	2.38			
KCOS11	13.	12:10	.02			
R8A	13.	12:13	.02			

KCDV9	70.	12:23	.13			
DET09	2.1	19:59	.13	134.	12.	
KCDV11	24.	12:04	.02			
DET11	1.7	13:43	.02	134.	1.3	.00
J08	509.	12:53	2.55			
R9	499.	13:02	2.55			
J9	527.	13:01	2.66			
KCDV12	104.	12:14	.15			
KCOS14	13.	12:18	.02			
KCOS13	23.	12:13	.03			
KCOS12	51.	12:23	.10			
R10B	51.	12:26	.10			
J10B	66.	12:24	.13			
R10C	66.	12:28	.13			
J10C	76.	12:27	.16			
R10D	76.	12:33	.16			
KCDV10	79.	12:12	.11			
DET10	2.2	18:42	.11	130.	9.7	
J10	607.	12:59	3.07			
R10	600.	13:03	3.07			
EXKC13	86.	12:11	.11			
J11	619.	13:03	3.19			
R11	603.	13:15	3.19			
EXKC14	20.	15:09	.15			
J12	613.	13:15	3.33			

Appendix H: Technical Memorandum – Updated Storm Drain Demands

TECHNICAL MEMORANDUM

Date:	July 21, 2010
To:	Bob Shattuck, Lennar Communities
From:	Scott Hartstein, MacKay & Somps
TM No.:	Technical Memorandum No. 7
Subject:	Updated Storm Drain Demands SunCreek Specific Plan Rancho Cordova, CA
Job No.:	7991-10
Task No.:	Task D.3

A. Introduction

In the two years since Sacramento County Water Resources last reviewed the Regional Master Drainage Study (RMDS) for the SunCreek Specific Plan (MacKay & Somps, December 2008), the land use plan has undergone several minor land use changes in response to requirements imposed by the City of Rancho Cordova and other related local agencies. These changes in land use, principally relating to the addition of more employment related land uses to the Specific Plan in favor of low density, medium density, and compact medium density residential land uses, have a minor impact on the storm drain demands generated by development of the project.

The purpose of this technical memorandum is to quantify the magnitude of these land use changes and the resulting changes in storm drain demands. It is believed that the magnitude of change in storm drain demands is nominal when compared to those projected in the RMDS. The goal of this technical memorandum is to demonstrate that the magnitude of these changes is insignificant, and that the RMDS still adequately projects the overall impacts of the project in terms of storm drain supply and related infrastructure for purposes of environmental review.

B. Land Use Plan Changes

The prior and updated land use plans are shown in Appendix A (Figures 1 and 2, respectively). A comparison of the land uses between the version of the land use plan used during the preparation of the RMDS and the updated land use plan for the project is summarized in Table 1.

Table 1
Land Use Comparison

Land Use Description	Prior Land Use Plan (Acres)	Updated Land Use Plan (Acres)	Change (Acres)	Change %
Low Density Residential (LDR)	190.0	169.4	-20.6	-10.8%
Medium Density Residential (MDR)	379.0	322.7	-56.3	-14.9%
Compact Density Residential (CMDR)	27.0	20.1	-6.9	-25.6%
High Density Residential (HDR)	29.0	34.6	5.6	19.3%
Commercial Mixed Use (CMU)	29.0	31.9	2.9	10.0%
Village Center	3.0	0	-3.0	-100.0%
Local Town Center (Commercial & Employment)	0.0	59.4	59.4	100.0%
Public/Quasi Public (PQP)	7.0	13.0	6.0	85.7%
Neighborhood Park (PP)	61.0	44.0	-17.0	-27.9%
Community Park	35.0	43.1	8.1	23.1%
Neighborhood Green	0.0	4.3	4.3	100.0%
Parkway, Paseos and Trails (PC)	28.0	9.1	-18.9	-67.5%
School	112.0	110.9	-1.1	-1.0%
Minor Roads	0.0	23.1	23.1	100.0%
Major Roads	97.0	79.0	-18.0	-18.6%
Wetland Buffer/Bike Path Corridor	30.0	45.2	15.2	50.7%
Detention Basin (DB)	31.0	46.9	15.9	51.3%
Storm Drain Channel	9.0	5.0	-4.0	-44.4%
Wetland Preserve	218.0	203.7	-14.3	-6.6%
Total	1285.0	1265.4	-19.6	-1.5%

Footnote:

Refinement in project boundary resulted in a reduction in total land use areas of approximately 20 acres from the prior to the current land use plan.

Clearly, the amounts of the various land uses for the project have changed during the last two years. Additionally, by inspection it is evident that the spatial distribution of the various land uses of the prior and updated land use plans is relatively the same. Therefore, as long as the resulting total storm drain demands of the two land use plans are identical, or nearly so, and as long as the distribution of said demand across the project area is relatively the same between the prior and the updated land use plans, it is reasonable to conclude that the size and location of the various storm drain infrastructure improvements contemplated in the RMDS to serve the prior land use plan are still adequate and appropriate to serve the updated land use plan.

C. Updated Storm Drain Demands

The storm drain demands resulting from the prior and updated land use plan are summarized in Tables 2 and 3. The unit demand figures used for these demand calculations and the methodology of calculating these demands are identical. The only difference between these two sets of calculations is the change in land use areas.

Table 2
SunCreek Storm Drain Demand - Prior Land Use Plan

Land Use Description	Land Use Classification	Total Acres	Runoff Coefficient	Water Quality Flow (in ft^3/s)
Low Density Residential (LDR)	Single Family	190.0	0.50	1.7
Medium Density Residential (MDR)	Multi-units, detached	379.0	0.60	40.9
Compact Density Residential (CMDR)	Multi-units, detached	27.0	0.60	2.9
High Density Residential (HDR)	Multi-units, attached	29.0	0.75	3.9
Commercial Mixed Use (CMU)	Apartment dwelling areas	29.0	0.75	3.9
Village Center	Neighborhood areas	3.0	0.70	0.4
Local Town Center (Commercial & Employment)	Neighborhood areas	0.0	0.70	0.0
Public/Quasi Public (PQP)	Playgrounds	7.0	0.40	0.5
Neighborhood Park (PP)	Parks	61.0	0.25	2.7
Community Park	Parks	35.0	0.25	1.6
Neighborhood Green	Parks	0.0	0.25	0.0
Parkway, Paseos and Trails (PC)	Parks	28.0	0.25	1.3
School	Neighborhood areas	112.0	0.70	14.1
Minor Roads	Asphaltic	0.0	0.95	0.0
Major Roads	Asphaltic	97.0	0.95	16.6
Wetland Buffer/Bike Path Corridor	Open Space	30.0	0.00	0.0
Detention Basin (DB)	Open Space	31.0	0.00	0.0
Storm Drain Channel	Open Space	9.0	0.00	0.0
Wetland Preserve	Open Space	218.0	0.00	0.0
			Cumulative	**90.5**

Total Acreage **1,285.0**

Developed Acreage **997.0**

Table 3
SunCreek Storm Drain Demand - Updated Land Use Plan

Land Use Description	Land Use Classification	Total Acres	Runoff Coefficient	Water Quality Flow (in ft^3/s)
Low Density Residential (LDR)	Single Family	169.4	0.50	1.5
Medium Density Residential (MDR)	Multi-units, detached	322.7	0.60	34.9
Compact Density Residential (CMDR)	Multi-units, detached	20.1	0.60	2.2
High Density Residential (HDR)	Multi-units, attached	34.6	0.75	4.7
Commercial Mixed Use (CMU)	Apartment dwelling areas	31.9	0.75	4.3
Village Center	Neighborhood areas	0	0.70	0.0
Local Town Center (Commercial & Employment)	Neighborhood areas	59.4	0.70	7.5
Public/Quasi Public (PQP)	Playgrounds	13.0	0.40	0.9
Neighborhood Park (PP)	Parks	44.0	0.25	2.0
Community Park	Parks	43.1	0.25	1.9
Neighborhood Green	Parks	4.3	0.25	0.2
Parkway, Paseos and Trails (PC)	Parks	9.1	0.25	0.4
School	Neighborhood areas	110.9	0.70	14.0
Minor Roads	Asphaltic	23.1	0.95	4.0
Major Roads	Asphaltic	79.0	0.95	13.5
Wetland Buffer/Bike Path Corridor	Open Space	45.2	0.00	0.0
Detention Basin (DB)	Open Space	46.9	0.00	0.0
Storm Drain Channel	Open Space	5.0	0.00	0.0
Wetland Preserve	Open Space	203.7	0.00	0.0
			Cumulative	**91.9**

Total Acreage **1,265.4**

Developed Acreage **964.6**

Source: MacKay & Somps Civil Engineers, July 21, 2010

D. Comparison with Storm Drain Study

A comparison of the storm drain demands resulting from the prior and updated land use plans is shown in Table 4. Like the earlier comparison of land use areas between the prior and the updated land use plans, the differences in the resulting demands for storm drain are nominal. In fact, the projected demands resulting from the updated land use plan are slightly more than those contained in the RMDS, 1.5% more in terms of cumulative water quality flow. While the developed acreage for the project has actually decreased, the increase in cumulative water quality flow is attributable to an increase in the HDR, CMU and Commercial & Employment Land Use Designations. This incremental increase results in insignificant adjustments to the peak flow and hydromodification requirements. The basins are contained within developable parcels and any modifications can be done within the developable footprint, without additional environmental impacts.

Table 4
Comparison of Drainage Demands

Demand	Prior Land Use Plan	Updated Lane Use Plan	Change	Change %
Developed Acreage	997.0	964.6	-32.4	-3.2%
Cumulative Water Quality Flow	90.5	91.9	1.4	1.5%

E. Summary

The magnitude of the land use changes and the resulting changes in storm drain demands between the prior and updated land use plans are nominal. Furthermore, the spatial distribution of proposed land uses is relatively the same between the prior and updated land use plan. Accordingly, it is reasonable to conclude that the RMDS still adequately addresses the infrastructure requirements for the current land use plan, and that the differences in overall impacts on storm drain demand and infrastructure between the prior and updated land use plans are insignificant.

Appendix A

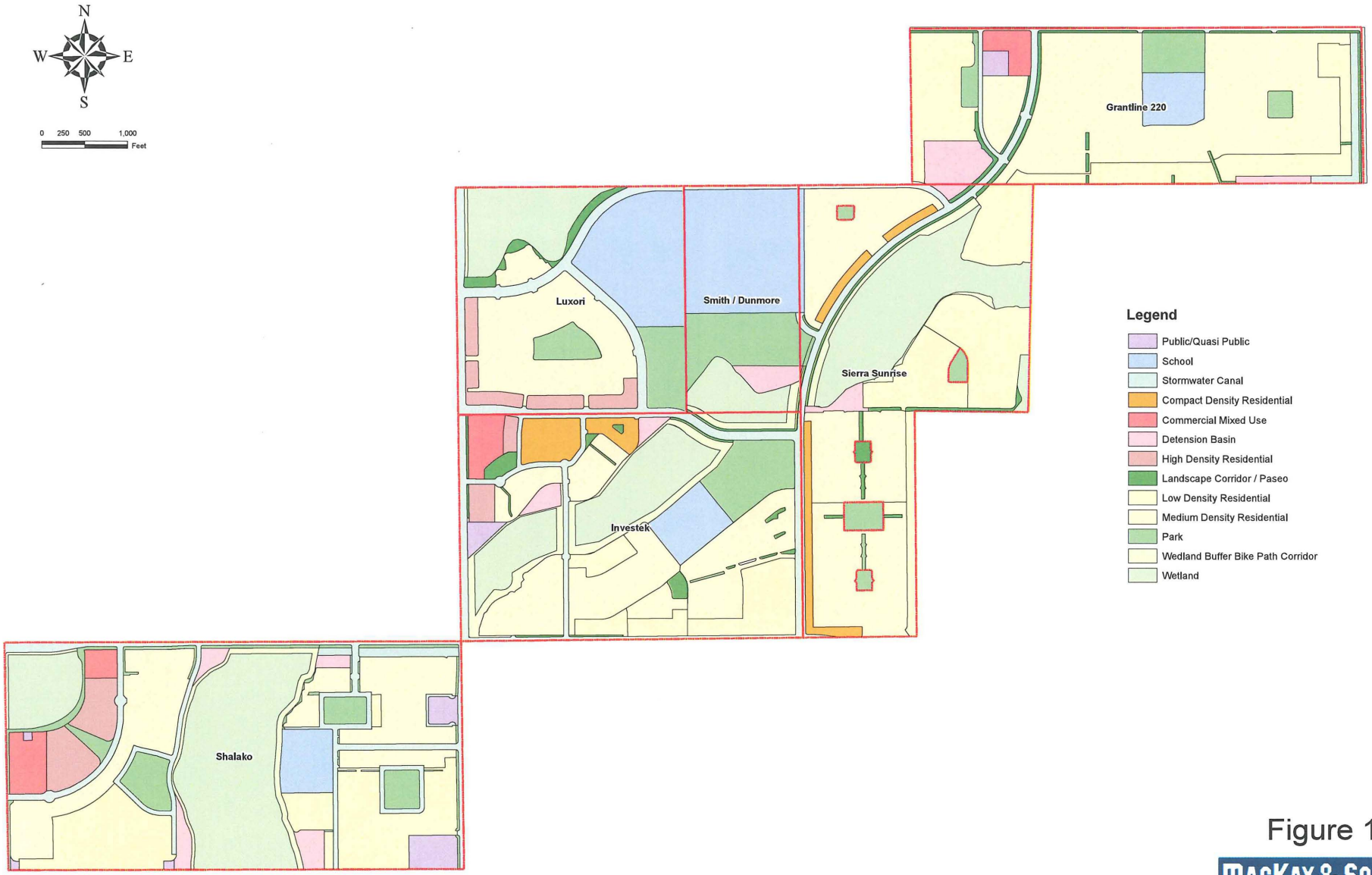
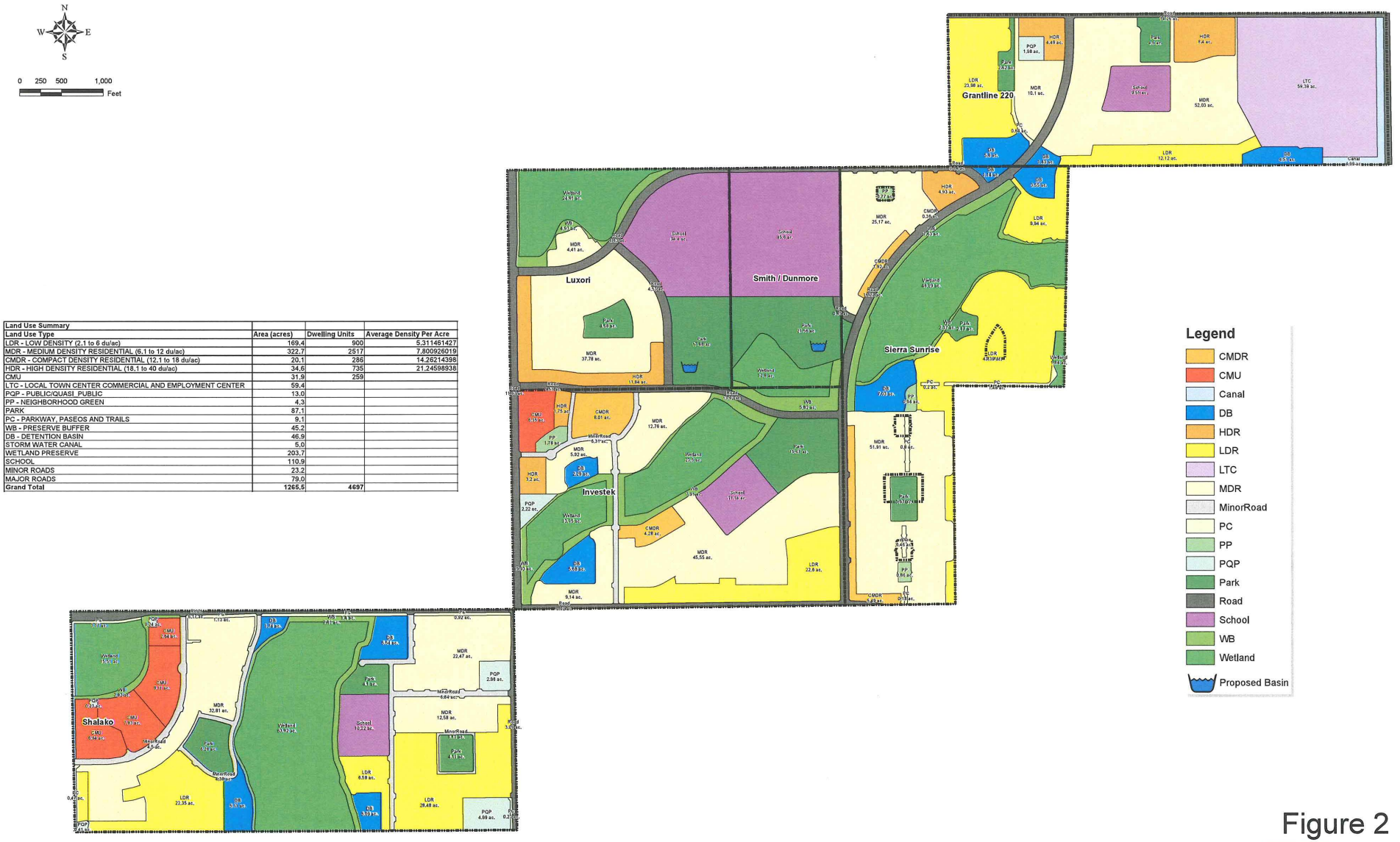


Figure 1

Prior Suncreek Landuse Area Summary (2008)

MacKay & Somps
ENGINEERS PLANNERS SURVEYORS
1771 Tribute Road, Suite E, Sacramento, CA 95815 (916) 929-8092

Date:10/2008



Land Use Summary			
Land Use Type	Area (acres)	Dwelling Units	Average Density Per Acre
LDR - LOW DENSITY (2,1 to 6 du/ac)	169,4	900	5,311461427
MDR - MEDIUM DENSITY RESIDENTIAL (6,1 to 12 du/ac)	322,7	2517	7,800926019
CMDR - COMPACT DENSITY RESIDENTIAL (12,1 to 18 du/ac)	20,1	286	14,26214398
HDR - HIGH DENSITY RESIDENTIAL (18,1 to 40 du/ac)	34,6	735	21,24598938
CMU	31,9	259	
LTC - LOCAL TOWN CENTER COMMERCIAL AND EMPLOYMENT CENTER	59,4		
PQP - PUBLIC/QUASI_PUBLIC	13,0		
PP - NEIGHBORHOOD GREEN	4,3		
PARK	87,1		
PC - PARKWAY, PASEOS AND TRAILS	9,1		
WB - PRESERVE BUFFER	45,2		
DB - DETENTION BASIN	46,9		
STORM WATER CANAL	5,0		
WETLAND PRESERVE	203,7		
SCHOOL	110,9		
MINOR ROADS	23,2		
MAJOR ROADS	79,0		
Grand Total	**1265,5**	**4697**	

Figure 2

Updated Suncreek Landuse Area Summary (2010)

MacKay & Somps
ENGINEERS PLANNERS SURVEYORS

Job Number: 7991.00 Date : 05/26/2010
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Appendix I: Summary of Sunrise Boulevard Flood Protection Study

February 5, 2010

Mr. Mark Rains
Sacramento County
Department of Water Resources
827 7th Street, Room 301
Sacramento CA 95814

Project No.: 063-00-08-22.002

SUBJECT: Summary of Sunrise Boulevard Flood Protection Study

Dear Mark:

West Yost Associates (West Yost) has completed a hydraulic analysis of flood protection alternatives for Sunrise Boulevard south of Highway 16 (Jackson Road). This letter provides a summary of the analysis and results of the study.

BACKGROUND

Sacramento County and the City of Rancho Cordova are planning to replace the bridge on Sunrise Boulevard at Laguna Creek just south of Highway 16 (See Figure 1). The existing bridge is undersized and subject to potential flooding during large storm events. In addition, a reach of Sunrise Boulevard to the south of the bridge is subject to flooding during moderate storm events. West Yost performed a hydraulic analysis to define the existing flood flows and water surface elevations at the bridge and the roadway to the south, and to evaluate potential solutions for protecting the bridge and roadway from flooding.

HYDRAULIC MODELING APPROACH

Hydraulic modeling was performed to define the existing 10-year and 100-year water surface elevations in the vicinity of the proposed bridge and also to evaluate potential future flood protection measures for the roadway. Hydraulic modeling for this reach of Laguna Creek was previously prepared by MacKay & Somps as part of a technical study prepared for the SunCreek Specific Plan, which is located upstream of Sunrise Boulevard. That model was used as a starting point for this study. The model was revised to provide more detail in the project area and the updated model was used to define existing conditions and to evaluate potential flood protection alternatives. The various model configurations are described below.

Existing Conditions

As indicated above, West Yost revised the HEC-RAS model prepared by MacKay & Somps for SunCreek to better define the existing flooding conditions near Sunrise Boulevard and Laguna Creek. The revisions were focused on improving the representation of the potential flow spills from Laguna Creek immediately upstream of Sunrise Boulevard. During moderate to large storms, the water level in the creek can exceed the top of the bank and spill out of the creek. Flows that spill over the left (south) bank of the creek will enter into a floodplain area east of Sunrise Boulevard, labeled "East Overflow Area" on Figure 2. When the ponding depth in this floodplain area reaches 2 to 3 feet, flow will enter a second storage area, labeled "West Overflow Area" on Figure 2, by spilling over Sunrise Boulevard to the west and over high ground to the south. A double 8'x5' box culvert under Sunrise Boulevard allows flows in this second storage area to move to either side of the road. The West Overflow Area also receives flows directly from an approximately 1,000 acre watershed located to the east. Flow in this second storage area will re-enter Laguna Creek just downstream of the Sunrise Boulevard Bridge when water levels in the creek recede enough to allow it. When the West Overflow Area fills, flow will spill south along Sunrise Boulevard, entering a third watershed labeled "South Overflow Area" on Figure 2. This neighboring watershed covers approximately 580 acres and drains under Sunrise Boulevard in a 7' x 5' box culvert approximately 920 feet north of Grantline Road. Runoff then continues west and is conveyed under the Folsom South Canal in four 42-inch siphons and re-enters Laguna Creek approximately 2,700 feet south of Florin Road.

Because the MacKay & Somps study was more focused on the SunCreek planning area, they used a simplified representation of the flooding in vicinity of Sunrise Boulevard. Their model included wide cross sections along Laguna Creek between Sunrise Boulevard and Highway 16 and the bridge at Sunrise Boulevard. The cross sections did not cover the entire width of the floodplain storage areas and the model did not allow for spill into the South Overflow Area.

For this study, the East, West and South Overflow Areas were modeled as a series of storage ponds that were connected to Laguna Creek and each other by lateral weirs. A schematic of the overflow storage configuration is provided as Figure 2. The elevation-storage volume relationships within each of the storage areas are presented in Tables 1 through 3 and were based on topographic mapping provided by MacKay & Somps. The topographic mapping was based on a compilation of data from a number of sources including LIDAR mapping developed by the County. Prior to final design of the new bridge or any roadway improvements, it would be desirable to obtain design level topographic mapping to more accurately define the spill elevations along the left bank of Laguna Creek near the bridge. It would also be desirable to survey the double 8' x 5' box culverts and the 7' x 5' box culvert under Sunrise Boulevard and add them to the model. For this study, it was assumed that these culverts do not significantly restrict flow.

The South Overflow Area is modeled as a storage area that drains directly to Laguna Creek through a set of 42-inch culverts that represent the Folsom South Canal siphons. This is a simplified representation of the actual system because the 42-inch pipes were not modeled as siphons and a short reach of channel between the Folsom South Canal and Laguna Creek was not modeled. However, the results near the Sunrise Boulevard Bridge are not highly sensitive to this part of the model so the simplification is considered reasonable for this study.

Table 1. Elevation-Volume Data for East Overflow Area

Elevation, NGVD29	Area, sf	Incremental Volume, ac-ft	Cumulative Volume, ac-ft
111.1	0	0.0	0.0
112.0	41,266	0.4	0.4
114.0	412,212	10.4	10.8
116.0	1,473,120	43.3	54.1

Table 2. Elevation-Volume Data for West Overflow Area

Elevation, NGVD29	Area, sf	Incremental Volume, ac-ft	Cumulative Volume, ac-ft
110.0	147,824	0.0	0.0
112.0	510,788	15.1	15.1
114.0	1,757,567	52.1	67.2
116.0	2,792,032	104.4	171.6

Table 3. Elevation-Volume Data for South Overflow Area

Elevation, NGVD29	Area, sf	Incremental Volume, ac-ft	Cumulative Volume, ac-ft
105.0	0	0.0	0.0
110.0	400,085	23.0	23.0
112.0	2,480,313	66.1	89.1
114.0	5,383,000	180.5	269.6

Alternative 1 – Raise Bridge and Road

For Alternative 1, the bridge and roadway are protected from flooding by raising them above the floodplain elevation. The modeled elements included with Alternative 1 are described below and shown on Figure 3.

- The Sunrise Boulevard Bridge is raised above the 100-year water surface elevation of 115.3 feet. The minimum invert elevation of the creek at this location is approximately 106.5 feet. For this study it was assumed that the existing creek section at the bridge would not be significantly altered and that the bridge abutments would be constructed outside of the banks of the creek. The assumed width between bridge abutments is 68 feet. A single, central pier with a width of 1.25 feet was assumed.
- Sunrise Boulevard is raised above the 100-year water surface elevation from the bridge to a point about 3,000 feet to the south, just past Florin Road.
- Culverts are added under the road to allow spill from the creek to pass between the floodplain storage areas. Under existing conditions, flood flows pass over the roadway. The culverts are intended to replace the flow capacity that is lost by raising the road. For this study, twelve 48-inch culverts were modeled at a location approximately 1,800 feet south of Laguna Creek as shown on Figure 1. The actual shape, size, and number of the required culverts could vary depending on the ultimate design of the roadway and the available cover over the culverts.

Alternative 2 – Raise Bridge and Construct Containment Levee

For Alternative 2, the bridge is raised above the floodplain elevation. The roadway to the south of the bridge is protected from Laguna Creek overflow by a containment levee along the left (south) bank of the creek. The increase in downstream flows caused by preventing the creek overflow would be mitigated in the already planned detention facility at the Triangle Rock mining pit. This detention facility will use a weir and detention basin to limit peak flows delivered downstream to the roughly the two year peak flow during large storms up to the 100-year event. This detention basin will help prevent the spill from Laguna Creek to Gerber Creek that occurs downstream of Vineyard Road, and mitigate for volume impacts from upstream development. The modeled elements that are included with Alternative 2 are described below and shown on Figure 4.

- The Sunrise Boulevard Bridge is raised above the 100-year water surface elevation of 115.3 feet. The minimum invert elevation of the creek at this location is approximately 106.5 feet. For this study it was assumed that the existing creek section at the bridge would not be significantly altered and that the bridge abutments would be constructed outside of the banks of the creek. The assumed width between bridge abutments is 68 feet. A single, central pier with a width of 1.25 feet was assumed.
- A containment levee or berm is modeled along the left overbank of Laguna Creek from Highway 16 to the Folsom South Canal. A gated 10' x 6' box culvert is included through the levee to allow the local watershed to drain into the creek. The culvert size was selected to be large enough to not significantly restrict flow, but it was not optimized. If this alternative is considered for implementation, the size should be evaluated further.

- A regional detention basin is included just downstream of the Folsom South Canal at the Triangle Rock mining pit. The storage volume of the basin was based on information prepared by MacKay & Somps for their SunCreek study. The peak storage volume during the 100-year storm is approximately 800 acre-feet at an elevation of 102 feet. The weir was assumed to be 600 feet long at an elevation of 110.5 feet.

HYDRAULIC MODELING RESULTS

The hydraulic models were used to calculate existing 10-year and 100-year water surface elevations and flows in the area of interest and to evaluate the effectiveness of the flood protection alternatives. Table 2 provides a summary of the calculated peak water surface elevations in the area of interest. Table 3 presents a summary of the calculated flood flows at key points in the system.

Table 4. Calculated Peak Water Surface Elevations in feet (NGVD29)

Location	Low Road Elevation on Sunrise Boulevard, Existing	10-Year Storm			100-Year Storm		
		Existing Conditions	Alternative 1	Alternative 2	Existing Conditions	Alternative 1	Alternative 2
Just Upstream of Sunrise Boulevard Bridge	115.30	114.63	114.45	114.39	115.50	115.33	115.50
East Overflow Area	112.30	114.03	114.03	113.77	115.27	115.29	114.70
West Overflow Area	112.30	114.03	114.02	113.77	115.27	115.27	114.70
South Overflow Area	111.80	108.91	108.91	108.90	110.17	110.17	110.17
Just Upstream of old Highway 16 Bridge	n/a	116.01	116.01	116.01	117.35	117.19	117.51
Downstream of Folsom South Canal	n/a	112.53	112.53	110.94	113.38	113.39	111.38

Table 5. Calculated Peak Flow in cfs

Location	10-Year Storm			100-Year Storm		
	Existing Conditions	Alternative 1	Alternative 2	Existing Conditions	Alternative 1	Alternative 2
Just Upstream of Sunrise Boulevard Bridge	750	770	810	1,010	1,150	1,470
At Folsom South Canal	850	850	850	1,370	1,370	1,460
Downstream of Folsom South Canal	850	850	300	1,370	1,380	390
Spill Along East Side of Sunrise Blvd. to South Watershed	20	20	10	160	160	80

Existing Condition Results

Under existing conditions, the results on Table 2 indicate that shallow flooding of the bridge is expected during a 100-year storm event. The 10-year water surface elevation is below the surface elevation at the bridge. The low chord of the existing bridge deck is below the water surface for both storm events and represents a significant restriction to flood flows during a 100-year storm event.

The elevations along the road to the south of the bridge are lower than at the bridge itself and portions of the road would be subject to flooding during the 10-year and 100-year storms. The 10-year and 100-year water surface elevations south of the bridge are approximately 114.0 and 115.3 feet, respectively (see East Overflow Area in Table 2). For the 10-year, 24-hour storm, approximately 1,600 feet of Sunrise Blvd between Grant Line Road and Highway 16 would be inundated for approximately 11 hours up to a maximum depth of 1.8 feet. For the 100-year, 24-hour storm, approximately 3,300 feet of Sunrise Blvd between Grant Line Road and Highway 16 would be inundated for approximately 16 hours up to a maximum depth of 3.1 feet. Figure 5 shows the calculated flood depths above the roadway.

The 10-year peak flood flow ranges from 750 cfs at the bridge to 850 cfs downstream of the Folsom South Canal. Approximately 20 cfs is predicted to spill from the floodplain area near the bridge to the adjacent watershed to the south. The 100-year peak flood flow ranges from 1,010 cfs at the bridge to 1,370 cfs downstream of the Folsom South Canal. Approximately 160 cfs is predicted to spill from the floodplain area near the bridge to the adjacent watershed to the south.

Alternative 1 Results

The results for Alternative 1 indicate that raising the road could be a feasible approach for protecting the road from flooding without adversely impacting existing flooding on adjacent land. Water surface elevations upstream of the bridge are predicted to be slightly lower than existing elevations. This is due to providing clearance between the bridge deck and the calculated water surface elevation, which removes a significant restriction to flow. Removal of this restriction results in slightly higher flows and water surface elevations downstream of the bridge, but the increases are small. The water surface elevations in the overflow areas to the south of the creek would be essentially equal to existing elevations. The proposed culverts under Sunrise Boulevard would adequately mitigate for the potential impacts of raising the road.

Alternative 2 Results

The results for Alternative 2 show that this is not a feasible approach. The goal of the alternative is to protect the roadway south of the bridge by constructing levees along the creek to prevent spill from the creek. The levees prevent overflow from the creek, but they don't prevent the road from flooding. Runoff from the 1,000 acre watershed to the east that drains into the West Overflow storage area, currently crosses Sunrise Boulevard through two 8'x5' box culverts (See Figure 2) and then continues to the north in a channel and enters Laguna Creek just downstream of Sunrise Boulevard. If Alternative 2 were implemented, this watershed would continue to drain into the West Overflow area and then to Laguna Creek through a flap-gated culvert through the containment levee. However, during a large storm event, high water in the creek will prevent runoff from the tributary shed from entering the creek at the peak of the storm. During the 100-year storm, the runoff from the tributary watershed would pond behind the containment levee to an elevation that is lower than the existing floodplain elevation (114.7 versus 115.3) but is still significantly higher than the low point of the road. Therefore, the road would still need to be raised for this alternative. The alternative would also cause increases in the 100-year water surface elevations upstream of the bridge.

The planned regional detention basin downstream of the Folsom South Canal will produce significant reductions in flows and water surface elevations downstream of the Folsom South Canal. However, these reductions do not extend upstream to Sunrise Boulevard.

CONCLUSIONS

Sunrise Boulevard is vulnerable to flooding from Laguna Creek during both the modeled 10-year and 100-year storm events. Raising the elevation of the bridge and roadway above the 100-year water surface elevation appears to be a feasible approach for protecting the road. Raising the roadway would block flood flows that currently flow over the roadway. Without mitigation, this could cause increases to the water surface elevations in areas east of Sunrise Boulevard. However, the potential increases to water surface elevations can be mitigated by providing culverts under the raised roadway.

Sincerely,

WEST YOST ASSOCIATES

Mark O. Kubik
Principal Engineer
R.C.E. #50963

MOK:nmp

attachments

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© 2009–GOOGLE–MAP DATA

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Figure 1
Sunrise Boulevard
Flood Protection Study
Vicinity Map

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Consulting Engineers

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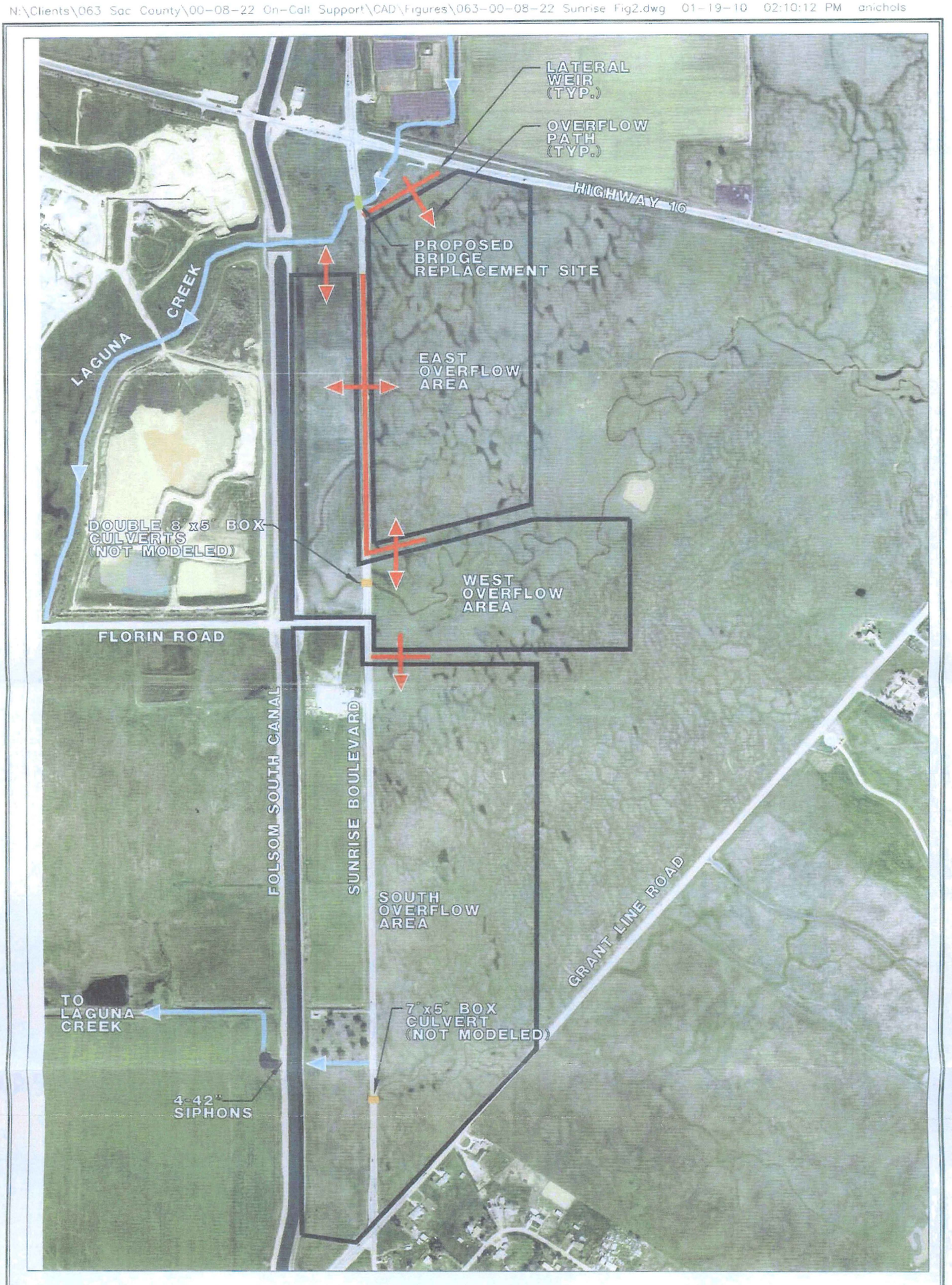

Figure 2
Sunrise Boulevard
Flood Protection Study
Overflow Storage Configuration

WEST YOST ASSOCIATES
Consulting Engineers

N

0 300 600

SCALE IN FEET

Figure 3
Sunrise Boulevard
Flood Protection Study
Alternative 1 Schematic

WEST YOST ASSOCIATES
Consulting Engineers

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Figure 4
Sunrise Boulevard
Flood Protection Study
Alternative 2 Schematic

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Consulting Engineers

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SCALE IN FEET

Figure 5
Sunrise Boulevard
Flood Protection Study
Approximate Flood Depths
For Existing Conditions

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Consulting Engineers

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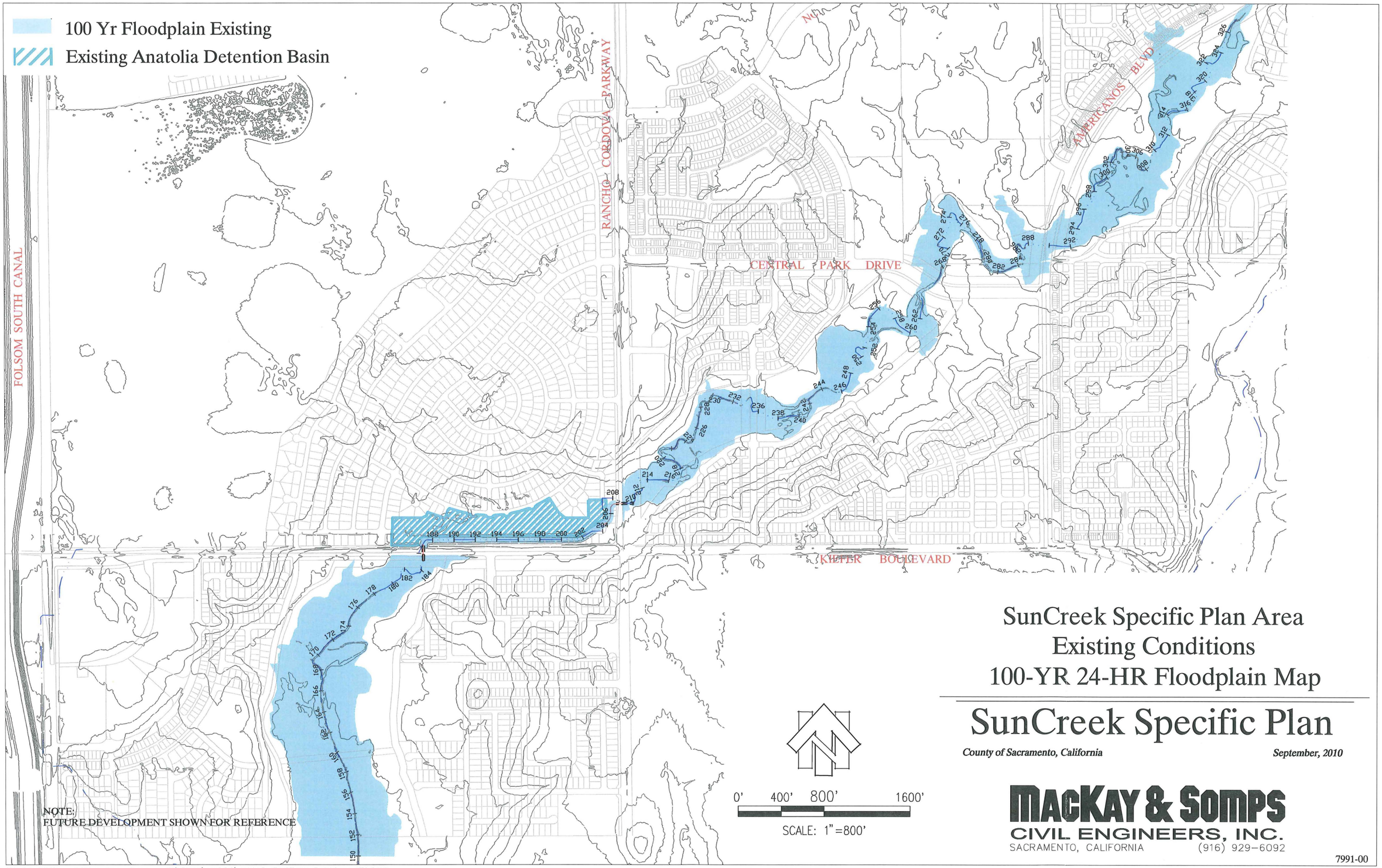
Appendix J: SunCreek Specific Plan Area – Existing Conditions 100-Year, 24-Hour Flood Plain Map

100 Yr Floodplain Existing

Existing Anatolia Detention Basin



NOTE:
FUTURE DEVELOPMENT SHOWN FOR REFERENCE

0' 400' 800' 1600'

SCALE: 1"=800'

SunCreek Specific Plan Area
Existing Conditions
100-YR 24-HR Floodplain Map

SunCreek Specific Plan

County of Sacramento, California *September, 2010*

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

7991-00

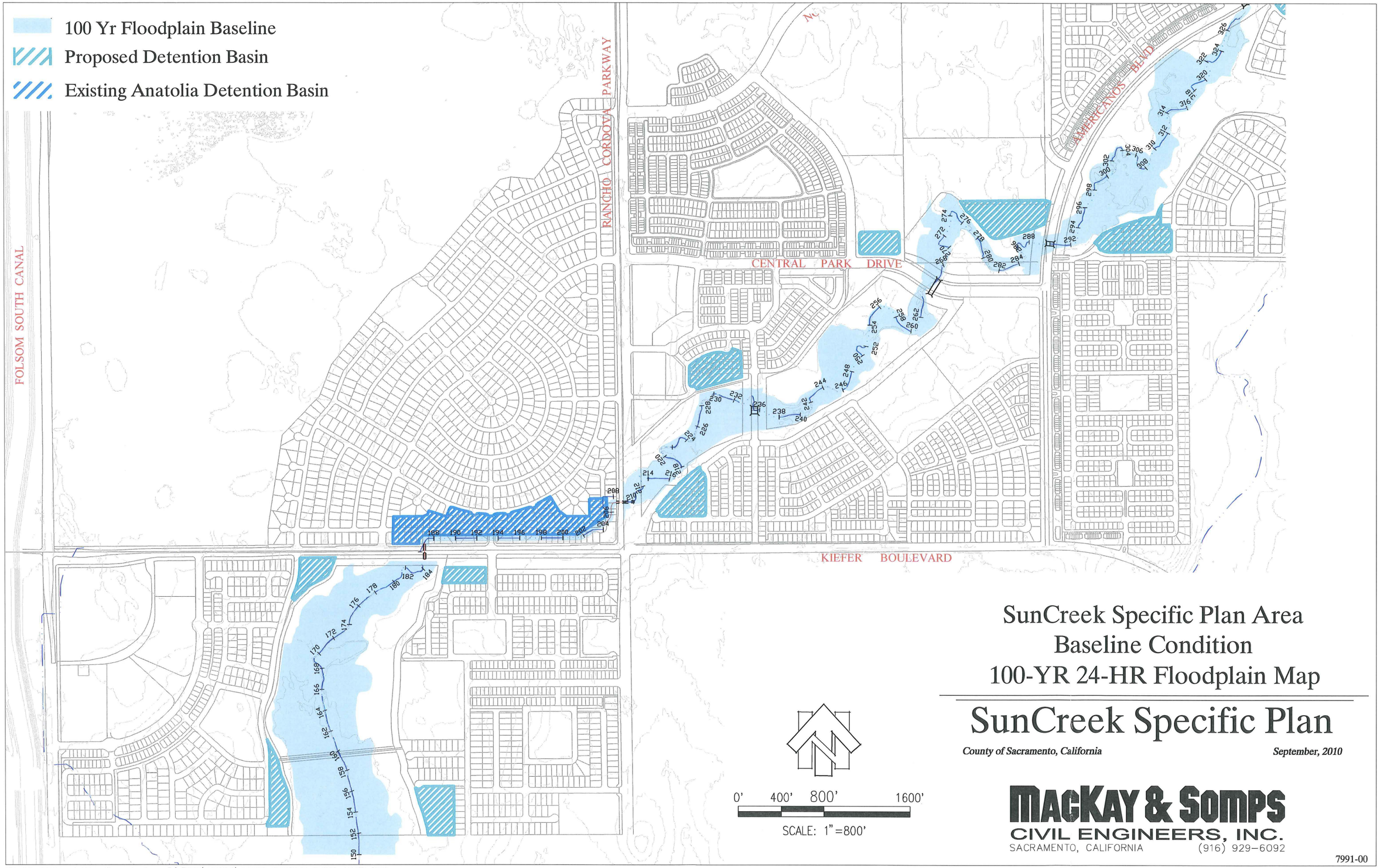
09-14-2010 4:02pm Greg Jordan P:\7991\HYDRO\100YR EXISTING FLOOD LIMITS.DWG

Appendix K: SunCreek Specific Plan Area – Baseline Conditions 100-Year, 24-Hour Flood Plain Map

100 Yr Floodplain Baseline

Proposed Detention Basin

Existing Anatolia Detention Basin



0' 400' 800' 1600'

SCALE: 1"=800'

SunCreek Specific Plan Area
Baseline Condition
100-YR 24-HR Floodplain Map

SunCreek Specific Plan

County of Sacramento, California *September, 2010*

MACKAY & SOMPS
CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

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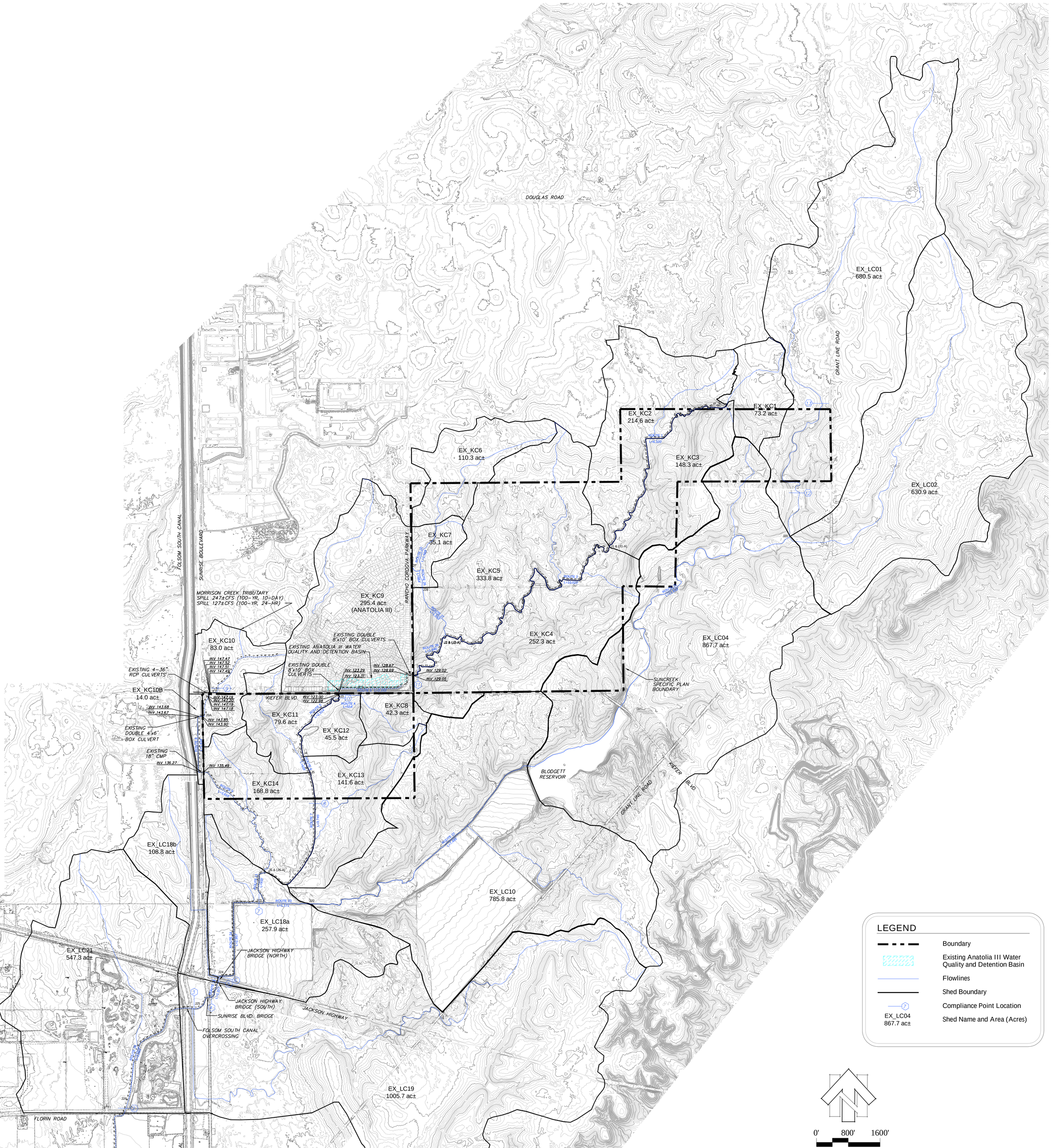
Appendix L: SunCreek Drainage Study Area – Existing Conditions Watershed Map



LEGEND

- Boundary
- Existing Anatolia III Water Quality and Detention Basin
- Flowlines
- Shed Boundary
- Compliance Point Location (7)
- EX_LC04 867.7 ac± — Shed Name and Area (Acres)

0' 800' 1600'

SUNCREEK DRAINAGE STUDY AREA
EXISTING CONDITIONS WATERSHED MAP

SunCreek Specific Plan

County of Sacramento, California

September 2010

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CIVIL ENGINEERS, INC.
SACRAMENTO, CALIFORNIA (916) 929-6092

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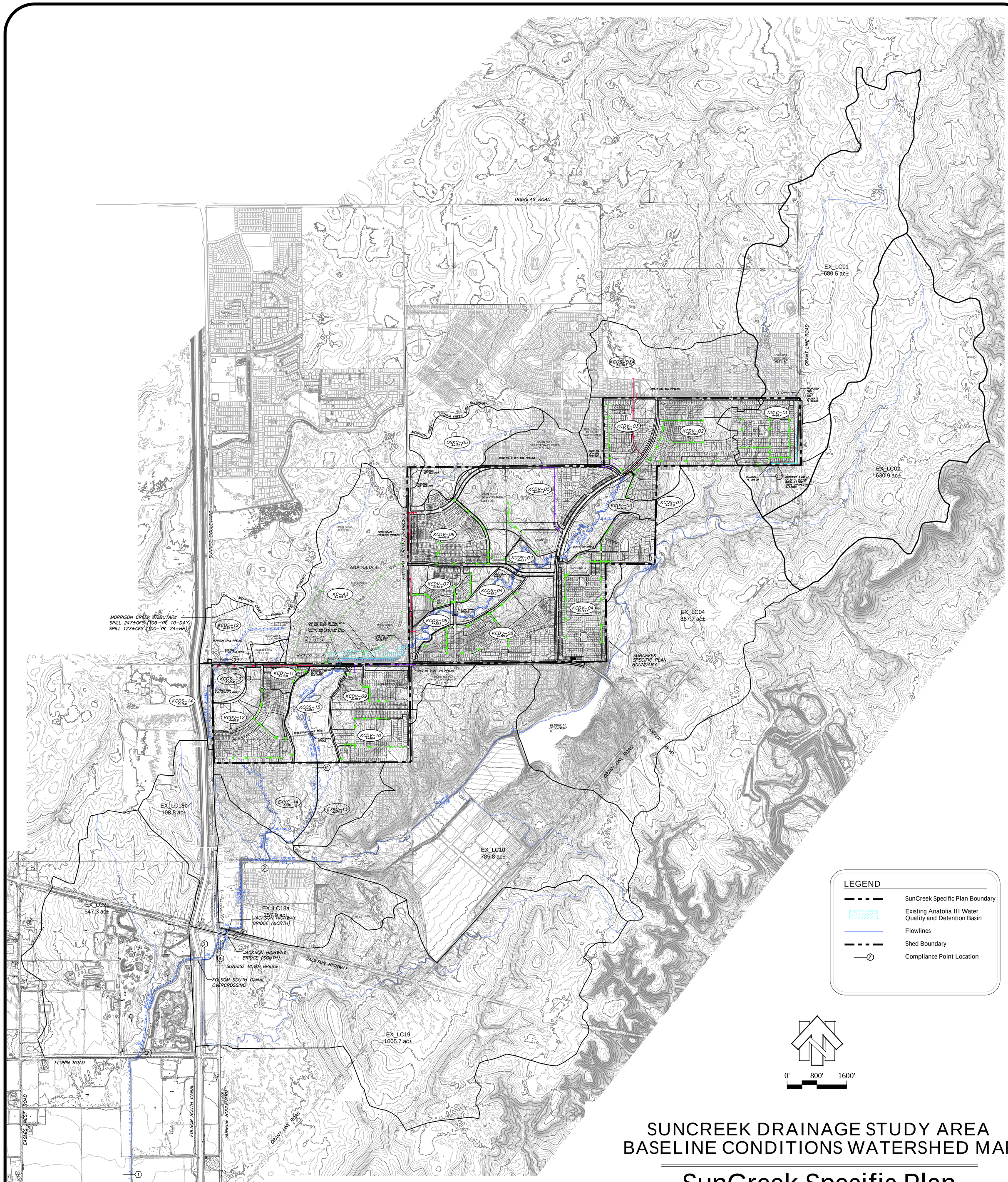
Appendix M: SunCreek Drainage Study Area – Baseline Conditions Watershed Map



LEGEND

- SunCreek Specific Plan Boundary
- Existing Anatolia III Water Quality and Detention Basin
- Flowlines
- Shed Boundary
- Compliance Point Location

0' 800' 1600'

SUNCREEK DRAINAGE STUDY AREA BASELINE CONDITIONS WATERSHED MAP

SunCreek Specific Plan

County of Sacramento, California

September 2010

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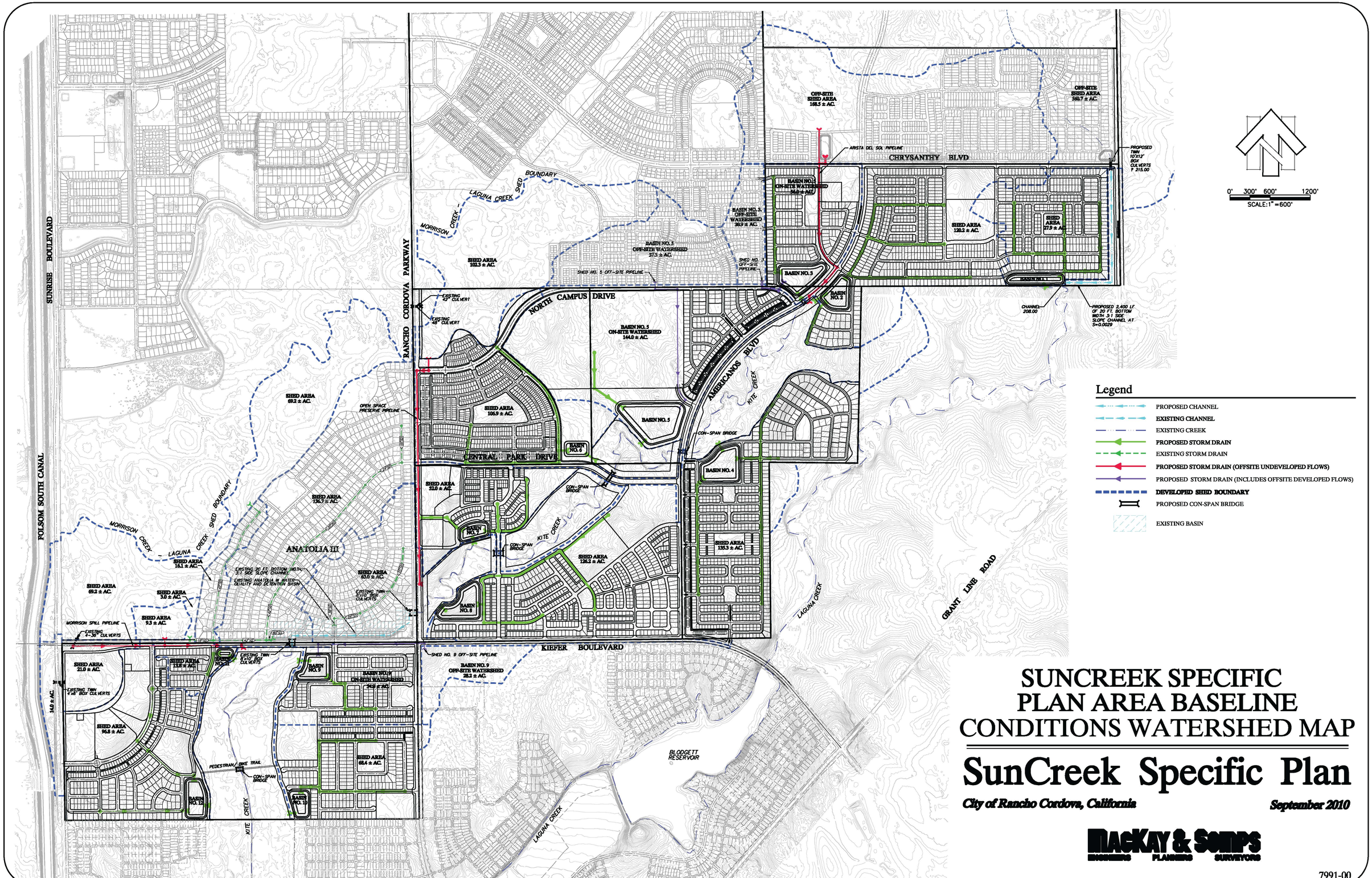
Appendix N: SunCreek Specific Plan Area – Baseline Conditions Watershed Map



SUNCREEK SPECIFIC PLAN AREA BASELINE CONDITIONS WATERSHED MAP

SunCreek Specific Plan

City of Rancho Cordova, California

September 2010

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

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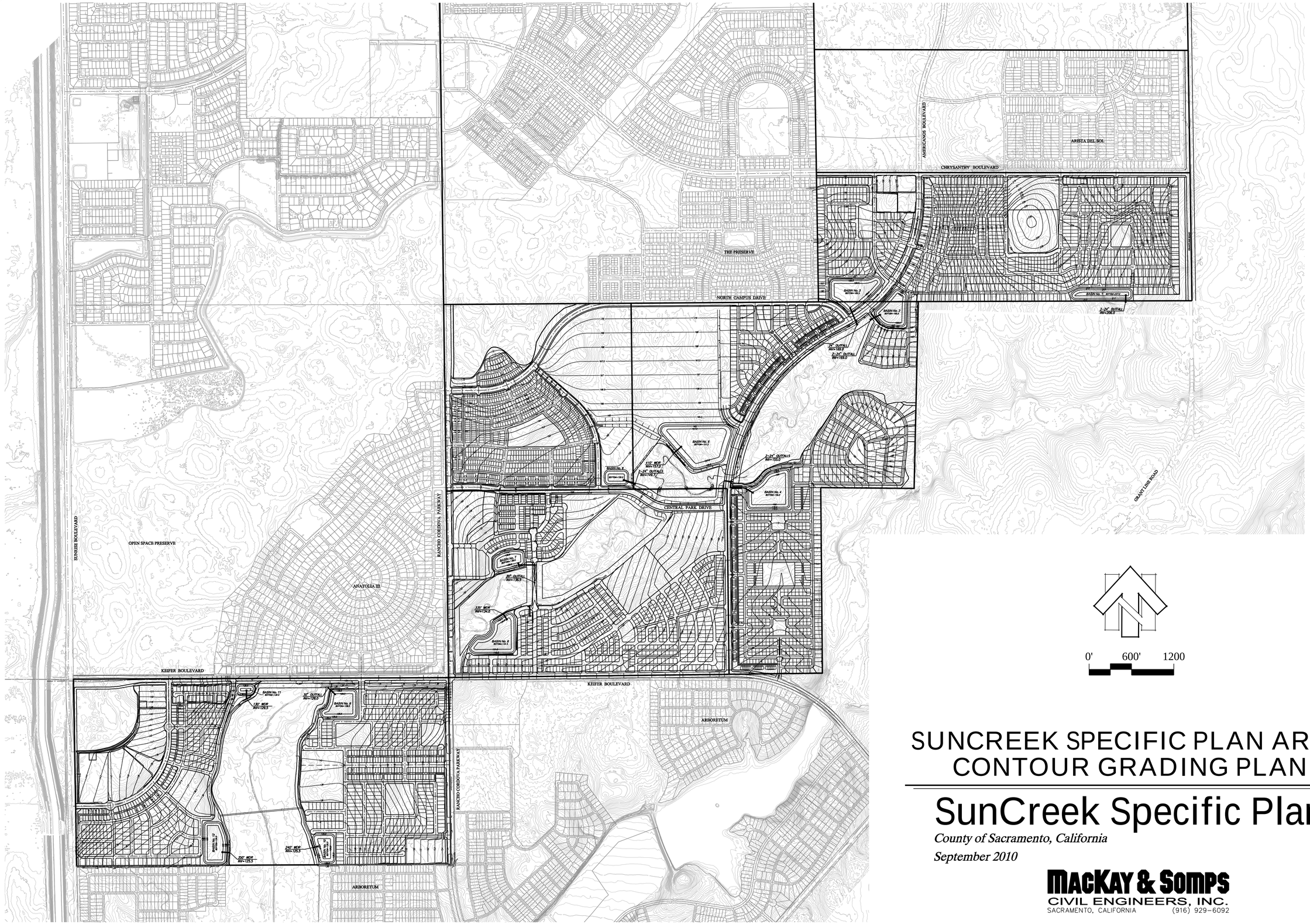
Appendix O: SunCreek Specific Plan Area – Contour Grading Plan



SUNCREEK SPECIFIC PLAN AREA CONTOUR GRADING PLAN

SunCreek Specific Plan

County of Sacramento, California

September 2010

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Appendix P: HEC-RAS Results

Appendix P-1: HEC-RAS Results, Existing Conditions Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X    X    X    X
XXXXXXX  XXXX     X      XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
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PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 10:41:28 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	308.14	158.00	162.23		162.23	0.000027	0.29	1044.89	296.62	0.03
RIVER-2	Reach-1	11850.*	Max WS	308.13	157.71	162.23		162.23	0.000027	0.29	1062.00	313.81	0.03
RIVER-2	Reach-1	11800	Max WS	306.37	157.42	162.23		162.23	0.000011	0.20	1554.71	411.49	0.02
RIVER-2	Reach-1	11750.*	Max WS	307.24	156.96	162.23		162.23	0.000011	0.20	1517.93	399.53	0.02
RIVER-2	Reach-1	11700	Max WS	308.09	156.50	162.23		162.23	0.000010	0.20	1550.60	376.06	0.02
RIVER-2	Reach-1	11650.*	Max WS	305.52	156.25	162.23		162.23	0.000011	0.21	1465.50	350.34	0.02
RIVER-2	Reach-1	11600	Max WS	306.36	156.00	162.23		162.23	0.000011	0.22	1416.11	330.56	0.02
RIVER-2	Reach-1	11550.*	Max WS	307.20	155.05	162.23		162.23	0.000011	0.21	1430.46	336.71	0.02
RIVER-2	Reach-1	11500	Max WS	306.35	154.11	162.23		162.23	0.000011	0.21	1440.17	337.96	0.02
RIVER-2	Reach-1	11450.*	Max WS	306.34	154.05	162.23		162.23	0.000010	0.20	1529.64	373.60	0.02
RIVER-2	Reach-1	11400	Max WS	305.51	154.00	162.23		162.23	0.000009	0.19	1630.47	401.83	0.02
RIVER-2	Reach-1	11350.*	Max WS	305.49	154.00	162.23		162.23	0.000008	0.18	1708.46	406.25	0.02
RIVER-2	Reach-1	11300	Max WS	304.68	154.00	162.22		162.23	0.000006	0.16	1875.85	454.20	0.01
RIVER-2	Reach-1	11250.*	Max WS	305.47	154.00	162.22		162.23	0.000005	0.15	2054.51	461.22	0.01
RIVER-2	Reach-1	11200	Max WS	304.67	154.00	162.22		162.22	0.000004	0.14	2245.57	477.51	0.01
RIVER-2	Reach-1	11150.*	Max WS	304.66	153.00	162.22		162.22	0.000003	0.12	2460.11	497.26	0.01
RIVER-2	Reach-1	11100	Max WS	305.41	152.00	162.22		162.22	0.000002	0.11	2672.31	533.06	0.01
RIVER-2	Reach-1	11050.*	Max WS	303.88	152.00	162.22		162.22	0.000002	0.11	2876.76	544.94	0.01
RIVER-2	Reach-1	11000	Max WS	304.64	152.00	162.22		162.22	0.000002	0.10	3139.29	573.11	0.01
RIVER-2	Reach-1	10887.5*	Max WS	303.87	152.00	162.22		162.22	0.000001	0.09	3526.95	583.01	0.01
RIVER-2	Reach-1	10775.*	Max WS	304.61	152.00	162.22		162.22	0.000001	0.08	4044.70	602.52	0.01
RIVER-2	Reach-1	10662.5*	Max WS	304.57	152.00	162.22		162.22	0.000001	0.07	4637.37	638.30	0.00
RIVER-2	Reach-1	10550	Max WS	304.54	152.00	162.22		162.22	0.000000	0.06	5280.15	681.04	0.00
RIVER-2	Reach-1	10490.*	Max WS	304.52	151.60	162.22		162.22	0.000000	0.05	5857.69	784.26	0.00
RIVER-2	Reach-1	10430.*	Max WS	305.19	151.20	162.22		162.22	0.000000	0.05	6398.53	881.72	0.00
RIVER-2	Reach-1	10370.*	Max WS	304.49	150.80	162.22		162.22	0.000000	0.04	6905.31	980.99	0.00
RIVER-2	Reach-1	10310.*	Max WS	304.44	150.40	162.22		162.22	0.000000	0.04	7393.45	1050.73	0.00
RIVER-2	Reach-1	10250	Max WS	304.39	150.00	162.22		162.22	0.000000	0.04	7886.55	1128.37	0.00
RIVER-2	Reach-1	10200.*	Max WS	304.95	150.00	162.22		162.22	0.000000	0.04	7375.28	965.02	0.00
RIVER-2	Reach-1	10150	Max WS	304.37	150.00	162.22		162.22	0.000000	0.04	6881.09	855.76	0.00
RIVER-2	Reach-1	10100.*	Max WS	304.35	150.00	162.22		162.22	0.000000	0.05	6557.42	844.11	0.00
RIVER-2	Reach-1	10050	Max WS	303.87	150.00	162.22		162.22	0.000000	0.05	6332.71	774.09	0.00
RIVER-2	Reach-1	10000.*	Max WS	304.82	150.00	162.22		162.22	0.000000	0.05	6589.10	794.00	0.00
RIVER-2	Reach-1	9950	Max WS	304.31	150.00	162.22		162.22	0.000000	0.04	6860.19	813.45	0.00

RIVER-2	Reach-1	9900.*	Max WS	304.29	150.00	162.22		162.22	0.000000	0.04	7506.73	1037.55	0.00
RIVER-2	Reach-1	9850	Max WS	303.85	150.00	162.22		162.22	0.000000	0.04	8113.07	1198.91	0.00
RIVER-2	Reach-1	9800.*	Max WS	304.69	150.00	162.22		162.22	0.000000	0.04	7903.99	1387.12	0.00
RIVER-2	Reach-1	9750	Max WS	304.24	150.00	162.22		162.22	0.000000	0.04	8198.10	1454.42	0.00
RIVER-2	Reach-1	9675.*	Max WS	303.85	149.36	162.22		162.22	0.000000	0.03	8893.31	1493.77	0.00
RIVER-2	Reach-1	9600	Max WS	304.50	148.73	162.22		162.22	0.000000	0.03	9676.16	1532.96	0.00
RIVER-2	Reach-1	9550.*	Max WS	304.44	148.36	162.22		162.22	0.000000	0.03	11932.31	1676.96	0.00
RIVER-2	Reach-1	9500	Max WS	303.83	148.00	162.22		162.22	0.000000	0.02	14360.24	1727.91	0.00
RIVER-2	Reach-1	9450.*	Max WS	304.12	147.00	162.22		162.22	0.000000	0.02	15358.53	1760.25	0.00
RIVER-2	Reach-1	9400	Max WS	303.85	146.00	162.22		162.22	0.000000	0.02	16694.54	1775.38	0.00
RIVER-2	Reach-1	9350.*	Max WS	304.23	145.51	162.22		162.22	0.000000	0.02	16142.28	1703.59	0.00
RIVER-2	Reach-1	9300	Max WS	304.00	145.02	162.22		162.22	0.000000	0.02	15471.57	1607.94	0.00
RIVER-2	Reach-1	9200.*	Max WS	303.94	144.51	162.22		162.22	0.000000	0.02	14448.79	1431.13	0.00
RIVER-2	Reach-1	9100	Max WS	303.89	144.00	162.22		162.22	0.000000	0.02	13377.69	1248.08	0.00
RIVER-2	Reach-1	9050.*	Max WS	303.83	144.00	162.22		162.22	0.000000	0.02	12971.60	1125.45	0.00
RIVER-2	Reach-1	9000	Max WS	303.81	144.00	162.22		162.22	0.000000	0.02	12643.71	1021.36	0.00
RIVER-2	Reach-1	8900.*	Max WS	303.91	143.08	162.22		162.22	0.000000	0.02	13001.21	994.54	0.00
RIVER-2	Reach-1	8800	Max WS	303.85	142.16	162.22		162.22	0.000000	0.02	13218.50	949.80	0.00
RIVER-2	Reach-1	8700.*	Max WS	303.80	143.70	162.22		162.22	0.000000	0.02	12432.24	979.85	0.00
RIVER-2	Reach-1	8600	Max WS	303.78	145.24	162.22	145.80	162.22	0.000000	0.03	11906.28	987.96	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	303.78	140.56	152.43		152.55	0.003341	2.74	110.89	29.02	0.25
RIVER-2	Reach-1	8350	Max WS	305.06	140.09	152.05		152.18	0.004226	2.89	105.65	28.45	0.26
RIVER-2	Reach-1	8250.*	Max WS	306.36	139.60	151.63		151.76	0.004247	2.89	105.83	28.67	0.27
RIVER-2	Reach-1	8150.*	Max WS	307.65	139.11	151.21		151.34	0.004293	2.90	105.93	28.93	0.27
RIVER-2	Reach-1	8050.*	Max WS	308.94	138.62	150.79		150.92	0.004357	2.92	105.97	29.21	0.27
RIVER-2	Reach-1	7950.*	Max WS	310.24	138.13	150.35		150.49	0.004433	2.93	105.98	29.51	0.27
RIVER-2	Reach-1	7850.*	Max WS	311.54	137.64	149.91		150.04	0.004526	2.94	106.03	29.97	0.28
RIVER-2	Reach-1	7750.*	Max WS	312.85	137.15	149.45		149.59	0.004687	2.95	105.96	30.83	0.28
RIVER-2	Reach-1	7650.*	Max WS	314.14	136.66	148.98		149.12	0.004873	2.97	105.85	31.78	0.29
RIVER-2	Reach-1	7550.*	Max WS	315.44	136.17	148.50		148.64	0.004947	2.98	105.93	32.06	0.29
RIVER-2	Reach-1	7450.*	Max WS	316.76	135.68	148.01		148.15	0.005028	2.99	105.86	32.20	0.29
RIVER-2	Reach-1	7350.*	Max WS	318.06	135.19	147.51		147.65	0.005107	3.01	105.74	32.26	0.29
RIVER-2	Reach-1	7250.*	Max WS	319.37	134.70	147.00		147.14	0.005163	3.02	105.72	32.24	0.29
RIVER-2	Reach-1	7150.*	Max WS	320.68	134.21	146.48		146.63	0.005257	3.04	105.39	32.11	0.30
RIVER-2	Reach-1	7050.*	Max WS	321.99	133.72	145.96		146.11	0.005348	3.06	105.06	31.93	0.30
RIVER-2	Reach-1	6950.*	Max WS	323.31	133.23	145.43		145.57	0.005496	3.10	104.34	31.64	0.30
RIVER-2	Reach-1	6850.*	Max WS	324.62	132.74	144.87		145.03	0.005697	3.14	103.29	31.24	0.30
RIVER-2	Reach-1	6750.*	Max WS	325.94	132.25	144.29		144.45	0.006067	3.22	101.30	30.69	0.31
RIVER-2	Reach-1	6650.*	Max WS	327.26	131.76	143.65		143.83	0.006802	3.35	97.66	29.92	0.33
RIVER-2	Reach-1	6550	Max WS	328.58	131.27	142.83		143.04	0.009050	3.70	88.89	28.52	0.37
RIVER-2	Reach-1	6466.66*	Max WS	329.69	132.84	142.11		142.32	0.008270	3.70	89.04	30.65	0.38
RIVER-2	Reach-1	6383.33*	Max WS	330.79	134.40	141.59		141.76	0.005462	3.25	101.73	36.55	0.34
RIVER-2	Reach-1	6300	Max WS	331.90	135.97	141.26		141.40	0.003180	3.04	109.08	31.47	0.29
RIVER-2	Reach-1	6250	Max WS	332.56	136.00	141.01		141.21	0.004671	3.53	94.19	28.78	0.34
RIVER-2	Reach-1	6200	Max WS	333.22	135.00	140.67		140.94	0.006266	4.11	80.99	23.16	0.39
RIVER-2	Reach-1	6100.*	Max WS	334.56	134.75	140.20		140.39	0.004671	3.51	95.26	28.96	0.34
RIVER-2	Reach-1	6000.*	Max WS	335.89	134.50	139.81		139.97	0.003914	3.13	107.45	34.91	0.31
RIVER-2	Reach-1	5900.*	Max WS	337.23	134.25	139.47		139.60	0.003575	2.88	117.23	40.88	0.30
RIVER-2	Reach-1	5800.*	Max WS	338.56	134.00	139.12		139.24	0.003563	2.74	123.59	46.66	0.30
RIVER-2	Reach-1	5700.*	Max WS	339.90	133.75	138.75		138.87	0.003953	2.72	124.82	51.69	0.31
RIVER-2	Reach-1	5600.*	Max WS	341.23	133.50	138.29		138.42	0.005166	2.90	117.51	54.15	0.35
RIVER-2	Reach-1	5500.*	Max WS	342.56	133.25	137.57		137.77	0.008122	3.59	95.38	44.53	0.43
RIVER-2	Reach-1	5400	Max WS	343.89	133.00	135.85		136.40	0.020547	5.93	58.01	25.30	0.69
RIVER-2	Reach-1	5304.54*	Max WS	345.17	132.73	134.88		135.05	0.007812	3.28	105.21	56.36	0.42
RIVER-2	Reach-1	5209.09*	Max WS	346.45	132.45	134.35		134.44	0.005253	2.44	141.86	88.61	0.34
RIVER-2	Reach-1	5113.63*	Max WS	347.74	132.18	133.93		133.99	0.004356	2.04	170.36	121.36	0.30
RIVER-2	Reach-1	5018.18*	Max WS	349.02	131.91	133.56		133.61	0.004046	1.82	192.27	154.73	0.29
RIVER-2	Reach-1	4922.72*	Max WS	350.29	131.64	133.23		133.27	0.003918	1.67	209.78	187.00	0.28
RIVER-2	Reach-1	4827.27*	Max WS	351.57	131.36	132.91		132.95	0.003850	1.56	224.99	218.83	0.27
RIVER-2	Reach-1	4731.81*	Max WS	352.85	131.09	132.61		132.65	0.003913	1.49	237.56	252.54	0.27
RIVER-2	Reach-1	4636.36*	Max WS	354.12	130.82	132.31		132.35	0.004205	1.44	246.53	290.99	0.28
RIVER-2	Reach-1	4540.90*	Max WS	355.39	130.55	132.02		132.05	0.004547	1.40	254.74	333.27	0.28
RIVER-2	Reach-1	4445.45*	Max WS	356.66	130.27	131.74		131.77	0.004460	1.29	276.47	401.04	0.27
RIVER-2	Reach-1	4350	Max WS	357.93	130.00	131.19		131.25	0.017049	1.89	189.39	423.62	0.50
RIVER-2	Reach-1	4260.*	Max WS	359.02	129.40	130.57		130.62	0.013700	1.78	201.64	420.25	0.45
RIVER-2	Reach-1	4170.*	Max WS	360.12	128.80	130.00		130.05	0.013371	1.79	201.31	407.37	0.45
RIVER-2	Reach-1	4080.*	Max WS	361.22	128.20	129.60		129.64	0.008801	1.55	233.34	428.56	0.37
RIVER-2	Reach-1	3990.*	Max WS	362.31	127.60	129.36		129.39	0.004561	1.23	295.43	470.15	0.27

RIVER-2	Reach-1	3900	Max WS	363.40	127.00	129.15		129.16	0.003486	1.11	326.28	490.53	0.24
RIVER-2	Reach-1	3800.*	Max WS	364.78	126.70	128.87		128.89	0.003842	1.16	315.62	482.89	0.25
RIVER-2	Reach-1	3700.*	Max WS	366.17	126.40	128.59		128.61	0.004368	1.21	302.30	474.62	0.27
RIVER-2	Reach-1	3600.*	Max WS	367.55	126.10	128.31		128.33	0.004725	1.26	290.98	454.99	0.28
RIVER-2	Reach-1	3500.*	Max WS	368.93	125.80	128.03		128.06	0.004554	1.29	285.73	420.54	0.28
RIVER-2	Reach-1	3400.*	Max WS	370.30	125.50	127.77		127.79	0.004406	1.31	282.46	396.38	0.27
RIVER-2	Reach-1	3300.*	Max WS	371.66	125.20	127.50		127.52	0.004255	1.32	280.85	378.58	0.27
RIVER-2	Reach-1	3200.*	Max WS	373.02	124.90	127.23		127.26	0.004112	1.33	280.48	365.73	0.27
RIVER-2	Reach-1	3100.*	Max WS	374.38	124.60	126.97		127.00	0.003947	1.32	283.37	361.84	0.26
RIVER-2	Reach-1	3000.*	Max WS	375.73	124.30	126.72		126.75	0.003676	1.29	291.03	364.73	0.25
RIVER-2	Reach-1	2900	Max WS	377.08	124.00	126.49		126.52	0.003209	1.21	311.01	386.78	0.24
RIVER-2	Reach-1	2812.5*	Max WS	378.21	123.52	126.30		126.32	0.003281	1.16	327.44	445.32	0.24
RIVER-2	Reach-1	2725.*	Max WS	379.34	123.03	126.02		126.04	0.004130	1.19	317.83	489.01	0.26
RIVER-2	Reach-1	2637.5*	Max WS	380.46	122.55	125.68		125.71	0.005942	1.34	284.97	486.80	0.31
RIVER-2	Reach-1	2550.*	Max WS	381.56	122.07	125.39		125.42	0.006600	1.38	276.13	484.62	0.32
RIVER-2	Reach-1	2462.5*	Max WS	382.66	121.58	125.16		125.18	0.004997	1.30	293.48	455.93	0.29
RIVER-2	Reach-1	2375	Max WS	383.77	121.10	124.89		124.91	0.004237	1.28	299.08	420.31	0.27
RIVER-2	Reach-1	2279.16*	Max WS	384.98	121.07	124.59		124.62	0.005104	1.32	291.74	452.27	0.29
RIVER-2	Reach-1	2183.33*	Max WS	386.19	121.03	124.35		124.38	0.004971	1.25	309.77	512.90	0.28
RIVER-2	Reach-1	2087.5*	Max WS	387.40	121.00	124.14		124.16	0.003738	1.13	341.84	527.44	0.25
RIVER-2	Reach-1	1991.66*	Max WS	388.60	120.97	123.87		123.89	0.003670	1.12	345.76	532.81	0.25
RIVER-2	Reach-1	1895.83*	Max WS	389.79	120.93	123.60		123.62	0.003728	1.13	345.59	535.95	0.25
RIVER-2	Reach-1	1800	Max WS	390.98	120.90	123.41		123.43	0.002548	1.00	392.34	550.68	0.21
RIVER-2	Reach-1	1705.*	Max WS	392.16	120.43	123.25		123.27	0.002330	0.99	395.64	523.52	0.20
RIVER-2	Reach-1	1610.*	Max WS	393.34	119.95	123.05		123.06	0.002463	1.03	380.96	494.11	0.21
RIVER-2	Reach-1	1515.*	Max WS	394.52	119.47	122.79		122.81	0.003147	1.13	348.83	474.94	0.23
RIVER-2	Reach-1	1420	Max WS	395.69	119.00	122.49		122.52	0.003824	1.25	320.11	455.75	0.26
RIVER-2	Reach-1	1324.61*	Max WS	395.67	118.62	122.16		122.19	0.003783	1.24	322.23	460.53	0.25
RIVER-2	Reach-1	1229.23*	Max WS	395.67	118.23	121.83		121.86	0.004052	1.26	316.93	463.11	0.26
RIVER-2	Reach-1	1133.84*	Max WS	395.64	117.85	121.53		121.55	0.004135	1.27	315.92	461.95	0.26
RIVER-2	Reach-1	1038.46*	Max WS	395.62	117.46	121.19		121.22	0.004062	1.35	304.04	470.05	0.27
RIVER-2	Reach-1	943.076*	Max WS	395.60	117.08	120.84		120.87	0.004427	1.44	288.37	424.76	0.28
RIVER-2	Reach-1	847.692*	Max WS	395.59	116.69	120.49		120.52	0.003994	1.50	279.16	359.13	0.27
RIVER-2	Reach-1	752.307*	Max WS	395.56	116.31	120.11		120.15	0.004141	1.61	260.88	310.40	0.28
RIVER-2	Reach-1	656.923*	Max WS	395.55	115.92	119.74		119.78	0.004512	1.71	246.28	282.49	0.29
RIVER-2	Reach-1	561.538*	Max WS	395.54	115.54	119.42		119.46	0.004321	1.75	241.16	256.89	0.29
RIVER-2	Reach-1	466.153*	Max WS	395.46	115.15	119.13		119.17	0.003809	1.76	241.36	233.46	0.28
RIVER-2	Reach-1	370.769*	Max WS	395.17	114.77	118.86		118.91	0.003246	1.76	241.60	206.33	0.26
RIVER-2	Reach-1	275.384*	Max WS	394.52	114.38	118.61		118.66	0.002939	1.82	225.24	153.06	0.25
RIVER-2	Reach-1	180	Max WS	392.18	114.00	118.27		118.35	0.004133	2.27	172.93	99.35	0.30
RIVER-1	Reach-1	372	Max WS	40.81	206.95	207.54	207.66	207.93	0.088020	4.98	8.19	26.97	1.59
RIVER-1	Reach-1	371.*	Max WS	40.80	204.98	205.59	205.76	206.13	0.103345	5.87	6.95	20.09	1.76
RIVER-1	Reach-1	370	Max WS	40.77	203.00	203.80		203.98	0.021474	3.40	11.98	24.12	0.85
RIVER-1	Reach-1	369.*	Max WS	42.42	201.50	202.32	202.29	202.54	0.026477	3.78	11.22	22.58	0.95
RIVER-1	Reach-1	368	Max WS	44.12	200.00	201.08		201.19	0.009871	2.59	17.05	28.82	0.59
RIVER-1	Reach-1	367.*	Max WS	45.86	199.00	200.07		200.19	0.010543	2.76	16.64	26.98	0.62
RIVER-1	Reach-1	366	Max WS	47.66	198.00	199.06		199.20	0.011417	3.04	17.42	60.55	0.65
RIVER-1	Reach-1	365.*	Max WS	49.45	196.50	197.57	197.51	197.79	0.020899	3.71	13.55	30.24	0.86
RIVER-1	Reach-1	364	Max WS	51.26	195.00	196.48		196.56	0.006037	2.37	25.97	52.32	0.48
RIVER-1	Reach-1	363.*	Max WS	52.49	194.14	195.15	195.12	195.33	0.021881	3.44	16.44	49.62	0.86
RIVER-1	Reach-1	362	Max WS	53.69	193.28	193.83	193.96	194.23	0.090526	5.03	10.67	35.26	1.61
RIVER-1	Reach-1	361.*	Max WS	45.15	192.51	193.09		193.20	0.021399	2.63	17.15	50.83	0.80
RIVER-1	Reach-1	360	Max WS	56.02	191.75	192.11	192.27	192.83	0.461169	6.81	8.23	58.71	3.20
RIVER-1	Reach-1	359.*	Max WS	56.49	190.38	191.18		191.29	0.027867	2.61	21.65	79.32	0.88
RIVER-1	Reach-1	358	Max WS	59.46	189.00	190.23		190.27	0.006266	1.53	38.92	103.82	0.44
RIVER-1	Reach-1	357.*	Max WS	60.73	188.00	189.05		189.15	0.017423	2.65	22.94	57.73	0.74
RIVER-1	Reach-1	356	Max WS	61.96	187.00	187.92		188.01	0.008160	2.36	26.22	44.25	0.54
RIVER-1	Reach-1	355.*	Max WS	63.29	186.00	187.31		187.37	0.006228	1.95	32.44	59.63	0.47
RIVER-1	Reach-1	354	Max WS	64.70	185.00	186.45		186.53	0.010785	2.38	27.15	55.77	0.60
RIVER-1	Reach-1	353.*	Max WS	66.98	184.06	185.27		185.33	0.015125	2.01	33.28	113.76	0.66
RIVER-1	Reach-1	352	Max WS	63.83	183.12	184.24		184.26	0.007366	1.21	52.71	225.08	0.44
RIVER-1	Reach-1	351.*	Max WS	71.97	181.56	183.23		183.28	0.012426	1.83	39.24	132.99	0.59
RIVER-1	Reach-1	350	Max WS	74.60	180.00	182.22		182.28	0.008405	1.98	37.60	84.12	0.52
RIVER-1	Reach-1	349.*	Max WS	77.00	179.00	181.42		181.50	0.007664	2.30	33.50	55.83	0.52
RIVER-1	Reach-1	348	Max WS	79.49	178.00	180.76		180.83	0.006036	2.11	37.68	59.47	0.47
RIVER-1	Reach-1	347.*	Max WS	82.13	177.50	180.19		180.26	0.005679	2.10	39.16	59.78	0.46
RIVER-1	Reach-1	346	Max WS	84.79	177.00	179.50		179.59	0.007680	2.41	35.23	54.89	0.53
RIVER-1	Reach-1	345.*	Max WS	87.13	176.50	178.86		178.95	0.005251	2.30	37.91	47.63	0.45
RIVER-1	Reach-1	344	Max WS	89.49	176.00	178.35		178.43	0.005397	2.25	39.83	52.77	0.46

RIVER-1	Reach-1	343.*	Max WS	92.90	175.50	177.84		177.93	0.005154	2.41	38.57	44.50	0.46
RIVER-1	Reach-1	342	Max WS	96.35	175.00	177.37		177.45	0.004561	2.36	40.86	44.49	0.43
RIVER-1	Reach-1	341.*	Max WS	99.11	174.90	176.95		177.01	0.004547	1.96	50.50	72.52	0.41
RIVER-1	Reach-1	340	Max WS	101.73	174.80	176.66		176.68	0.002132	1.28	79.65	123.56	0.28
RIVER-1	Reach-1	339.*	Max WS	104.65	174.55	176.05		176.11	0.009923	2.07	50.56	120.64	0.56
RIVER-1	Reach-1	338	Max WS	107.40	174.30	175.57		175.61	0.004267	1.55	69.25	135.38	0.38
RIVER-1	Reach-1	337.*	Max WS	109.73	173.65	175.23		175.28	0.005451	1.79	61.27	115.98	0.43
RIVER-1	Reach-1	336	Max WS	112.03	173.00	174.78		174.83	0.004076	1.76	63.80	99.97	0.39
RIVER-1	Reach-1	335.*	Max WS	114.14	172.50	174.47		174.51	0.002407	1.63	70.23	83.21	0.31
RIVER-1	Reach-1	334	Max WS	116.26	172.00	174.13		174.22	0.003692	2.33	50.31	55.27	0.40
RIVER-1	Reach-1	333.*	Max WS	118.86	171.60	173.78		173.86	0.003539	2.29	51.88	48.93	0.39
RIVER-1	Reach-1	332	Max WS	121.45	171.19	173.40		173.48	0.003970	2.33	52.18	52.36	0.41
RIVER-1	Reach-1	331.*	Max WS	123.84	171.10	173.04		173.11	0.003504	2.17	57.00	57.89	0.39
RIVER-1	Reach-1	330	Max WS	126.21	171.00	172.69		172.76	0.003586	2.04	61.78	70.09	0.38
RIVER-1	Reach-1	329.*	Max WS	128.74	170.50	172.34		172.40	0.003458	2.09	61.69	65.90	0.38
RIVER-1	Reach-1	328	Max WS	131.26	170.00	171.95		172.03	0.004119	2.29	57.30	60.33	0.41
RIVER-1	Reach-1	327.*	Max WS	133.71	169.50	171.20		171.38	0.009642	3.38	44.53	97.64	0.63
RIVER-1	Reach-1	326	Max WS	136.15	169.00	170.57		170.66	0.005112	2.79	74.52	137.97	0.47
RIVER-1	Reach-1	325.*	Max WS	138.83	168.50	169.98		170.09	0.006649	3.01	72.79	144.38	0.53
RIVER-1	Reach-1	324	Max WS	141.49	168.00	169.50		169.55	0.004099	2.46	103.49	197.83	0.42
RIVER-1	Reach-1	323.*	Max WS	143.14	167.02	169.12		169.21	0.004825	2.44	69.94	196.24	0.45
RIVER-1	Reach-1	322	Max WS	144.82	166.04	168.79		168.85	0.002826	1.85	78.42	86.02	0.34
RIVER-1	Reach-1	321.*	Max WS	146.47	166.02	168.00		168.18	0.011636	3.43	42.68	53.45	0.68
RIVER-1	Reach-1	320	Max WS	148.08	166.00	167.53		167.57	0.004464	2.67	123.89	252.44	0.44
RIVER-1	Reach-1	319.*	Max WS	149.40	166.00	167.30		167.33	0.002112	1.53	144.48	363.94	0.29
RIVER-1	Reach-1	318	Max WS	150.72	166.00	167.13		167.15	0.002295	1.32	134.58	498.49	0.29
RIVER-1	Reach-1	317.*	Max WS	152.11	165.50	166.93		166.95	0.002157	1.14	137.82	335.16	0.25
RIVER-1	Reach-1	316	Max WS	153.51	165.00	166.44		166.48	0.007834	1.71	89.84	171.55	0.42
RIVER-1	Reach-1	315.*	Max WS	156.08	164.50	165.71		165.77	0.006738	1.90	82.36	140.83	0.44
RIVER-1	Reach-1	314	Max WS	158.57	164.00	165.27		165.32	0.002525	1.84	110.32	232.62	0.33
RIVER-1	Reach-1	313.*	Max WS	160.89	163.50	164.91		164.99	0.004534	2.46	93.33	239.79	0.44
RIVER-1	Reach-1	312	Max WS	163.16	163.00	164.60		164.63	0.003004	1.96	157.98	350.06	0.35
RIVER-1	Reach-1	311.*	Max WS	165.48	162.50	164.08		164.17	0.007518	3.03	93.12	216.57	0.56
RIVER-1	Reach-1	310	Max WS	167.77	162.00	163.65		163.69	0.002360	1.99	144.73	227.08	0.32
RIVER-1	Reach-1	309.*	Max WS	167.73	161.26	163.10	162.84	163.28	0.009764	3.47	59.50	244.32	0.64
RIVER-1	Reach-1	308	Max WS	167.70	160.51	162.75		162.78	0.001308	1.56	146.61	163.47	0.24
RIVER-1	Reach-1	307.*	Max WS	168.10	159.76	162.54		162.62	0.002993	2.31	93.06	333.29	0.37
RIVER-1	Reach-1	306	Max WS	168.79	159.00	162.12		162.27	0.006257	3.11	74.84	407.38	0.52
RIVER-1	Reach-1	305.*	Max WS	170.24	159.50	161.63		161.76	0.006666	2.90	82.10	438.81	0.53
RIVER-1	Reach-1	304	Max WS	171.19	160.00	161.37		161.39	0.001687	1.47	235.42	690.04	0.27
RIVER-1	Reach-1	303.*	Max WS	172.44	159.50	161.24		161.26	0.001497	1.37	189.06	650.34	0.25
RIVER-1	Reach-1	302	Max WS	173.95	159.00	161.14		161.16	0.000844	1.06	194.39	645.65	0.19
RIVER-1	Reach-1	301	Max WS	176.04	158.00	160.86		160.92	0.004387	1.90	92.55	135.47	0.41
RIVER-1	Reach-1	300	Max WS	177.09	158.00	160.50		160.61	0.003854	3.10	109.00	223.78	0.43
RIVER-1	Reach-1	299.*	Max WS	178.36	158.31	160.26		160.32	0.002180	1.94	100.24	135.34	0.31
RIVER-1	Reach-1	298	Max WS	179.43	158.62	160.06		160.10	0.002378	1.63	110.55	150.08	0.31
RIVER-1	Reach-1	297	Max WS	180.60	158.00	159.87		159.90	0.001733	2.03	202.27	403.29	0.29
RIVER-1	Reach-1	296	Max WS	181.95	158.00	159.77		159.79	0.000782	1.24	272.31	388.02	0.19
RIVER-1	Reach-1	295	Max WS	183.99	158.00	159.73		159.73	0.000278	0.72	402.48	546.12	0.11
RIVER-1	Reach-1	294	Max WS	185.94	158.01	159.55		159.61	0.002918	2.14	118.19	196.33	0.36
RIVER-1	Reach-1	293.*	Max WS	188.26	157.51	159.26		159.31	0.002853	1.94	108.62	182.31	0.35
RIVER-1	Reach-1	292	Max WS	190.52	157.00	159.00		159.04	0.002581	1.71	111.22	128.30	0.32
RIVER-1	Reach-1	291.*	Max WS	192.77	157.07	158.80		158.83	0.001638	1.38	139.19	157.36	0.26
RIVER-1	Reach-1	290	Max WS	193.44	157.13	158.57		158.60	0.002935	1.55	124.87	184.80	0.33
RIVER-1	Reach-1	289	Max WS	193.49	157.00	158.38		158.40	0.001227	1.30	223.07	435.35	0.23
RIVER-1	Reach-1	288	Max WS	194.85	156.00	158.32		158.32	0.000288	0.94	429.02	509.09	0.12
RIVER-1	Reach-1	287.*	Max WS	196.69	156.00	158.28		158.29	0.000518	1.27	342.58	466.40	0.16
RIVER-1	Reach-1	286	Max WS	198.68	156.00	158.21		158.23	0.000837	1.63	282.02	418.97	0.21
RIVER-1	Reach-1	285.*	Max WS	199.46	155.50	158.05		158.16	0.003254	2.71	100.40	164.76	0.36
RIVER-1	Reach-1	284	Max WS	200.26	155.00	157.68		157.80	0.004857	2.81	71.18	44.46	0.39
RIVER-1	Reach-1	283.*	Max WS	201.70	154.75	157.34		157.42	0.002876	2.20	91.75	65.82	0.33
RIVER-1	Reach-1	282	Max WS	203.13	154.50	157.12		157.18	0.002174	1.95	107.66	140.43	0.31
RIVER-1	Reach-1	281.*	Max WS	205.10	154.25	156.90		156.95	0.002388	1.86	110.11	104.59	0.32
RIVER-1	Reach-1	280	Max WS	207.02	154.00	156.59		156.65	0.003712	2.07	100.12	112.95	0.39
RIVER-1	Reach-1	279.*	Max WS	208.92	153.25	156.17		156.26	0.004243	2.45	85.29	82.93	0.43
RIVER-1	Reach-1	278	Max WS	210.85	152.50	155.71		155.84	0.004296	2.98	70.86	51.45	0.45
RIVER-1	Reach-1	277.*	Max WS	212.30	152.45	155.36		155.43	0.004084	2.19	97.14	91.64	0.37
RIVER-1	Reach-1	276	Max WS	213.73	152.40	154.89		154.95	0.005858	2.02	105.56	125.32	0.39
RIVER-1	Reach-1	275.*	Max WS	215.63	151.90	154.38		154.44	0.004926	1.97	109.64	119.48	0.36

RIVER-1	Reach-1	274	Max WS	217.43	151.40	154.03		154.08	0.003013	1.68	130.49	171.51	0.29
RIVER-1	Reach-1	273.*	Max WS	218.54	151.30	153.84		153.87	0.001689	1.39	171.52	225.66	0.22
RIVER-1	Reach-1	272	Max WS	219.71	151.20	153.75		153.76	0.000610	0.96	260.84	245.09	0.14
RIVER-1	Reach-1	271.*	Max WS	220.43	150.85	153.65		153.68	0.001329	1.24	187.07	247.08	0.20
RIVER-1	Reach-1	270	Max WS	221.18	150.50	153.37		153.43	0.003981	1.91	116.02	112.90	0.33
RIVER-1	Reach-1	269.*	Max WS	223.06	150.12	152.99		153.04	0.003754	1.92	116.18	106.99	0.32
RIVER-1	Reach-1	268.*	Max WS	224.93	149.75	152.62		152.68	0.003614	1.96	114.69	99.36	0.32
RIVER-1	Reach-1	267.*	Max WS	226.80	149.38	152.24		152.31	0.003754	2.08	109.28	89.40	0.33
RIVER-1	Reach-1	266	Max WS	228.68	149.00	151.77		151.87	0.005191	2.47	92.46	73.92	0.39
RIVER-1	Reach-1	265.*	Max WS	230.35	148.62	151.31		151.40	0.004080	2.39	96.50	68.12	0.35
RIVER-1	Reach-1	264	Max WS	232.02	148.25	150.78		150.91	0.005918	2.79	83.11	61.16	0.42
RIVER-1	Reach-1	263.*	Max WS	233.85	147.84	150.19		150.27	0.006873	2.27	102.80	115.53	0.42
RIVER-1	Reach-1	262	Max WS	235.67	147.43	149.57		149.63	0.006089	1.92	122.64	162.16	0.39
RIVER-1	Reach-1	261.*	Max WS	238.19	146.71	149.03		149.10	0.004693	2.06	115.56	113.79	0.36
RIVER-1	Reach-1	260	Max WS	240.70	146.00	148.61		148.67	0.003542	2.27	137.72	171.42	0.33
RIVER-1	Reach-1	259.*	Max WS	241.09	146.00	148.05		148.23	0.009552	3.50	75.23	84.81	0.54
RIVER-1	Reach-1	258	Max WS	241.48	146.00	147.73		147.78	0.003377	2.10	147.77	182.68	0.32
RIVER-1	Reach-1	257.*	Max WS	243.02	145.50	147.45		147.50	0.003065	1.88	159.28	216.08	0.30
RIVER-1	Reach-1	256	Max WS	244.53	145.00	147.07		147.13	0.005297	2.11	137.20	277.52	0.38
RIVER-1	Reach-1	255.*	Max WS	245.69	144.50	146.61		146.68	0.004882	2.14	124.31	185.57	0.37
RIVER-1	Reach-1	254	Max WS	246.85	144.00	145.99		146.09	0.007474	2.50	98.92	103.15	0.45
RIVER-1	Reach-1	253.*	Max WS	247.99	143.00	145.12		145.25	0.009470	2.91	88.76	135.86	0.51
RIVER-1	Reach-1	252	Max WS	249.09	142.00	144.62		144.68	0.003373	2.19	140.75	180.01	0.32
RIVER-1	Reach-1	251.*	Max WS	251.90	141.75	144.18		144.27	0.004567	2.54	132.10	254.00	0.37
RIVER-1	Reach-1	250	Max WS	254.61	141.50	143.82		143.85	0.002478	1.93	217.59	426.30	0.28
RIVER-1	Reach-1	249.*	Max WS	255.97	141.25	143.60		143.64	0.002901	1.91	198.89	392.09	0.29
RIVER-1	Reach-1	248	Max WS	257.33	141.00	143.30		143.37	0.004453	2.26	154.07	371.43	0.36
RIVER-1	Reach-1	247.*	Max WS	259.76	140.75	142.92		142.96	0.003165	1.93	189.53	303.89	0.31
RIVER-1	Reach-1	246	Max WS	262.27	140.50	142.71		142.72	0.000982	1.31	274.48	277.18	0.18
RIVER-1	Reach-1	245.*	Max WS	263.37	139.75	142.42		142.55	0.005520	3.38	110.83	135.00	0.43
RIVER-1	Reach-1	244	Max WS	264.48	139.00	142.12		142.21	0.004719	3.32	143.22	206.54	0.39
RIVER-1	Reach-1	243.*	Max WS	265.25	139.50	141.89		141.97	0.003575	2.54	141.97	178.97	0.34
RIVER-1	Reach-1	242	Max WS	266.01	140.00	141.66		141.71	0.003523	2.01	166.34	227.82	0.32
RIVER-1	Reach-1	241.*	Max WS	267.54	139.50	141.34		141.39	0.003960	2.19	156.44	206.90	0.34
RIVER-1	Reach-1	240	Max WS	269.08	139.00	141.05		141.10	0.003259	2.31	156.48	190.87	0.32
RIVER-1	Reach-1	239.*	Max WS	270.81	138.50	140.76		140.80	0.003418	2.07	175.95	283.56	0.32
RIVER-1	Reach-1	238	Max WS	272.54	138.00	140.34		140.40	0.005987	2.31	161.78	325.29	0.40
RIVER-1	Reach-1	237.*	Max WS	273.80	137.50	139.88		139.95	0.006477	2.57	157.16	327.49	0.43
RIVER-1	Reach-1	236	Max WS	275.04	137.00	139.49		139.55	0.005049	2.48	177.92	362.24	0.38
RIVER-1	Reach-1	235.*	Max WS	277.17	136.02	139.04		139.11	0.003553	2.58	174.47	319.48	0.34
RIVER-1	Reach-1	234	Max WS	279.28	135.04	138.83		138.85	0.000962	1.67	292.02	379.79	0.19
RIVER-1	Reach-1	233.*	Max WS	280.64	135.02	138.74		138.77	0.001365	1.96	274.07	406.01	0.22
RIVER-1	Reach-1	232	Max WS	281.98	135.00	138.30		138.56	0.010240	5.01	125.76	414.61	0.57
RIVER-1	Reach-1	231.*	Max WS	282.99	135.00	137.99		138.06	0.003441	2.83	211.53	445.40	0.34
RIVER-1	Reach-1	230	Max WS	284.06	135.00	137.91		137.91	0.000519	1.13	446.13	541.57	0.13
RIVER-1	Reach-1	229.*	Max WS	313.75	134.50	137.83		137.84	0.000831	1.54	397.45	525.55	0.17
RIVER-1	Reach-1	228	Max WS	315.70	134.00	137.69		137.73	0.001427	2.12	319.61	497.76	0.22
RIVER-1	Reach-1	227.*	Max WS	317.25	133.85	137.56		137.59	0.001619	2.05	300.54	463.25	0.23
RIVER-1	Reach-1	226	Max WS	318.84	133.70	137.22		137.30	0.005740	2.97	191.33	406.54	0.41
RIVER-1	Reach-1	225.*	Max WS	319.68	133.48	136.89		136.99	0.005743	3.33	179.29	355.52	0.43
RIVER-1	Reach-1	224	Max WS	320.52	133.25	136.58		136.68	0.005686	3.62	178.68	338.68	0.43
RIVER-1	Reach-1	223.*	Max WS	321.64	133.12	136.20		136.29	0.006062	3.45	181.99	343.32	0.44
RIVER-1	Reach-1	222	Max WS	322.71	133.00	135.94		135.98	0.003063	2.40	241.26	372.01	0.31
RIVER-1	Reach-1	221.*	Max WS	323.75	132.70	135.76		135.81	0.002750	2.22	245.09	391.52	0.30
RIVER-1	Reach-1	220	Max WS	324.73	132.40	135.54		135.59	0.004176	2.36	214.11	402.83	0.35
RIVER-1	Reach-1	219.*	Max WS	324.94	131.80	135.36		135.44	0.003275	2.66	190.87	305.33	0.33
RIVER-1	Reach-1	218	Max WS	325.18	131.20	135.32		135.34	0.000983	1.80	309.00	322.94	0.19
RIVER-1	Reach-1	217.*	Max WS	326.65	131.98	135.22		135.25	0.001297	1.90	281.77	326.41	0.21
RIVER-1	Reach-1	216	Max WS	328.14	132.75	135.09		135.12	0.001865	1.93	249.35	323.30	0.25
RIVER-1	Reach-1	215.*	Max WS	328.95	132.62	134.81		134.93	0.005734	3.23	157.13	283.42	0.43
RIVER-1	Reach-1	214	Max WS	329.67	132.50	134.54		134.60	0.003604	2.40	203.09	325.28	0.34
RIVER-1	Reach-1	213.*	Max WS	330.55	131.88	134.36		134.41	0.001702	2.07	263.68	348.82	0.27
RIVER-1	Reach-1	212	Max WS	331.51	131.25	134.30		134.32	0.000609	1.48	411.85	387.85	0.18
RIVER-1	Reach-1	211.*	Max WS	331.49	131.24	134.21		134.25	0.001562	2.26	271.73	283.69	0.29
RIVER-1	Reach-1	210	Max WS	331.45	131.23	133.91		134.01	0.005846	3.83	175.71	222.99	0.52
RIVER-1	Reach-1	209.44	Max WS	331.43	131.20	133.33	133.18	133.68	0.010349	5.47	96.10	125.02	0.73
RIVER-1	Reach-1	209.43	Inl Struct										
RIVER-1	Reach-1	209.41	Max WS	331.43	129.05	132.88		133.04	0.000766	3.25	122.49	86.51	0.33
RIVER-1	Reach-1	209.24	Max WS	331.42	129.02	132.74		133.03	0.000915	4.32	76.75	77.95	0.39

RIVER-1	Reach-1	209.23		Culvert								
RIVER-1	Reach-1	208.43	Max WS	331.40	128.67	132.66	132.83	0.000480	3.28	101.17	64.26	0.29
RIVER-1	Reach-1	205.91	Max WS	331.39	129.85	132.38	132.71	0.002576	4.66	71.12	36.29	0.59
RIVER-1	Reach-1	205.49	Max WS	331.36	129.75	132.27	132.61	0.002586	4.66	71.17	36.47	0.59
RIVER-1	Reach-1	204.965*	Max WS	331.35	129.62	132.14	132.47	0.002577	4.64	71.42	36.71	0.59
RIVER-1	Reach-1	204.44	Max WS	331.35	129.49	132.01	132.34	0.002564	4.62	71.72	36.97	0.58
RIVER-1	Reach-1	203.626*	Max WS	331.31	129.29	131.80	132.13	0.002566	4.61	71.88	37.23	0.58
RIVER-1	Reach-1	202.813*	Max WS	331.30	129.08	131.60	131.93	0.002499	4.55	72.75	37.63	0.58
RIVER-1	Reach-1	202	Max WS	331.26	128.88	131.41	131.72	0.002469	4.52	73.26	37.98	0.57
RIVER-1	Reach-1	201.36	Max WS	331.25	128.72	131.25	131.57	0.002496	4.55	72.73	37.57	0.58
RIVER-1	Reach-1	200.405*	Max WS	331.20	128.48	131.01	131.33	0.002477	4.55	72.83	37.49	0.57
RIVER-1	Reach-1	199.451*	Max WS	331.14	128.24	130.79	131.10	0.002438	4.53	73.16	37.48	0.57
RIVER-1	Reach-1	198.497*	Max WS	331.07	128.00	130.56	130.88	0.002383	4.49	73.67	37.47	0.56
RIVER-1	Reach-1	197.542*	Max WS	330.99	127.76	130.35	130.66	0.002293	4.44	74.59	37.56	0.55
RIVER-1	Reach-1	196.588*	Max WS	330.90	127.52	130.15	130.45	0.002169	4.36	75.95	37.71	0.54
RIVER-1	Reach-1	195.634*	Max WS	330.67	127.28	129.97	130.25	0.002000	4.24	78.04	38.00	0.52
RIVER-1	Reach-1	194.68*	Max WS	330.37	127.04	129.81	130.07	0.001801	4.09	80.85	38.39	0.50
RIVER-1	Reach-1	193.725*	Max WS	329.79	126.81	129.67	129.91	0.001599	3.92	84.12	38.87	0.47
RIVER-1	Reach-1	192.771*	Max WS	329.06	126.57	129.55	129.77	0.001358	3.70	88.92	39.60	0.44
RIVER-1	Reach-1	191.817*	Max WS	327.87	126.33	129.46	129.65	0.001127	3.46	94.65	40.43	0.40
RIVER-1	Reach-1	190.862*	Max WS	326.84	126.09	129.39	129.55	0.000923	3.23	101.29	41.40	0.36
RIVER-1	Reach-1	189.908*	Max WS	325.68	125.85	129.33	129.47	0.000750	3.00	108.66	42.42	0.33
RIVER-1	Reach-1	188.954*	Max WS	324.42	125.61	129.29	129.41	0.000606	2.78	116.83	43.55	0.30
RIVER-1	Reach-1	188	Max WS	324.41	125.37	129.25	129.35	0.000494	2.58	125.55	44.70	0.27
RIVER-1	Reach-1	187.7	Max WS	324.41	125.29	129.26	129.34	0.000330	2.28	142.39	44.50	0.22
RIVER-1	Reach-1	187.68		Lat Struct								
RIVER-1	Reach-1	187.65	Max WS	323.43	125.27	129.28	129.34	0.000246	2.02	162.16	51.06	0.20
RIVER-1	Reach-1	187.2	Max WS	383.96	125.15	129.25	129.31	0.000188	1.85	209.59	61.54	0.17
RIVER-1	Reach-1	187.15	Max WS	385.83	125.13	129.25	129.30	0.000197	1.87	206.41	59.81	0.18
RIVER-1	Reach-1	187	Max WS	385.78	125.09	129.26	129.30	0.000158	1.68	229.10	66.05	0.16
RIVER-1	Reach-1	186.81	Max WS	385.73	123.29	129.15	129.31	0.000269	3.17	121.84	69.77	0.23
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	186	Max WS	385.64	122.98	129.06	129.20	0.000233	3.02	127.70	148.53	0.22
RIVER-1	Reach-1	185.25*	Max WS	385.71	124.49	129.11	129.17	0.000400	2.10	289.72	226.97	0.20
RIVER-1	Reach-1	184.5	Max WS	385.63	126.00	129.09	129.12	0.001191	2.17	370.12	367.61	0.25
RIVER-1	Reach-1	184	Max WS	389.89	126.00	129.01	129.05	0.001211	2.35	350.15	360.20	0.26
RIVER-1	Reach-1	183.*	Max WS	389.95	126.00	128.93	128.97	0.001463	2.35	331.18	341.89	0.26
RIVER-1	Reach-1	182	Max WS	390.02	126.00	128.88	128.90	0.001037	1.83	363.30	334.03	0.20
RIVER-1	Reach-1	181.*	Max WS	390.26	126.00	128.73	128.77	0.001781	2.25	283.87	284.91	0.25
RIVER-1	Reach-1	180	Max WS	390.43	126.00	128.47	128.54	0.003281	2.76	226.84	279.40	0.34
RIVER-1	Reach-1	179.*	Max WS	390.48	125.00	128.20	128.26	0.002530	2.63	262.81	342.98	0.30
RIVER-1	Reach-1	178	Max WS	390.54	124.00	128.07	128.09	0.000836	1.61	420.01	426.21	0.17
RIVER-1	Reach-1	177.*	Max WS	390.80	124.00	127.91	127.94	0.001351	1.90	349.67	419.83	0.22
RIVER-1	Reach-1	176	Max WS	391.12	124.00	127.58	127.62	0.003569	2.31	266.38	430.17	0.33
RIVER-1	Reach-1	175.*	Max WS	391.20	123.50	127.30	127.38	0.004170	2.82	241.12	438.29	0.37
RIVER-1	Reach-1	174	Max WS	390.96	123.00	127.06	127.14	0.003656	3.06	259.24	549.19	0.35
RIVER-1	Reach-1	173.*	Max WS	390.72	123.50	126.93	126.97	0.001957	2.23	365.73	614.77	0.26
RIVER-1	Reach-1	172	Max WS	390.69	124.00	126.89	126.89	0.000516	1.15	625.90	738.47	0.13
RIVER-1	Reach-1	171.*	Max WS	391.58	124.00	126.80	126.81	0.000899	1.48	533.15	769.19	0.17
RIVER-1	Reach-1	170	Max WS	392.53	124.00	126.67	126.69	0.001477	1.82	434.81	673.41	0.22
RIVER-1	Reach-1	169.*	Max WS	392.88	123.50	126.54	126.59	0.002755	2.65	332.88	667.91	0.31
RIVER-1	Reach-1	168	Max WS	393.29	123.00	126.41	126.45	0.002479	2.60	325.30	551.17	0.29
RIVER-1	Reach-1	167.*	Max WS	393.63	122.50	126.27	126.31	0.001894	2.46	355.31	592.24	0.26
RIVER-1	Reach-1	166	Max WS	394.04	122.00	126.18	126.20	0.001075	1.96	438.70	654.30	0.20
RIVER-1	Reach-1	165.*	Max WS	395.77	121.00	125.95	125.98	0.001486	1.89	377.28	620.14	0.22
RIVER-1	Reach-1	164	Max WS	397.58	120.00	125.74	125.75	0.001175	1.31	463.15	680.72	0.19
RIVER-1	Reach-1	163.*	Max WS	398.01	120.00	125.61	125.64	0.001657	1.56	403.78	738.35	0.22
RIVER-1	Reach-1	162	Max WS	398.80	120.00	125.26	125.35	0.005991	2.66	216.94	674.37	0.41
RIVER-1	Reach-1	161.*	Max WS	399.23	120.40	124.89	124.96	0.002881	2.33	277.83	616.49	0.30
RIVER-1	Reach-1	160	Max WS	399.63	120.79	124.73	124.76	0.000984	1.70	449.28	644.43	0.19
RIVER-1	Reach-1	159.*	Max WS	399.56	120.40	124.65	124.68	0.000821	1.57	466.10	676.01	0.17
RIVER-1	Reach-1	158	Max WS	399.53	120.00	124.59	124.61	0.000657	1.41	500.47	733.24	0.16
RIVER-1	Reach-1	157.*	Max WS	399.49	119.50	124.53	124.55	0.001055	1.58	434.34	741.56	0.19
RIVER-1	Reach-1	156	Max WS	399.44	119.00	124.29	124.39	0.005434	2.70	230.26	703.86	0.40
RIVER-1	Reach-1	155.*	Max WS	400.07	119.00	123.94	124.01	0.002310	2.46	291.95	649.75	0.28
RIVER-1	Reach-1	154	Max WS	400.67	119.00	123.76	123.78	0.001226	2.11	445.17	688.13	0.20
RIVER-1	Reach-1	153.*	Max WS	401.11	119.00	123.66	123.69	0.001176	1.83	450.78	773.99	0.20
RIVER-1	Reach-1	152	Max WS	401.56	119.00	123.57	123.59	0.001337	1.65	456.56	869.51	0.21
RIVER-1	Reach-1	151.*	Max WS	402.36	119.00	123.42	123.45	0.001667	1.59	404.79	846.23	0.23

RIVER-1	Reach-1	150	Max WS	403.02	119.00	123.14	123.19	0.004230	2.03	251.78	658.74	0.34
RIVER-1	Reach-1	149.*	Max WS	403.61	118.50	122.89	122.93	0.001809	1.92	323.50	701.41	0.25
RIVER-1	Reach-1	148	Max WS	404.30	118.00	122.74	122.77	0.001507	2.29	395.63	660.00	0.23
RIVER-1	Reach-1	147.*	Max WS	404.83	117.92	122.60	122.64	0.002144	2.44	381.93	868.13	0.27
RIVER-1	Reach-1	146	Max WS	405.33	117.83	122.39	122.46	0.004404	2.95	320.17	1007.12	0.37
RIVER-1	Reach-1	145.*	Max WS	405.90	117.92	122.19	122.23	0.001945	1.84	341.98	957.95	0.25
RIVER-1	Reach-1	144	Max WS	406.23	118.00	121.97	122.01	0.003312	1.77	307.93	707.17	0.30
RIVER-1	Reach-1	143.*	Max WS	406.66	117.50	121.80	121.82	0.000907	1.49	443.85	884.90	0.18
RIVER-1	Reach-1	142	Max WS	407.23	117.00	121.72	121.74	0.001010	1.97	524.75	880.98	0.19
RIVER-1	Reach-1	141.*	Max WS	407.85	117.00	121.59	121.63	0.001640	2.49	440.57	912.47	0.24
RIVER-1	Reach-1	140	Max WS	408.19	117.00	121.39	121.48	0.003272	3.42	340.88	1033.89	0.33
RIVER-1	Reach-1	139.*	Max WS	407.99	117.50	121.23	121.28	0.002077	2.52	402.97	922.38	0.27
RIVER-1	Reach-1	138	Max WS	408.03	118.00	121.15	121.17	0.000936	1.59	549.88	947.49	0.18
RIVER-1	Reach-1	137.*	Max WS	408.32	118.00	121.07	121.09	0.001210	1.69	476.39	831.48	0.21
RIVER-1	Reach-1	136	Max WS	408.66	118.00	120.95	120.97	0.001535	1.71	387.55	541.68	0.23
RIVER-1	Reach-1	135.*	Max WS	409.00	117.50	120.84	120.86	0.001102	1.36	457.92	651.40	0.19
RIVER-1	Reach-1	134	Max WS	409.36	117.00	120.76	120.78	0.000770	1.08	542.22	726.72	0.15
RIVER-1	Reach-1	133.*	Max WS	409.92	117.00	120.68	120.69	0.000923	1.16	462.33	636.28	0.17
RIVER-1	Reach-1	132	Max WS	410.50	117.00	120.60	120.61	0.000733	1.03	477.04	572.84	0.15
RIVER-1	Reach-1	131.*	Max WS	410.81	117.00	120.53	120.54	0.000975	1.12	441.55	582.66	0.17
RIVER-1	Reach-1	130	Max WS	411.11	117.00	120.45	120.47	0.000973	1.08	500.11	794.89	0.17
RIVER-1	Reach-1	129.*	Max WS	411.10	117.00	120.37	120.39	0.001428	1.27	432.02	808.36	0.20
RIVER-1	Reach-1	128	Max WS	411.08	117.00	120.09	120.16	0.005355	2.12	219.38	568.24	0.38
RIVER-1	Reach-1	127.*	Max WS	411.04	116.71	119.81	119.87	0.003287	2.16	282.51	639.02	0.32
RIVER-1	Reach-1	126	Max WS	410.99	116.42	119.74	119.76	0.001443	1.90	451.99	687.05	0.22
RIVER-1	Reach-1	125.*	Max WS	410.99	116.21	119.71	119.73	0.001459	1.72	456.32	749.42	0.22
RIVER-1	Reach-1	124	Max WS	410.98	116.00	119.68	119.70	0.001047	1.32	524.67	799.27	0.18
RIVER-1	Reach-1	123.*	Max WS	410.95	116.18	119.61	119.63	0.001365	1.62	471.28	802.19	0.21
RIVER-1	Reach-1	122	Max WS	380.75	116.35	119.53	119.55	0.001533	1.73	453.10	928.94	0.22
RIVER-1	Reach-1	121.*	Max WS	448.34	115.68	119.31	119.36	0.002836	2.54	342.36	593.42	0.31
RIVER-1	Reach-1	120	Max WS	448.03	115.00	119.14	119.18	0.001471	2.20	404.84	563.46	0.23
RIVER-1	Reach-1	119.*	Max WS	447.65	114.50	118.99	119.06	0.001939	2.83	318.26	397.86	0.30
RIVER-1	Reach-1	118	Max WS	435.95	114.00	118.70	118.88	0.003164	3.96	207.27	262.79	0.42
RIVER-1	Reach-1	117.*	Max WS	435.87	114.50	118.64	118.70	0.001194	2.19	283.78	308.02	0.26
RIVER-1	Reach-1	116	Max WS	435.67	115.00	118.53	118.59	0.002018	2.08	271.30	347.09	0.31
RIVER-1	Reach-1	115.*	Max WS	434.98	114.50	118.40	118.44	0.001750	1.73	286.56	360.39	0.28
RIVER-1	Reach-1	114	Max WS	433.46	114.00	118.27	118.30	0.001487	1.42	326.37	406.97	0.25
RIVER-1	Reach-2	112.05	Max WS	825.64	112.00	118.27	118.35	0.001384	2.35	407.66	447.13	0.28
RIVER-1	Reach-2	112	Max WS	825.64	112.00	118.26	118.35	0.001401	2.36	404.40	445.23	0.28
RIVER-1	Reach-2	111.95	Lat Struct									
RIVER-1	Reach-2	111.*	Max WS	825.45	113.00	118.13	118.21	0.001934	2.34	411.27	389.83	0.31
RIVER-1	Reach-2	110	Max WS	825.33	114.00	118.00	118.06	0.002155	2.16	494.63	506.63	0.32
RIVER-1	Reach-2	109.*	Max WS	825.77	113.50	117.72	117.87	0.002689	3.55	391.93	406.30	0.39
RIVER-1	Reach-2	108	Max WS	826.01	113.00	117.48	117.64	0.002315	3.79	422.12	439.75	0.37
RIVER-1	Reach-2	107.*	Max WS	825.94	112.00	117.39	117.51	0.001639	3.26	504.80	515.46	0.32
RIVER-1	Reach-2	106	Max WS	826.05	111.00	117.34	117.42	0.001029	2.88	627.33	591.78	0.26
RIVER-1	Reach-2	105.*	Max WS	826.13	110.50	117.25	117.35	0.001378	3.25	574.06	557.28	0.29
RIVER-1	Reach-2	104	Max WS	825.92	110.00	117.16	117.28	0.001395	3.60	549.77	526.69	0.29
RIVER-1	Reach-2	103.*	Max WS	825.80	110.00	117.13	117.20	0.001564	2.92	594.60	547.99	0.30
RIVER-1	Reach-2	102	Max WS	720.36	110.00	117.12	117.16	0.000448	2.06	824.18	602.09	0.17
RIVER-1	Reach-2	101.*	Max WS	826.26	110.50	117.08	117.12	0.000638	2.40	811.43	595.07	0.20
RIVER-1	Reach-2	100	Max WS	826.60	111.00	117.03	117.08	0.000689	2.44	798.84	588.22	0.21
RIVER-1	Reach-2	99.*	Max WS	827.96	111.00	116.90	116.95	0.000732	2.54	765.67	585.57	0.22
RIVER-1	Reach-2	98	Max WS	829.38	111.00	116.77	116.83	0.000788	2.65	727.16	579.41	0.23
RIVER-1	Reach-2	97.*	Max WS	830.24	110.50	116.69	116.74	0.000765	2.64	722.17	555.69	0.22
RIVER-1	Reach-2	96	Max WS	831.03	110.00	116.60	116.66	0.000757	2.63	717.72	540.30	0.22
RIVER-1	Reach-2	95.*	Max WS	831.93	109.50	116.52	116.59	0.000842	2.82	657.94	529.41	0.23
RIVER-1	Reach-2	94	Max WS	832.76	109.00	116.42	116.52	0.000924	3.00	594.78	507.40	0.24
RIVER-1	Reach-2	93.*	Max WS	833.65	109.00	116.34	116.43	0.000835	2.90	588.96	476.23	0.23
RIVER-1	Reach-2	92	Max WS	834.51	109.00	116.26	116.35	0.000766	2.83	570.80	422.33	0.23
RIVER-1	Reach-2	91.*	Max WS	835.43	108.50	116.18	116.27	0.000789	2.80	571.13	437.30	0.23
RIVER-1	Reach-2	90	Max WS	836.34	108.00	116.11	116.20	0.000812	2.77	571.77	448.61	0.23
RIVER-1	Reach-2	89.*	Max WS	837.24	108.50	116.04	116.12	0.000726	2.72	606.14	431.53	0.22
RIVER-1	Reach-2	88	Max WS	838.14	109.00	115.98	116.05	0.000658	2.67	642.97	415.95	0.21
RIVER-1	Reach-2	87.*	Max WS	838.80	108.00	115.95	115.99	0.000293	1.96	785.40	437.82	0.14
RIVER-1	Reach-2	86	Max WS	839.47	107.00	115.94	115.97	0.000142	1.47	959.72	462.86	0.10
RIVER-1	Reach-2	85.*	Max WS	839.48	107.50	115.93	115.96	0.000187	1.51	1058.28	579.33	0.12
RIVER-1	Reach-2	84	Max WS	839.45	108.00	115.93	115.94	0.000210	1.38	1234.78	704.60	0.12
RIVER-1	Reach-2	83.*	Max WS	848.60	108.50	115.90	115.93	0.000367	1.80	994.41	736.56	0.16

RIVER-1	Reach-2	82	Max WS	848.59	109.00	115.83		115.90	0.000806	2.52	711.45	777.74	0.23
RIVER-1	Reach-2	81.56	Max WS	609.78	108.22	115.77	111.92	115.83	0.000397	1.86	327.86	79.32	0.16
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	848.16	108.96	115.25		115.56	0.003596	4.45	190.48	65.46	0.46
RIVER-1	Reach-2	80.95	Max WS	848.27	108.83	115.32	112.32	115.47	0.001050	3.13	270.96	61.64	0.26
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	848.16	108.67	115.29		115.45	0.001155	3.21	264.17	63.09	0.28
RIVER-1	Reach-2	79.3849*	Max WS	847.88	108.33	115.10		115.31	0.001514	3.74	226.85	274.54	0.32
RIVER-1	Reach-2	78.39	Max WS	847.86	108.00	115.09		115.16	0.000606	2.66	585.62	327.24	0.20
RIVER-1	Reach-2	77.6566*	Max WS	847.84	107.80	115.08		115.11	0.000299	1.86	990.39	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	847.82	107.60	115.05		115.10	0.000453	2.26	902.82	750.14	0.18
RIVER-1	Reach-2	76.19	Max WS	847.80	107.40	114.97		115.08	0.000804	2.96	564.51	602.82	0.23
RIVER-1	Reach-2	75.86	Max WS	847.79	107.22	114.89	111.42	115.06	0.000991	3.33	254.54	344.85	0.26
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	847.78	106.63	114.63		114.80	0.001387	3.36	252.53	138.63	0.30
RIVER-1	Reach-2	74.7*	Max WS	847.76	106.82	114.62		114.72	0.001078	2.60	430.79	654.70	0.26
RIVER-1	Reach-2	74	Max WS	847.74	107.00	114.58		114.63	0.000940	2.02	758.64	1084.75	0.23
RIVER-1	Reach-2	73.*	Max WS	847.60	107.43	114.52		114.56	0.000559	1.84	955.45	1162.99	0.18
RIVER-1	Reach-2	72	Max WS	847.56	107.86	114.49		114.52	0.000398	1.78	1159.92	1228.07	0.16
RIVER-1	Reach-2	71.*	Max WS	989.38	107.44	114.34		114.47	0.001135	2.82	381.84	188.14	0.24
RIVER-1	Reach-2	70	Max WS	989.38	107.03	114.29		114.37	0.000728	2.21	448.08	96.70	0.18
RIVER-1	Reach-2	69.*	Max WS	989.37	107.35	114.19		114.29	0.000895	2.45	404.43	86.75	0.20
RIVER-1	Reach-2	68	Max WS	989.33	107.68	114.07		114.18	0.001178	2.70	366.90	83.72	0.23
RIVER-1	Reach-2	67	Max WS	989.33	107.40	113.88		114.04	0.001797	3.28	336.59	125.11	0.28
RIVER-1	Reach-2	66	Max WS	989.28	107.40	113.67		113.85	0.002170	3.51	310.37	117.60	0.30
RIVER-1	Reach-2	65.*	Max WS	989.28	107.20	113.52		113.66	0.001623	3.05	333.51	134.08	0.29
RIVER-1	Reach-2	64	Max WS	989.23	107.00	113.39		113.52	0.001190	2.83	349.83	104.51	0.27
RIVER-1	Reach-2	63.*	Max WS	990.38	106.81	113.26		113.39	0.001475	2.85	347.79	121.84	0.30
RIVER-1	Reach-2	62.*	Max WS	991.48	106.62	113.10		113.23	0.001726	2.85	348.78	144.01	0.32
RIVER-1	Reach-2	61.*	Max WS	992.56	106.43	112.96		113.07	0.001485	2.71	370.98	162.04	0.29
RIVER-1	Reach-2	60	Max WS	993.63	106.24	112.85		112.94	0.001153	2.45	419.15	186.29	0.26
RIVER-1	Reach-2	59.*	Max WS	995.52	106.07	112.75		112.84	0.000898	2.41	431.96	186.39	0.24
RIVER-1	Reach-2	58	Max WS	997.54	105.90	112.70		112.77	0.000498	2.23	609.73	447.71	0.19
RIVER-1	Reach-2	57.2	Max WS	999.08	107.05	112.58	110.03	112.73	0.001278	3.15	438.62	393.30	0.29
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	998.82	107.05	112.43		112.61	0.001720	3.52	362.40	368.19	0.33
RIVER-1	Reach-2	56	Max WS	1000.61	105.90	112.40		112.49	0.000663	2.36	484.36	342.12	0.21
RIVER-1	Reach-2	55.*	Max WS	1002.18	105.85	112.35		112.42	0.000636	2.10	544.12	444.19	0.20
RIVER-1	Reach-2	54	Max WS	1003.84	105.80	112.30		112.36	0.000667	1.97	578.13	539.05	0.20
RIVER-1	Reach-2	53.*	Max WS	1008.11	105.70	112.23		112.28	0.000561	1.91	689.17	353.07	0.17
RIVER-1	Reach-2	52	Max WS	1012.37	105.60	112.14		112.18	0.000700	1.99	688.86	300.35	0.17
RIVER-1	Reach-2	51.*	Max WS	1014.45	105.57	112.05		112.10	0.000839	2.22	645.44	287.34	0.20
RIVER-1	Reach-2	50.*	Max WS	1016.43	105.54	111.96		112.01	0.000944	2.43	611.10	274.03	0.22
RIVER-1	Reach-2	49.*	Max WS	1018.56	105.50	111.85		111.92	0.000963	2.61	588.19	260.35	0.23
RIVER-1	Reach-2	48	Max WS	1020.60	105.47	111.75		111.83	0.000857	2.76	578.06	246.54	0.24
RIVER-1	Reach-2	47.*	Max WS	1022.42	105.68	111.67		111.74	0.000876	2.67	619.70	279.40	0.24
RIVER-1	Reach-2	46.*	Max WS	1024.43	105.88	111.59		111.65	0.000796	2.50	682.07	315.26	0.23
RIVER-1	Reach-2	45.*	Max WS	1026.42	106.08	111.53		111.58	0.000636	2.27	770.77	351.59	0.20
RIVER-1	Reach-2	44	Max WS	1028.52	106.29	111.48		111.52	0.000458	2.02	888.00	388.07	0.17
RIVER-1	Reach-2	43.*	Max WS	1030.36	106.30	111.44		111.48	0.000405	1.88	844.72	370.33	0.17
RIVER-1	Reach-2	42.*	Max WS	1032.20	106.31	111.40		111.44	0.000386	1.77	806.28	365.46	0.16
RIVER-1	Reach-2	41.*	Max WS	1034.04	106.32	111.36		111.40	0.000393	1.69	776.81	364.05	0.16
RIVER-1	Reach-2	40	Max WS	1035.99	106.33	111.32		111.36	0.000429	1.65	751.97	364.63	0.16
RIVER-1	Reach-2	39.*	Max WS	1035.89	106.17	111.28		111.32	0.000365	1.62	824.74	381.93	0.15
RIVER-1	Reach-2	38.*	Max WS	1035.88	106.01	111.25		111.28	0.000301	1.56	955.57	435.12	0.14
RIVER-1	Reach-2	37.*	Max WS	1035.82	105.84	111.24		111.26	0.000210	1.37	1178.02	467.34	0.12
RIVER-1	Reach-2	36	Max WS	1035.85	105.68	111.21		111.23	0.000290	1.68	1065.75	484.11	0.14
RIVER-1	Reach-2	35.22	Max WS	1035.84	104.52	111.06		111.22	0.001085	3.30	314.08	68.95	0.27
RIVER-1	Reach-2	34.82	Max WS	1035.84	104.52	111.01	107.77	111.18	0.001117	3.33	310.81	68.67	0.28
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1035.70	104.30	110.47		110.82	0.003358	4.73	219.11	65.27	0.45
RIVER-1	Reach-2	33.67*	Max WS	1035.65	104.12	110.43		110.64	0.001736	3.67	282.38	75.69	0.33
RIVER-1	Reach-2	33	Max WS	1035.64	103.93	110.45		110.55	0.000746	2.62	518.29	454.78	0.22
RIVER-1	Reach-2	32.*	Max WS	1035.63	103.40	110.38		110.47	0.000753	2.41	538.82	500.39	0.22
RIVER-1	Reach-2	31.*	Max WS	1035.59	102.88	110.28		110.37	0.001108	2.51	490.18	524.95	0.26
RIVER-1	Reach-2	30	Max WS	1035.58	102.35	110.00		110.17	0.003365	3.27	316.38	166.12	0.42
RIVER-1	Reach-2	29.*	Max WS	1035.57	102.34	109.66		109.85	0.003481	3.52	320.43	453.73	0.43
RIVER-1	Reach-2	28.*	Max WS	1035.53	102.33	109.34		109.54	0.003435	3.72	381.70	662.87	0.43
RIVER-1	Reach-2	27.*	Max WS	1035.48	102.33	109.11		109.26	0.002632	3.50	539.54	776.95	0.39

RIVER-1	Reach-2	26	Max WS	1035.45	102.32	108.98		109.05	0.001500	2.86	813.85	907.59	0.30
RIVER-1	Reach-2	25.*	Max WS	1035.36	101.99	108.81		108.92	0.002268	3.31	689.06	942.31	0.36
RIVER-1	Reach-2	24.*	Max WS	1035.33	101.66	108.63		108.73	0.002531	3.27	631.08	735.43	0.37
RIVER-1	Reach-2	23.*	Max WS	1035.24	101.33	108.45		108.54	0.002647	3.11	671.93	842.60	0.37
RIVER-1	Reach-2	22	Max WS	1035.17	101.00	108.29		108.34	0.002268	2.68	770.30	966.32	0.34
RIVER-1	Reach-2	21.*	Max WS	1035.08	101.27	108.11		108.16	0.002357	2.75	738.96	827.63	0.34
RIVER-1	Reach-2	20.*	Max WS	1034.87	101.54	107.92		107.98	0.002330	2.86	735.05	762.52	0.35
RIVER-1	Reach-2	19.*	Max WS	1034.60	101.82	107.74		107.80	0.002195	2.99	741.66	731.33	0.34
RIVER-1	Reach-2	18	Max WS	1034.15	102.09	107.58		107.63	0.002034	3.07	758.24	707.66	0.33
RIVER-1	Reach-2	17.*	Max WS	1033.24	101.97	107.41		107.47	0.001890	3.08	805.17	798.49	0.32
RIVER-1	Reach-2	16.*	Max WS	1031.63	101.85	107.27		107.31	0.001650	2.83	980.01	1183.19	0.30
RIVER-1	Reach-2	15.*	Max WS	1030.72	101.73	107.18		107.20	0.000843	1.93	1261.99	1204.57	0.21
RIVER-1	Reach-2	14	Max WS	1030.01	101.61	107.14		107.14	0.000429	1.29	1594.13	1220.06	0.15
RIVER-1	Reach-2	13.*	Max WS	1029.53	101.43	107.11		107.12	0.000329	1.06	1740.25	1222.69	0.13
RIVER-1	Reach-2	12.*	Max WS	1029.10	101.26	107.09		107.09	0.000245	0.97	1896.21	1214.36	0.11
RIVER-1	Reach-2	11.*	Max WS	1029.26	101.08	107.07		107.08	0.000184	0.90	2060.84	1199.29	0.10
RIVER-1	Reach-2	10	Max WS	1029.07	100.90	107.06		107.06	0.000139	0.82	2220.50	1164.55	0.09
RIVER-1	Reach-2	9.*	Max WS	1028.88	100.75	107.04		107.05	0.000212	1.05	1837.72	1021.41	0.11
RIVER-1	Reach-2	8.*	Max WS	1028.55	100.60	107.01		107.02	0.000384	1.42	1469.85	970.52	0.15
RIVER-1	Reach-2	7.*	Max WS	1028.24	100.45	106.95		106.97	0.000678	2.03	1194.72	1116.26	0.20
RIVER-1	Reach-2	6	Max WS	1027.53	100.30	106.83		106.90	0.001454	3.12	908.57	1213.20	0.29
RIVER-1	Reach-2	5.*	Max WS	1026.93	100.15	106.71		106.78	0.001275	3.00	958.52	1284.56	0.28
RIVER-1	Reach-2	4.*	Max WS	1026.62	100.00	106.60		106.66	0.001083	2.83	1041.34	1419.82	0.26
RIVER-1	Reach-2	3.*	Max WS	1026.05	99.85	106.51		106.56	0.000896	2.62	1193.19	1692.16	0.24
RIVER-1	Reach-2	2	Max WS	1025.93	99.70	106.45		106.47	0.000560	2.11	1609.20	2205.05	0.19
RIVER-1	Reach-2	1.*	Max WS	1025.87	99.55	106.38		106.43	0.000793	2.58	1307.82	2130.68	0.23
RIVER-1	Reach-2	0	Max WS	1025.83	99.40	106.29	103.75	106.36	0.000807	2.66	1120.83	1845.28	0.23

Appendix P-2: HEC-RAS Results, Existing Conditions Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X    X    X    X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X      X    X        X
X     X  X        X    X      X   X     X    X        X
X     X  XXXXXX    XXXX       X    X    X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 10:09:44 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.38	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	600.15	157.71	163.01		163.02	0.000055	0.46	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.14	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	598.67	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.66	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.65	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	597.20	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.19	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	595.78	154.11	163.01		163.01	0.000024	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	597.17	154.05	163.00		163.01	0.000022	0.33	1827.44	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	597.15	154.00	163.00		163.01	0.000020	0.31	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.77	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02

RIVER-2	Reach-1	11300	Max WS	595.75	154.00	163.00	163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.74	154.00	163.00	163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	594.38	154.00	163.00	163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.69	153.00	163.00	163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	594.37	152.00	163.00	163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.35	152.00	163.00	163.00	0.000005	0.18	3310.35	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	594.34	152.00	163.00	163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.31	152.00	163.00	163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	595.52	152.00	163.00	163.00	0.000002	0.13	4521.19	625.06	0.01
RIVER-2	Reach-1	10662.5*	Max WS	594.27	152.00	163.00	163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.25	152.00	163.00	163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.23	151.60	163.00	163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	593.14	151.20	163.00	163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	593.12	150.80	163.00	163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.13	150.40	163.00	163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	595.01	150.00	163.00	163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.08	150.00	163.00	163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.05	150.00	163.00	163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.02	150.00	163.00	163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	593.99	150.00	163.00	163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	593.97	150.00	163.00	163.00	0.000001	0.08	7215.35	820.23	0.00
RIVER-2	Reach-1	9950	Max WS	593.94	150.00	163.00	163.00	0.000001	0.08	7505.85	842.71	0.00
RIVER-2	Reach-1	9900.*	Max WS	593.92	150.00	163.00	163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	594.67	150.00	163.00	163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.18	150.00	163.00	163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	594.53	150.00	163.00	163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	593.84	149.36	163.00	163.00	0.000000	0.06	10070.95	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.81	148.73	163.00	163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.78	148.36	163.00	163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.74	148.00	163.00	163.00	0.000000	0.04	15722.64	1830.39	0.00
RIVER-2	Reach-1	9450.*	Max WS	593.71	147.00	163.00	163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.23	146.00	163.00	163.00	0.000000	0.03	18084.44	1807.32	0.00

RIVER-2	Reach-1	9350.*	Max WS	593.91	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.62	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.55	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.49	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.46	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.43	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.38	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.39	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.33	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.28	140.56	154.39		154.57	0.003543	3.40	174.46	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004343	3.55	168.03	35.96	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.58	139.60	153.55		153.74	0.004423	3.56	168.06	36.58	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.22	139.11	153.10		153.30	0.004519	3.58	168.17	37.30	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004626	3.59	168.27	38.04	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.52	138.13	152.19		152.39	0.004699	3.60	168.47	38.51	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.18	137.64	151.72		151.93	0.004744	3.61	168.86	38.86	0.31
RIVER-2	Reach-1	7750.*	Max WS	611.84	137.15	151.25		151.45	0.004781	3.61	169.29	39.16	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.49	136.66	150.78		150.98	0.004811	3.62	169.70	39.35	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.30		150.50	0.004812	3.62	170.35	39.47	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.81	135.68	149.82		150.03	0.004804	3.62	171.05	39.53	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.49	135.19	149.35		149.55	0.004786	3.62	171.89	39.60	0.31
RIVER-2	Reach-1	7250.*	Max WS	625.12	134.70	148.86		149.06	0.004806	3.62	172.46	39.79	0.31
RIVER-2	Reach-1	7150.*	Max WS	627.78	134.21	148.34		148.54	0.004957	3.66	171.48	39.82	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.28	133.72	147.77		147.99	0.005560	3.72	169.33	42.53	0.33
RIVER-2	Reach-1	6950.*	Max WS	597.49	133.23	147.17		147.37	0.005593	3.60	166.14	44.64	0.33
RIVER-2	Reach-1	6850.*	Max WS	591.54	132.74	146.61		146.81	0.005956	3.59	164.98	47.29	0.34
RIVER-2	Reach-1	6750.*	Max WS	590.56	132.25	145.99		146.20	0.006501	3.65	161.80	48.37	0.35
RIVER-2	Reach-1	6650.*	Max WS	638.53	131.76	145.30		145.56	0.008639	4.12	155.06	47.50	0.40
RIVER-2	Reach-1	6550	Max WS	641.00	131.27	144.57		144.87	0.010112	4.37	146.71	45.57	0.43

RIVER-2	Reach-1	6466.66*	Max WS	643.06	132.84	143.92	144.15	0.007512	3.84	167.34	57.72	0.40
RIVER-2	Reach-1	6383.33*	Max WS	645.17	134.40	143.48	143.66	0.004362	3.48	185.32	52.71	0.33
RIVER-2	Reach-1	6300	Max WS	647.27	135.97	143.13	143.35	0.003358	3.69	175.26	39.14	0.31
RIVER-2	Reach-1	6250	Max WS	648.52	136.00	142.87	143.15	0.004668	4.20	154.57	36.19	0.36
RIVER-2	Reach-1	6200	Max WS	649.75	135.00	142.44	142.85	0.007155	5.14	126.53	28.34	0.43
RIVER-2	Reach-1	6100.*	Max WS	651.95	134.75	141.96	142.25	0.004959	4.29	152.09	35.58	0.37
RIVER-2	Reach-1	6000.*	Max WS	646.41	134.50	141.59	141.80	0.003698	3.65	177.09	43.49	0.32
RIVER-2	Reach-1	5900.*	Max WS	648.87	134.25	141.24	141.41	0.003095	3.25	199.68	51.96	0.29
RIVER-2	Reach-1	5800.*	Max WS	650.82	134.00	140.87	141.00	0.003596	2.98	218.10	73.60	0.31
RIVER-2	Reach-1	5700.*	Max WS	653.42	133.75	140.42	140.54	0.005511	2.79	234.23	124.53	0.36
RIVER-2	Reach-1	5600.*	Max WS	665.12	133.50	139.88	140.00	0.005893	2.75	242.79	144.98	0.36
RIVER-2	Reach-1	5500.*	Max WS	667.67	133.25	139.23	139.36	0.008288	2.94	228.91	161.28	0.42
RIVER-2	Reach-1	5400	Max WS	670.22	133.00	136.80	137.80	0.027572	8.02	83.59	28.60	0.83
RIVER-2	Reach-1	5304.54*	Max WS	672.65	132.73	135.66	135.97	0.009808	4.45	151.08	60.47	0.50
RIVER-2	Reach-1	5209.09*	Max WS	675.10	132.45	135.04	135.21	0.006349	3.30	204.58	93.59	0.39
RIVER-2	Reach-1	5113.63*	Max WS	677.57	132.18	134.56	134.67	0.005021	2.73	248.47	127.37	0.34
RIVER-2	Reach-1	5018.18*	Max WS	680.03	131.91	134.16	134.25	0.004307	2.37	286.92	162.10	0.31
RIVER-2	Reach-1	4922.72*	Max WS	682.51	131.64	133.80	133.87	0.003897	2.13	320.82	197.97	0.29
RIVER-2	Reach-1	4827.27*	Max WS	685.00	131.36	133.47	133.53	0.003706	1.95	350.70	237.07	0.28
RIVER-2	Reach-1	4731.81*	Max WS	687.47	131.09	133.14	133.20	0.003625	1.82	378.47	280.85	0.28
RIVER-2	Reach-1	4636.36*	Max WS	689.99	130.82	132.82	132.86	0.003702	1.71	402.82	331.78	0.27
RIVER-2	Reach-1	4540.90*	Max WS	692.47	130.55	132.46	132.51	0.004081	1.66	418.36	390.42	0.28
RIVER-2	Reach-1	4445.45*	Max WS	694.98	130.27	132.08	132.13	0.004750	1.65	421.29	442.84	0.30
RIVER-2	Reach-1	4350	Max WS	697.49	130.00	131.47	131.55	0.013879	2.25	309.99	457.35	0.48
RIVER-2	Reach-1	4260.*	Max WS	699.67	129.40	130.87	130.93	0.011246	2.11	333.20	467.92	0.44
RIVER-2	Reach-1	4170.*	Max WS	701.87	128.80	130.39	130.45	0.007654	1.87	376.07	469.95	0.37
RIVER-2	Reach-1	4080.*	Max WS	704.05	128.20	130.03	130.07	0.004990	1.62	433.57	484.27	0.30
RIVER-2	Reach-1	3990.*	Max WS	706.24	127.60	129.74	129.77	0.003745	1.48	477.72	495.48	0.27
RIVER-2	Reach-1	3900	Max WS	708.43	127.00	129.50	129.53	0.003241	1.40	504.92	508.27	0.25
RIVER-2	Reach-1	3800.*	Max WS	711.21	126.70	129.25	129.28	0.003234	1.41	503.78	501.74	0.25
RIVER-2	Reach-1	3700.*	Max WS	713.99	126.40	129.00	129.03	0.003203	1.42	503.96	495.68	0.25
RIVER-2	Reach-1	3600.*	Max WS	716.75	126.10	128.76	128.79	0.003143	1.42	505.82	490.30	0.25

RIVER-2	Reach-1	3500.*	Max WS	719.51	125.80	128.51	128.55	0.003041	1.41	510.26	486.12	0.24
RIVER-2	Reach-1	3400.*	Max WS	722.26	125.50	128.27	128.30	0.002966	1.40	514.17	483.45	0.24
RIVER-2	Reach-1	3300.*	Max WS	725.01	125.20	128.03	128.06	0.002920	1.40	517.21	482.16	0.24
RIVER-2	Reach-1	3200.*	Max WS	727.76	124.90	127.78	127.81	0.002898	1.40	518.82	480.41	0.24
RIVER-2	Reach-1	3100.*	Max WS	730.50	124.60	127.52	127.55	0.002911	1.41	517.82	476.93	0.24
RIVER-2	Reach-1	3000.*	Max WS	733.25	124.30	127.24	127.27	0.003130	1.44	509.40	480.75	0.25
RIVER-2	Reach-1	2900	Max WS	735.99	124.00	126.93	126.96	0.003480	1.46	505.35	507.36	0.26
RIVER-2	Reach-1	2812.5*	Max WS	738.27	123.52	126.64	126.68	0.003865	1.49	495.75	520.81	0.27
RIVER-2	Reach-1	2725.*	Max WS	740.54	123.03	126.37	126.40	0.003920	1.50	493.95	519.11	0.27
RIVER-2	Reach-1	2637.5*	Max WS	742.82	122.55	126.12	126.15	0.003687	1.47	503.95	518.81	0.26
RIVER-2	Reach-1	2550.*	Max WS	745.09	122.07	125.86	125.90	0.003503	1.45	512.40	518.02	0.26
RIVER-2	Reach-1	2462.5*	Max WS	747.36	121.58	125.59	125.62	0.003578	1.47	509.15	515.51	0.26
RIVER-2	Reach-1	2375	Max WS	749.62	121.10	125.33	125.36	0.003468	1.46	514.32	513.90	0.26
RIVER-2	Reach-1	2279.16*	Max WS	752.09	121.07	125.05	125.08	0.003355	1.43	525.06	525.48	0.25
RIVER-2	Reach-1	2183.33*	Max WS	754.55	121.03	124.76	124.79	0.003470	1.44	524.83	535.91	0.26
RIVER-2	Reach-1	2087.5*	Max WS	757.00	121.00	124.49	124.52	0.003401	1.42	533.20	546.61	0.25
RIVER-2	Reach-1	1991.66*	Max WS	759.45	120.97	124.25	124.28	0.003070	1.37	555.78	558.75	0.24
RIVER-2	Reach-1	1895.83*	Max WS	761.89	120.93	124.03	124.06	0.002647	1.30	587.47	571.56	0.23
RIVER-2	Reach-1	1800	Max WS	764.30	120.90	123.83	123.85	0.002156	1.21	630.08	580.89	0.21
RIVER-2	Reach-1	1705.*	Max WS	766.71	120.43	123.63	123.66	0.002356	1.28	601.25	549.77	0.21
RIVER-2	Reach-1	1610.*	Max WS	769.11	119.95	123.42	123.45	0.002657	1.35	569.47	522.68	0.23
RIVER-2	Reach-1	1515.*	Max WS	771.51	119.47	123.17	123.20	0.002995	1.45	534.76	502.74	0.24
RIVER-2	Reach-1	1420	Max WS	773.89	119.00	122.87	122.90	0.003632	1.60	494.42	478.63	0.27
RIVER-2	Reach-1	1324.61*	Max WS	773.86	118.62	122.54	122.58	0.003640	1.60	501.72	574.35	0.27
RIVER-2	Reach-1	1229.23*	Max WS	773.81	118.23	122.22	122.26	0.003511	1.57	518.03	580.52	0.26
RIVER-2	Reach-1	1133.84*	Max WS	773.78	117.85	121.91	121.95	0.003476	1.55	527.85	579.24	0.26
RIVER-2	Reach-1	1038.46*	Max WS	773.71	117.46	121.62	121.65	0.003449	1.52	535.56	576.00	0.26
RIVER-2	Reach-1	943.076*	Max WS	773.61	117.08	121.34	121.38	0.003376	1.48	543.83	572.31	0.26
RIVER-2	Reach-1	847.692*	Max WS	773.45	116.69	121.07	121.11	0.003369	1.46	546.97	565.81	0.25
RIVER-2	Reach-1	752.307*	Max WS	773.41	116.31	120.79	120.82	0.003306	1.49	532.79	520.57	0.25
RIVER-2	Reach-1	656.923*	Max WS	773.34	115.92	120.49	120.53	0.003330	1.56	511.34	471.81	0.26

RIVER-2	Reach-1	561.538*	Max WS	773.33	115.54	120.21		120.25	0.003395	1.61	493.05	436.42	0.26
RIVER-2	Reach-1	466.153*	Max WS	773.30	115.15	119.95		119.99	0.003292	1.64	476.63	389.54	0.26
RIVER-2	Reach-1	370.769*	Max WS	773.17	114.77	119.70		119.75	0.003509	1.71	439.58	334.33	0.27
RIVER-2	Reach-1	275.384*	Max WS	772.71	114.38	119.42		119.49	0.004877	2.03	366.62	273.01	0.32
RIVER-2	Reach-1	180	Max WS	768.53	114.00	118.91		119.07	0.005803	3.24	237.03	102.11	0.38
RIVER-1	Reach-1	372	Max WS	77.91	206.95	208.01		208.19	0.012790	3.50	24.90	44.43	0.71
RIVER-1	Reach-1	371.*	Max WS	77.89	204.98	206.02	206.02	206.31	0.029264	4.34	17.94	31.68	1.02
RIVER-1	Reach-1	370	Max WS	77.87	203.00	204.20		204.37	0.012645	3.32	23.46	32.92	0.69
RIVER-1	Reach-1	369.*	Max WS	80.65	201.50	202.68		202.91	0.018431	3.85	20.97	31.37	0.83
RIVER-1	Reach-1	368	Max WS	83.45	200.00	201.43		201.56	0.009208	2.93	28.44	37.80	0.60
RIVER-1	Reach-1	367.*	Max WS	86.32	199.00	200.40		200.56	0.011254	3.22	26.84	36.24	0.66
RIVER-1	Reach-1	366	Max WS	87.92	198.00	199.28		199.47	0.012532	3.71	31.22	68.32	0.71
RIVER-1	Reach-1	365.*	Max WS	92.23	196.50	197.87		198.11	0.017004	4.10	27.75	64.96	0.82
RIVER-1	Reach-1	364	Max WS	95.12	195.00	196.66		196.81	0.010186	3.32	36.23	65.95	0.64
RIVER-1	Reach-1	363.*	Max WS	97.22	194.14	195.40		195.58	0.018398	3.68	33.36	86.39	0.82
RIVER-1	Reach-1	362	Max WS	99.27	193.28	194.29		194.39	0.009175	2.73	48.01	121.17	0.59
RIVER-1	Reach-1	361.*	Max WS	101.12	192.51	193.40		193.53	0.013438	2.92	34.66	62.08	0.69
RIVER-1	Reach-1	360	Max WS	103.07	191.75	192.51		192.65	0.016291	2.94	35.04	71.62	0.74
RIVER-1	Reach-1	359.*	Max WS	105.97	190.38	191.41		191.51	0.014311	2.58	41.03	92.57	0.68
RIVER-1	Reach-1	358	Max WS	108.89	189.00	190.38		190.44	0.007529	2.00	54.32	110.67	0.50
RIVER-1	Reach-1	357.*	Max WS	110.92	188.00	189.30		189.41	0.014228	2.64	42.02	91.27	0.69
RIVER-1	Reach-1	356	Max WS	112.97	187.00	188.26		188.36	0.007866	2.49	45.36	68.86	0.54
RIVER-1	Reach-1	355.*	Max WS	115.27	186.00	187.60		187.68	0.006018	2.18	52.81	79.97	0.47
RIVER-1	Reach-1	354	Max WS	117.65	185.00	186.67		186.80	0.011742	2.82	41.69	70.86	0.65
RIVER-1	Reach-1	353.*	Max WS	121.51	184.06	185.41		185.50	0.014913	2.31	52.57	144.44	0.68
RIVER-1	Reach-1	352	Max WS	125.42	183.12	184.35		184.39	0.008233	1.59	78.88	243.39	0.49
RIVER-1	Reach-1	351.*	Max WS	129.85	181.56	183.39		183.45	0.011619	1.96	66.10	192.17	0.59
RIVER-1	Reach-1	350	Max WS	134.31	180.00	182.50		182.56	0.006998	1.91	70.16	144.70	0.48
RIVER-1	Reach-1	349.*	Max WS	138.31	179.00	181.78		181.85	0.007518	2.14	64.78	119.47	0.51
RIVER-1	Reach-1	348	Max WS	142.56	178.00	181.13		181.20	0.006263	2.10	67.86	111.49	0.47
RIVER-1	Reach-1	347.*	Max WS	147.06	177.50	180.54		180.62	0.006423	2.21	66.51	103.28	0.49
RIVER-1	Reach-1	346	Max WS	151.78	177.00	179.92		180.01	0.005891	2.35	64.69	86.15	0.48

RIVER-1	Reach-1	345.*	Max WS	155.96	176.50	179.30		179.38	0.006378	2.27	68.72	102.27	0.49
RIVER-1	Reach-1	344	Max WS	160.06	176.00	178.80		178.88	0.004287	2.16	77.01	134.30	0.41
RIVER-1	Reach-1	343.*	Max WS	166.15	175.50	178.31		178.41	0.005113	2.55	65.19	68.90	0.46
RIVER-1	Reach-1	342	Max WS	172.27	175.00	177.74		177.87	0.005721	2.86	60.19	58.16	0.50
RIVER-1	Reach-1	341.*	Max WS	177.17	174.90	177.22		177.31	0.005764	2.45	72.36	89.14	0.48
RIVER-1	Reach-1	340	Max WS	182.03	174.80	176.84		176.88	0.003159	1.78	102.36	129.81	0.35
RIVER-1	Reach-1	339.*	Max WS	186.98	174.55	176.30		176.38	0.007192	2.21	84.59	143.74	0.51
RIVER-1	Reach-1	338	Max WS	191.89	174.30	175.88		175.92	0.003063	1.69	113.44	151.79	0.34
RIVER-1	Reach-1	337.*	Max WS	196.01	173.65	175.53		175.59	0.004333	1.98	99.21	136.44	0.41
RIVER-1	Reach-1	336	Max WS	200.10	173.00	175.17		175.22	0.003018	1.86	107.47	123.11	0.35
RIVER-1	Reach-1	335.*	Max WS	203.87	172.50	174.92		174.97	0.002167	1.82	111.78	103.00	0.31
RIVER-1	Reach-1	334	Max WS	207.65	172.00	174.60		174.72	0.003262	2.80	82.81	84.17	0.40
RIVER-1	Reach-1	333.*	Max WS	212.32	171.60	174.25		174.37	0.003668	2.74	78.14	63.84	0.42
RIVER-1	Reach-1	332	Max WS	216.98	171.19	173.85		173.97	0.004176	2.77	78.28	62.79	0.44
RIVER-1	Reach-1	331.*	Max WS	221.26	171.10	173.45		173.56	0.003981	2.65	83.60	69.49	0.43
RIVER-1	Reach-1	330	Max WS	225.53	171.00	173.09		173.18	0.003653	2.44	92.80	86.64	0.40
RIVER-1	Reach-1	329.*	Max WS	230.05	170.50	172.71		172.82	0.003698	2.60	91.46	98.59	0.41
RIVER-1	Reach-1	328	Max WS	234.56	170.00	172.27		172.40	0.004793	2.98	89.27	138.22	0.47
RIVER-1	Reach-1	327.*	Max WS	238.94	169.50	171.51		171.72	0.010126	3.93	80.29	135.43	0.67
RIVER-1	Reach-1	326	Max WS	243.30	169.00	170.86		170.98	0.005501	3.30	119.95	170.11	0.51
RIVER-1	Reach-1	325.*	Max WS	248.11	168.50	170.25		170.38	0.006760	3.55	116.07	175.90	0.56
RIVER-1	Reach-1	324	Max WS	252.89	168.00	169.77		169.83	0.004027	2.83	158.88	211.81	0.43
RIVER-1	Reach-1	323.*	Max WS	255.91	167.02	169.44		169.53	0.003910	2.68	142.30	245.95	0.42
RIVER-1	Reach-1	322	Max WS	258.92	166.04	169.14		169.23	0.003114	2.31	125.97	301.12	0.37
RIVER-1	Reach-1	321.*	Max WS	261.88	166.02	168.24	168.22	168.53	0.013828	4.46	72.82	172.86	0.77
RIVER-1	Reach-1	320	Max WS	264.80	166.00	167.74		167.79	0.004801	3.11	179.57	264.88	0.47
RIVER-1	Reach-1	319.*	Max WS	267.36	166.00	167.51		167.55	0.002388	1.87	220.80	384.67	0.32
RIVER-1	Reach-1	318	Max WS	269.90	166.00	167.34		167.37	0.002107	1.53	242.20	525.08	0.29
RIVER-1	Reach-1	317.*	Max WS	272.48	165.50	167.17		167.19	0.001967	1.33	254.35	568.46	0.25
RIVER-1	Reach-1	316	Max WS	275.07	165.00	166.71		166.76	0.007673	1.88	146.38	257.90	0.42
RIVER-1	Reach-1	315.*	Max WS	279.75	164.50	165.99		166.06	0.006543	2.23	127.31	195.15	0.45

RIVER-1	Reach-1	314	Max WS	284.33	164.00	165.53	165.60	0.002839	2.29	175.93	267.64	0.36
RIVER-1	Reach-1	313.*	Max WS	288.54	163.50	165.16	165.26	0.004778	2.94	164.61	327.27	0.47
RIVER-1	Reach-1	312	Max WS	292.68	163.00	164.83	164.87	0.003046	2.28	239.94	366.77	0.37
RIVER-1	Reach-1	311.*	Max WS	297.03	162.50	164.33	164.43	0.006903	3.41	152.20	257.89	0.56
RIVER-1	Reach-1	310	Max WS	301.36	162.00	163.90	163.96	0.002963	2.51	203.01	238.05	0.37
RIVER-1	Reach-1	309.*	Max WS	301.27	161.26	163.37	163.54	0.008457	3.82	129.73	288.14	0.62
RIVER-1	Reach-1	308	Max WS	301.10	160.51	163.01	163.06	0.002009	2.16	198.64	421.48	0.31
RIVER-1	Reach-1	307.*	Max WS	301.89	159.76	162.70	162.83	0.004836	3.20	160.76	432.88	0.48
RIVER-1	Reach-1	306	Max WS	302.24	159.00	162.33	162.45	0.005868	3.37	195.15	632.50	0.52
RIVER-1	Reach-1	305.*	Max WS	305.48	159.50	161.86	161.95	0.005089	2.92	216.67	645.04	0.48
RIVER-1	Reach-1	304	Max WS	307.76	160.00	161.60	161.62	0.001328	1.51	401.27	707.80	0.25
RIVER-1	Reach-1	303.*	Max WS	310.09	159.50	161.50	161.52	0.001204	1.45	367.16	696.04	0.23
RIVER-1	Reach-1	302	Max WS	312.51	159.00	161.42	161.44	0.000794	1.21	388.80	711.68	0.19
RIVER-1	Reach-1	301	Max WS	315.09	158.00	161.15	161.22	0.004326	2.27	173.78	669.07	0.42
RIVER-1	Reach-1	300	Max WS	316.44	158.00	160.86	160.95	0.003394	3.33	197.09	269.84	0.42
RIVER-1	Reach-1	299.*	Max WS	318.20	158.31	160.60	160.69	0.002664	2.52	159.05	212.12	0.36
RIVER-1	Reach-1	298	Max WS	319.07	158.62	160.37	160.44	0.002560	2.09	162.17	178.51	0.34
RIVER-1	Reach-1	297	Max WS	321.21	158.00	160.21	160.23	0.001380	2.08	340.79	420.68	0.27
RIVER-1	Reach-1	296	Max WS	323.50	158.00	160.12	160.14	0.000775	1.44	417.71	449.22	0.20
RIVER-1	Reach-1	295	Max WS	326.75	158.00	160.07	160.08	0.000293	0.87	603.27	606.65	0.12
RIVER-1	Reach-1	294	Max WS	329.83	158.01	159.89	159.96	0.002896	2.55	195.66	259.47	0.37
RIVER-1	Reach-1	293.*	Max WS	333.43	157.51	159.58	159.66	0.002917	2.38	178.46	249.72	0.37
RIVER-1	Reach-1	292	Max WS	336.65	157.00	159.34	159.39	0.002278	2.01	203.81	292.55	0.32
RIVER-1	Reach-1	291.*	Max WS	339.34	157.07	159.14	159.18	0.001812	1.74	195.95	181.55	0.29
RIVER-1	Reach-1	290	Max WS	339.79	157.13	158.94	158.98	0.002277	1.72	197.47	206.36	0.31
RIVER-1	Reach-1	289	Max WS	341.71	157.00	158.81	158.83	0.000708	1.26	428.69	500.14	0.18
RIVER-1	Reach-1	288	Max WS	345.24	156.00	158.77	158.78	0.000252	1.02	668.37	536.27	0.12
RIVER-1	Reach-1	287.*	Max WS	348.34	156.00	158.74	158.75	0.000393	1.29	567.25	497.65	0.15
RIVER-1	Reach-1	286	Max WS	351.75	156.00	158.70	158.71	0.000555	1.55	495.25	459.67	0.18
RIVER-1	Reach-1	285.*	Max WS	353.09	155.50	158.59	158.67	0.002343	2.75	213.42	239.08	0.32
RIVER-1	Reach-1	284	Max WS	354.43	155.00	158.18	158.39	0.006462	3.67	106.59	145.02	0.47
RIVER-1	Reach-1	283.*	Max WS	356.89	154.75	157.78	157.91	0.003553	2.88	135.95	140.49	0.38

RIVER-1	Reach-1	282	Max WS	359.33	154.50	157.55	157.64	0.002179	2.39	173.95	163.66	0.33
RIVER-1	Reach-1	281.*	Max WS	362.70	154.25	157.33	157.41	0.002381	2.32	161.10	137.42	0.34
RIVER-1	Reach-1	280	Max WS	366.10	154.00	157.06	157.15	0.002882	2.32	158.64	131.32	0.36
RIVER-1	Reach-1	279.*	Max WS	369.45	153.25	156.73	156.84	0.003303	2.68	139.44	109.29	0.40
RIVER-1	Reach-1	278	Max WS	372.80	152.50	156.17	156.38	0.006145	3.68	105.90	117.63	0.54
RIVER-1	Reach-1	277.*	Max WS	375.33	152.45	155.72	155.83	0.004986	2.77	144.49	175.52	0.43
RIVER-1	Reach-1	276	Max WS	377.80	152.40	155.24	155.32	0.005584	2.40	169.87	232.15	0.40
RIVER-1	Reach-1	275.*	Max WS	380.80	151.90	154.75	154.83	0.004776	2.33	180.33	256.83	0.37
RIVER-1	Reach-1	274	Max WS	383.64	151.40	154.45	154.49	0.002365	1.85	249.83	334.34	0.27
RIVER-1	Reach-1	273.*	Max WS	385.43	151.30	154.29	154.33	0.001422	1.57	290.11	292.11	0.21
RIVER-1	Reach-1	272	Max WS	387.63	151.20	154.22	154.24	0.000649	1.19	410.02	374.20	0.15
RIVER-1	Reach-1	271.*	Max WS	388.86	150.85	154.14	154.17	0.001116	1.42	331.77	409.05	0.19
RIVER-1	Reach-1	270	Max WS	390.17	150.50	153.88	153.95	0.003914	2.13	183.44	149.59	0.34
RIVER-1	Reach-1	269.*	Max WS	393.48	150.12	153.50	153.58	0.003854	2.20	179.16	138.09	0.34
RIVER-1	Reach-1	268.*	Max WS	396.79	149.75	153.13	153.21	0.003656	2.29	180.02	202.01	0.34
RIVER-1	Reach-1	267.*	Max WS	400.11	149.38	152.76	152.85	0.003676	2.44	175.41	177.56	0.34
RIVER-1	Reach-1	266	Max WS	403.45	149.00	152.31	152.43	0.004914	2.89	149.82	141.14	0.40
RIVER-1	Reach-1	265.*	Max WS	406.44	148.62	151.85	151.98	0.004384	2.91	150.58	134.11	0.38
RIVER-1	Reach-1	264	Max WS	409.41	148.25	151.22	151.41	0.007446	3.58	124.46	144.72	0.49
RIVER-1	Reach-1	263.*	Max WS	412.67	147.84	150.54	150.66	0.007766	2.82	146.71	137.00	0.47
RIVER-1	Reach-1	262	Max WS	415.89	147.43	149.97	150.04	0.005027	2.17	191.88	198.99	0.37
RIVER-1	Reach-1	261.*	Max WS	420.38	146.71	149.44	149.54	0.005050	2.55	165.34	127.22	0.39
RIVER-1	Reach-1	260	Max WS	424.86	146.00	149.05	149.12	0.003109	2.53	214.25	181.22	0.32
RIVER-1	Reach-1	259.*	Max WS	425.56	146.00	148.38	148.68	0.012390	4.62	106.63	105.61	0.63
RIVER-1	Reach-1	258	Max WS	426.24	146.00	148.07	148.15	0.004361	2.77	213.23	243.97	0.38
RIVER-1	Reach-1	257.*	Max WS	428.95	145.50	147.74	147.81	0.003735	2.39	230.57	265.37	0.34
RIVER-1	Reach-1	256	Max WS	431.67	145.00	147.38	147.45	0.004551	2.35	225.92	295.83	0.37
RIVER-1	Reach-1	255.*	Max WS	433.73	144.50	146.96	147.05	0.004934	2.60	195.64	238.82	0.39
RIVER-1	Reach-1	254	Max WS	435.83	144.00	146.31	146.46	0.008319	3.18	149.25	178.98	0.50
RIVER-1	Reach-1	253.*	Max WS	437.88	143.00	145.46	145.64	0.009582	3.54	139.71	164.70	0.54
RIVER-1	Reach-1	252	Max WS	439.88	142.00	144.98	145.07	0.003712	2.67	217.90	249.05	0.35

RIVER-1	Reach-1	251.*	Max WS	444.73	141.75	144.48	144.57	0.004747	2.94	223.93	330.98	0.39
RIVER-1	Reach-1	250	Max WS	449.50	141.50	144.10	144.13	0.002295	2.03	342.37	488.68	0.27
RIVER-1	Reach-1	249.*	Max WS	451.87	141.25	143.90	143.94	0.002706	1.96	317.89	408.70	0.29
RIVER-1	Reach-1	248	Max WS	454.20	141.00	143.64	143.69	0.003519	2.14	284.88	391.03	0.33
RIVER-1	Reach-1	247.*	Max WS	458.62	140.75	143.32	143.35	0.002402	1.86	314.70	331.92	0.27
RIVER-1	Reach-1	246	Max WS	463.20	140.50	143.13	143.15	0.000996	1.51	394.06	289.63	0.18
RIVER-1	Reach-1	245.*	Max WS	465.22	139.75	142.79	142.95	0.006565	4.13	166.24	169.55	0.48
RIVER-1	Reach-1	244	Max WS	467.21	139.00	142.49	142.58	0.004437	3.57	221.61	225.11	0.39
RIVER-1	Reach-1	243.*	Max WS	468.62	139.50	142.23	142.34	0.004280	3.14	209.79	212.03	0.38
RIVER-1	Reach-1	242	Max WS	469.99	140.00	142.02	142.08	0.003411	2.35	251.01	251.40	0.33
RIVER-1	Reach-1	241.*	Max WS	472.77	139.50	141.70	141.77	0.003947	2.58	238.20	250.13	0.36
RIVER-1	Reach-1	240	Max WS	475.53	139.00	141.38	141.45	0.003983	2.89	242.92	292.71	0.36
RIVER-1	Reach-1	239.*	Max WS	478.70	138.50	141.03	141.10	0.003939	2.52	258.50	316.52	0.35
RIVER-1	Reach-1	238	Max WS	481.86	138.00	140.58	140.66	0.005903	2.65	242.83	336.84	0.42
RIVER-1	Reach-1	237.*	Max WS	484.14	137.50	140.13	140.21	0.006140	2.86	241.39	344.21	0.43
RIVER-1	Reach-1	236	Max WS	486.39	137.00	139.78	139.84	0.004112	2.56	288.98	392.18	0.36
RIVER-1	Reach-1	235.*	Max WS	490.53	136.02	139.34	139.41	0.003659	2.89	276.24	363.79	0.35
RIVER-1	Reach-1	234	Max WS	494.74	135.04	139.08	139.12	0.001400	2.15	391.04	396.72	0.23
RIVER-1	Reach-1	233.*	Max WS	497.25	135.02	138.95	139.00	0.002030	2.53	362.82	424.19	0.27
RIVER-1	Reach-1	232	Max WS	499.73	135.00	138.56	138.71	0.007771	4.67	237.59	439.13	0.50
RIVER-1	Reach-1	231.*	Max WS	501.63	135.00	138.30	138.35	0.002779	2.78	359.05	504.44	0.31
RIVER-1	Reach-1	230	Max WS	503.64	135.00	138.23	138.24	0.000592	1.32	625.04	570.75	0.15
RIVER-1	Reach-1	229.*	Max WS	558.76	134.50	138.13	138.15	0.000962	1.79	563.19	557.23	0.19
RIVER-1	Reach-1	228	Max WS	562.55	134.00	137.98	138.02	0.001611	2.41	466.36	528.46	0.24
RIVER-1	Reach-1	227.*	Max WS	565.48	133.85	137.82	137.86	0.001987	2.43	422.83	481.05	0.26
RIVER-1	Reach-1	226	Max WS	568.41	133.70	137.48	137.56	0.005455	3.20	296.98	422.40	0.41
RIVER-1	Reach-1	225.*	Max WS	569.95	133.48	137.16	137.26	0.005882	3.67	277.88	389.40	0.44
RIVER-1	Reach-1	224	Max WS	571.51	133.25	136.85	136.95	0.005811	3.95	273.90	365.81	0.44
RIVER-1	Reach-1	223.*	Max WS	573.50	133.12	136.49	136.58	0.005502	3.61	287.06	374.67	0.43
RIVER-1	Reach-1	222	Max WS	575.49	133.00	136.25	136.30	0.002994	2.63	357.04	386.12	0.31
RIVER-1	Reach-1	221.*	Max WS	577.32	132.70	136.07	136.12	0.002760	2.48	368.08	410.38	0.31
RIVER-1	Reach-1	220	Max WS	579.11	132.40	135.88	135.93	0.003303	2.43	357.44	440.82	0.33

RIVER-1	Reach-1	219.*	Max WS	579.44	131.80	135.75		135.82	0.003124	2.92	329.71	399.24	0.33
RIVER-1	Reach-1	218	Max WS	579.91	131.20	135.71		135.74	0.001207	2.17	446.18	382.74	0.21
RIVER-1	Reach-1	217.*	Max WS	582.57	131.98	135.59		135.63	0.001535	2.27	409.73	362.06	0.24
RIVER-1	Reach-1	216	Max WS	585.25	132.75	135.42		135.47	0.002192	2.33	361.53	338.35	0.27
RIVER-1	Reach-1	215.*	Max WS	586.43	132.62	135.16		135.28	0.005357	3.53	265.17	330.40	0.43
RIVER-1	Reach-1	214	Max WS	587.12	132.50	134.95		135.01	0.002782	2.46	343.45	351.49	0.31
RIVER-1	Reach-1	213.*	Max WS	588.71	131.88	134.82		134.86	0.001517	2.26	430.58	381.95	0.26
RIVER-1	Reach-1	212	Max WS	590.58	131.25	134.76		134.78	0.000692	1.81	595.18	412.53	0.20
RIVER-1	Reach-1	211.*	Max WS	590.32	131.24	134.65		134.71	0.001688	2.70	404.45	310.90	0.31
RIVER-1	Reach-1	210	Max WS	590.26	131.23	134.43		134.52	0.003988	3.78	300.13	257.59	0.45
RIVER-1	Reach-1	209.44	Max WS	590.10	131.20	134.09	133.71	134.31	0.005321	4.98	232.20	230.77	0.55
RIVER-1	Reach-1	209.43		Inl Struct									
RIVER-1	Reach-1	209.41	Max WS	590.10	129.05	134.09		134.24	0.000565	3.48	333.54	268.34	0.30
RIVER-1	Reach-1	209.24	Max WS	590.08	129.02	133.81		134.37	0.001252	5.98	98.73	228.41	0.48
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	590.03	128.67	133.53		133.88	0.000791	4.79	123.06	69.44	0.38
RIVER-1	Reach-1	205.91	Max WS	589.92	129.85	133.27		133.75	0.002631	5.56	106.11	42.04	0.62
RIVER-1	Reach-1	205.49	Max WS	589.92	129.75	133.16		133.64	0.002632	5.55	106.34	42.31	0.62
RIVER-1	Reach-1	204.965*	Max WS	589.92	129.62	133.03		133.51	0.002613	5.52	106.88	42.64	0.61
RIVER-1	Reach-1	204.44	Max WS	589.91	129.49	132.90		133.37	0.002589	5.49	107.52	43.01	0.61
RIVER-1	Reach-1	203.626*	Max WS	589.80	129.29	132.70		133.16	0.002571	5.46	108.09	43.40	0.61
RIVER-1	Reach-1	202.813*	Max WS	589.79	129.08	132.51		132.96	0.002491	5.38	109.66	43.95	0.60
RIVER-1	Reach-1	202	Max WS	589.78	128.88	132.32		132.76	0.002434	5.32	110.92	44.47	0.59
RIVER-1	Reach-1	201.36	Max WS	589.67	128.72	132.16		132.60	0.002473	5.37	109.84	43.91	0.60
RIVER-1	Reach-1	200.405*	Max WS	589.65	128.48	131.93		132.37	0.002462	5.37	109.89	43.79	0.60
RIVER-1	Reach-1	199.451*	Max WS	589.52	128.24	131.70		132.14	0.002438	5.35	110.13	43.73	0.59
RIVER-1	Reach-1	198.497*	Max WS	589.36	128.00	131.47		131.91	0.002408	5.34	110.46	43.65	0.59
RIVER-1	Reach-1	197.542*	Max WS	588.96	127.76	131.25		131.69	0.002360	5.30	111.09	43.64	0.59
RIVER-1	Reach-1	196.588*	Max WS	588.72	127.52	131.04		131.47	0.002297	5.26	112.01	43.66	0.58
RIVER-1	Reach-1	195.634*	Max WS	588.14	127.28	130.84		131.25	0.002205	5.18	113.47	43.79	0.57
RIVER-1	Reach-1	194.68*	Max WS	587.38	127.04	130.65		131.05	0.002088	5.09	115.46	43.97	0.55

RIVER-1	Reach-1	193.725*	Max WS	585.95	126.81	130.47	130.86	0.001970	4.98	117.57	44.19	0.54
RIVER-1	Reach-1	192.771*	Max WS	583.47	126.57	130.32	130.68	0.001795	4.82	121.08	44.61	0.52
RIVER-1	Reach-1	191.817*	Max WS	580.36	126.33	130.18	130.51	0.001604	4.63	125.43	45.13	0.49
RIVER-1	Reach-1	190.862*	Max WS	576.72	126.09	130.07	130.37	0.001406	4.41	130.77	45.78	0.46
RIVER-1	Reach-1	189.908*	Max WS	571.51	125.85	129.97	130.24	0.001209	4.17	136.99	46.53	0.43
RIVER-1	Reach-1	188.954*	Max WS	568.10	125.61	129.89	130.13	0.001032	3.94	144.28	47.42	0.40
RIVER-1	Reach-1	188	Max WS	563.30	125.37	129.83	130.04	0.000871	3.70	152.27	48.36	0.37
RIVER-1	Reach-1	187.7	Max WS	564.52	125.29	129.84	130.02	0.000611	3.34	169.00	47.03	0.31
RIVER-1	Reach-1	187.68		Lat Struct								
RIVER-1	Reach-1	187.65	Max WS	569.47	125.27	129.87	130.01	0.000453	2.99	193.00	52.83	0.27
RIVER-1	Reach-1	187.2	Max WS	631.60	125.15	129.86	129.96	0.000307	2.58	247.46	63.20	0.23
RIVER-1	Reach-1	187.15	Max WS	635.65	125.13	129.85	129.96	0.000329	2.61	243.40	62.66	0.23
RIVER-1	Reach-1	187	Max WS	635.65	125.09	129.87	129.96	0.000263	2.35	270.53	69.34	0.21
RIVER-1	Reach-1	186.81	Max WS	635.57	123.29	129.62	129.98	0.000566	4.83	131.53	72.41	0.34
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	186	Max WS	635.10	122.98	129.35	129.70	0.000541	4.75	133.70	155.71	0.33
RIVER-1	Reach-1	185.25*	Max WS	635.28	124.49	129.49	129.60	0.000651	2.88	382.41	258.60	0.26
RIVER-1	Reach-1	184.5	Max WS	635.27	126.00	129.49	129.53	0.001233	2.46	522.15	395.98	0.27
RIVER-1	Reach-1	184	Max WS	643.85	126.00	129.40	129.45	0.001290	2.68	497.44	385.94	0.28
RIVER-1	Reach-1	183.*	Max WS	643.99	126.00	129.33	129.37	0.001511	2.63	471.63	372.55	0.27
RIVER-1	Reach-1	182	Max WS	644.23	126.00	129.27	129.30	0.001154	2.11	497.88	360.00	0.21
RIVER-1	Reach-1	181.*	Max WS	644.65	126.00	129.09	129.15	0.002026	2.63	392.66	317.46	0.28
RIVER-1	Reach-1	180	Max WS	645.08	126.00	128.81	128.89	0.003388	3.10	327.51	309.29	0.35
RIVER-1	Reach-1	179.*	Max WS	645.27	125.00	128.54	128.61	0.002518	2.87	385.90	378.15	0.31
RIVER-1	Reach-1	178	Max WS	645.64	124.00	128.41	128.43	0.000962	1.87	565.78	446.35	0.19
RIVER-1	Reach-1	177.*	Max WS	646.34	124.00	128.21	128.25	0.001593	2.24	479.24	455.54	0.24
RIVER-1	Reach-1	176	Max WS	647.04	124.00	127.83	127.89	0.003582	2.57	380.25	454.54	0.34
RIVER-1	Reach-1	175.*	Max WS	647.21	123.50	127.56	127.64	0.004184	3.08	355.24	465.87	0.37
RIVER-1	Reach-1	174	Max WS	647.09	123.00	127.32	127.39	0.003316	3.12	405.84	573.28	0.34
RIVER-1	Reach-1	173.*	Max WS	646.93	123.50	127.20	127.24	0.001826	2.32	536.62	650.81	0.25
RIVER-1	Reach-1	172	Max WS	646.94	124.00	127.16	127.17	0.000582	1.31	829.00	751.12	0.14
RIVER-1	Reach-1	171.*	Max WS	649.01	124.00	127.07	127.09	0.000881	1.58	744.46	790.18	0.18

RIVER-1	Reach-1	170	Max WS	651.01	124.00	126.94	126.96	0.001364	1.90	620.01	693.37	0.22
RIVER-1	Reach-1	169.*	Max WS	651.91	123.50	126.84	126.87	0.002204	2.56	552.18	799.73	0.28
RIVER-1	Reach-1	168	Max WS	652.81	123.00	126.72	126.75	0.002088	2.58	506.98	615.71	0.27
RIVER-1	Reach-1	167.*	Max WS	653.82	122.50	126.59	126.62	0.001732	2.53	562.60	711.87	0.25
RIVER-1	Reach-1	166	Max WS	654.94	122.00	126.50	126.53	0.001151	2.17	685.98	856.75	0.21
RIVER-1	Reach-1	165.*	Max WS	657.80	121.00	126.23	126.27	0.001848	2.28	594.74	1008.33	0.25
RIVER-1	Reach-1	164	Max WS	661.26	120.00	125.96	125.98	0.001470	1.60	622.26	815.04	0.21
RIVER-1	Reach-1	163.*	Max WS	662.44	120.00	125.81	125.84	0.002050	1.89	559.59	867.25	0.25
RIVER-1	Reach-1	162	Max WS	663.31	120.00	125.49	125.57	0.005165	2.76	384.59	780.06	0.40
RIVER-1	Reach-1	161.*	Max WS	663.98	120.40	125.17	125.23	0.002668	2.47	458.60	701.75	0.30
RIVER-1	Reach-1	160	Max WS	664.90	120.79	125.01	125.04	0.001104	1.93	635.03	699.59	0.20
RIVER-1	Reach-1	159.*	Max WS	664.47	120.40	124.92	124.94	0.001004	1.86	656.79	776.47	0.19
RIVER-1	Reach-1	158	Max WS	664.28	120.00	124.83	124.86	0.000863	1.72	684.19	786.95	0.18
RIVER-1	Reach-1	157.*	Max WS	664.13	119.50	124.75	124.78	0.001317	1.88	607.00	795.46	0.22
RIVER-1	Reach-1	156	Max WS	663.87	119.00	124.54	124.61	0.004333	2.68	411.43	762.93	0.37
RIVER-1	Reach-1	155.*	Max WS	665.14	119.00	124.22	124.28	0.002313	2.65	490.78	800.99	0.29
RIVER-1	Reach-1	154	Max WS	666.52	119.00	124.04	124.06	0.001407	2.38	645.34	834.98	0.22
RIVER-1	Reach-1	153.*	Max WS	667.59	119.00	123.93	123.96	0.001196	1.98	680.04	885.77	0.21
RIVER-1	Reach-1	152	Max WS	668.67	119.00	123.84	123.86	0.001201	1.71	698.88	923.42	0.20
RIVER-1	Reach-1	151.*	Max WS	670.29	119.00	123.69	123.71	0.001484	1.67	641.78	922.18	0.22
RIVER-1	Reach-1	150	Max WS	671.67	119.00	123.40	123.45	0.003365	2.09	465.69	857.58	0.32
RIVER-1	Reach-1	149.*	Max WS	672.92	118.50	123.14	123.19	0.001943	2.17	518.30	804.73	0.26
RIVER-1	Reach-1	148	Max WS	674.17	118.00	122.97	123.01	0.001770	2.61	564.82	791.91	0.25
RIVER-1	Reach-1	147.*	Max WS	675.07	117.92	122.82	122.86	0.002121	2.56	590.51	1002.71	0.27
RIVER-1	Reach-1	146	Max WS	675.97	117.83	122.61	122.65	0.003113	2.67	551.49	1063.38	0.32
RIVER-1	Reach-1	145.*	Max WS	676.58	117.92	122.40	122.44	0.002122	2.08	557.46	1062.46	0.27
RIVER-1	Reach-1	144	Max WS	677.19	118.00	122.21	122.25	0.002861	1.87	524.72	1125.43	0.29
RIVER-1	Reach-1	143.*	Max WS	678.12	117.50	122.04	122.07	0.001085	1.75	677.75	1007.00	0.20
RIVER-1	Reach-1	142	Max WS	679.03	117.00	121.95	121.97	0.001124	2.17	740.66	959.00	0.20
RIVER-1	Reach-1	141.*	Max WS	679.78	117.00	121.82	121.85	0.001670	2.62	655.81	999.21	0.24
RIVER-1	Reach-1	140	Max WS	680.25	117.00	121.64	121.69	0.002232	2.96	604.20	1060.98	0.28

RIVER-1	Reach-1	139.*	Max WS	680.52	117.50	121.52	121.55	0.001550	2.32	672.78	999.46	0.24
RIVER-1	Reach-1	138	Max WS	681.02	118.00	121.44	121.45	0.000817	1.61	825.89	970.67	0.17
RIVER-1	Reach-1	137.*	Max WS	681.70	118.00	121.36	121.38	0.001069	1.73	753.94	997.48	0.20
RIVER-1	Reach-1	136	Max WS	682.36	118.00	121.24	121.27	0.001734	2.01	651.36	1110.87	0.25
RIVER-1	Reach-1	135.*	Max WS	683.04	117.50	121.13	121.16	0.001256	1.62	684.56	953.51	0.21
RIVER-1	Reach-1	134	Max WS	683.78	117.00	121.05	121.07	0.000883	1.30	764.66	878.97	0.17
RIVER-1	Reach-1	133.*	Max WS	684.95	117.00	120.95	120.98	0.001116	1.43	655.98	774.35	0.19
RIVER-1	Reach-1	132	Max WS	686.16	117.00	120.85	120.87	0.001017	1.35	626.17	629.08	0.18
RIVER-1	Reach-1	131.*	Max WS	686.76	117.00	120.75	120.78	0.001353	1.47	611.75	832.02	0.21
RIVER-1	Reach-1	130	Max WS	687.42	117.00	120.66	120.68	0.001247	1.35	665.93	812.71	0.20
RIVER-1	Reach-1	129.*	Max WS	687.38	117.00	120.56	120.59	0.001793	1.57	590.39	834.58	0.23
RIVER-1	Reach-1	128	Max WS	687.33	117.00	120.31	120.39	0.005312	2.42	386.67	858.65	0.39
RIVER-1	Reach-1	127.*	Max WS	687.29	116.71	120.10	120.15	0.002735	2.22	476.84	704.70	0.30
RIVER-1	Reach-1	126	Max WS	687.27	116.42	120.04	120.06	0.001347	1.99	670.99	782.53	0.21
RIVER-1	Reach-1	125.*	Max WS	687.26	116.21	120.02	120.04	0.001229	1.74	700.16	830.01	0.21
RIVER-1	Reach-1	124	Max WS	687.25	116.00	120.00	120.01	0.000888	1.37	783.95	844.86	0.17
RIVER-1	Reach-1	123.*	Max WS	687.21	116.18	119.94	119.96	0.001057	1.59	750.08	895.13	0.19
RIVER-1	Reach-1	122	Max WS	687.19	116.35	119.88	119.90	0.000998	1.57	793.28	980.14	0.19
RIVER-1	Reach-1	121.*	Max WS	772.58	115.68	119.73	119.76	0.001855	2.07	600.78	644.80	0.25
RIVER-1	Reach-1	120	Max WS	772.19	115.00	119.59	119.62	0.001142	2.06	678.96	636.57	0.21
RIVER-1	Reach-1	119.*	Max WS	771.57	114.50	119.47	119.52	0.001715	2.79	586.98	603.19	0.28
RIVER-1	Reach-1	118	Max WS	768.98	114.00	119.22	119.38	0.003375	4.26	433.04	561.96	0.44
RIVER-1	Reach-1	117.*	Max WS	767.06	114.50	119.15	119.23	0.001589	2.68	491.34	554.99	0.30
RIVER-1	Reach-1	116	Max WS	763.43	115.00	119.06	119.13	0.001817	2.35	480.65	541.01	0.31
RIVER-1	Reach-1	115.*	Max WS	757.25	114.50	118.98	119.02	0.001275	1.77	531.23	493.26	0.25
RIVER-1	Reach-1	114	Max WS	749.77	114.00	118.91	118.93	0.000822	1.36	626.57	536.61	0.20
RIVER-1	Reach-2	112.05	Max WS	1518.30	112.00	118.91	119.02	0.001675	2.88	744.69	611.96	0.31
RIVER-1	Reach-2	112	Max WS	1517.63	112.00	118.90	119.01	0.001698	2.90	739.01	609.55	0.32
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1504.62	113.00	118.79	118.89	0.001858	2.69	737.04	628.74	0.32
RIVER-1	Reach-2	110	Max WS	1426.86	114.00	118.74	118.79	0.001323	2.07	953.44	714.34	0.26
RIVER-1	Reach-2	109.*	Max WS	1383.62	113.50	118.56	118.62	0.002225	2.55	836.04	663.59	0.34

RIVER-1	Reach-2	108	Max WS	1374.93	113.00	118.39		118.47	0.001357	3.17	911.69	635.23	0.29
RIVER-1	Reach-2	107.*	Max WS	1373.37	112.00	118.35		118.40	0.000925	2.57	1101.19	728.96	0.24
RIVER-1	Reach-2	106	Max WS	1372.92	111.00	118.32		118.36	0.000592	2.38	1310.11	797.74	0.20
RIVER-1	Reach-2	105.*	Max WS	1371.77	110.50	118.28		118.32	0.000714	2.36	1283.92	813.24	0.21
RIVER-1	Reach-2	104	Max WS	1369.56	110.00	118.24		118.28	0.000687	2.71	1286.73	819.45	0.20
RIVER-1	Reach-2	103.*	Max WS	1369.18	110.00	118.23		118.26	0.000668	2.09	1393.57	914.60	0.20
RIVER-1	Reach-2	102	Max WS	1157.55	110.00	118.23		118.24	0.000249	1.70	1654.90	889.15	0.13
RIVER-1	Reach-2	101.*	Max WS	1484.79	110.50	118.19		118.22	0.000425	2.19	1638.76	875.53	0.17
RIVER-1	Reach-2	100	Max WS	1483.37	111.00	118.17		118.19	0.000435	2.18	1625.93	859.72	0.17
RIVER-1	Reach-2	99.*	Max WS	1482.03	111.00	118.09		118.11	0.000427	2.19	1625.61	865.16	0.17
RIVER-1	Reach-2	98	Max WS	1482.13	111.00	118.01		118.04	0.000416	2.19	1627.46	868.96	0.17
RIVER-1	Reach-2	97.*	Max WS	1482.01	110.50	117.96		117.99	0.000412	2.19	1616.53	850.11	0.17
RIVER-1	Reach-2	96	Max WS	1482.02	110.00	117.92		117.95	0.000410	2.18	1604.76	831.22	0.17
RIVER-1	Reach-2	95.*	Max WS	1481.97	109.50	117.88		117.91	0.000419	2.22	1577.67	833.62	0.17
RIVER-1	Reach-2	94	Max WS	1482.84	109.00	117.83		117.87	0.000426	2.27	1549.43	834.39	0.17
RIVER-1	Reach-2	93.*	Max WS	1482.97	109.00	117.79		117.83	0.000411	2.26	1481.73	743.60	0.17
RIVER-1	Reach-2	92	Max WS	1483.95	109.00	117.74		117.79	0.000416	2.38	1356.65	627.03	0.17
RIVER-1	Reach-2	91.*	Max WS	1484.97	108.50	117.71		117.75	0.000384	2.28	1453.61	1179.86	0.17
RIVER-1	Reach-2	90	Max WS	1486.65	108.00	117.68		117.71	0.000314	2.06	1760.23	1221.77	0.15
RIVER-1	Reach-2	89.*	Max WS	1487.79	108.50	117.65		117.68	0.000312	2.11	1697.95	1208.38	0.15
RIVER-1	Reach-2	88	Max WS	1489.44	109.00	117.62		117.65	0.000309	2.14	1639.35	1085.23	0.15
RIVER-1	Reach-2	87.*	Max WS	1490.31	108.00	117.61		117.63	0.000159	1.69	2181.46	1301.33	0.11
RIVER-1	Reach-2	86	Max WS	1491.53	107.00	117.60		117.61	0.000082	1.30	2800.15	1375.43	0.08
RIVER-1	Reach-2	85.*	Max WS	1491.15	107.50	117.60		117.61	0.000084	1.21	2989.88	1424.66	0.08
RIVER-1	Reach-2	84	Max WS	1491.13	108.00	117.60		117.60	0.000077	1.04	3285.95	1472.81	0.07
RIVER-1	Reach-2	83.*	Max WS	1508.08	108.50	117.59		117.60	0.000110	1.23	2844.47	1383.24	0.09
RIVER-1	Reach-2	82	Max WS	1507.85	109.00	117.58		117.59	0.000154	1.39	2525.97	1282.66	0.11
RIVER-1	Reach-2	81.56	Max WS	1507.84	108.22	117.48	113.50	117.59	0.000630	2.85	971.56	1375.23	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1503.04	108.96	116.24		116.76	0.004673	5.82	258.47	72.38	0.54
RIVER-1	Reach-2	80.95	Max WS	1504.06	108.83	116.33	113.31	116.65	0.001770	4.48	335.50	65.62	0.35

RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1502.50	108.67	116.24		116.57	0.001952	4.60	326.62	67.10	0.37
RIVER-1	Reach-2	79.3849*	Max WS	1501.93	108.33	116.20		116.36	0.001119	3.70	839.46	651.59	0.28
RIVER-1	Reach-2	78.39	Max WS	1501.47	108.00	116.12		116.19	0.000633	3.06	922.08	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1501.85	107.80	116.12		116.14	0.000268	1.98	1566.28	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1501.78	107.60	116.10		116.13	0.000290	2.05	1722.71	785.94	0.14
RIVER-1	Reach-2	76.19	Max WS	1501.44	107.40	116.06		116.12	0.000509	2.69	1453.09	1015.28	0.19
RIVER-1	Reach-2	75.86	Max WS	1501.18	107.22	115.84	112.62	116.06	0.001210	4.13	631.64	457.70	0.30
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1501.18	106.63	115.84		116.04	0.001311	3.87	614.16	442.24	0.30
RIVER-1	Reach-2	74.7*	Max WS	1501.37	106.82	115.87		115.92	0.000450	2.10	1395.43	936.99	0.18
RIVER-1	Reach-2	74	Max WS	1501.28	107.00	115.87		115.88	0.000209	1.27	2293.05	1288.37	0.12
RIVER-1	Reach-2	73.*	Max WS	1501.16	107.43	115.85		115.87	0.000148	1.21	2628.61	1349.31	0.10
RIVER-1	Reach-2	72	Max WS	1501.04	107.86	115.84		115.85	0.000117	1.18	2950.40	1420.12	0.09
RIVER-1	Reach-2	71.*	Max WS	1740.98	107.44	115.74		115.86	0.000926	3.07	858.75	504.91	0.23
RIVER-1	Reach-2	70	Max WS	1740.97	107.03	115.61		115.75	0.001014	3.01	580.40	103.73	0.22
RIVER-1	Reach-2	69.*	Max WS	1740.83	107.35	115.46		115.63	0.001376	3.35	520.14	96.06	0.25
RIVER-1	Reach-2	68	Max WS	1740.69	107.68	115.27		115.48	0.001768	3.70	470.94	90.51	0.29
RIVER-1	Reach-2	67	Max WS	1740.53	107.40	115.07		115.29	0.002119	4.03	493.40	136.57	0.31
RIVER-1	Reach-2	66	Max WS	1740.16	107.40	114.81		115.07	0.002587	4.34	457.59	134.73	0.34
RIVER-1	Reach-2	65.*	Max WS	1739.70	107.20	114.63		114.84	0.001857	3.85	511.84	178.20	0.32
RIVER-1	Reach-2	64	Max WS	1739.45	107.00	114.46		114.67	0.001572	3.66	504.03	211.99	0.32
RIVER-1	Reach-2	63.*	Max WS	1740.58	106.81	114.32		114.51	0.001620	3.55	524.87	239.66	0.33
RIVER-1	Reach-2	62.*	Max WS	1741.88	106.62	114.18		114.36	0.001627	3.44	546.83	278.42	0.32
RIVER-1	Reach-2	61.*	Max WS	1743.09	106.43	114.05		114.21	0.001463	3.27	579.82	244.72	0.31
RIVER-1	Reach-2	60	Max WS	1744.22	106.24	113.96		114.09	0.001096	2.95	655.06	240.58	0.27
RIVER-1	Reach-2	59.*	Max WS	1747.25	106.07	113.87		113.99	0.000905	2.89	767.19	375.21	0.25
RIVER-1	Reach-2	58	Max WS	1750.26	105.90	113.84		113.92	0.000475	2.49	1135.15	494.34	0.19
RIVER-1	Reach-2	57.2	Max WS	1752.58	107.05	113.76	111.19	113.88	0.000921	3.16	917.45	424.46	0.25
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1750.72	107.05	113.64		113.78	0.001145	3.43	832.85	407.22	0.28
RIVER-1	Reach-2	56	Max WS	1753.25	105.90	113.59		113.68	0.000630	2.70	923.64	390.60	0.21

RIVER-1	Reach-2	55.*	Max WS	1755.56	105.85	113.56		113.63	0.000504	2.26	1099.67	478.02	0.19
RIVER-1	Reach-2	54	Max WS	1757.89	105.80	113.53		113.58	0.000434	1.98	1257.24	565.40	0.17
RIVER-1	Reach-2	53.*	Max WS	1764.86	105.70	113.46		113.51	0.000485	2.10	1155.99	407.45	0.17
RIVER-1	Reach-2	52	Max WS	1771.82	105.60	113.37		113.42	0.000593	2.11	1077.49	329.97	0.16
RIVER-1	Reach-2	51.*	Max WS	1775.06	105.57	113.30		113.35	0.000697	2.37	1023.41	319.71	0.19
RIVER-1	Reach-2	50.*	Max WS	1777.86	105.54	113.22		113.28	0.000782	2.59	978.68	309.87	0.21
RIVER-1	Reach-2	49.*	Max WS	1781.07	105.50	113.13		113.20	0.000830	2.82	945.27	301.37	0.22
RIVER-1	Reach-2	48	Max WS	1783.81	105.47	113.03		113.12	0.000815	3.10	923.10	294.92	0.24
RIVER-1	Reach-2	47.*	Max WS	1786.99	105.68	112.96		113.04	0.000746	2.88	1014.31	330.07	0.23
RIVER-1	Reach-2	46.*	Max WS	1790.17	105.88	112.90		112.96	0.000628	2.62	1128.59	372.82	0.21
RIVER-1	Reach-2	45.*	Max WS	1793.76	106.08	112.86		112.90	0.000489	2.37	1272.81	407.97	0.19
RIVER-1	Reach-2	44	Max WS	1796.95	106.29	112.82		112.86	0.000363	2.13	1441.48	434.90	0.16
RIVER-1	Reach-2	43.*	Max WS	1800.29	106.30	112.78		112.82	0.000332	2.06	1392.16	432.32	0.16
RIVER-1	Reach-2	42.*	Max WS	1803.61	106.31	112.75		112.79	0.000317	1.96	1351.69	429.48	0.15
RIVER-1	Reach-2	41.*	Max WS	1806.64	106.32	112.72		112.76	0.000312	1.88	1319.77	425.34	0.15
RIVER-1	Reach-2	40	Max WS	1809.97	106.33	112.69		112.73	0.000317	1.80	1295.99	420.90	0.15
RIVER-1	Reach-2	39.*	Max WS	1809.92	106.17	112.66		112.70	0.000286	1.79	1412.41	468.97	0.14
RIVER-1	Reach-2	38.*	Max WS	1809.87	106.01	112.64		112.67	0.000235	1.70	1612.15	506.46	0.13
RIVER-1	Reach-2	37.*	Max WS	1809.82	105.84	112.63		112.65	0.000176	1.53	1870.01	521.74	0.11
RIVER-1	Reach-2	36	Max WS	1809.76	105.68	112.61		112.63	0.000218	1.75	1775.41	529.08	0.13
RIVER-1	Reach-2	35.22	Max WS	1809.73	104.52	112.37		112.67	0.001575	4.42	409.61	76.46	0.34
RIVER-1	Reach-2	34.82	Max WS	1809.73	104.52	112.30	108.90	112.61	0.001636	4.48	404.08	76.05	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1809.55	104.30	111.03		111.80	0.006458	7.04	257.04	68.72	0.64
RIVER-1	Reach-2	33.67*	Max WS	1809.46	104.12	110.99		111.47	0.003546	5.57	325.13	79.50	0.48
RIVER-1	Reach-2	33	Max WS	1809.45	103.93	111.09		111.25	0.001104	3.47	858.11	605.15	0.28
RIVER-1	Reach-2	32.*	Max WS	1809.43	103.40	110.98		111.12	0.001097	3.19	897.96	684.39	0.27
RIVER-1	Reach-2	31.*	Max WS	1809.34	102.88	110.83		110.97	0.001505	3.25	853.18	755.96	0.31
RIVER-1	Reach-2	30	Max WS	1809.26	102.35	110.50		110.73	0.003746	4.03	689.44	1125.76	0.46
RIVER-1	Reach-2	29.*	Max WS	1809.17	102.34	110.13		110.38	0.003972	4.32	676.93	970.84	0.48
RIVER-1	Reach-2	28.*	Max WS	1808.98	102.33	109.82		110.04	0.003566	4.30	762.35	927.79	0.46

RIVER-1	Reach-2	27.*	Max WS	1808.80	102.33	109.59		109.74	0.002604	3.91	963.36	987.95	0.40
RIVER-1	Reach-2	26	Max WS	1808.61	102.32	109.45		109.53	0.001581	3.24	1283.78	1084.16	0.31
RIVER-1	Reach-2	25.*	Max WS	1808.51	101.99	109.30		109.40	0.002097	3.56	1202.16	1184.04	0.35
RIVER-1	Reach-2	24.*	Max WS	1808.31	101.66	109.12		109.23	0.002710	3.82	1101.52	1258.54	0.40
RIVER-1	Reach-2	23.*	Max WS	1808.10	101.33	108.94		109.02	0.002364	3.36	1156.25	1098.12	0.36
RIVER-1	Reach-2	22	Max WS	1807.97	101.00	108.80		108.85	0.001821	2.80	1309.54	1139.76	0.31
RIVER-1	Reach-2	21.*	Max WS	1807.74	101.27	108.64		108.70	0.001975	2.95	1274.30	1155.06	0.33
RIVER-1	Reach-2	20.*	Max WS	1807.40	101.54	108.47		108.53	0.002160	3.10	1235.82	1139.43	0.34
RIVER-1	Reach-2	19.*	Max WS	1807.16	101.82	108.28		108.34	0.002526	3.33	1193.98	1120.73	0.37
RIVER-1	Reach-2	18	Max WS	1806.76	102.09	108.08		108.16	0.003478	3.84	1171.01	1337.36	0.43
RIVER-1	Reach-2	17.*	Max WS	1805.90	101.97	107.89		107.93	0.002222	3.01	1335.42	1240.96	0.35
RIVER-1	Reach-2	16.*	Max WS	1805.26	101.85	107.74		107.77	0.001410	2.44	1554.55	1243.14	0.28
RIVER-1	Reach-2	15.*	Max WS	1804.56	101.73	107.66		107.68	0.000830	1.92	1845.50	1245.02	0.21
RIVER-1	Reach-2	14	Max WS	1804.30	101.61	107.61		107.62	0.000498	1.46	2177.22	1250.12	0.16
RIVER-1	Reach-2	13.*	Max WS	1804.04	101.43	107.58		107.59	0.000410	1.26	2318.54	1256.91	0.15
RIVER-1	Reach-2	12.*	Max WS	1803.81	101.26	107.55		107.56	0.000332	1.22	2462.01	1249.21	0.14
RIVER-1	Reach-2	11.*	Max WS	1803.59	101.08	107.53		107.53	0.000270	1.17	2612.89	1239.19	0.12
RIVER-1	Reach-2	10	Max WS	1803.56	100.90	107.51		107.51	0.000225	1.10	2755.98	1225.65	0.11
RIVER-1	Reach-2	9.*	Max WS	1803.37	100.75	107.48		107.49	0.000377	1.43	2325.61	1208.24	0.15
RIVER-1	Reach-2	8.*	Max WS	1803.21	100.60	107.43		107.45	0.000575	1.90	1956.19	1321.05	0.18
RIVER-1	Reach-2	7.*	Max WS	1803.06	100.45	107.35		107.38	0.000875	2.49	1676.33	1302.75	0.23
RIVER-1	Reach-2	6	Max WS	1802.80	100.30	107.22		107.30	0.001561	3.47	1419.23	1391.56	0.31
RIVER-1	Reach-2	5.*	Max WS	1802.28	100.15	107.08		107.15	0.001447	3.41	1484.87	1516.86	0.30
RIVER-1	Reach-2	4.*	Max WS	1801.83	100.00	106.96		107.03	0.001325	3.32	1601.02	1707.95	0.29
RIVER-1	Reach-2	3.*	Max WS	1801.64	99.85	106.86		106.91	0.001059	3.02	1938.44	2228.42	0.26
RIVER-1	Reach-2	2	Max WS	1801.37	99.70	106.80		106.83	0.000609	2.33	2416.52	2346.92	0.20
RIVER-1	Reach-2	1.*	Max WS	1801.30	99.55	106.73		106.78	0.000850	2.83	2107.25	2375.63	0.24
RIVER-1	Reach-2	0	Max WS	1801.23	99.40	106.65	105.94	106.71	0.000976	3.09	1859.75	2311.98	0.25

Appendix P-3: HEC-RAS Results, Developed Conditions Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 11:21:42 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	319.02	158.00	162.26		162.26	0.000028	0.30	1053.95	296.98	0.03
RIVER-2	Reach-1	11850.*	Max WS	317.18	157.71	162.26		162.26	0.000028	0.30	1071.62	314.59	0.03
RIVER-2	Reach-1	11800	Max WS	316.27	157.42	162.26		162.26	0.000011	0.20	1567.27	412.19	0.02
RIVER-2	Reach-1	11750.*	Max WS	317.17	156.96	162.26		162.26	0.000012	0.21	1530.12	400.13	0.02
RIVER-2	Reach-1	11700	Max WS	316.26	156.50	162.26		162.26	0.000010	0.20	1562.08	376.83	0.02
RIVER-2	Reach-1	11650.*	Max WS	317.15	156.25	162.26		162.26	0.000011	0.21	1476.20	351.23	0.02
RIVER-2	Reach-1	11600	Max WS	315.37	156.00	162.26		162.26	0.000011	0.22	1426.17	331.19	0.02
RIVER-2	Reach-1	11550.*	Max WS	316.24	155.05	162.26		162.26	0.000011	0.22	1440.70	337.28	0.02
RIVER-2	Reach-1	11500	Max WS	315.36	154.11	162.26		162.26	0.000011	0.22	1450.46	338.65	0.02
RIVER-2	Reach-1	11450.*	Max WS	316.22	154.05	162.26		162.26	0.000010	0.21	1541.01	374.30	0.02
RIVER-2	Reach-1	11400	Max WS	315.35	154.00	162.26		162.26	0.000009	0.19	1642.67	403.12	0.02
RIVER-2	Reach-1	11350.*	Max WS	315.34	154.00	162.26		162.26	0.000008	0.18	1720.82	407.18	0.02
RIVER-2	Reach-1	11300	Max WS	315.33	154.00	162.26		162.26	0.000007	0.17	1889.63	455.23	0.01
RIVER-2	Reach-1	11250.*	Max WS	315.31	154.00	162.26		162.26	0.000005	0.15	2068.50	462.11	0.01
RIVER-2	Reach-1	11200	Max WS	314.48	154.00	162.25		162.26	0.000004	0.14	2260.05	478.49	0.01
RIVER-2	Reach-1	11150.*	Max WS	314.46	153.00	162.25		162.25	0.000003	0.13	2475.19	498.27	0.01
RIVER-2	Reach-1	11100	Max WS	313.64	152.00	162.25		162.25	0.000003	0.12	2688.48	533.88	0.01
RIVER-2	Reach-1	11050.*	Max WS	314.44	152.00	162.25		162.25	0.000002	0.11	2893.23	545.86	0.01
RIVER-2	Reach-1	11000	Max WS	314.42	152.00	162.25		162.25	0.000002	0.10	3156.66	574.08	0.01
RIVER-2	Reach-1	10887.5*	Max WS	315.17	152.00	162.25		162.25	0.000001	0.09	3544.63	584.15	0.01
RIVER-2	Reach-1	10775.*	Max WS	314.39	152.00	162.25		162.25	0.000001	0.08	4062.98	603.40	0.01
RIVER-2	Reach-1	10662.5*	Max WS	314.37	152.00	162.25		162.25	0.000001	0.07	4656.72	639.10	0.00
RIVER-2	Reach-1	10550	Max WS	313.64	152.00	162.25		162.25	0.000000	0.06	5300.80	681.71	0.00
RIVER-2	Reach-1	10490.*	Max WS	314.33	151.60	162.25		162.25	0.000000	0.05	5881.47	785.23	0.00
RIVER-2	Reach-1	10430.*	Max WS	314.30	151.20	162.25		162.25	0.000000	0.05	6425.27	882.60	0.00
RIVER-2	Reach-1	10370.*	Max WS	314.27	150.80	162.25		162.25	0.000000	0.05	6934.94	981.91	0.00
RIVER-2	Reach-1	10310.*	Max WS	313.63	150.40	162.25		162.25	0.000000	0.04	7425.21	1052.67	0.00
RIVER-2	Reach-1	10250	Max WS	314.21	150.00	162.25		162.25	0.000000	0.04	7920.65	1129.89	0.00
RIVER-2	Reach-1	10200.*	Max WS	314.18	150.00	162.25		162.25	0.000000	0.04	7404.53	965.93	0.00
RIVER-2	Reach-1	10150	Max WS	314.15	150.00	162.25		162.25	0.000000	0.05	6907.02	856.56	0.00
RIVER-2	Reach-1	10100.*	Max WS	314.13	150.00	162.25		162.25	0.000000	0.05	6583.04	847.82	0.00
RIVER-2	Reach-1	10050	Max WS	314.63	150.00	162.25		162.25	0.000000	0.05	6356.18	775.23	0.00
RIVER-2	Reach-1	10000.*	Max WS	314.11	150.00	162.25		162.25	0.000000	0.05	6613.16	795.07	0.00
RIVER-2	Reach-1	9950	Max WS	314.09	150.00	162.25		162.25	0.000000	0.05	6884.85	815.03	0.00

RIVER-2	Reach-1	9900.*	Max WS	314.07	150.00	162.25		162.25	0.000000	0.04	7538.18	1039.59	0.00
RIVER-2	Reach-1	9850	Max WS	313.62	150.00	162.25		162.25	0.000000	0.04	8149.41	1201.12	0.00
RIVER-2	Reach-1	9800.*	Max WS	314.00	150.00	162.25		162.25	0.000000	0.04	7946.07	1391.53	0.00
RIVER-2	Reach-1	9750	Max WS	313.60	150.00	162.25		162.25	0.000000	0.04	8242.18	1456.41	0.00
RIVER-2	Reach-1	9675.*	Max WS	313.95	149.36	162.25		162.25	0.000000	0.04	8938.59	1495.74	0.00
RIVER-2	Reach-1	9600	Max WS	313.57	148.73	162.25		162.25	0.000000	0.03	9722.62	1534.90	0.00
RIVER-2	Reach-1	9550.*	Max WS	313.89	148.36	162.25		162.25	0.000000	0.03	11983.13	1678.72	0.00
RIVER-2	Reach-1	9500	Max WS	313.85	148.00	162.25		162.25	0.000000	0.02	14412.61	1729.97	0.00
RIVER-2	Reach-1	9450.*	Max WS	314.15	147.00	162.25		162.25	0.000000	0.02	15411.87	1761.69	0.00
RIVER-2	Reach-1	9400	Max WS	313.80	146.00	162.25		162.25	0.000000	0.02	16748.33	1776.63	0.00
RIVER-2	Reach-1	9350.*	Max WS	313.76	145.51	162.25		162.25	0.000000	0.02	16193.90	1704.95	0.00
RIVER-2	Reach-1	9300	Max WS	313.73	145.02	162.25		162.25	0.000000	0.02	15520.29	1608.95	0.00
RIVER-2	Reach-1	9200.*	Max WS	313.52	144.51	162.25		162.25	0.000000	0.02	14492.15	1432.17	0.00
RIVER-2	Reach-1	9100	Max WS	313.66	144.00	162.25		162.25	0.000000	0.02	13415.52	1249.52	0.00
RIVER-2	Reach-1	9050.*	Max WS	313.51	144.00	162.25		162.25	0.000000	0.02	13005.73	1127.96	0.00
RIVER-2	Reach-1	9000	Max WS	313.50	144.00	162.25		162.25	0.000000	0.02	12674.67	1022.80	0.00
RIVER-2	Reach-1	8900.*	Max WS	313.56	143.08	162.25		162.25	0.000000	0.02	13031.26	995.69	0.00
RIVER-2	Reach-1	8800	Max WS	313.52	142.16	162.25		162.25	0.000000	0.02	13247.20	950.91	0.00
RIVER-2	Reach-1	8700.*	Max WS	313.50	143.70	162.25		162.25	0.000000	0.03	12461.84	980.52	0.00
RIVER-2	Reach-1	8600	Max WS	313.48	145.24	162.25	145.80	162.25	0.000000	0.03	11936.12	988.38	0.00
RIVER-2	Reach-1	8500		Inl Struct									
RIVER-2	Reach-1	8450	Max WS	313.47	140.56	152.52		152.64	0.003337	2.76	113.40	29.32	0.25
RIVER-2	Reach-1	8350	Max WS	314.81	140.09	152.13		152.26	0.004218	2.91	108.09	28.78	0.26
RIVER-2	Reach-1	8250.*	Max WS	316.14	139.60	151.72		151.85	0.004237	2.92	108.28	29.01	0.27
RIVER-2	Reach-1	8150.*	Max WS	317.48	139.11	151.30		151.43	0.004281	2.93	108.41	29.28	0.27
RIVER-2	Reach-1	8050.*	Max WS	318.82	138.62	150.87		151.01	0.004343	2.94	108.47	29.56	0.27
RIVER-2	Reach-1	7950.*	Max WS	320.15	138.13	150.44		150.57	0.004418	2.95	108.49	29.87	0.27
RIVER-2	Reach-1	7850.*	Max WS	321.50	137.64	149.99		150.13	0.004520	2.96	108.55	30.43	0.28
RIVER-2	Reach-1	7750.*	Max WS	322.84	137.15	149.54		149.67	0.004678	2.98	108.51	31.29	0.28
RIVER-2	Reach-1	7650.*	Max WS	324.19	136.66	149.06		149.20	0.004847	2.99	108.42	32.15	0.29
RIVER-2	Reach-1	7550.*	Max WS	325.53	136.17	148.58		148.72	0.004919	3.00	108.45	32.38	0.29
RIVER-2	Reach-1	7450.*	Max WS	326.88	135.68	148.08		148.23	0.005002	3.02	108.36	32.52	0.29
RIVER-2	Reach-1	7350.*	Max WS	328.24	135.19	147.58		147.73	0.005081	3.03	108.23	32.57	0.29
RIVER-2	Reach-1	7250.*	Max WS	329.58	134.70	147.07		147.22	0.005139	3.05	108.18	32.54	0.29
RIVER-2	Reach-1	7150.*	Max WS	330.94	134.21	146.56		146.71	0.005236	3.07	107.82	32.39	0.30
RIVER-2	Reach-1	7050.*	Max WS	332.29	133.72	146.03		146.18	0.005332	3.09	107.44	32.20	0.30
RIVER-2	Reach-1	6950.*	Max WS	333.65	133.23	145.50		145.65	0.005487	3.13	106.66	31.90	0.30
RIVER-2	Reach-1	6850.*	Max WS	335.01	132.74	144.95		145.10	0.005696	3.17	105.52	31.49	0.31
RIVER-2	Reach-1	6750.*	Max WS	336.36	132.25	144.36		144.53	0.006076	3.25	103.42	30.92	0.31
RIVER-2	Reach-1	6650.*	Max WS	337.73	131.76	143.72		143.90	0.006820	3.39	99.67	30.15	0.33
RIVER-2	Reach-1	6550	Max WS	339.09	131.27	142.90		143.12	0.008997	3.73	90.97	28.76	0.37
RIVER-2	Reach-1	6466.66*	Max WS	340.22	132.84	142.19		142.40	0.008335	3.72	91.40	31.66	0.39
RIVER-2	Reach-1	6383.33*	Max WS	341.36	134.40	141.67		141.83	0.005421	3.27	104.53	37.16	0.34
RIVER-2	Reach-1	6300	Max WS	342.51	135.97	141.33		141.48	0.003198	3.07	111.40	31.77	0.29
RIVER-2	Reach-1	6250	Max WS	343.19	136.00	141.09		141.28	0.004683	3.56	96.31	29.07	0.34
RIVER-2	Reach-1	6200	Max WS	343.87	135.00	140.74		141.01	0.006322	4.16	82.63	23.37	0.39
RIVER-2	Reach-1	6100.*	Max WS	345.25	134.75	140.27		140.46	0.004705	3.55	97.21	29.22	0.34
RIVER-2	Reach-1	6000.*	Max WS	346.62	134.50	139.88		140.03	0.003940	3.16	109.67	35.22	0.32
RIVER-2	Reach-1	5900.*	Max WS	348.00	134.25	139.53		139.66	0.003597	2.91	119.68	41.25	0.30
RIVER-2	Reach-1	5800.*	Max WS	349.38	134.00	139.18		139.30	0.003577	2.77	126.30	47.14	0.30
RIVER-2	Reach-1	5700.*	Max WS	350.75	133.75	138.81		138.93	0.003940	2.74	127.98	52.37	0.31
RIVER-2	Reach-1	5600.*	Max WS	352.13	133.50	138.36		138.49	0.005064	2.90	121.50	55.34	0.34
RIVER-2	Reach-1	5500.*	Max WS	353.50	133.25	137.64		137.84	0.008208	3.59	98.39	46.34	0.43
RIVER-2	Reach-1	5400	Max WS	354.88	133.00	135.90		136.46	0.020685	6.00	59.16	25.45	0.69
RIVER-2	Reach-1	5304.54*	Max WS	356.20	132.73	134.91		135.08	0.007893	3.33	107.01	56.53	0.43
RIVER-2	Reach-1	5209.09*	Max WS	357.52	132.45	134.38		134.47	0.005273	2.47	144.55	88.83	0.34
RIVER-2	Reach-1	5113.63*	Max WS	358.84	132.18	133.96		134.03	0.004341	2.06	173.94	121.64	0.30
RIVER-2	Reach-1	5018.18*	Max WS	360.16	131.91	133.59		133.64	0.004027	1.83	196.37	155.06	0.29
RIVER-2	Reach-1	4922.72*	Max WS	361.48	131.64	133.25		133.30	0.003901	1.69	214.33	187.59	0.28
RIVER-2	Reach-1	4827.27*	Max WS	362.80	131.36	132.94		132.98	0.003829	1.58	229.92	219.47	0.27
RIVER-2	Reach-1	4731.81*	Max WS	364.11	131.09	132.63		132.67	0.003887	1.50	242.82	253.23	0.27
RIVER-2	Reach-1	4636.36*	Max WS	365.43	130.82	132.33		132.37	0.004182	1.45	252.04	292.14	0.28
RIVER-2	Reach-1	4540.90*	Max WS	366.75	130.55	132.03		132.06	0.004553	1.41	260.22	335.61	0.28
RIVER-2	Reach-1	4445.45*	Max WS	368.05	130.27	131.75		131.78	0.004502	1.31	281.33	402.40	0.28
RIVER-2	Reach-1	4350	Max WS	369.37	130.00	131.20		131.26	0.016999	1.91	193.37	424.78	0.50
RIVER-2	Reach-1	4260.*	Max WS	370.50	129.40	130.58		130.63	0.013868	1.81	205.36	423.44	0.46
RIVER-2	Reach-1	4170.*	Max WS	371.63	128.80	130.01		130.06	0.013212	1.80	206.54	410.67	0.45
RIVER-2	Reach-1	4080.*	Max WS	372.76	128.20	129.62		129.66	0.008512	1.55	241.01	432.28	0.37
RIVER-2	Reach-1	3990.*	Max WS	373.88	127.60	129.38		129.40	0.004536	1.24	302.26	472.87	0.27

RIVER-2	Reach-1	3900	Max WS	375.00	127.00	129.16	129.18	0.003513	1.13	331.89	491.09	0.24
RIVER-2	Reach-1	3800.*	Max WS	376.44	126.70	128.88	128.90	0.003855	1.17	321.47	483.44	0.25
RIVER-2	Reach-1	3700.*	Max WS	377.86	126.40	128.60	128.62	0.004354	1.22	308.52	475.19	0.27
RIVER-2	Reach-1	3600.*	Max WS	379.29	126.10	128.32	128.35	0.004837	1.27	297.57	467.22	0.28
RIVER-2	Reach-1	3500.*	Max WS	380.71	125.80	128.05	128.08	0.004585	1.30	292.22	426.47	0.28
RIVER-2	Reach-1	3400.*	Max WS	382.13	125.50	127.78	127.81	0.004426	1.32	289.05	401.92	0.27
RIVER-2	Reach-1	3300.*	Max WS	383.54	125.20	127.51	127.54	0.004262	1.33	287.59	383.65	0.27
RIVER-2	Reach-1	3200.*	Max WS	384.94	124.90	127.25	127.28	0.004111	1.34	287.48	371.01	0.27
RIVER-2	Reach-1	3100.*	Max WS	386.34	124.60	126.99	127.02	0.003935	1.33	290.69	367.12	0.26
RIVER-2	Reach-1	3000.*	Max WS	387.74	124.30	126.74	126.77	0.003670	1.30	298.41	369.92	0.25
RIVER-2	Reach-1	2900	Max WS	389.14	124.00	126.51	126.54	0.003225	1.22	318.13	391.85	0.24
RIVER-2	Reach-1	2812.5*	Max WS	390.30	123.52	126.31	126.33	0.003332	1.17	333.12	448.60	0.24
RIVER-2	Reach-1	2725.*	Max WS	391.47	123.03	126.03	126.05	0.004187	1.21	322.78	489.88	0.26
RIVER-2	Reach-1	2637.5*	Max WS	392.62	122.55	125.70	125.73	0.005814	1.34	292.58	487.95	0.31
RIVER-2	Reach-1	2550.*	Max WS	393.77	122.07	125.42	125.45	0.006225	1.37	287.40	488.91	0.31
RIVER-2	Reach-1	2462.5*	Max WS	394.90	121.58	125.18	125.21	0.004885	1.29	305.71	473.54	0.28
RIVER-2	Reach-1	2375	Max WS	396.05	121.10	124.91	124.94	0.004155	1.28	309.06	428.86	0.27
RIVER-2	Reach-1	2279.16*	Max WS	397.29	121.07	124.61	124.64	0.005006	1.33	299.82	455.24	0.29
RIVER-2	Reach-1	2183.33*	Max WS	398.54	121.03	124.37	124.39	0.004915	1.26	317.01	513.92	0.28
RIVER-2	Reach-1	2087.5*	Max WS	399.79	121.00	124.15	124.17	0.003778	1.15	347.49	528.34	0.25
RIVER-2	Reach-1	1991.66*	Max WS	401.03	120.97	123.88	123.90	0.003629	1.13	354.15	535.02	0.25
RIVER-2	Reach-1	1895.83*	Max WS	402.27	120.93	123.62	123.63	0.003612	1.13	356.06	537.92	0.24
RIVER-2	Reach-1	1800	Max WS	403.50	120.90	123.43	123.44	0.002533	1.01	400.83	551.79	0.21
RIVER-2	Reach-1	1705.*	Max WS	404.72	120.43	123.26	123.28	0.002350	1.01	402.45	524.45	0.20
RIVER-2	Reach-1	1610.*	Max WS	405.94	119.95	123.06	123.08	0.002494	1.05	387.09	495.07	0.21
RIVER-2	Reach-1	1515.*	Max WS	407.15	119.47	122.80	122.82	0.003160	1.15	355.55	476.71	0.23
RIVER-2	Reach-1	1420	Max WS	408.37	119.00	122.51	122.53	0.003828	1.27	326.31	456.59	0.26
RIVER-2	Reach-1	1324.61*	Max WS	408.35	118.62	122.18	122.20	0.003773	1.26	328.92	461.75	0.26
RIVER-2	Reach-1	1229.23*	Max WS	408.34	118.23	121.85	121.87	0.004002	1.27	324.44	464.55	0.26
RIVER-2	Reach-1	1133.84*	Max WS	408.31	117.85	121.55	121.57	0.004061	1.27	325.47	468.50	0.26
RIVER-2	Reach-1	1038.46*	Max WS	408.29	117.46	121.21	121.24	0.004020	1.35	315.06	480.05	0.27
RIVER-2	Reach-1	943.076*	Max WS	408.27	117.08	120.86	120.89	0.004420	1.44	297.18	432.51	0.28
RIVER-2	Reach-1	847.692*	Max WS	408.26	116.69	120.51	120.54	0.004002	1.51	286.14	362.98	0.27
RIVER-2	Reach-1	752.307*	Max WS	408.24	116.31	120.14	120.17	0.004029	1.62	268.88	311.79	0.28
RIVER-2	Reach-1	656.923*	Max WS	408.24	115.92	119.77	119.81	0.004363	1.71	254.29	284.02	0.29
RIVER-2	Reach-1	561.538*	Max WS	408.17	115.54	119.44	119.49	0.004244	1.76	247.70	258.27	0.29
RIVER-2	Reach-1	466.153*	Max WS	407.67	115.15	119.15	119.19	0.003800	1.78	246.49	234.65	0.28
RIVER-2	Reach-1	370.769*	Max WS	401.10	114.77	118.88	118.93	0.003173	1.76	245.71	206.41	0.26
RIVER-2	Reach-1	275.384*	Max WS	333.67	114.38	118.67	118.70	0.001838	1.48	234.87	153.33	0.20
RIVER-2	Reach-1	180	Max WS	307.96	114.00	118.50	118.54	0.001695	1.57	196.43	100.37	0.20
RIVER-1	Reach-1	326	Max WS	74.60	169.00	170.54	170.57	0.001690	1.59	71.33	135.42	0.27
RIVER-1	Reach-1	325.5*	Max WS	74.24	168.75	170.50	170.51	0.000710	1.12	107.13	164.54	0.18
RIVER-1	Reach-1	325.*	Max WS	203.39	168.50	170.28	170.36	0.004089	2.80	121.50	183.37	0.43
RIVER-1	Reach-1	324.5*	Max WS	251.18	168.25	169.98	170.09	0.006230	3.43	128.05	200.84	0.54
RIVER-1	Reach-1	324	Max WS	251.04	168.00	169.75	169.82	0.004158	2.86	156.26	211.17	0.44
RIVER-1	Reach-1	323.*	Max WS	251.18	167.02	169.29	169.49	0.006454	4.18	110.47	214.79	0.57
RIVER-1	Reach-1	322	Max WS	251.59	166.04	168.44	168.49	0.014993	6.18	51.07	68.28	0.86
RIVER-1	Reach-1	320	Max WS	265.58	166.00	167.65	167.73	0.007261	3.66	156.58	260.40	0.57
RIVER-1	Reach-1	319.*	Max WS	265.38	166.00	167.45	167.50	0.003002	2.03	200.90	380.21	0.36
RIVER-1	Reach-1	318	Max WS	264.44	166.00	167.29	167.33	0.002594	1.63	218.19	519.26	0.32
RIVER-1	Reach-1	317.*	Max WS	264.17	165.50	167.08	167.12	0.002370	1.53	206.31	544.78	0.31
RIVER-1	Reach-1	316	Max WS	264.07	165.00	166.59	166.67	0.007540	2.21	119.75	211.78	0.52
RIVER-1	Reach-1	315.*	Max WS	265.03	164.50	165.95	166.03	0.005508	2.23	119.73	184.90	0.46
RIVER-1	Reach-1	314	Max WS	265.70	164.00	165.49	165.56	0.002867	2.25	165.04	259.30	0.36
RIVER-1	Reach-1	313.*	Max WS	265.81	163.50	165.11	165.21	0.005010	2.93	149.20	316.88	0.48
RIVER-1	Reach-1	312	Max WS	266.32	163.00	164.78	164.82	0.003186	2.26	221.07	363.26	0.38
RIVER-1	Reach-1	311.*	Max WS	266.94	162.50	164.27	164.38	0.007059	3.34	138.80	249.14	0.56
RIVER-1	Reach-1	310	Max WS	267.93	162.00	163.87	163.91	0.002636	2.33	194.70	236.52	0.35
RIVER-1	Reach-1	309.*	Max WS	268.54	161.26	163.31	163.50	0.009145	3.85	109.72	274.93	0.64
RIVER-1	Reach-1	308	Max WS	269.25	160.51	162.93	162.98	0.002011	2.08	176.49	169.28	0.31
RIVER-1	Reach-1	307.*	Max WS	269.64	159.76	162.62	162.77	0.005819	3.36	116.53	411.89	0.52
RIVER-1	Reach-1	306	Max WS	270.02	159.00	162.26	162.42	0.007185	3.60	153.12	627.68	0.57
RIVER-1	Reach-1	305.*	Max WS	266.05	159.00	161.74	161.88	0.006471	3.28	146.33	621.41	0.54
RIVER-1	Reach-1	304	Max WS	262.79	159.00	161.48	161.51	0.001331	1.61	331.58	698.58	0.25
RIVER-1	Reach-1	303.*	Max WS	261.87	158.75	161.37	161.41	0.001315	1.95	308.17	681.27	0.26
RIVER-1	Reach-1	302	Max WS	256.80	158.50	161.24	161.30	0.001932	2.75	269.91	692.11	0.33
RIVER-1	Reach-1	301.*	Max WS	251.73	158.25	161.08	161.16	0.002296	2.93	229.15	622.60	0.35
RIVER-1	Reach-1	300	Max WS	248.11	158.00	160.94	161.00	0.001945	2.59	224.67	432.63	0.32
RIVER-1	Reach-1	299.*	Max WS	241.94	158.31	160.80	160.85	0.002064	2.70	202.72	272.72	0.33

RIVER-1	Reach-1	298	Max WS	236.24	158.62	160.68		160.71	0.001499	2.27	226.15	236.37	0.28
RIVER-1	Reach-1	297.*	Max WS	233.42	158.31	160.60		160.61	0.000500	1.32	380.24	415.69	0.16
RIVER-1	Reach-1	296	Max WS	233.42	158.00	160.58		160.58	0.000125	0.68	628.16	481.57	0.08
RIVER-1	Reach-1	295.*	Max WS	233.17	158.01	160.56		160.57	0.000187	0.83	495.67	400.00	0.10
RIVER-1	Reach-1	294	Max WS	288.20	158.01	160.53		160.54	0.000284	1.02	445.28	332.32	0.12
RIVER-1	Reach-1	293.*	Max WS	288.07	157.51	160.50		160.51	0.000309	1.17	383.91	243.24	0.13
RIVER-1	Reach-1	292	Max WS	287.94	157.00	160.46		160.48	0.000400	1.46	317.29	177.45	0.15
RIVER-1	Reach-1	291.5	Max WS	287.79	157.00	160.34		160.45	0.002104	3.25	130.95	93.40	0.35
RIVER-1	Reach-1	290.62	Max WS	287.77	157.00	160.08	158.69	160.24	0.002408	3.19	90.39	42.34	0.36
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	287.28	157.00	159.15		159.54	0.009236	5.06	56.72	32.87	0.68
RIVER-1	Reach-1	288.66*	Max WS	286.54	156.50	158.69	158.34	159.04	0.009830	4.81	67.76	122.65	0.69
RIVER-1	Reach-1	288	Max WS	284.99	156.00	158.52		158.52	0.000334	1.09	496.37	429.06	0.13
RIVER-1	Reach-1	287.*	Max WS	284.59	156.00	158.48		158.49	0.000481	1.31	426.03	392.55	0.16
RIVER-1	Reach-1	286	Max WS	284.54	156.00	158.43		158.44	0.000562	1.44	387.28	344.04	0.17
RIVER-1	Reach-1	285.*	Max WS	284.68	155.50	158.29		158.41	0.002819	3.09	145.85	211.85	0.39
RIVER-1	Reach-1	284	Max WS	284.82	155.00	157.97		158.15	0.003997	3.36	84.83	49.09	0.45
RIVER-1	Reach-1	283.*	Max WS	285.00	154.75	157.60		157.81	0.004218	3.82	97.65	129.08	0.47
RIVER-1	Reach-1	282	Max WS	285.24	154.50	157.36		157.51	0.003208	3.78	143.35	154.97	0.42
RIVER-1	Reach-1	281.*	Max WS	285.67	154.25	157.04		157.21	0.003349	3.81	124.82	131.57	0.43
RIVER-1	Reach-1	280	Max WS	286.06	154.00	156.70		156.89	0.003506	3.82	110.29	117.86	0.44
RIVER-1	Reach-1	279.*	Max WS	285.91	153.25	156.38		156.57	0.003139	3.61	98.70	96.92	0.42
RIVER-1	Reach-1	278	Max WS	282.17	152.50	156.08		156.26	0.003098	3.40	96.06	105.09	0.41
RIVER-1	Reach-1	277.*	Max WS	369.51	152.45	155.47		155.81	0.006291	4.88	97.12	107.23	0.58
RIVER-1	Reach-1	276	Max WS	369.80	152.40	154.97		155.28	0.006429	4.92	116.07	131.97	0.59
RIVER-1	Reach-1	275.*	Max WS	369.96	151.90	154.64		154.74	0.003453	2.71	171.38	260.31	0.37
RIVER-1	Reach-1	274	Max WS	369.92	151.40	154.40		154.45	0.002527	1.88	235.43	327.55	0.28
RIVER-1	Reach-1	273.*	Max WS	369.82	151.30	154.24		154.28	0.001499	1.58	275.02	284.80	0.22
RIVER-1	Reach-1	272	Max WS	369.91	151.20	154.16		154.18	0.000680	1.19	388.91	371.52	0.15
RIVER-1	Reach-1	271.*	Max WS	370.04	150.85	154.08		154.11	0.001206	1.44	306.08	402.33	0.20
RIVER-1	Reach-1	270	Max WS	370.02	150.50	153.80		153.87	0.004230	2.17	170.73	143.49	0.35
RIVER-1	Reach-1	269.*	Max WS	370.43	150.12	153.43		153.51	0.003028	2.30	161.11	96.23	0.31
RIVER-1	Reach-1	268	Max WS	370.38	149.75	152.89		153.12	0.005122	3.84	96.39	38.45	0.43
RIVER-1	Reach-1	267.265*	Max WS	370.38	149.43	152.51		152.76	0.004734	4.00	92.54	39.02	0.45
RIVER-1	Reach-1	266.53	Max WS	370.37	149.10	152.22	151.07	152.47	0.003631	3.99	93.95	49.57	0.45
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	370.35	148.65	151.50		151.82	0.005455	4.55	81.31	37.09	0.54
RIVER-1	Reach-1	264.033*	Max WS	370.32	148.24	150.98		151.29	0.007939	4.47	87.72	83.93	0.59
RIVER-1	Reach-1	263.016*	Max WS	370.07	147.84	150.61		150.74	0.005492	3.27	141.58	151.80	0.45
RIVER-1	Reach-1	262	Max WS	369.96	147.43	150.44		150.47	0.001177	1.52	338.27	342.19	0.20
RIVER-1	Reach-1	261.*	Max WS	370.44	146.71	149.59		149.85	0.012225	4.17	97.45	132.07	0.61
RIVER-1	Reach-1	260	Max WS	370.90	146.00	148.92		148.99	0.003243	2.47	192.48	178.51	0.33
RIVER-1	Reach-1	259.*	Max WS	370.97	146.00	148.29		148.56	0.011625	4.32	97.98	100.31	0.61
RIVER-1	Reach-1	258	Max WS	371.03	146.00	147.98		148.05	0.003505	2.40	195.87	193.00	0.33
RIVER-1	Reach-1	257.*	Max WS	371.29	145.50	147.66		147.74	0.004234	2.84	203.34	268.63	0.37
RIVER-1	Reach-1	256	Max WS	371.33	145.00	147.31		147.38	0.004882	3.24	204.35	290.86	0.41
RIVER-1	Reach-1	255.*	Max WS	411.44	144.50	146.88		147.00	0.006553	3.81	174.73	216.12	0.47
RIVER-1	Reach-1	254	Max WS	411.65	144.00	146.25		146.45	0.009975	4.48	138.95	174.32	0.58
RIVER-1	Reach-1	253.*	Max WS	411.87	143.00	145.42		145.67	0.012380	4.87	120.97	139.11	0.64
RIVER-1	Reach-1	252	Max WS	412.06	142.00	144.97		145.05	0.004116	3.12	213.52	245.32	0.38
RIVER-1	Reach-1	251.*	Max WS	412.51	141.75	144.43		144.51	0.004482	2.97	225.46	333.75	0.39
RIVER-1	Reach-1	250	Max WS	412.94	141.50	144.04		144.08	0.002565	2.10	308.13	472.98	0.29
RIVER-1	Reach-1	249.*	Max WS	413.11	141.25	143.82		143.87	0.003114	2.28	276.33	416.24	0.32
RIVER-1	Reach-1	248	Max WS	413.25	141.00	143.55		143.62	0.003366	2.45	251.69	386.15	0.33
RIVER-1	Reach-1	247.*	Max WS	413.63	140.75	143.23		143.27	0.002692	2.10	274.26	316.13	0.29
RIVER-1	Reach-1	246	Max WS	414.00	140.50	143.03		143.05	0.001009	1.47	365.13	285.57	0.18
RIVER-1	Reach-1	245.*	Max WS	414.18	139.75	142.70		142.86	0.006483	4.00	151.67	161.04	0.47
RIVER-1	Reach-1	244	Max WS	414.35	139.00	142.38		142.48	0.004753	3.59	198.72	220.57	0.40
RIVER-1	Reach-1	243.*	Max WS	414.48	139.50	142.13		142.23	0.004541	3.25	193.33	209.98	0.39
RIVER-1	Reach-1	242	Max WS	414.58	140.00	141.93		141.99	0.003487	2.49	229.89	245.73	0.34
RIVER-1	Reach-1	241.*	Max WS	414.80	139.50	141.63		141.69	0.003855	2.61	221.52	238.46	0.35
RIVER-1	Reach-1	240	Max WS	415.03	139.00	141.33		141.39	0.003631	2.71	218.23	239.19	0.35
RIVER-1	Reach-1	239.*	Max WS	415.28	138.50	141.01		141.07	0.003501	2.36	227.13	241.05	0.33
RIVER-1	Reach-1	238	Max WS	415.20	138.00	140.63		140.70	0.004731	2.44	214.35	254.69	0.38
RIVER-1	Reach-1	237.25*	Max WS	415.06	137.62	140.34		140.40	0.004186	2.44	228.43	280.16	0.36
RIVER-1	Reach-1	236.5	Max WS	415.03	137.25	140.13		140.17	0.002622	2.12	289.58	363.47	0.29
RIVER-1	Reach-1	235.85	Max WS	415.00	136.60	139.67	138.72	140.00	0.005136	4.64	89.64	41.42	0.53
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	415.00	136.10	139.50		139.75	0.003262	4.03	106.03	53.68	0.43

RIVER-1	Reach-1	234.153*	Max WS	414.99	135.73	139.24	139.51	0.004354	4.38	126.32	142.60	0.46
RIVER-1	Reach-1	233.076*	Max WS	414.98	135.37	138.88	139.14	0.006501	4.77	150.55	249.55	0.51
RIVER-1	Reach-1	232	Max WS	414.98	135.00	138.47	138.65	0.008516	4.78	197.37	431.65	0.53
RIVER-1	Reach-1	231.*	Max WS	414.92	135.00	138.19	138.24	0.002849	2.73	303.40	460.75	0.31
RIVER-1	Reach-1	230	Max WS	414.79	135.00	138.11	138.12	0.000559	1.25	541.44	508.81	0.14
RIVER-1	Reach-1	229.*	Max WS	428.20	134.50	138.03	138.05	0.000881	1.67	455.62	461.07	0.18
RIVER-1	Reach-1	228	Max WS	428.52	134.00	137.90	137.93	0.001376	2.18	382.23	440.08	0.22
RIVER-1	Reach-1	227.*	Max WS	428.75	133.85	137.75	137.79	0.001822	2.29	328.63	374.98	0.25
RIVER-1	Reach-1	226	Max WS	428.99	133.70	137.41	137.49	0.005618	3.16	217.39	315.02	0.42
RIVER-1	Reach-1	225.*	Max WS	429.12	133.48	137.08	137.18	0.005642	3.51	211.38	305.35	0.43
RIVER-1	Reach-1	224	Max WS	429.23	133.25	136.76	136.87	0.005743	3.84	208.86	298.01	0.44
RIVER-1	Reach-1	223.*	Max WS	429.40	133.12	136.42	136.51	0.005161	3.65	217.77	289.52	0.42
RIVER-1	Reach-1	222	Max WS	429.57	133.00	136.17	136.23	0.003362	3.01	251.90	283.51	0.34
RIVER-1	Reach-1	221.*	Max WS	429.72	132.70	135.95	136.02	0.003669	3.24	248.15	301.25	0.35
RIVER-1	Reach-1	220	Max WS	429.86	132.40	135.68	135.77	0.004542	3.64	234.40	321.57	0.40
RIVER-1	Reach-1	219.*	Max WS	429.89	131.80	135.57	135.66	0.003387	3.46	245.78	310.11	0.35
RIVER-1	Reach-1	218	Max WS	429.92	131.20	135.55	135.57	0.000868	1.92	403.65	356.05	0.18
RIVER-1	Reach-1	217.*	Max WS	430.15	131.98	135.47	135.50	0.001000	1.86	383.15	335.88	0.19
RIVER-1	Reach-1	216	Max WS	430.10	132.75	135.37	135.40	0.001255	1.75	354.98	315.32	0.21
RIVER-1	Reach-1	215.*	Max WS	474.12	132.62	135.21	135.28	0.003101	2.73	262.53	277.53	0.33
RIVER-1	Reach-1	214	Max WS	474.20	132.50	135.10	135.13	0.001392	1.83	358.19	311.95	0.22
RIVER-1	Reach-1	213.*	Max WS	499.36	131.88	135.00	135.04	0.001121	2.12	364.85	237.89	0.23
RIVER-1	Reach-1	212	Max WS	499.33	131.25	134.93	134.97	0.001033	2.59	363.72	189.48	0.25
RIVER-1	Reach-1	211.065*	Max WS	499.31	130.32	134.16	134.65	0.010120	5.59	89.38	33.63	0.60
RIVER-1	Reach-1	210.13	Max WS	499.30	129.39	133.69	134.12	0.001128	5.28	94.59	42.95	0.45
RIVER-1	Reach-1	209.23		Culvert								
RIVER-1	Reach-1	208.43	Max WS	499.30	128.67	133.27	133.55	0.000680	4.29	116.52	67.89	0.35
RIVER-1	Reach-1	205.91	Max WS	499.27	129.85	132.99	133.43	0.002591	5.27	94.75	40.26	0.61
RIVER-1	Reach-1	205.49	Max WS	499.27	129.75	132.89	133.32	0.002595	5.26	94.91	40.50	0.61
RIVER-1	Reach-1	204.965*	Max WS	499.23	129.62	132.76	133.18	0.002581	5.24	95.33	40.81	0.60
RIVER-1	Reach-1	204.44	Max WS	499.22	129.49	132.63	133.05	0.002561	5.21	95.84	41.14	0.60
RIVER-1	Reach-1	203.626*	Max WS	499.18	129.29	132.42	132.84	0.002543	5.18	96.34	41.50	0.60
RIVER-1	Reach-1	202.813*	Max WS	499.17	129.08	132.23	132.64	0.002459	5.10	97.79	42.02	0.59
RIVER-1	Reach-1	202	Max WS	499.12	128.88	132.05	132.44	0.002391	5.04	99.08	42.54	0.58
RIVER-1	Reach-1	201.36	Max WS	499.12	128.72	131.89	132.29	0.002420	5.08	98.27	42.04	0.59
RIVER-1	Reach-1	200.405*	Max WS	499.06	128.48	131.66	132.06	0.002390	5.06	98.58	41.97	0.58
RIVER-1	Reach-1	199.451*	Max WS	499.05	128.24	131.44	131.84	0.002339	5.03	99.25	41.98	0.58
RIVER-1	Reach-1	198.497*	Max WS	498.99	128.00	131.23	131.62	0.002273	4.98	100.14	42.01	0.57
RIVER-1	Reach-1	197.542*	Max WS	498.92	127.76	131.03	131.40	0.002178	4.91	101.56	42.14	0.56
RIVER-1	Reach-1	196.588*	Max WS	498.84	127.52	130.84	131.20	0.002057	4.82	103.51	42.34	0.54
RIVER-1	Reach-1	195.634*	Max WS	498.74	127.28	130.67	131.01	0.001904	4.69	106.29	42.68	0.52
RIVER-1	Reach-1	194.68*	Max WS	498.64	127.04	130.52	130.84	0.001727	4.54	109.90	43.12	0.50
RIVER-1	Reach-1	193.725*	Max WS	498.63	126.81	130.39	130.69	0.001560	4.38	113.87	43.64	0.48
RIVER-1	Reach-1	192.771*	Max WS	498.52	126.57	130.28	130.55	0.001366	4.18	119.28	44.35	0.45
RIVER-1	Reach-1	191.817*	Max WS	498.39	126.33	130.18	130.43	0.001181	3.97	125.49	45.13	0.42
RIVER-1	Reach-1	190.862*	Max WS	498.26	126.09	130.10	130.32	0.001012	3.76	132.51	46.03	0.39
RIVER-1	Reach-1	189.908*	Max WS	498.26	125.85	130.04	130.23	0.000861	3.55	140.29	46.98	0.36
RIVER-1	Reach-1	188.954*	Max WS	498.11	125.61	129.99	130.16	0.000728	3.35	148.85	48.03	0.33
RIVER-1	Reach-1	188	Max WS	498.10	125.37	129.94	130.10	0.000616	3.15	157.94	49.09	0.31
RIVER-1	Reach-1	187.7	Max WS	498.10	125.29	129.95	130.08	0.000436	2.86	174.19	47.51	0.26
RIVER-1	Reach-1	187.68		Lat Struct								
RIVER-1	Reach-1	187.65	Max WS	492.98	125.27	129.98	130.08	0.000310	2.52	198.86	53.16	0.23
RIVER-1	Reach-1	187.2	Max WS	593.70	125.15	129.94	130.03	0.000256	2.38	252.37	63.41	0.21
RIVER-1	Reach-1	187.15	Max WS	600.15	125.13	129.93	130.02	0.000277	2.42	248.24	63.02	0.21
RIVER-1	Reach-1	187	Max WS	600.15	125.09	129.94	130.02	0.000222	2.18	275.73	69.74	0.19
RIVER-1	Reach-1	186.81	Max WS	600.01	123.29	129.73	130.04	0.000476	4.48	133.82	73.03	0.31
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	185.39	Max WS	599.90	122.78	129.55	129.80	0.000359	4.03	148.87	49.26	0.27
RIVER-1	Reach-1	184.5	Max WS	600.00	126.00	129.66	129.69	0.000769	2.03	592.26	408.40	0.21
RIVER-1	Reach-1	184	Max WS	599.82	126.00	129.61	129.64	0.000733	2.12	579.88	399.62	0.21
RIVER-1	Reach-1	183.*	Max WS	627.10	126.00	129.45	129.57	0.002908	3.75	303.08	230.01	0.37
RIVER-1	Reach-1	182	Max WS	627.10	126.00	129.35	129.41	0.002014	2.83	335.63	212.66	0.28
RIVER-1	Reach-1	181.*	Max WS	627.80	126.00	129.10	129.18	0.002868	3.13	302.95	224.68	0.33
RIVER-1	Reach-1	180	Max WS	627.86	126.00	128.81	128.89	0.003204	3.02	327.73	309.35	0.34
RIVER-1	Reach-1	179.*	Max WS	651.54	125.00	128.55	128.61	0.002659	2.95	382.91	384.19	0.32
RIVER-1	Reach-1	178	Max WS	652.18	124.00	128.41	128.43	0.000979	1.89	566.18	446.41	0.19
RIVER-1	Reach-1	177.*	Max WS	653.31	124.00	128.21	128.25	0.001594	2.45	487.27	459.12	0.24
RIVER-1	Reach-1	176	Max WS	654.46	124.00	127.82	127.90	0.003506	3.43	373.39	453.11	0.36
RIVER-1	Reach-1	175.*	Max WS	657.37	123.50	127.55	127.65	0.004235	3.76	348.64	465.89	0.39

RIVER-1	Reach-1	174	Max WS	657.48	123.00	127.32	127.40	0.003263	3.34	407.96	573.62	0.34
RIVER-1	Reach-1	173.*	Max WS	657.58	123.50	127.21	127.25	0.001803	2.39	544.76	654.09	0.25
RIVER-1	Reach-1	172	Max WS	657.78	124.00	127.17	127.18	0.000584	1.32	836.74	751.63	0.14
RIVER-1	Reach-1	171.*	Max WS	658.48	124.00	127.08	127.10	0.000876	1.58	752.68	790.79	0.18
RIVER-1	Reach-1	170	Max WS	659.11	124.00	126.95	126.97	0.001343	1.89	628.13	694.24	0.22
RIVER-1	Reach-1	169.*	Max WS	659.40	123.50	126.85	126.88	0.002118	2.52	563.94	800.85	0.28
RIVER-1	Reach-1	168	Max WS	659.67	123.00	126.74	126.77	0.002001	2.54	518.91	619.71	0.27
RIVER-1	Reach-1	167.*	Max WS	659.92	122.50	126.62	126.65	0.001638	2.47	582.04	728.73	0.25
RIVER-1	Reach-1	166	Max WS	660.25	122.00	126.54	126.56	0.001046	2.08	714.84	866.32	0.20
RIVER-1	Reach-1	165.*	Max WS	660.84	121.00	126.26	126.30	0.001913	2.76	621.24	1014.08	0.26
RIVER-1	Reach-1	164	Max WS	661.86	120.00	125.96	125.98	0.001577	2.29	624.95	817.95	0.22
RIVER-1	Reach-1	163.*	Max WS	662.38	120.00	125.80	125.85	0.002235	3.01	549.82	866.18	0.28
RIVER-1	Reach-1	162	Max WS	662.68	120.00	125.45	125.64	0.005412	4.84	352.95	763.04	0.43
RIVER-1	Reach-1	161.*	Max WS	662.55	120.25	125.15	125.24	0.002799	3.37	442.58	716.89	0.32
RIVER-1	Reach-1	160	Max WS	662.75	120.50	125.01	125.04	0.001075	2.01	643.30	753.37	0.20
RIVER-1	Reach-1	159.*	Max WS	663.12	120.25	124.91	124.94	0.001006	1.91	647.87	769.87	0.20
RIVER-1	Reach-1	158	Max WS	663.42	120.00	124.82	124.85	0.000886	1.74	676.26	784.74	0.18
RIVER-1	Reach-1	157.*	Max WS	663.78	119.50	124.74	124.78	0.001287	2.26	592.70	792.34	0.22
RIVER-1	Reach-1	156	Max WS	664.08	119.00	124.56	124.67	0.003380	3.79	422.36	766.63	0.35
RIVER-1	Reach-1	155.*	Max WS	664.75	119.00	124.27	124.33	0.002434	3.21	505.12	799.23	0.29
RIVER-1	Reach-1	154	Max WS	685.85	119.00	124.07	124.10	0.001342	2.34	678.36	871.68	0.21
RIVER-1	Reach-1	153.*	Max WS	699.17	119.00	123.97	124.00	0.001234	2.29	704.33	905.58	0.21
RIVER-1	Reach-1	152	Max WS	699.57	119.00	123.88	123.90	0.001101	2.08	736.53	931.52	0.20
RIVER-1	Reach-1	151.*	Max WS	708.07	119.00	123.73	123.76	0.001458	2.15	682.92	939.82	0.23
RIVER-1	Reach-1	150	Max WS	707.91	119.00	123.47	123.52	0.003146	2.64	526.08	877.25	0.32
RIVER-1	Reach-1	149.*	Max WS	710.48	118.50	123.20	123.25	0.002510	2.81	534.70	828.88	0.30
RIVER-1	Reach-1	148	Max WS	713.10	118.00	123.00	123.04	0.001804	2.65	586.58	807.19	0.26
RIVER-1	Reach-1	147.*	Max WS	715.09	117.92	122.85	122.89	0.002125	2.58	617.34	1014.57	0.27
RIVER-1	Reach-1	146	Max WS	716.92	117.83	122.64	122.68	0.003025	2.65	581.45	1069.25	0.31
RIVER-1	Reach-1	145.*	Max WS	718.49	117.92	122.43	122.47	0.002095	2.09	591.18	1072.07	0.27
RIVER-1	Reach-1	144	Max WS	720.02	118.00	122.24	122.28	0.002753	1.87	562.76	1132.05	0.29
RIVER-1	Reach-1	143.*	Max WS	721.71	117.50	122.08	122.11	0.001091	1.77	713.34	1015.61	0.20
RIVER-1	Reach-1	142	Max WS	723.57	117.00	121.98	122.01	0.001132	2.19	773.95	970.47	0.20
RIVER-1	Reach-1	141.*	Max WS	725.24	117.00	121.86	121.89	0.001632	2.61	693.13	1006.98	0.24
RIVER-1	Reach-1	140	Max WS	726.58	117.00	121.68	121.72	0.002099	2.90	648.11	1065.43	0.27
RIVER-1	Reach-1	139.*	Max WS	727.46	117.50	121.56	121.59	0.001500	2.31	714.90	1011.03	0.23
RIVER-1	Reach-1	138	Max WS	728.57	118.00	121.48	121.50	0.000808	1.62	867.61	974.12	0.17
RIVER-1	Reach-1	137.*	Max WS	729.98	118.00	121.40	121.42	0.001052	1.74	796.98	1009.02	0.20
RIVER-1	Reach-1	136	Max WS	731.37	118.00	121.29	121.32	0.001635	1.98	702.05	1116.90	0.24
RIVER-1	Reach-1	135.*	Max WS	732.58	117.50	121.18	121.21	0.001237	1.64	731.97	1001.84	0.21
RIVER-1	Reach-1	134	Max WS	734.29	117.00	121.10	121.12	0.000910	1.34	810.23	973.39	0.17
RIVER-1	Reach-1	133.*	Max WS	736.38	117.00	121.00	121.02	0.001121	1.46	692.52	786.99	0.19
RIVER-1	Reach-1	132	Max WS	738.51	117.00	120.89	120.91	0.001056	1.39	652.84	638.08	0.19
RIVER-1	Reach-1	131.*	Max WS	739.65	117.00	120.79	120.82	0.001380	1.51	645.83	842.72	0.21
RIVER-1	Reach-1	130	Max WS	740.75	117.00	120.70	120.72	0.001269	1.39	697.53	816.07	0.20
RIVER-1	Reach-1	129.*	Max WS	741.31	117.00	120.60	120.63	0.001812	1.61	621.69	839.40	0.24
RIVER-1	Reach-1	128	Max WS	741.87	117.00	120.34	120.42	0.005293	2.46	415.29	870.43	0.39
RIVER-1	Reach-1	127.*	Max WS	741.79	116.71	120.13	120.18	0.002880	2.31	495.94	710.19	0.31
RIVER-1	Reach-1	126	Max WS	741.72	116.42	120.06	120.09	0.001463	2.09	688.95	792.80	0.22
RIVER-1	Reach-1	125.*	Max WS	741.71	116.21	120.04	120.06	0.001335	1.83	717.64	835.19	0.22
RIVER-1	Reach-1	124	Max WS	741.70	116.00	120.02	120.03	0.001049	1.50	800.86	911.52	0.19
RIVER-1	Reach-1	123.*	Max WS	741.66	116.18	119.95	119.97	0.001181	1.69	761.65	900.03	0.20
RIVER-1	Reach-1	122	Max WS	741.63	116.35	119.89	119.91	0.001141	1.68	798.19	980.86	0.20
RIVER-1	Reach-1	121.*	Max WS	783.14	115.68	119.73	119.76	0.001918	2.11	599.42	644.54	0.26
RIVER-1	Reach-1	120	Max WS	783.09	115.00	119.58	119.61	0.001199	2.11	673.87	635.56	0.21
RIVER-1	Reach-1	119.*	Max WS	783.02	114.50	119.45	119.51	0.001848	2.89	576.50	601.08	0.29
RIVER-1	Reach-1	118	Max WS	781.17	114.00	119.10	119.35	0.004939	5.12	364.14	549.28	0.53
RIVER-1	Reach-1	117.*	Max WS	779.65	114.50	119.00	119.12	0.002133	3.08	410.58	466.71	0.35
RIVER-1	Reach-1	116	Max WS	774.74	115.00	118.86	118.95	0.002704	2.70	392.98	393.10	0.37
RIVER-1	Reach-1	115.*	Max WS	764.43	114.50	118.68	118.76	0.002552	2.29	397.73	417.09	0.35
RIVER-1	Reach-1	114	Max WS	742.39	114.00	118.50	118.56	0.002162	1.90	427.77	454.91	0.31
RIVER-1	Reach-2	112.05	Max WS	1050.35	112.00	118.50	118.60	0.001529	2.58	520.07	508.25	0.29
RIVER-1	Reach-2	112	Max WS	1050.35	112.00	118.50	118.59	0.001551	2.59	515.65	505.99	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1049.45	113.00	118.37	118.46	0.002029	2.49	512.82	451.86	0.33
RIVER-1	Reach-2	110	Max WS	1040.76	114.00	118.26	118.32	0.001855	2.18	643.25	597.57	0.30
RIVER-1	Reach-2	109.*	Max WS	1034.33	113.50	118.00	118.13	0.002678	3.48	516.55	476.33	0.39
RIVER-1	Reach-2	108	Max WS	1024.47	113.00	117.77	117.91	0.002089	3.72	560.32	502.67	0.36
RIVER-1	Reach-2	107.*	Max WS	1020.54	112.00	117.70	117.79	0.001461	3.11	675.52	585.53	0.30

RIVER-1	Reach-2	106	Max WS	1019.36	111.00	117.66		117.73	0.000910	2.79	824.86	659.20	0.24
RIVER-1	Reach-2	105.*	Max WS	1016.75	110.50	117.59		117.66	0.001178	3.01	776.12	643.28	0.27
RIVER-1	Reach-2	104	Max WS	1014.17	110.00	117.51		117.60	0.001182	3.39	752.59	628.01	0.26
RIVER-1	Reach-2	103.*	Max WS	1013.58	110.00	117.49		117.54	0.001225	2.65	810.82	654.73	0.26
RIVER-1	Reach-2	102	Max WS	872.87	110.00	117.48		117.51	0.000390	1.99	1059.50	701.60	0.16
RIVER-1	Reach-2	101.*	Max WS	1021.95	110.50	117.44		117.48	0.000566	2.35	1046.60	691.38	0.19
RIVER-1	Reach-2	100	Max WS	1021.49	111.00	117.40		117.44	0.000596	2.37	1035.20	681.50	0.20
RIVER-1	Reach-2	99.*	Max WS	1021.42	111.00	117.30		117.34	0.000605	2.41	1014.22	679.66	0.20
RIVER-1	Reach-2	98	Max WS	1021.64	111.00	117.19		117.23	0.000620	2.46	991.15	680.54	0.20
RIVER-1	Reach-2	97.*	Max WS	1022.40	110.50	117.12		117.17	0.000599	2.44	984.98	651.43	0.20
RIVER-1	Reach-2	96	Max WS	1023.18	110.00	117.06		117.10	0.000580	2.41	980.39	620.15	0.20
RIVER-1	Reach-2	95.*	Max WS	1023.77	109.50	117.00		117.05	0.000629	2.54	932.95	627.62	0.20
RIVER-1	Reach-2	94	Max WS	1024.39	109.00	116.93		116.99	0.000679	2.68	883.29	633.86	0.21
RIVER-1	Reach-2	93.*	Max WS	1024.52	109.00	116.86		116.93	0.000615	2.61	867.48	578.90	0.20
RIVER-1	Reach-2	92	Max WS	1025.69	109.00	116.80		116.87	0.000584	2.60	822.80	503.96	0.20
RIVER-1	Reach-2	91.*	Max WS	1026.41	108.50	116.75		116.81	0.000569	2.52	839.84	515.40	0.20
RIVER-1	Reach-2	90	Max WS	1027.12	108.00	116.70		116.75	0.000553	2.44	857.56	523.95	0.19
RIVER-1	Reach-2	89.*	Max WS	1027.82	108.50	116.65		116.70	0.000504	2.41	891.95	509.06	0.19
RIVER-1	Reach-2	88	Max WS	1029.02	109.00	116.60		116.65	0.000467	2.38	927.83	495.30	0.18
RIVER-1	Reach-2	87.*	Max WS	1030.24	108.00	116.58		116.61	0.000238	1.86	1089.33	611.90	0.13
RIVER-1	Reach-2	86	Max WS	1031.05	107.00	116.57		116.59	0.000116	1.41	1529.64	1106.53	0.09
RIVER-1	Reach-2	85.*	Max WS	1031.65	107.50	116.57		116.59	0.000132	1.36	1673.66	1150.25	0.10
RIVER-1	Reach-2	84	Max WS	1032.25	108.00	116.57		116.58	0.000130	1.19	1912.06	1226.92	0.09
RIVER-1	Reach-2	83.*	Max WS	1048.72	108.50	116.55		116.57	0.000207	1.48	1563.97	998.56	0.12
RIVER-1	Reach-2	82	Max WS	1048.44	109.00	116.52		116.55	0.000344	1.81	1331.16	977.03	0.15
RIVER-1	Reach-2	81.56	Max WS	1048.21	108.22	116.43	112.82	116.55	0.001187	2.75	381.79	83.83	0.23
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1045.80	108.96	115.63		115.99	0.005963	4.85	215.57	68.09	0.48
RIVER-1	Reach-2	80.95	Max WS	1045.32	108.83	115.66	112.64	115.86	0.001277	3.58	292.27	62.98	0.29
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1044.41	108.67	115.61		115.82	0.001400	3.66	285.15	64.47	0.31
RIVER-1	Reach-2	79.3849*	Max WS	1041.38	108.33	115.44		115.67	0.001590	3.99	379.04	475.64	0.33
RIVER-1	Reach-2	78.39	Max WS	1040.89	108.00	115.41		115.48	0.000630	2.82	690.63	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1041.31	107.80	115.41		115.43	0.000292	1.91	1170.45	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1040.87	107.60	115.38		115.42	0.000397	2.21	1156.83	785.94	0.17
RIVER-1	Reach-2	76.19	Max WS	1040.47	107.40	115.31		115.41	0.000734	2.96	792.72	739.83	0.22
RIVER-1	Reach-2	75.86	Max WS	1039.37	107.22	115.18	111.80	115.40	0.001178	3.77	344.73	411.05	0.29
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1038.13	106.63	115.03		115.24	0.001516	3.72	300.60	362.88	0.31
RIVER-1	Reach-2	74.7*	Max WS	1038.10	106.82	115.05		115.13	0.000769	2.39	732.59	731.30	0.22
RIVER-1	Reach-2	74	Max WS	1038.06	107.00	115.04		115.07	0.000457	1.58	1275.94	1166.80	0.17
RIVER-1	Reach-2	73.*	Max WS	1037.97	107.43	115.01		115.03	0.000287	1.45	1540.54	1232.87	0.14
RIVER-1	Reach-2	72	Max WS	1037.89	107.86	114.99		115.01	0.000209	1.40	1798.35	1295.90	0.12
RIVER-1	Reach-2	71.*	Max WS	1244.19	107.44	114.86		114.99	0.001132	3.02	500.30	291.62	0.25
RIVER-1	Reach-2	70	Max WS	1244.18	107.03	114.79		114.88	0.000836	2.51	496.44	99.33	0.20
RIVER-1	Reach-2	69.*	Max WS	1244.17	107.35	114.67		114.79	0.001075	2.79	446.31	90.23	0.22
RIVER-1	Reach-2	68	Max WS	1244.01	107.68	114.52		114.67	0.001397	3.07	404.95	86.27	0.25
RIVER-1	Reach-2	67	Max WS	1243.84	107.40	114.33		114.51	0.001947	3.59	393.62	131.38	0.29
RIVER-1	Reach-2	66	Max WS	1243.47	107.40	114.08		114.30	0.002391	3.88	362.08	129.69	0.32
RIVER-1	Reach-2	65.*	Max WS	1243.25	107.20	113.91		114.09	0.001776	3.41	390.29	156.34	0.30
RIVER-1	Reach-2	64	Max WS	1242.79	107.00	113.77		113.92	0.001435	3.18	390.42	112.41	0.30
RIVER-1	Reach-2	63.*	Max WS	1244.38	106.81	113.61		113.77	0.001676	3.17	393.10	138.29	0.32
RIVER-1	Reach-2	62.*	Max WS	1245.32	106.62	113.45		113.60	0.001797	3.14	401.58	165.04	0.33
RIVER-1	Reach-2	61.*	Max WS	1246.45	106.43	113.29		113.43	0.001574	3.00	428.17	180.02	0.31
RIVER-1	Reach-2	60	Max WS	1247.47	106.24	113.18		113.30	0.001233	2.72	483.62	202.57	0.27
RIVER-1	Reach-2	59.*	Max WS	1249.83	106.07	113.07		113.18	0.001031	2.73	495.57	234.38	0.26
RIVER-1	Reach-2	58	Max WS	1252.57	105.90	113.02		113.10	0.000554	2.45	754.10	452.38	0.20
RIVER-1	Reach-2	57.2	Max WS	1254.22	107.05	112.90	110.41	113.05	0.001316	3.36	564.98	398.65	0.30
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1254.29	107.05	112.82		113.00	0.001602	3.62	510.83	381.73	0.32
RIVER-1	Reach-2	56	Max WS	1256.62	105.90	112.78		112.87	0.000712	2.59	617.01	362.23	0.22
RIVER-1	Reach-2	55.*	Max WS	1258.77	105.85	112.73		112.80	0.000641	2.25	713.97	454.60	0.21
RIVER-1	Reach-2	54	Max WS	1261.35	105.80	112.68		112.74	0.000624	2.06	787.19	546.40	0.20
RIVER-1	Reach-2	53.*	Max WS	1267.75	105.70	112.61		112.66	0.000580	2.06	825.27	369.53	0.18
RIVER-1	Reach-2	52	Max WS	1273.83	105.60	112.51		112.56	0.000718	2.11	801.95	309.26	0.18
RIVER-1	Reach-2	51.*	Max WS	1276.84	105.57	112.42		112.48	0.000862	2.37	753.09	296.74	0.20
RIVER-1	Reach-2	50.*	Max WS	1279.48	105.54	112.32		112.39	0.000977	2.60	712.93	283.86	0.23
RIVER-1	Reach-2	49.*	Max WS	1282.45	105.50	112.21		112.29	0.001025	2.82	683.32	271.03	0.24
RIVER-1	Reach-2	48	Max WS	1285.00	105.47	112.10		112.19	0.000955	3.04	665.41	257.88	0.25

RIVER-1	Reach-2	47.*	Max WS	1287.50	105.68	112.01		112.09	0.000957	2.92	716.89	293.11	0.25
RIVER-1	Reach-2	46.*	Max WS	1290.37	105.88	111.93		112.00	0.000859	2.72	789.55	328.93	0.24
RIVER-1	Reach-2	45.*	Max WS	1292.83	106.08	111.86		111.91	0.000688	2.47	888.56	364.28	0.21
RIVER-1	Reach-2	44	Max WS	1295.70	106.29	111.81		111.85	0.000506	2.21	1015.97	400.14	0.19
RIVER-1	Reach-2	43.*	Max WS	1298.73	106.30	111.75		111.80	0.000536	2.29	962.92	389.40	0.19
RIVER-1	Reach-2	42.*	Max WS	1301.40	106.31	111.69		111.75	0.000566	2.37	916.53	387.14	0.20
RIVER-1	Reach-2	41.*	Max WS	1304.07	106.32	111.63		111.69	0.000598	2.43	877.11	382.76	0.20
RIVER-1	Reach-2	40	Max WS	1306.77	106.33	111.57		111.63	0.000631	2.48	844.97	378.13	0.21
RIVER-1	Reach-2	39.*	Max WS	1306.74	106.17	111.52		111.57	0.000508	2.24	955.92	408.90	0.19
RIVER-1	Reach-2	38.*	Max WS	1306.48	106.01	111.49		111.52	0.000379	1.95	1115.46	443.94	0.16
RIVER-1	Reach-2	37.*	Max WS	1306.48	105.84	111.47		111.49	0.000261	1.64	1325.83	474.89	0.14
RIVER-1	Reach-2	36	Max WS	1306.46	105.68	111.43		111.46	0.000357	1.93	1173.65	490.11	0.16
RIVER-1	Reach-2	35.22	Max WS	1306.36	104.52	111.21		111.46	0.001571	4.02	324.71	69.82	0.33
RIVER-1	Reach-2	34.82	Max WS	1306.36	104.52	111.14	108.19	111.40	0.001642	4.09	319.70	69.41	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1305.56	104.30	110.71		111.19	0.004370	5.56	234.71	66.71	0.52
RIVER-1	Reach-2	33.67*	Max WS	1305.33	104.12	110.66		110.96	0.002320	4.35	300.00	77.28	0.39
RIVER-1	Reach-2	33	Max WS	1305.54	103.93	110.71		110.83	0.000892	2.97	641.58	514.44	0.25
RIVER-1	Reach-2	32.*	Max WS	1305.34	103.40	110.62		110.73	0.000897	2.73	667.36	582.57	0.24
RIVER-1	Reach-2	31.*	Max WS	1305.30	102.88	110.50		110.62	0.001277	2.82	619.76	635.72	0.28
RIVER-1	Reach-2	30	Max WS	1305.24	102.35	110.19		110.40	0.003712	3.67	418.60	706.90	0.45
RIVER-1	Reach-2	29.*	Max WS	1305.10	102.34	109.84		110.07	0.003830	3.92	433.15	719.83	0.46
RIVER-1	Reach-2	28.*	Max WS	1304.95	102.33	109.53		109.75	0.003528	3.98	519.54	768.65	0.45
RIVER-1	Reach-2	27.*	Max WS	1304.66	102.33	109.30		109.45	0.002642	3.68	692.78	859.35	0.39
RIVER-1	Reach-2	26	Max WS	1304.53	102.32	109.16		109.23	0.001546	3.02	983.78	975.26	0.30
RIVER-1	Reach-2	25.*	Max WS	1304.30	101.99	109.01		109.11	0.002154	3.38	880.43	1023.59	0.35
RIVER-1	Reach-2	24.*	Max WS	1303.94	101.66	108.82		108.93	0.002634	3.50	778.18	848.84	0.38
RIVER-1	Reach-2	23.*	Max WS	1303.67	101.33	108.64		108.72	0.002603	3.25	841.85	960.34	0.37
RIVER-1	Reach-2	22	Max WS	1303.37	101.00	108.48		108.54	0.002067	2.73	964.95	1032.13	0.33
RIVER-1	Reach-2	21.*	Max WS	1303.05	101.27	108.31		108.37	0.002185	2.82	920.23	972.47	0.34
RIVER-1	Reach-2	20.*	Max WS	1302.56	101.54	108.13		108.19	0.002213	2.85	904.60	846.87	0.34
RIVER-1	Reach-2	19.*	Max WS	1302.01	101.82	107.95		108.01	0.002180	2.93	904.00	796.51	0.34
RIVER-1	Reach-2	18	Max WS	1301.39	102.09	107.78		107.83	0.002104	3.04	909.22	768.92	0.33
RIVER-1	Reach-2	17.*	Max WS	1300.39	101.97	107.60		107.67	0.002513	3.42	990.93	1177.08	0.37
RIVER-1	Reach-2	16.*	Max WS	1298.85	101.85	107.46		107.49	0.001481	2.68	1205.00	1204.28	0.29
RIVER-1	Reach-2	15.*	Max WS	1297.42	101.73	107.37		107.39	0.000812	1.91	1492.33	1219.98	0.21
RIVER-1	Reach-2	14	Max WS	1296.67	101.61	107.33		107.33	0.000446	1.34	1825.74	1232.06	0.15
RIVER-1	Reach-2	13.*	Max WS	1296.30	101.43	107.30		107.30	0.000354	1.11	1970.72	1237.28	0.13
RIVER-1	Reach-2	12.*	Max WS	1295.98	101.26	107.27		107.28	0.000273	1.06	2122.37	1227.89	0.12
RIVER-1	Reach-2	11.*	Max WS	1295.94	101.08	107.26		107.26	0.000212	1.00	2281.83	1214.94	0.11
RIVER-1	Reach-2	10	Max WS	1295.64	100.90	107.24		107.25	0.000169	0.93	2434.48	1196.60	0.10
RIVER-1	Reach-2	9.*	Max WS	1295.59	100.75	107.22		107.23	0.000270	1.20	2021.10	1093.38	0.12
RIVER-1	Reach-2	8.*	Max WS	1295.19	100.60	107.18		107.19	0.000459	1.61	1650.14	1138.55	0.16
RIVER-1	Reach-2	7.*	Max WS	1295.14	100.45	107.11		107.14	0.000741	2.19	1382.44	1191.07	0.21
RIVER-1	Reach-2	6	Max WS	1294.52	100.30	106.99		107.06	0.001447	3.21	1110.74	1265.81	0.30
RIVER-1	Reach-2	5.*	Max WS	1294.17	100.15	106.86		106.93	0.001319	3.14	1161.14	1369.11	0.29
RIVER-1	Reach-2	4.*	Max WS	1293.43	100.00	106.75		106.81	0.001144	2.98	1257.68	1533.69	0.27
RIVER-1	Reach-2	3.*	Max WS	1293.01	99.85	106.64		106.70	0.001066	2.92	1463.96	2103.18	0.26
RIVER-1	Reach-2	2	Max WS	1292.61	99.70	106.58		106.61	0.000583	2.20	1906.93	2258.52	0.19
RIVER-1	Reach-2	1.*	Max WS	1292.45	99.55	106.50		106.55	0.000845	2.72	1582.32	2219.38	0.23
RIVER-1	Reach-2	0	Max WS	1292.34	99.40	106.42	104.36	106.48	0.000914	2.89	1361.59	2004.88	0.24

Appendix P-4: HEC-RAS Results, Developed Conditions Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X    X    X    X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X  X     X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 11:16:45 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.38	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	598.66	157.71	163.01		163.02	0.000054	0.45	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.15	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	600.13	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.66	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	597.21	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	598.63	156.00	163.01		163.01	0.000025	0.36	1680.61	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.20	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	597.19	154.11	163.01		163.01	0.000025	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	595.76	154.05	163.01		163.01	0.000022	0.33	1827.48	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	597.15	154.00	163.00		163.01	0.000020	0.31	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.75	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	595.73	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	594.37	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	594.36	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.68	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	595.64	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	595.61	152.00	163.00		163.00	0.000005	0.18	3310.35	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	595.58	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.32	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	594.30	152.00	163.00		163.00	0.000002	0.13	4521.19	625.06	0.01
RIVER-2	Reach-1	10662.5*	Max WS	594.28	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.25	152.00	163.00		163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.23	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	593.14	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	594.17	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.13	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	595.04	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.96	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.07	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.04	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	594.01	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	594.79	150.00	163.00		163.00	0.000001	0.08	7215.35	820.23	0.00
RIVER-2	Reach-1	9950	Max WS	593.98	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	593.96	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.93	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.88	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	594.51	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	594.41	149.36	163.00		163.00	0.000000	0.06	10070.95	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.81	148.73	163.00		163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.74	148.36	163.00		163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.69	148.00	163.00		163.00	0.000000	0.04	15722.64	1830.39	0.00
RIVER-2	Reach-1	9450.*	Max WS	593.24	147.00	163.00		163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.61	146.00	163.00		163.00	0.000000	0.03	18084.44	1807.32	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.93	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.83	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.51	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.46	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.58	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.43	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.38	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.39	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.33	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.28	140.56	154.39		154.57	0.003541	3.40	174.49	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004340	3.55	168.07	35.97	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.58	139.60	153.55		153.75	0.004419	3.56	168.12	36.59	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.23	139.11	153.11		153.30	0.004513	3.57	168.25	37.31	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004617	3.59	168.38	38.06	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.53	138.13	152.19		152.40	0.004687	3.60	168.63	38.53	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.19	137.64	151.73		151.93	0.004726	3.60	169.08	38.89	0.30
RIVER-2	Reach-1	7750.*	Max WS	611.84	137.15	151.26		151.46	0.004756	3.61	169.60	39.19	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.50	136.66	150.79		150.99	0.004776	3.61	170.14	39.40	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.32		150.52	0.004763	3.61	170.97	39.53	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.81	135.68	149.85		150.05	0.004736	3.61	171.91	39.62	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.48	135.19	149.38		149.58	0.004695	3.60	173.09	39.75	0.30
RIVER-2	Reach-1	7250.*	Max WS	625.15	134.70	148.90		149.10	0.004683	3.59	174.12	40.02	0.30
RIVER-2	Reach-1	7150.*	Max WS	627.81	134.21	148.39		148.59	0.004867	3.61	173.73	40.87	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.49	133.72	147.84		148.05	0.005468	3.65	172.58	44.58	0.33
RIVER-2	Reach-1	6950.*	Max WS	633.13	133.23	147.26		147.48	0.006096	3.72	170.24	47.03	0.34
RIVER-2	Reach-1	6850.*	Max WS	635.41	132.74	146.62		146.85	0.006827	3.83	165.73	47.69	0.36
RIVER-2	Reach-1	6750.*	Max WS	591.30	132.25	146.00		146.21	0.006504	3.65	162.00	48.47	0.35
RIVER-2	Reach-1	6650.*	Max WS	641.15	131.76	145.27		145.54	0.008842	4.17	153.68	46.79	0.41
RIVER-2	Reach-1	6550	Max WS	643.74	131.27	144.59		144.89	0.010092	4.36	147.59	46.02	0.43
RIVER-2	Reach-1	6466.66*	Max WS	645.92	132.84	143.94		144.17	0.007444	3.83	168.69	58.18	0.40
RIVER-2	Reach-1	6383.33*	Max WS	648.08	134.40	143.50		143.69	0.004313	3.47	186.78	52.96	0.33
RIVER-2	Reach-1	6300	Max WS	650.24	135.97	143.16		143.37	0.003328	3.69	176.44	39.26	0.31
RIVER-2	Reach-1	6250	Max WS	651.54	136.00	142.90		143.18	0.004617	4.18	155.75	36.31	0.36
RIVER-2	Reach-1	6200	Max WS	652.84	135.00	142.48		142.88	0.007067	5.12	127.56	28.45	0.43
RIVER-2	Reach-1	6100.*	Max WS	655.29	134.75	142.01		142.29	0.004869	4.26	153.71	35.75	0.36
RIVER-2	Reach-1	6000.*	Max WS	657.68	134.50	141.64		141.85	0.003711	3.67	179.14	43.72	0.32
RIVER-2	Reach-1	5900.*	Max WS	658.86	134.25	141.29		141.45	0.003178	3.26	201.93	53.33	0.30
RIVER-2	Reach-1	5800.*	Max WS	661.39	134.00	140.90		141.04	0.003852	3.00	220.75	78.14	0.31
RIVER-2	Reach-1	5700.*	Max WS	662.07	133.75	140.44		140.56	0.005418	2.79	237.39	125.36	0.35
RIVER-2	Reach-1	5600.*	Max WS	665.84	133.50	139.89		140.00	0.005880	2.75	243.14	145.05	0.36
RIVER-2	Reach-1	5500.*	Max WS	690.11	133.25	139.23		139.37	0.008872	3.04	228.77	161.25	0.44
RIVER-2	Reach-1	5400	Max WS	689.47	133.00	136.91		137.89	0.026421	7.96	86.59	28.96	0.81
RIVER-2	Reach-1	5304.54*	Max WS	691.71	132.73	135.70		136.02	0.009942	4.51	153.21	60.65	0.50
RIVER-2	Reach-1	5209.09*	Max WS	693.39	132.45	135.07		135.24	0.006417	3.34	207.43	93.81	0.40
RIVER-2	Reach-1	5113.63*	Max WS	694.98	132.18	134.59		134.70	0.005057	2.76	251.95	127.63	0.35
RIVER-2	Reach-1	5018.18*	Max WS	697.32	131.91	134.18		134.27	0.004342	2.40	290.78	162.40	0.32
RIVER-2	Reach-1	4922.72*	Max WS	699.15	131.64	133.82		133.90	0.003926	2.15	325.00	198.30	0.30
RIVER-2	Reach-1	4827.27*	Max WS	701.06	131.36	133.49		133.55	0.003744	1.97	355.17	238.13	0.28
RIVER-2	Reach-1	4731.81*	Max WS	703.03	131.09	133.16		133.21	0.003654	1.83	383.28	281.96	0.28
RIVER-2	Reach-1	4636.36*	Max WS	705.00	130.82	132.84		132.88	0.003708	1.72	408.81	333.72	0.27
RIVER-2	Reach-1	4540.90*	Max WS	707.10	130.55	132.48		132.53	0.004050	1.66	425.29	391.99	0.28
RIVER-2	Reach-1	4445.45*	Max WS	709.49	130.27	132.10		132.14	0.004739	1.66	427.37	444.26	0.30
RIVER-2	Reach-1	4350	Max WS	711.78	130.00	131.48		131.56	0.013721	2.26	315.26	458.77	0.48
RIVER-2	Reach-1	4260.*	Max WS	713.61	129.40	130.88		130.95	0.011080	2.11	339.20	469.77	0.44
RIVER-2	Reach-1	4170.*	Max WS	715.55	128.80	130.41		130.46	0.007521	1.87	382.84	471.11	0.37
RIVER-2	Reach-1	4080.*	Max WS	717.34	128.20	130.04		130.09	0.004956	1.63	439.64	485.05	0.30
RIVER-2	Reach-1	3990.*	Max WS	719.37	127.60	129.75		129.78	0.003734	1.49	483.72	496.15	0.27

RIVER-2	Reach-1	3900	Max WS	721.39	127.00	129.52		129.55	0.003217	1.41	511.84	508.94	0.25
RIVER-2	Reach-1	3800.*	Max WS	723.96	126.70	129.27		129.30	0.003203	1.42	510.96	502.46	0.25
RIVER-2	Reach-1	3700.*	Max WS	726.51	126.40	129.02		129.05	0.003165	1.42	511.40	496.46	0.25
RIVER-2	Reach-1	3600.*	Max WS	728.98	126.10	128.77		128.80	0.003100	1.42	513.47	491.18	0.24
RIVER-2	Reach-1	3500.*	Max WS	731.45	125.80	128.53		128.56	0.002997	1.41	518.00	487.08	0.24
RIVER-2	Reach-1	3400.*	Max WS	733.94	125.50	128.29		128.32	0.002921	1.41	521.96	484.49	0.24
RIVER-2	Reach-1	3300.*	Max WS	736.45	125.20	128.04		128.07	0.002876	1.40	524.93	483.29	0.24
RIVER-2	Reach-1	3200.*	Max WS	739.01	124.90	127.79		127.82	0.002853	1.40	526.36	481.04	0.24
RIVER-2	Reach-1	3100.*	Max WS	741.60	124.60	127.53		127.56	0.002874	1.41	524.83	477.66	0.24
RIVER-2	Reach-1	3000.*	Max WS	744.15	124.30	127.25		127.28	0.003104	1.44	515.61	481.64	0.25
RIVER-2	Reach-1	2900	Max WS	746.74	124.00	126.94		126.97	0.003494	1.46	510.23	510.03	0.26
RIVER-2	Reach-1	2812.5*	Max WS	748.87	123.52	126.65		126.68	0.003867	1.50	500.29	521.72	0.27
RIVER-2	Reach-1	2725.*	Max WS	750.97	123.03	126.38		126.41	0.003903	1.50	499.10	519.96	0.27
RIVER-2	Reach-1	2637.5*	Max WS	753.10	122.55	126.13		126.16	0.003668	1.48	509.19	519.55	0.26
RIVER-2	Reach-1	2550.*	Max WS	755.21	122.07	125.87		125.91	0.003504	1.46	516.75	518.56	0.26
RIVER-2	Reach-1	2462.5*	Max WS	757.32	121.58	125.60		125.63	0.003585	1.48	513.07	515.96	0.26
RIVER-2	Reach-1	2375	Max WS	759.42	121.10	125.33		125.37	0.003472	1.47	518.33	514.32	0.26
RIVER-2	Reach-1	2279.16*	Max WS	761.71	121.07	125.06		125.09	0.003344	1.44	529.80	525.95	0.25
RIVER-2	Reach-1	2183.33*	Max WS	763.99	121.03	124.77		124.80	0.003449	1.44	529.92	536.41	0.26
RIVER-2	Reach-1	2087.5*	Max WS	766.26	121.00	124.50		124.53	0.003393	1.43	537.69	547.03	0.25
RIVER-2	Reach-1	1991.66*	Max WS	768.50	120.97	124.26		124.29	0.003068	1.37	559.98	559.13	0.24
RIVER-2	Reach-1	1895.83*	Max WS	770.75	120.93	124.04		124.07	0.002647	1.30	591.70	571.93	0.23
RIVER-2	Reach-1	1800	Max WS	772.99	120.90	123.84		123.86	0.002155	1.22	634.68	581.46	0.21
RIVER-2	Reach-1	1705.*	Max WS	775.21	120.43	123.64		123.67	0.002354	1.28	605.65	550.23	0.21
RIVER-2	Reach-1	1610.*	Max WS	777.41	119.95	123.43		123.45	0.002657	1.36	573.39	523.26	0.23
RIVER-2	Reach-1	1515.*	Max WS	779.65	119.47	123.18		123.21	0.002994	1.46	538.33	503.22	0.24
RIVER-2	Reach-1	1420	Max WS	781.87	119.00	122.87		122.91	0.003628	1.61	497.77	479.06	0.27
RIVER-2	Reach-1	1324.61*	Max WS	781.81	118.62	122.54		122.58	0.003636	1.61	505.72	580.83	0.27
RIVER-2	Reach-1	1229.23*	Max WS	781.75	118.23	122.23		122.27	0.003499	1.57	522.27	580.94	0.26
RIVER-2	Reach-1	1133.84*	Max WS	781.67	117.85	121.92		121.96	0.003459	1.55	532.26	579.92	0.26
RIVER-2	Reach-1	1038.46*	Max WS	781.63	117.46	121.62		121.66	0.003434	1.52	539.82	576.70	0.26
RIVER-2	Reach-1	943.076*	Max WS	781.58	117.08	121.35		121.38	0.003356	1.49	548.41	573.13	0.25
RIVER-2	Reach-1	847.692*	Max WS	781.51	116.69	121.09		121.12	0.003334	1.46	553.22	568.80	0.25
RIVER-2	Reach-1	752.307*	Max WS	781.49	116.31	120.80		120.83	0.003282	1.49	539.59	525.85	0.25
RIVER-2	Reach-1	656.923*	Max WS	781.44	115.92	120.50		120.54	0.003318	1.55	517.46	476.94	0.26
RIVER-2	Reach-1	561.538*	Max WS	781.07	115.54	120.23		120.26	0.003364	1.61	498.57	439.00	0.26
RIVER-2	Reach-1	466.153*	Max WS	778.28	115.15	119.97		120.01	0.003251	1.63	481.48	392.00	0.26
RIVER-2	Reach-1	370.769*	Max WS	771.74	114.77	119.72		119.77	0.003393	1.68	445.13	337.49	0.26
RIVER-2	Reach-1	275.384*	Max WS	762.87	114.38	119.45		119.52	0.004544	1.96	374.31	278.31	0.31
RIVER-2	Reach-1	180	Max WS	611.36	114.00	119.08		119.16	0.005898	2.37	257.55	181.43	0.35
RIVER-1	Reach-1	326	Max WS	141.40	169.00	170.95		170.98	0.001382	1.71	135.96	180.07	0.26
RIVER-1	Reach-1	325.5*	Max WS	141.30	168.75	170.91		170.93	0.000645	1.30	184.93	210.52	0.18
RIVER-1	Reach-1	325.*	Max WS	386.69	168.50	170.67		170.77	0.004125	3.35	200.12	220.29	0.46
RIVER-1	Reach-1	324.5*	Max WS	472.37	168.25	170.36		170.49	0.005929	3.98	209.19	224.04	0.55
RIVER-1	Reach-1	324	Max WS	472.05	168.00	170.13		170.22	0.004380	3.48	240.09	233.08	0.47
RIVER-1	Reach-1	323.*	Max WS	471.90	167.02	169.77		169.93	0.004736	4.24	225.93	264.65	0.51
RIVER-1	Reach-1	322	Max WS	472.41	166.04	168.88	168.94	169.70	0.018120	7.98	85.96	89.44	0.98
RIVER-1	Reach-1	320	Max WS	500.07	166.00	167.92		168.03	0.008495	4.49	226.79	273.92	0.64
RIVER-1	Reach-1	319.*	Max WS	500.21	166.00	167.70		167.78	0.003717	2.62	298.94	403.69	0.41
RIVER-1	Reach-1	318	Max WS	499.70	166.00	167.54		167.59	0.002727	2.01	354.18	549.56	0.35
RIVER-1	Reach-1	317.*	Max WS	500.10	165.50	167.33		167.38	0.002594	1.93	349.82	604.10	0.33
RIVER-1	Reach-1	316	Max WS	499.41	165.00	166.90		167.00	0.006544	2.55	215.24	473.84	0.51
RIVER-1	Reach-1	315.*	Max WS	497.25	164.50	166.30		166.40	0.004458	2.60	235.35	413.60	0.44
RIVER-1	Reach-1	314	Max WS	499.44	164.00	165.83		165.93	0.003440	2.90	263.62	326.62	0.41
RIVER-1	Reach-1	313.*	Max WS	499.50	163.50	165.43		165.55	0.004773	3.36	259.38	354.46	0.48
RIVER-1	Reach-1	312	Max WS	500.36	163.00	165.11		165.16	0.003069	2.64	344.96	383.61	0.38
RIVER-1	Reach-1	311.*	Max WS	501.55	162.50	164.62		164.74	0.006316	3.79	236.31	301.65	0.55
RIVER-1	Reach-1	310	Max WS	503.05	162.00	164.18		164.27	0.003661	3.14	273.44	266.93	0.43
RIVER-1	Reach-1	309.*	Max WS	504.03	161.26	163.64		163.83	0.008100	4.30	210.14	338.79	0.63
RIVER-1	Reach-1	308	Max WS	505.64	160.51	163.25		163.34	0.002817	2.82	289.40	437.42	0.38
RIVER-1	Reach-1	307.*	Max WS	506.41	159.76	162.84		163.06	0.007927	4.36	213.97	455.88	0.62
RIVER-1	Reach-1	306	Max WS	507.14	159.00	162.49		162.62	0.006443	3.82	299.59	644.32	0.55
RIVER-1	Reach-1	305.*	Max WS	496.45	159.00	162.02		162.12	0.004510	3.17	332.58	670.63	0.47
RIVER-1	Reach-1	304	Max WS	468.85	159.00	161.82		161.84	0.000973	1.61	575.82	724.28	0.22
RIVER-1	Reach-1	303.*	Max WS	446.98	158.75	161.75		161.77	0.000849	1.78	574.62	728.24	0.22
RIVER-1	Reach-1	302	Max WS	424.98	158.50	161.69		161.71	0.000793	2.00	592.74	739.81	0.22
RIVER-1	Reach-1	301.*	Max WS	408.37	158.25	161.63		161.65	0.000654	1.82	598.57	697.42	0.20
RIVER-1	Reach-1	300	Max WS	401.27	158.00	161.59		161.60	0.000515	1.60	634.90	680.30	0.17
RIVER-1	Reach-1	299.*	Max WS	398.02	158.31	161.55		161.57	0.000665	1.89	575.42	636.48	0.20

RIVER-1	Reach-1	298	Max WS	397.63	158.62	161.50		161.52	0.000683	1.93	561.28	556.94	0.20
RIVER-1	Reach-1	297.*	Max WS	398.29	158.31	161.47		161.47	0.000195	1.05	828.20	588.93	0.11
RIVER-1	Reach-1	296	Max WS	400.47	158.00	161.46		161.46	0.000077	0.67	1093.38	566.93	0.07
RIVER-1	Reach-1	295.*	Max WS	400.30	158.01	161.45		161.45	0.000105	0.79	857.75	418.47	0.08
RIVER-1	Reach-1	294	Max WS	495.68	158.01	161.43		161.44	0.000179	1.03	745.59	340.24	0.11
RIVER-1	Reach-1	293.*	Max WS	495.44	157.51	161.40		161.41	0.000242	1.28	608.11	254.83	0.12
RIVER-1	Reach-1	292	Max WS	495.20	157.00	161.36		161.38	0.000359	1.67	503.98	226.63	0.15
RIVER-1	Reach-1	291.5	Max WS	494.92	157.00	161.26		161.37	0.001644	3.50	245.60	150.04	0.32
RIVER-1	Reach-1	290.62	Max WS	494.91	157.00	160.97	159.35	161.19	0.002304	3.85	137.16	55.38	0.38
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	476.67	157.00	159.59		160.27	0.012813	6.62	71.95	35.54	0.82
RIVER-1	Reach-1	288.66*	Max WS	493.61	156.50	159.15		159.55	0.008822	5.45	127.94	159.52	0.68
RIVER-1	Reach-1	288	Max WS	491.96	156.00	159.01		159.02	0.000332	1.25	707.82	433.32	0.14
RIVER-1	Reach-1	287.*	Max WS	491.84	156.00	158.97		158.98	0.000456	1.48	620.23	397.54	0.16
RIVER-1	Reach-1	286	Max WS	491.67	156.00	158.92		158.94	0.000552	1.64	562.35	366.90	0.18
RIVER-1	Reach-1	285.*	Max WS	491.85	155.50	158.80		158.91	0.002356	3.29	264.93	250.97	0.37
RIVER-1	Reach-1	284	Max WS	492.03	155.00	158.46		158.71	0.004518	4.19	152.42	181.78	0.50
RIVER-1	Reach-1	283.*	Max WS	492.44	154.75	158.12		158.36	0.004099	4.40	175.65	162.75	0.49
RIVER-1	Reach-1	282	Max WS	492.98	154.50	157.93		158.07	0.002834	4.07	238.88	180.42	0.41
RIVER-1	Reach-1	281.*	Max WS	493.71	154.25	157.63		157.81	0.003105	4.24	211.16	159.92	0.43
RIVER-1	Reach-1	280	Max WS	494.31	154.00	157.31		157.52	0.003249	4.28	189.62	139.20	0.44
RIVER-1	Reach-1	279.*	Max WS	491.98	153.25	156.96		157.21	0.003433	4.38	163.22	124.11	0.45
RIVER-1	Reach-1	278	Max WS	452.28	152.50	156.68		156.87	0.002747	3.76	174.63	151.92	0.40
RIVER-1	Reach-1	277.*	Max WS	650.12	152.45	155.91		156.41	0.008096	6.26	166.02	186.89	0.68
RIVER-1	Reach-1	276	Max WS	650.62	152.40	155.41		155.78	0.007229	5.91	211.27	242.28	0.65
RIVER-1	Reach-1	275.*	Max WS	651.07	151.90	155.06		155.18	0.003476	3.16	293.49	307.15	0.39
RIVER-1	Reach-1	274	Max WS	651.68	151.40	154.84		154.90	0.002197	2.10	394.70	396.21	0.27
RIVER-1	Reach-1	273.*	Max WS	651.94	151.30	154.69		154.74	0.001609	1.93	423.64	367.98	0.24
RIVER-1	Reach-1	272	Max WS	652.20	151.20	154.61		154.64	0.000770	1.46	561.63	392.88	0.17
RIVER-1	Reach-1	271.*	Max WS	652.51	150.85	154.54		154.57	0.001147	1.66	498.93	433.58	0.20
RIVER-1	Reach-1	270	Max WS	651.80	150.50	154.32		154.40	0.003522	2.40	322.63	460.86	0.34
RIVER-1	Reach-1	269.*	Max WS	651.65	150.12	154.05		154.12	0.002297	2.44	357.28	412.86	0.29
RIVER-1	Reach-1	268	Max WS	651.17	149.75	153.84		153.93	0.002071	3.00	369.89	381.31	0.29
RIVER-1	Reach-1	267.265*	Max WS	651.10	149.43	153.41		153.77	0.004710	4.93	146.05	80.78	0.48
RIVER-1	Reach-1	266.53	Max WS	651.07	149.10	153.11	151.85	153.47	0.003679	4.93	141.81	55.78	0.48
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	651.03	148.65	151.98		152.64	0.008769	6.51	102.17	52.79	0.71
RIVER-1	Reach-1	264.033*	Max WS	650.99	148.24	151.45		151.92	0.010248	5.73	133.79	115.83	0.69
RIVER-1	Reach-1	263.016*	Max WS	650.89	147.84	151.05		151.22	0.005893	3.77	219.87	186.78	0.48
RIVER-1	Reach-1	262	Max WS	650.74	147.43	150.88		150.91	0.001227	1.66	490.89	355.18	0.21
RIVER-1	Reach-1	261.*	Max WS	651.33	146.71	150.03		150.33	0.011336	4.78	176.72	217.48	0.62
RIVER-1	Reach-1	260	Max WS	651.98	146.00	149.37		149.47	0.003491	2.98	274.99	188.38	0.35
RIVER-1	Reach-1	259.*	Max WS	652.06	146.00	148.69		149.09	0.014209	5.54	149.31	179.83	0.70
RIVER-1	Reach-1	258	Max WS	652.16	146.00	148.37		148.46	0.004405	3.10	298.93	294.88	0.39
RIVER-1	Reach-1	257.*	Max WS	652.51	145.50	148.02		148.11	0.004416	3.28	307.36	312.37	0.39
RIVER-1	Reach-1	256	Max WS	647.87	145.00	147.68		147.76	0.004492	3.49	321.84	348.00	0.40
RIVER-1	Reach-1	255.*	Max WS	719.12	144.50	147.26		147.41	0.006830	4.37	273.96	283.20	0.50
RIVER-1	Reach-1	254	Max WS	719.46	144.00	146.66		146.89	0.009628	5.02	216.95	206.98	0.59
RIVER-1	Reach-1	253.*	Max WS	719.80	143.00	145.79		146.12	0.015187	6.11	197.04	253.80	0.73
RIVER-1	Reach-1	252	Max WS	720.11	142.00	145.33		145.43	0.004514	3.64	344.74	389.46	0.41
RIVER-1	Reach-1	251.*	Max WS	720.65	141.75	144.77		144.86	0.004566	3.36	344.69	381.95	0.40
RIVER-1	Reach-1	250	Max WS	720.94	141.50	144.38		144.43	0.002285	2.25	478.52	505.98	0.28
RIVER-1	Reach-1	249.*	Max WS	720.98	141.25	144.19		144.24	0.002611	2.40	440.23	460.71	0.30
RIVER-1	Reach-1	248	Max WS	721.18	141.00	143.98		144.04	0.002544	2.47	422.32	410.61	0.30
RIVER-1	Reach-1	247.*	Max WS	721.68	140.75	143.72		143.77	0.002071	2.20	437.67	353.29	0.27
RIVER-1	Reach-1	246	Max WS	722.26	140.50	143.55		143.58	0.001044	1.75	517.70	307.40	0.19
RIVER-1	Reach-1	245.*	Max WS	722.55	139.75	143.13		143.35	0.008129	5.04	233.92	237.42	0.55
RIVER-1	Reach-1	244	Max WS	722.80	139.00	142.80		142.91	0.004684	3.95	294.59	238.86	0.41
RIVER-1	Reach-1	243.*	Max WS	722.94	139.50	142.55		142.68	0.004942	3.82	287.77	247.43	0.42
RIVER-1	Reach-1	242	Max WS	723.14	140.00	142.36		142.44	0.003464	2.88	340.69	273.87	0.35
RIVER-1	Reach-1	241.*	Max WS	723.45	139.50	142.06		142.14	0.003724	2.99	330.11	263.52	0.36
RIVER-1	Reach-1	240	Max WS	723.74	139.00	141.76		141.85	0.003712	3.14	327.74	265.69	0.36
RIVER-1	Reach-1	239.*	Max WS	723.92	138.50	141.44		141.52	0.003576	2.80	334.90	267.65	0.35
RIVER-1	Reach-1	238	Max WS	723.52	138.00	141.12		141.20	0.003501	2.59	343.98	277.66	0.34
RIVER-1	Reach-1	237.25*	Max WS	723.30	137.62	140.94		140.99	0.002370	2.32	410.27	326.49	0.29
RIVER-1	Reach-1	236.5	Max WS	723.25	137.25	140.84		140.87	0.001146	1.78	572.38	431.21	0.20
RIVER-1	Reach-1	235.85	Max WS	723.20	136.60	140.23	139.53	140.86	0.007386	6.41	118.38	54.36	0.66
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	723.20	136.10	139.88		140.43	0.006149	6.05	126.57	54.72	0.61

RIVER-1	Reach-1	234.153*	Max WS	723.19	135.73	139.52	140.00	0.007568	6.17	167.41	149.43	0.62
RIVER-1	Reach-1	233.076*	Max WS	723.12	135.37	139.13	139.48	0.009234	6.03	215.68	271.29	0.62
RIVER-1	Reach-1	232	Max WS	722.98	135.00	138.78	138.90	0.006345	4.45	336.03	455.38	0.46
RIVER-1	Reach-1	231.*	Max WS	722.95	135.00	138.56	138.61	0.002280	2.69	478.03	475.30	0.29
RIVER-1	Reach-1	230	Max WS	723.18	135.00	138.50	138.51	0.000636	1.47	738.07	512.91	0.15
RIVER-1	Reach-1	229.*	Max WS	741.27	134.50	138.40	138.43	0.000983	1.92	628.90	469.28	0.19
RIVER-1	Reach-1	228	Max WS	741.58	134.00	138.26	138.29	0.001465	2.43	542.82	454.10	0.23
RIVER-1	Reach-1	227.*	Max WS	741.93	133.85	138.09	138.14	0.002098	2.66	457.75	391.98	0.28
RIVER-1	Reach-1	226	Max WS	741.88	133.70	137.72	137.83	0.005522	3.49	318.95	327.23	0.42
RIVER-1	Reach-1	225.*	Max WS	740.80	133.48	137.42	137.53	0.005200	3.73	320.75	324.64	0.42
RIVER-1	Reach-1	224	Max WS	738.12	133.25	137.18	137.28	0.004328	3.71	340.82	326.44	0.39
RIVER-1	Reach-1	223.*	Max WS	736.01	133.12	136.97	137.04	0.002878	3.13	385.17	315.71	0.32
RIVER-1	Reach-1	222	Max WS	734.51	133.00	136.84	136.89	0.001689	2.50	451.85	307.43	0.25
RIVER-1	Reach-1	221.*	Max WS	733.86	132.70	136.76	136.80	0.001264	2.28	507.51	331.67	0.22
RIVER-1	Reach-1	220	Max WS	733.96	132.40	136.71	136.74	0.000873	1.99	585.96	359.28	0.18
RIVER-1	Reach-1	219.*	Max WS	733.35	131.80	136.69	136.72	0.000698	1.94	630.33	369.63	0.17
RIVER-1	Reach-1	218	Max WS	733.39	131.20	136.69	136.71	0.000304	1.37	829.41	388.17	0.11
RIVER-1	Reach-1	217.*	Max WS	733.65	131.98	136.67	136.68	0.000316	1.31	803.06	365.90	0.11
RIVER-1	Reach-1	216	Max WS	733.90	132.75	136.64	136.65	0.000338	1.23	772.16	344.36	0.12
RIVER-1	Reach-1	215.*	Max WS	792.05	132.62	136.61	136.63	0.000511	1.55	718.47	361.30	0.15
RIVER-1	Reach-1	214	Max WS	792.14	132.50	136.59	136.61	0.000275	1.16	867.22	362.81	0.11
RIVER-1	Reach-1	213.*	Max WS	835.43	131.88	136.56	136.58	0.000354	1.62	767.48	277.07	0.14
RIVER-1	Reach-1	212	Max WS	835.36	131.25	136.53	136.56	0.000429	2.18	681.85	207.37	0.17
RIVER-1	Reach-1	211.065*	Max WS	835.29	130.32	136.04	136.45	0.005488	5.17	162.33	50.72	0.47
RIVER-1	Reach-1	210.13	Max WS	835.27	129.39	135.57	136.15	0.000945	6.15	135.85	52.09	0.44
RIVER-1	Reach-1	209.23		Culvert								
RIVER-1	Reach-1	208.43	Max WS	835.25	128.67	134.11	134.68	0.001085	6.06	137.89	72.95	0.46
RIVER-1	Reach-1	205.91	Max WS	835.18	129.85	133.95	134.54	0.002621	6.13	136.28	46.44	0.63
RIVER-1	Reach-1	205.49	Max WS	835.17	129.75	133.85	134.43	0.002609	6.10	136.84	46.78	0.63
RIVER-1	Reach-1	204.965*	Max WS	835.07	129.62	133.72	134.29	0.002579	6.06	137.78	47.21	0.63
RIVER-1	Reach-1	204.44	Max WS	835.06	129.49	133.60	134.16	0.002540	6.01	138.93	47.68	0.62
RIVER-1	Reach-1	203.626*	Max WS	835.05	129.29	133.40	133.95	0.002500	5.96	140.15	48.20	0.62
RIVER-1	Reach-1	202.813*	Max WS	834.93	129.08	133.22	133.75	0.002401	5.85	142.66	48.92	0.60
RIVER-1	Reach-1	202	Max WS	834.93	128.88	133.05	133.56	0.002310	5.75	145.14	49.65	0.59
RIVER-1	Reach-1	201.36	Max WS	834.91	128.72	132.89	133.41	0.002336	5.80	143.97	49.02	0.60
RIVER-1	Reach-1	200.405*	Max WS	834.80	128.48	132.68	133.19	0.002289	5.76	144.81	48.99	0.59
RIVER-1	Reach-1	199.451*	Max WS	834.79	128.24	132.47	132.98	0.002222	5.71	146.22	49.07	0.58
RIVER-1	Reach-1	198.497*	Max WS	834.67	128.00	132.28	132.77	0.002143	5.64	147.95	49.16	0.57
RIVER-1	Reach-1	197.542*	Max WS	834.66	127.76	132.10	132.57	0.002043	5.55	150.36	49.36	0.56
RIVER-1	Reach-1	196.588*	Max WS	834.66	127.52	131.92	132.38	0.001930	5.44	153.29	49.62	0.55
RIVER-1	Reach-1	195.634*	Max WS	834.64	127.28	131.77	132.21	0.001797	5.31	157.12	50.01	0.53
RIVER-1	Reach-1	194.68*	Max WS	834.62	127.04	131.63	132.04	0.001654	5.16	161.72	50.48	0.51
RIVER-1	Reach-1	193.725*	Max WS	834.55	126.81	131.50	131.89	0.001520	5.01	166.56	50.99	0.49
RIVER-1	Reach-1	192.771*	Max WS	834.58	126.57	131.39	131.76	0.001368	4.83	172.89	51.68	0.47
RIVER-1	Reach-1	191.817*	Max WS	834.56	126.33	131.30	131.63	0.001221	4.64	179.90	52.41	0.44
RIVER-1	Reach-1	190.862*	Max WS	834.54	126.09	131.22	131.52	0.001083	4.45	187.73	53.24	0.42
RIVER-1	Reach-1	189.908*	Max WS	834.52	125.85	131.14	131.43	0.000956	4.25	196.18	54.10	0.39
RIVER-1	Reach-1	188.954*	Max WS	834.50	125.61	131.09	131.34	0.000839	4.06	205.54	55.08	0.37
RIVER-1	Reach-1	188	Max WS	834.48	125.37	131.03	131.27	0.000733	3.87	215.95	71.94	0.35
RIVER-1	Reach-1	187.7	Max WS	834.47	125.29	131.04	131.25	0.000566	3.65	228.53	55.19	0.31
RIVER-1	Reach-1	187.68		Lat Struct								
RIVER-1	Reach-1	187.65	Max WS	832.18	125.27	131.08	131.24	0.000404	3.27	258.98	56.42	0.27
RIVER-1	Reach-1	187.2	Max WS	974.84	125.15	131.02	131.17	0.000327	3.06	322.93	66.39	0.24
RIVER-1	Reach-1	187.15	Max WS	994.60	125.13	131.01	131.16	0.000368	3.12	319.04	68.11	0.25
RIVER-1	Reach-1	187	Max WS	994.60	125.09	131.03	131.16	0.000293	2.80	354.96	75.59	0.23
RIVER-1	Reach-1	186.81	Max WS	994.55	123.29	130.56	131.23	0.000871	6.58	151.21	77.75	0.43
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	185.39	Max WS	993.37	122.78	129.95	130.56	0.000814	6.30	157.63	50.87	0.41
RIVER-1	Reach-1	184.5	Max WS	994.31	126.00	130.21	130.25	0.000812	2.34	828.48	448.72	0.22
RIVER-1	Reach-1	184	Max WS	994.29	126.00	130.16	130.20	0.000791	2.45	808.20	431.67	0.23
RIVER-1	Reach-1	183.*	Max WS	1033.19	126.00	129.98	130.12	0.003209	4.37	435.00	273.41	0.40
RIVER-1	Reach-1	182	Max WS	1033.18	126.00	129.85	129.94	0.002481	3.46	449.21	241.31	0.32
RIVER-1	Reach-1	181.*	Max WS	1034.31	126.00	129.54	129.65	0.003473	3.80	408.34	253.51	0.37
RIVER-1	Reach-1	180	Max WS	1035.42	126.00	129.23	129.32	0.003289	3.40	464.38	339.12	0.36
RIVER-1	Reach-1	179.*	Max WS	1079.47	125.00	128.96	129.04	0.002674	3.25	554.52	429.70	0.32
RIVER-1	Reach-1	178	Max WS	1080.53	124.00	128.81	128.85	0.001170	2.24	752.99	475.27	0.21
RIVER-1	Reach-1	177.*	Max WS	1082.24	124.00	128.58	128.63	0.001819	2.82	665.81	496.18	0.27
RIVER-1	Reach-1	176	Max WS	1083.95	124.00	128.15	128.24	0.003579	3.73	531.04	480.10	0.37
RIVER-1	Reach-1	175.*	Max WS	1087.81	123.50	127.88	127.99	0.004231	4.04	508.73	504.12	0.40

RIVER-1	Reach-1	174	Max WS	1088.21	123.00	127.66	127.74	0.003001	3.44	607.78	604.89	0.33
RIVER-1	Reach-1	173.*	Max WS	1088.55	123.50	127.56	127.59	0.001752	2.55	776.93	696.04	0.25
RIVER-1	Reach-1	172	Max WS	1088.88	124.00	127.51	127.53	0.000678	1.54	1097.32	768.67	0.16
RIVER-1	Reach-1	171.*	Max WS	1089.92	124.00	127.42	127.44	0.000926	1.77	1019.44	811.93	0.18
RIVER-1	Reach-1	170	Max WS	1090.82	124.00	127.27	127.30	0.001497	2.17	882.64	824.72	0.23
RIVER-1	Reach-1	169.*	Max WS	1091.20	123.50	127.18	127.21	0.001834	2.54	831.36	843.74	0.26
RIVER-1	Reach-1	168	Max WS	1091.57	123.00	127.06	127.11	0.002466	3.03	749.55	920.25	0.30
RIVER-1	Reach-1	167.*	Max WS	1091.88	122.50	126.94	126.98	0.001742	2.73	850.29	885.81	0.26
RIVER-1	Reach-1	166	Max WS	1092.52	122.00	126.85	126.88	0.001142	2.30	998.75	955.36	0.21
RIVER-1	Reach-1	165.*	Max WS	1094.12	121.00	126.57	126.61	0.001625	2.69	957.00	1138.62	0.24
RIVER-1	Reach-1	164	Max WS	1095.91	120.00	126.26	126.29	0.001669	2.50	912.36	1077.45	0.23
RIVER-1	Reach-1	163.*	Max WS	1096.68	120.00	126.08	126.13	0.002222	3.15	818.75	1022.60	0.28
RIVER-1	Reach-1	162	Max WS	1097.30	120.00	125.77	125.88	0.004232	4.51	616.68	895.11	0.39
RIVER-1	Reach-1	161.*	Max WS	1097.88	120.25	125.49	125.56	0.002465	3.37	714.15	843.91	0.31
RIVER-1	Reach-1	160	Max WS	1098.42	120.50	125.35	125.38	0.001148	2.23	925.70	852.62	0.21
RIVER-1	Reach-1	159.*	Max WS	1099.28	120.25	125.24	125.27	0.001123	2.17	917.09	839.48	0.21
RIVER-1	Reach-1	158	Max WS	1100.05	120.00	125.14	125.17	0.001054	2.03	932.09	837.07	0.20
RIVER-1	Reach-1	157.*	Max WS	1100.58	119.50	125.04	125.09	0.001475	2.57	841.09	856.42	0.24
RIVER-1	Reach-1	156	Max WS	1101.16	119.00	124.87	124.95	0.003050	3.80	673.05	846.69	0.34
RIVER-1	Reach-1	155.*	Max WS	1102.23	119.00	124.58	124.64	0.002249	3.27	770.86	876.71	0.29
RIVER-1	Reach-1	154	Max WS	1134.28	119.00	124.39	124.42	0.001371	2.50	960.61	932.45	0.22
RIVER-1	Reach-1	153.*	Max WS	1154.69	119.00	124.28	124.31	0.001289	2.47	993.62	968.30	0.22
RIVER-1	Reach-1	152	Max WS	1155.35	119.00	124.18	124.21	0.001196	2.30	1032.04	1012.92	0.22
RIVER-1	Reach-1	151.*	Max WS	1168.40	119.00	124.02	124.05	0.001541	2.36	958.96	1004.20	0.24
RIVER-1	Reach-1	150	Max WS	1168.26	119.00	123.76	123.81	0.002749	2.69	789.89	948.93	0.31
RIVER-1	Reach-1	149.*	Max WS	1172.96	118.50	123.50	123.55	0.002415	2.96	799.34	946.39	0.30
RIVER-1	Reach-1	148	Max WS	1177.52	118.00	123.27	123.32	0.002161	3.06	867.79	1127.65	0.28
RIVER-1	Reach-1	147.*	Max WS	1180.88	117.92	123.09	123.14	0.002322	2.86	879.19	1127.73	0.29
RIVER-1	Reach-1	146	Max WS	1184.31	117.83	122.90	122.94	0.002606	2.66	870.75	1129.43	0.30
RIVER-1	Reach-1	145.*	Max WS	1187.43	117.92	122.71	122.75	0.001985	2.23	906.72	1157.10	0.26
RIVER-1	Reach-1	144	Max WS	1190.57	118.00	122.54	122.58	0.002169	1.90	910.14	1190.81	0.26
RIVER-1	Reach-1	143.*	Max WS	1193.90	117.50	122.39	122.43	0.001159	1.98	1046.05	1104.92	0.21
RIVER-1	Reach-1	142	Max WS	1197.69	117.00	122.29	122.31	0.001211	2.39	1079.12	1043.73	0.21
RIVER-1	Reach-1	141.*	Max WS	1201.29	117.00	122.15	122.18	0.001603	2.72	998.97	1079.50	0.24
RIVER-1	Reach-1	140	Max WS	1204.51	117.00	121.99	122.03	0.001709	2.76	986.75	1099.13	0.25
RIVER-1	Reach-1	139.*	Max WS	1206.87	117.50	121.89	121.92	0.001322	2.32	1071.39	1101.47	0.22
RIVER-1	Reach-1	138	Max WS	1209.52	118.00	121.82	121.84	0.000845	1.79	1204.23	1025.11	0.18
RIVER-1	Reach-1	137.*	Max WS	1212.65	118.00	121.74	121.76	0.001038	1.88	1154.82	1115.45	0.20
RIVER-1	Reach-1	136	Max WS	1215.46	118.00	121.64	121.66	0.001271	1.93	1099.59	1159.35	0.22
RIVER-1	Reach-1	135.*	Max WS	1218.23	117.50	121.54	121.56	0.001125	1.74	1136.56	1201.12	0.20
RIVER-1	Reach-1	134	Max WS	1221.31	117.00	121.45	121.47	0.000948	1.54	1191.91	1207.03	0.18
RIVER-1	Reach-1	133.*	Max WS	1225.00	117.00	121.34	121.37	0.001244	1.73	1035.94	1077.03	0.21
RIVER-1	Reach-1	132	Max WS	1228.52	117.00	121.20	121.24	0.001455	1.83	909.79	973.04	0.22
RIVER-1	Reach-1	131.*	Max WS	1230.37	117.00	121.09	121.13	0.001634	1.84	913.83	965.97	0.24
RIVER-1	Reach-1	130	Max WS	1232.21	117.00	120.98	121.01	0.001511	1.70	931.01	840.42	0.22
RIVER-1	Reach-1	129.*	Max WS	1233.05	117.00	120.87	120.91	0.002159	1.97	866.05	981.53	0.27
RIVER-1	Reach-1	128	Max WS	1233.31	117.00	120.69	120.75	0.003490	2.37	741.33	988.78	0.33
RIVER-1	Reach-1	127.*	Max WS	1232.64	116.71	120.55	120.60	0.002166	2.31	818.01	837.71	0.28
RIVER-1	Reach-1	126	Max WS	1232.61	116.42	120.51	120.53	0.001214	2.10	1084.05	992.13	0.21
RIVER-1	Reach-1	125.*	Max WS	1232.28	116.21	120.49	120.51	0.001109	1.88	1158.00	1104.62	0.20
RIVER-1	Reach-1	124	Max WS	1232.28	116.00	120.48	120.49	0.000802	1.50	1298.13	1140.87	0.17
RIVER-1	Reach-1	123.*	Max WS	1232.23	116.18	120.43	120.45	0.000905	1.69	1331.30	1360.28	0.18
RIVER-1	Reach-1	122	Max WS	1232.13	116.35	120.38	120.40	0.000917	1.73	1443.16	1796.67	0.19
RIVER-1	Reach-1	121.*	Max WS	1301.77	115.68	120.22	120.25	0.002415	2.32	999.32	1288.60	0.29
RIVER-1	Reach-1	120	Max WS	1301.04	115.00	120.01	120.05	0.001591	2.56	967.42	891.89	0.25
RIVER-1	Reach-1	119.*	Max WS	1299.90	114.50	119.85	119.91	0.001965	3.09	830.54	654.14	0.30
RIVER-1	Reach-1	118	Max WS	1294.23	114.00	119.57	119.73	0.003943	4.69	635.73	598.80	0.48
RIVER-1	Reach-1	117.*	Max WS	1290.03	114.50	119.46	119.58	0.002436	3.39	669.93	597.78	0.38
RIVER-1	Reach-1	116	Max WS	1268.75	115.00	119.32	119.43	0.002756	3.07	627.74	579.67	0.38
RIVER-1	Reach-1	115.*	Max WS	1219.41	114.50	119.19	119.27	0.002154	2.43	663.37	655.27	0.33
RIVER-1	Reach-1	114	Max WS	1161.51	114.00	119.08	119.13	0.001427	1.89	733.44	733.51	0.27
RIVER-1	Reach-2	112.05	Max WS	1772.87	112.00	119.08	119.19	0.001739	3.04	853.58	662.09	0.32
RIVER-1	Reach-2	112	Max WS	1771.64	112.00	119.07	119.19	0.001766	3.05	846.97	659.55	0.32
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1718.08	113.00	118.97	119.07	0.001744	2.75	857.54	713.83	0.31
RIVER-1	Reach-2	110	Max WS	1584.73	114.00	118.93	118.98	0.001149	2.02	1097.74	762.59	0.25
RIVER-1	Reach-2	109.*	Max WS	1455.18	113.50	118.80	118.84	0.001668	2.17	1000.69	749.70	0.29
RIVER-1	Reach-2	108	Max WS	1415.68	113.00	118.67	118.72	0.000945	2.70	1098.67	695.57	0.25
RIVER-1	Reach-2	107.*	Max WS	1408.57	112.00	118.64	118.68	0.000633	2.16	1324.61	792.46	0.20

RIVER-1	Reach-2	106	Max WS	1405.58	111.00	118.63		118.65	0.000410	2.02	1560.44	858.98	0.17
RIVER-1	Reach-2	105.*	Max WS	1399.47	110.50	118.60		118.62	0.000472	1.95	1552.21	887.71	0.17
RIVER-1	Reach-2	104	Max WS	1393.67	110.00	118.57		118.60	0.000440	2.22	1571.23	888.24	0.16
RIVER-1	Reach-2	103.*	Max WS	1387.46	110.00	118.57		118.58	0.000398	1.69	1713.94	982.73	0.16
RIVER-1	Reach-2	102	Max WS	1152.68	110.00	118.57		118.58	0.000161	1.41	1967.72	956.91	0.11
RIVER-1	Reach-2	101.*	Max WS	1587.19	110.50	118.54		118.56	0.000313	1.93	1952.76	940.01	0.15
RIVER-1	Reach-2	100	Max WS	1584.53	111.00	118.52		118.54	0.000316	1.92	1940.83	921.35	0.15
RIVER-1	Reach-2	99.*	Max WS	1577.32	111.00	118.46		118.48	0.000301	1.90	1964.82	936.74	0.14
RIVER-1	Reach-2	98	Max WS	1571.24	111.00	118.41		118.43	0.000285	1.88	1992.17	952.79	0.14
RIVER-1	Reach-2	97.*	Max WS	1570.68	110.50	118.38		118.40	0.000280	1.87	1986.95	934.84	0.14
RIVER-1	Reach-2	96	Max WS	1568.74	110.00	118.35		118.37	0.000276	1.86	1980.89	918.98	0.14
RIVER-1	Reach-2	95.*	Max WS	1568.31	109.50	118.32		118.34	0.000277	1.86	1968.02	922.51	0.14
RIVER-1	Reach-2	94	Max WS	1569.40	109.00	118.29		118.31	0.000279	1.86	1954.78	926.41	0.14
RIVER-1	Reach-2	93.*	Max WS	1569.27	109.00	118.26		118.29	0.000272	1.90	1852.16	818.40	0.14
RIVER-1	Reach-2	92	Max WS	1570.51	109.00	118.24		118.26	0.000275	2.02	1761.17	1294.26	0.14
RIVER-1	Reach-2	91.*	Max WS	1571.85	108.50	118.21		118.24	0.000227	1.85	2079.47	1296.25	0.13
RIVER-1	Reach-2	90	Max WS	1573.38	108.00	118.20		118.21	0.000177	1.64	2415.78	1313.19	0.11
RIVER-1	Reach-2	89.*	Max WS	1575.80	108.50	118.18		118.20	0.000180	1.69	2371.61	1339.13	0.12
RIVER-1	Reach-2	88	Max WS	1577.55	109.00	118.16		118.18	0.000182	1.73	2348.59	1439.75	0.12
RIVER-1	Reach-2	87.*	Max WS	1579.38	108.00	118.15		118.17	0.000097	1.38	2949.27	1472.83	0.09
RIVER-1	Reach-2	86	Max WS	1581.59	107.00	118.15		118.16	0.000054	1.10	3596.72	1506.02	0.07
RIVER-1	Reach-2	85.*	Max WS	1582.13	107.50	118.15		118.15	0.000054	1.02	3814.58	1553.85	0.07
RIVER-1	Reach-2	84	Max WS	1583.04	108.00	118.15		118.15	0.000049	0.88	4140.73	1611.99	0.06
RIVER-1	Reach-2	83.*	Max WS	1607.25	108.50	118.14		118.15	0.000068	1.03	3671.47	1578.33	0.07
RIVER-1	Reach-2	82	Max WS	1607.06	109.00	118.14		118.14	0.000093	1.15	3284.46	1541.85	0.08
RIVER-1	Reach-2	81.56	Max WS	1607.05	108.22	118.05	113.62	118.09	0.000407	1.96	1771.49	1445.86	0.14
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1606.91	108.96	116.58		117.08	0.006357	5.66	283.97	77.72	0.51
RIVER-1	Reach-2	80.95	Max WS	1606.91	108.83	116.62	113.47	116.94	0.001708	4.54	354.18	67.57	0.35
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1606.91	108.67	116.53		116.87	0.001889	4.64	346.02	68.29	0.36
RIVER-1	Reach-2	79.3849*	Max WS	1606.87	108.33	116.53		116.64	0.000812	3.28	1063.20	712.89	0.24
RIVER-1	Reach-2	78.39	Max WS	1606.83	108.00	116.44		116.51	0.000539	2.92	1028.70	327.24	0.20
RIVER-1	Reach-2	77.6566*	Max WS	1606.82	107.80	116.44		116.47	0.000222	1.87	1748.12	556.58	0.13
RIVER-1	Reach-2	76.9233*	Max WS	1606.80	107.60	116.43		116.45	0.000222	1.86	1982.77	785.94	0.13
RIVER-1	Reach-2	76.19	Max WS	1606.64	107.40	116.40		116.44	0.000345	2.29	1799.71	1015.28	0.16
RIVER-1	Reach-2	75.86	Max WS	1606.28	107.22	116.19	112.80	116.36	0.000939	3.78	794.03	468.97	0.27
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1606.63	106.63	116.13		116.29	0.001076	3.64	748.31	468.97	0.27
RIVER-1	Reach-2	74.7*	Max WS	1606.60	106.82	116.16		116.20	0.000343	1.91	1695.44	1075.91	0.16
RIVER-1	Reach-2	74	Max WS	1606.54	107.00	116.16		116.17	0.000165	1.19	2699.38	1642.62	0.11
RIVER-1	Reach-2	73.*	Max WS	1606.47	107.43	116.15		116.16	0.000122	1.14	3059.36	1713.05	0.09
RIVER-1	Reach-2	72	Max WS	1606.43	107.86	116.14		116.15	0.000099	1.13	3405.74	1802.75	0.08
RIVER-1	Reach-2	71.*	Max WS	1956.75	107.44	116.04		116.15	0.000862	3.07	1020.20	566.77	0.23
RIVER-1	Reach-2	70	Max WS	1956.61	107.03	115.89		116.05	0.001104	3.23	609.50	105.22	0.23
RIVER-1	Reach-2	69.*	Max WS	1956.60	107.35	115.72		115.92	0.001523	3.59	545.55	97.98	0.27
RIVER-1	Reach-2	68	Max WS	1956.36	107.68	115.50		115.75	0.001962	3.97	492.66	91.86	0.30
RIVER-1	Reach-2	67	Max WS	1956.22	107.40	115.30		115.55	0.002260	4.25	525.34	138.19	0.32
RIVER-1	Reach-2	66	Max WS	1955.74	107.40	115.02		115.31	0.002786	4.60	485.98	136.19	0.36
RIVER-1	Reach-2	65.*	Max WS	1955.35	107.20	114.82		115.07	0.001992	4.09	547.86	182.51	0.33
RIVER-1	Reach-2	64	Max WS	1954.93	107.00	114.65		114.88	0.001686	3.89	543.85	215.31	0.34
RIVER-1	Reach-2	63.*	Max WS	1957.64	106.81	114.50		114.72	0.001728	3.78	568.69	248.26	0.34
RIVER-1	Reach-2	62.*	Max WS	1960.29	106.62	114.35		114.55	0.001739	3.66	595.19	292.05	0.34
RIVER-1	Reach-2	61.*	Max WS	1962.58	106.43	114.21		114.40	0.001636	3.52	625.43	320.22	0.33
RIVER-1	Reach-2	60	Max WS	1965.40	106.24	114.11		114.26	0.001234	3.21	693.88	291.59	0.29
RIVER-1	Reach-2	59.*	Max WS	1970.66	106.07	114.01		114.15	0.001012	3.11	821.21	402.06	0.26
RIVER-1	Reach-2	58	Max WS	1975.91	105.90	113.98		114.06	0.000529	2.68	1204.45	498.59	0.20
RIVER-1	Reach-2	57.2	Max WS	1980.33	107.05	113.89	111.44	114.02	0.001020	3.38	973.17	426.18	0.27
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1981.51	107.05	113.82		113.96	0.001210	3.60	903.41	409.87	0.29
RIVER-1	Reach-2	56	Max WS	1986.46	105.90	113.75		113.86	0.000699	2.89	988.62	396.54	0.22
RIVER-1	Reach-2	55.*	Max WS	1990.78	105.85	113.72		113.80	0.000554	2.42	1178.00	486.13	0.20
RIVER-1	Reach-2	54	Max WS	1995.37	105.80	113.69		113.74	0.000470	2.11	1348.19	569.32	0.18
RIVER-1	Reach-2	53.*	Max WS	2007.17	105.70	113.61		113.67	0.000550	2.28	1217.37	414.25	0.18
RIVER-1	Reach-2	52	Max WS	2018.97	105.60	113.51		113.56	0.000684	2.30	1122.36	333.22	0.18
RIVER-1	Reach-2	51.*	Max WS	2024.70	105.57	113.42		113.49	0.000814	2.59	1062.93	322.94	0.20
RIVER-1	Reach-2	50.*	Max WS	2030.41	105.54	113.32		113.40	0.000929	2.86	1012.12	312.99	0.23
RIVER-1	Reach-2	49.*	Max WS	2036.10	105.50	113.21		113.31	0.001007	3.14	971.83	304.21	0.25
RIVER-1	Reach-2	48	Max WS	2041.77	105.47	113.09		113.21	0.001015	3.48	942.06	297.43	0.27

RIVER-1	Reach-2	47.*	Max WS	2047.42	105.68	113.01		113.11	0.000941	3.25	1029.60	331.58	0.26
RIVER-1	Reach-2	46.*	Max WS	2053.05	105.88	112.93		113.01	0.000804	2.98	1139.70	380.04	0.24
RIVER-1	Reach-2	45.*	Max WS	2058.93	106.08	112.87		112.93	0.000636	2.71	1278.93	408.33	0.21
RIVER-1	Reach-2	44	Max WS	2064.55	106.29	112.82		112.87	0.000477	2.45	1442.96	434.98	0.19
RIVER-1	Reach-2	43.*	Max WS	2070.01	106.30	112.77		112.83	0.000503	2.55	1386.22	430.54	0.19
RIVER-1	Reach-2	42.*	Max WS	2075.25	106.31	112.72		112.78	0.000530	2.63	1336.93	426.31	0.20
RIVER-1	Reach-2	41.*	Max WS	2080.70	106.32	112.66		112.73	0.000557	2.69	1294.30	422.24	0.20
RIVER-1	Reach-2	40	Max WS	2085.95	106.33	112.60		112.67	0.000582	2.74	1259.23	418.42	0.21
RIVER-1	Reach-2	39.*	Max WS	2085.93	106.17	112.56		112.62	0.000476	2.50	1408.55	462.47	0.19
RIVER-1	Reach-2	38.*	Max WS	2085.90	106.01	112.53		112.57	0.000365	2.20	1607.32	498.80	0.17
RIVER-1	Reach-2	37.*	Max WS	2085.87	105.84	112.51		112.53	0.000262	1.88	1844.18	517.25	0.14
RIVER-1	Reach-2	36	Max WS	2085.84	105.68	112.47		112.51	0.000325	2.11	1704.07	526.29	0.16
RIVER-1	Reach-2	35.22	Max WS	2085.82	104.52	112.12		112.57	0.002382	5.34	390.96	75.05	0.41
RIVER-1	Reach-2	34.82	Max WS	2085.82	104.52	112.00	109.26	112.47	0.002540	5.46	382.08	74.37	0.42
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	2085.78	104.30	111.18		112.12	0.007709	7.82	266.77	69.58	0.70
RIVER-1	Reach-2	33.67*	Max WS	2085.65	104.12	111.10		111.71	0.004341	6.23	334.60	80.31	0.54
RIVER-1	Reach-2	33	Max WS	2085.72	103.93	111.26		111.43	0.001223	3.73	958.51	642.88	0.29
RIVER-1	Reach-2	32.*	Max WS	2085.69	103.40	111.13		111.28	0.001210	3.42	1001.65	715.94	0.29
RIVER-1	Reach-2	31.*	Max WS	2085.64	102.88	110.97		111.12	0.001622	3.45	960.68	783.13	0.32
RIVER-1	Reach-2	30	Max WS	2085.46	102.35	110.62		110.85	0.003766	4.18	827.31	1199.26	0.46
RIVER-1	Reach-2	29.*	Max WS	2085.25	102.34	110.26		110.51	0.003912	4.43	811.03	1039.49	0.48
RIVER-1	Reach-2	28.*	Max WS	2084.98	102.33	109.96		110.18	0.003491	4.40	902.89	1031.99	0.46
RIVER-1	Reach-2	27.*	Max WS	2084.76	102.33	109.73		109.88	0.002563	4.00	1107.35	1049.92	0.40
RIVER-1	Reach-2	26	Max WS	2084.52	102.32	109.59		109.67	0.001595	3.34	1437.67	1134.83	0.31
RIVER-1	Reach-2	25.*	Max WS	2084.39	101.99	109.45		109.54	0.002045	3.63	1378.97	1271.55	0.35
RIVER-1	Reach-2	24.*	Max WS	2084.01	101.66	109.26		109.37	0.002587	3.86	1288.08	1358.53	0.39
RIVER-1	Reach-2	23.*	Max WS	2083.73	101.33	109.09		109.17	0.002281	3.42	1319.91	1165.50	0.36
RIVER-1	Reach-2	22	Max WS	2083.44	101.00	108.95		109.00	0.001818	2.91	1487.50	1245.50	0.32
RIVER-1	Reach-2	21.*	Max WS	2083.15	101.27	108.79		108.85	0.002002	3.09	1456.55	1289.68	0.33
RIVER-1	Reach-2	20.*	Max WS	2082.84	101.54	108.62		108.68	0.002301	3.33	1416.48	1361.81	0.36
RIVER-1	Reach-2	19.*	Max WS	2081.95	101.82	108.42		108.50	0.002838	3.67	1384.26	1466.91	0.40
RIVER-1	Reach-2	18	Max WS	2081.13	102.09	108.22		108.29	0.003212	3.81	1379.03	1516.51	0.42
RIVER-1	Reach-2	17.*	Max WS	2080.17	101.97	108.02		108.06	0.002121	2.89	1505.06	1272.35	0.34
RIVER-1	Reach-2	16.*	Max WS	2079.36	101.85	107.88		107.91	0.001397	2.31	1724.28	1264.08	0.27
RIVER-1	Reach-2	15.*	Max WS	2078.51	101.73	107.79		107.81	0.000858	1.83	2012.75	1262.24	0.21
RIVER-1	Reach-2	14	Max WS	2077.96	101.61	107.74		107.75	0.000528	1.48	2340.87	1260.71	0.17
RIVER-1	Reach-2	13.*	Max WS	2077.70	101.43	107.70		107.71	0.000441	1.31	2479.27	1266.98	0.15
RIVER-1	Reach-2	12.*	Max WS	2077.45	101.26	107.67		107.68	0.000364	1.29	2618.56	1259.62	0.14
RIVER-1	Reach-2	11.*	Max WS	2077.65	101.08	107.65		107.66	0.000302	1.24	2765.28	1251.20	0.13
RIVER-1	Reach-2	10	Max WS	2077.23	100.90	107.63		107.64	0.000255	1.18	2904.01	1239.47	0.12
RIVER-1	Reach-2	9.*	Max WS	2077.38	100.75	107.59		107.61	0.000420	1.54	2472.10	1341.57	0.15
RIVER-1	Reach-2	8.*	Max WS	2077.20	100.60	107.54		107.56	0.000702	2.15	2106.05	1490.96	0.20
RIVER-1	Reach-2	7.*	Max WS	2076.95	100.45	107.45		107.48	0.000971	2.67	1804.58	1376.17	0.24
RIVER-1	Reach-2	6	Max WS	2076.82	100.30	107.30		107.38	0.001723	3.69	1530.59	1438.49	0.33
RIVER-1	Reach-2	5.*	Max WS	2076.47	100.15	107.14		107.22	0.001675	3.71	1570.93	1545.89	0.33
RIVER-1	Reach-2	4.*	Max WS	2076.22	100.00	106.99		107.07	0.001634	3.71	1650.41	1722.16	0.32
RIVER-1	Reach-2	3.*	Max WS	2075.97	99.85	106.86		106.93	0.001406	3.48	1938.44	2228.42	0.30
RIVER-1	Reach-2	2	Max WS	2075.81	99.70	106.78		106.81	0.000862	2.76	2360.09	2337.30	0.24
RIVER-1	Reach-2	1.*	Max WS	2075.69	99.55	106.67		106.74	0.001342	3.52	1959.71	2335.85	0.30
RIVER-1	Reach-2	0	Max WS	2075.63	99.40	106.52	106.18	106.64	0.001805	4.13	1571.73	2139.80	0.34

Appendix P-5: HEC-RAS Results, Baseline Conditions Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X  X     X  X    X
X     X  X        X           X  X     X    X   X
XXXXXXX  XXXX     X      XXX  XXXX     XXXXXX   XXXX
X     X  X        X           X  X     X    X       X
X     X  X        X    X      X  X     X    X       X
X     X  XXXXXX    XXXX       X   X    X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 11:40:13 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	318.10	158.00	162.26		162.26	0.000028	0.30	1053.98	296.98	0.03
RIVER-2	Reach-1	11850.*	Max WS	317.18	157.71	162.26		162.26	0.000028	0.30	1071.62	314.59	0.03
RIVER-2	Reach-1	11800	Max WS	317.18	157.42	162.26		162.26	0.000011	0.20	1567.27	412.19	0.02
RIVER-2	Reach-1	11750.*	Max WS	317.17	156.96	162.26		162.26	0.000012	0.21	1530.12	400.13	0.02
RIVER-2	Reach-1	11700	Max WS	317.15	156.50	162.26		162.26	0.000010	0.20	1562.08	376.83	0.02
RIVER-2	Reach-1	11650.*	Max WS	316.27	156.25	162.26		162.26	0.000011	0.21	1476.20	351.23	0.02
RIVER-2	Reach-1	11600	Max WS	316.26	156.00	162.26		162.26	0.000011	0.22	1426.17	331.19	0.02
RIVER-2	Reach-1	11550.*	Max WS	316.24	155.05	162.26		162.26	0.000011	0.22	1440.70	337.28	0.02
RIVER-2	Reach-1	11500	Max WS	314.51	154.11	162.26		162.26	0.000011	0.22	1450.46	338.65	0.02
RIVER-2	Reach-1	11450.*	Max WS	314.50	154.05	162.26		162.26	0.000010	0.20	1541.01	374.30	0.02
RIVER-2	Reach-1	11400	Max WS	315.36	154.00	162.26		162.26	0.000009	0.19	1642.67	403.12	0.02
RIVER-2	Reach-1	11350.*	Max WS	315.35	154.00	162.26		162.26	0.000008	0.18	1720.82	407.18	0.02
RIVER-2	Reach-1	11300	Max WS	315.34	154.00	162.26		162.26	0.000007	0.17	1889.63	455.23	0.01
RIVER-2	Reach-1	11250.*	Max WS	314.50	154.00	162.26		162.26	0.000005	0.15	2068.50	462.11	0.01
RIVER-2	Reach-1	11200	Max WS	314.49	154.00	162.25		162.26	0.000004	0.14	2260.05	478.49	0.01
RIVER-2	Reach-1	11150.*	Max WS	315.28	153.00	162.25		162.25	0.000003	0.13	2475.19	498.27	0.01
RIVER-2	Reach-1	11100	Max WS	313.67	152.00	162.25		162.25	0.000003	0.12	2688.48	533.88	0.01
RIVER-2	Reach-1	11050.*	Max WS	314.47	152.00	162.25		162.25	0.000002	0.11	2893.23	545.86	0.01
RIVER-2	Reach-1	11000	Max WS	314.46	152.00	162.25		162.25	0.000002	0.10	3156.66	574.08	0.01
RIVER-2	Reach-1	10887.5*	Max WS	314.43	152.00	162.25		162.25	0.000001	0.09	3544.63	584.15	0.01
RIVER-2	Reach-1	10775.*	Max WS	314.40	152.00	162.25		162.25	0.000001	0.08	4062.98	603.40	0.01
RIVER-2	Reach-1	10662.5*	Max WS	314.38	152.00	162.25		162.25	0.000001	0.07	4656.72	639.10	0.00
RIVER-2	Reach-1	10550	Max WS	313.65	152.00	162.25		162.25	0.000000	0.06	5300.80	681.71	0.00
RIVER-2	Reach-1	10490.*	Max WS	314.34	151.60	162.25		162.25	0.000000	0.05	5881.47	785.23	0.00
RIVER-2	Reach-1	10430.*	Max WS	314.30	151.20	162.25		162.25	0.000000	0.05	6425.27	882.60	0.00
RIVER-2	Reach-1	10370.*	Max WS	314.26	150.80	162.25		162.25	0.000000	0.05	6934.94	981.91	0.00
RIVER-2	Reach-1	10310.*	Max WS	313.63	150.40	162.25		162.25	0.000000	0.04	7425.21	1052.67	0.00
RIVER-2	Reach-1	10250	Max WS	314.20	150.00	162.25		162.25	0.000000	0.04	7920.65	1129.89	0.00
RIVER-2	Reach-1	10200.*	Max WS	313.61	150.00	162.25		162.25	0.000000	0.04	7404.53	965.93	0.00
RIVER-2	Reach-1	10150	Max WS	314.17	150.00	162.25		162.25	0.000000	0.05	6907.02	856.56	0.00
RIVER-2	Reach-1	10100.*	Max WS	314.67	150.00	162.25		162.25	0.000000	0.05	6583.04	847.82	0.00
RIVER-2	Reach-1	10050	Max WS	314.15	150.00	162.25		162.25	0.000000	0.05	6356.18	775.23	0.00
RIVER-2	Reach-1	10000.*	Max WS	314.13	150.00	162.25		162.25	0.000000	0.05	6613.16	795.07	0.00
RIVER-2	Reach-1	9950	Max WS	314.10	150.00	162.25		162.25	0.000000	0.05	6884.85	815.03	0.00

RIVER-2	Reach-1	9900.*	Max WS	314.07	150.00	162.25		162.25	0.000000	0.04	7538.18	1039.59	0.00
RIVER-2	Reach-1	9850	Max WS	313.60	150.00	162.25		162.25	0.000000	0.04	8149.41	1201.12	0.00
RIVER-2	Reach-1	9800.*	Max WS	314.04	150.00	162.25		162.25	0.000000	0.04	7946.07	1391.53	0.00
RIVER-2	Reach-1	9750	Max WS	313.99	150.00	162.25		162.25	0.000000	0.04	8242.18	1456.41	0.00
RIVER-2	Reach-1	9675.*	Max WS	313.95	149.36	162.25		162.25	0.000000	0.04	8938.59	1495.74	0.00
RIVER-2	Reach-1	9600	Max WS	314.29	148.73	162.25		162.25	0.000000	0.03	9722.62	1534.90	0.00
RIVER-2	Reach-1	9550.*	Max WS	313.92	148.36	162.25		162.25	0.000000	0.03	11983.13	1678.72	0.00
RIVER-2	Reach-1	9500	Max WS	313.88	148.00	162.25		162.25	0.000000	0.02	14412.61	1729.97	0.00
RIVER-2	Reach-1	9450.*	Max WS	313.83	147.00	162.25		162.25	0.000000	0.02	15411.87	1761.69	0.00
RIVER-2	Reach-1	9400	Max WS	313.54	146.00	162.25		162.25	0.000000	0.02	16748.33	1776.63	0.00
RIVER-2	Reach-1	9350.*	Max WS	313.75	145.51	162.25		162.25	0.000000	0.02	16193.90	1704.95	0.00
RIVER-2	Reach-1	9300	Max WS	313.71	145.02	162.25		162.25	0.000000	0.02	15520.29	1608.95	0.00
RIVER-2	Reach-1	9200.*	Max WS	313.66	144.51	162.25		162.25	0.000000	0.02	14492.15	1432.17	0.00
RIVER-2	Reach-1	9100	Max WS	313.50	144.00	162.25		162.25	0.000000	0.02	13415.52	1249.52	0.00
RIVER-2	Reach-1	9050.*	Max WS	313.61	144.00	162.25		162.25	0.000000	0.02	13005.73	1127.96	0.00
RIVER-2	Reach-1	9000	Max WS	313.57	144.00	162.25		162.25	0.000000	0.02	12674.67	1022.80	0.00
RIVER-2	Reach-1	8900.*	Max WS	313.61	143.08	162.25		162.25	0.000000	0.02	13031.26	995.69	0.00
RIVER-2	Reach-1	8800	Max WS	313.52	142.16	162.25		162.25	0.000000	0.02	13247.20	950.91	0.00
RIVER-2	Reach-1	8700.*	Max WS	313.50	143.70	162.25		162.25	0.000000	0.03	12461.84	980.52	0.00
RIVER-2	Reach-1	8600	Max WS	313.48	145.24	162.25	145.80	162.25	0.000000	0.03	11936.12	988.38	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	313.47	140.56	152.52		152.64	0.003337	2.76	113.40	29.32	0.25
RIVER-2	Reach-1	8350	Max WS	314.81	140.09	152.13		152.26	0.004218	2.91	108.09	28.78	0.26
RIVER-2	Reach-1	8250.*	Max WS	316.14	139.60	151.72		151.85	0.004237	2.92	108.28	29.01	0.27
RIVER-2	Reach-1	8150.*	Max WS	317.48	139.11	151.30		151.43	0.004281	2.93	108.41	29.28	0.27
RIVER-2	Reach-1	8050.*	Max WS	318.82	138.62	150.87		151.01	0.004343	2.94	108.47	29.56	0.27
RIVER-2	Reach-1	7950.*	Max WS	320.15	138.13	150.44		150.57	0.004418	2.95	108.49	29.87	0.27
RIVER-2	Reach-1	7850.*	Max WS	321.50	137.64	149.99		150.13	0.004520	2.96	108.55	30.43	0.28
RIVER-2	Reach-1	7750.*	Max WS	322.84	137.15	149.54		149.67	0.004678	2.98	108.51	31.29	0.28
RIVER-2	Reach-1	7650.*	Max WS	324.19	136.66	149.06		149.20	0.004847	2.99	108.42	32.15	0.29
RIVER-2	Reach-1	7550.*	Max WS	325.53	136.17	148.58		148.72	0.004919	3.00	108.45	32.38	0.29
RIVER-2	Reach-1	7450.*	Max WS	326.88	135.68	148.08		148.23	0.005002	3.02	108.36	32.52	0.29
RIVER-2	Reach-1	7350.*	Max WS	328.23	135.19	147.58		147.73	0.005081	3.03	108.23	32.57	0.29
RIVER-2	Reach-1	7250.*	Max WS	329.58	134.70	147.07		147.22	0.005139	3.05	108.18	32.54	0.29
RIVER-2	Reach-1	7150.*	Max WS	330.94	134.21	146.56		146.71	0.005236	3.07	107.82	32.39	0.30
RIVER-2	Reach-1	7050.*	Max WS	332.29	133.72	146.03		146.18	0.005332	3.09	107.44	32.20	0.30
RIVER-2	Reach-1	6950.*	Max WS	333.65	133.23	145.50		145.65	0.005487	3.13	106.66	31.90	0.30
RIVER-2	Reach-1	6850.*	Max WS	335.01	132.74	144.95		145.10	0.005696	3.17	105.52	31.49	0.31
RIVER-2	Reach-1	6750.*	Max WS	336.36	132.25	144.36		144.53	0.006077	3.25	103.42	30.92	0.31
RIVER-2	Reach-1	6650.*	Max WS	337.73	131.76	143.72		143.90	0.006820	3.39	99.67	30.15	0.33
RIVER-2	Reach-1	6550	Max WS	339.09	131.27	142.90		143.12	0.008997	3.73	90.97	28.76	0.37
RIVER-2	Reach-1	6466.66*	Max WS	340.23	132.84	142.19		142.40	0.008335	3.72	91.40	31.66	0.39
RIVER-2	Reach-1	6383.33*	Max WS	341.36	134.40	141.67		141.83	0.005421	3.27	104.53	37.16	0.34
RIVER-2	Reach-1	6300	Max WS	342.50	135.97	141.33		141.48	0.003198	3.07	111.40	31.77	0.29
RIVER-2	Reach-1	6250	Max WS	343.19	136.00	141.09		141.28	0.004683	3.56	96.31	29.07	0.34
RIVER-2	Reach-1	6200	Max WS	343.88	135.00	140.74		141.01	0.006323	4.16	82.63	23.37	0.39
RIVER-2	Reach-1	6100.*	Max WS	345.25	134.75	140.27		140.46	0.004705	3.55	97.21	29.22	0.34
RIVER-2	Reach-1	6000.*	Max WS	346.62	134.50	139.88		140.03	0.003940	3.16	109.67	35.22	0.32
RIVER-2	Reach-1	5900.*	Max WS	348.00	134.25	139.53		139.66	0.003597	2.91	119.68	41.25	0.30
RIVER-2	Reach-1	5800.*	Max WS	349.38	134.00	139.18		139.30	0.003577	2.77	126.30	47.14	0.30
RIVER-2	Reach-1	5700.*	Max WS	350.76	133.75	138.81		138.93	0.003940	2.74	127.98	52.37	0.31
RIVER-2	Reach-1	5600.*	Max WS	352.13	133.50	138.36		138.49	0.005064	2.90	121.50	55.34	0.34
RIVER-2	Reach-1	5500.*	Max WS	353.50	133.25	137.64		137.84	0.008208	3.59	98.39	46.34	0.43
RIVER-2	Reach-1	5400	Max WS	354.88	133.00	135.90		136.46	0.020685	6.00	59.16	25.45	0.69
RIVER-2	Reach-1	5304.54*	Max WS	356.20	132.73	134.91		135.08	0.007893	3.33	107.01	56.53	0.43
RIVER-2	Reach-1	5209.09*	Max WS	357.52	132.45	134.38		134.47	0.005273	2.47	144.55	88.83	0.34
RIVER-2	Reach-1	5113.63*	Max WS	358.84	132.18	133.96		134.03	0.004341	2.06	173.94	121.64	0.30
RIVER-2	Reach-1	5018.18*	Max WS	360.16	131.91	133.59		133.64	0.004027	1.83	196.37	155.06	0.29
RIVER-2	Reach-1	4922.72*	Max WS	361.48	131.64	133.25		133.30	0.003901	1.69	214.33	187.59	0.28
RIVER-2	Reach-1	4827.27*	Max WS	362.80	131.36	132.94		132.98	0.003829	1.58	229.92	219.47	0.27
RIVER-2	Reach-1	4731.81*	Max WS	364.12	131.09	132.63		132.67	0.003888	1.50	242.82	253.23	0.27
RIVER-2	Reach-1	4636.36*	Max WS	365.43	130.82	132.33		132.37	0.004182	1.45	252.04	292.14	0.28
RIVER-2	Reach-1	4540.90*	Max WS	366.74	130.55	132.03		132.06	0.004553	1.41	260.22	335.61	0.28
RIVER-2	Reach-1	4445.45*	Max WS	368.05	130.27	131.75		131.78	0.004502	1.31	281.33	402.40	0.28
RIVER-2	Reach-1	4350	Max WS	369.37	130.00	131.20		131.26	0.016999	1.91	193.37	424.78	0.50
RIVER-2	Reach-1	4260.*	Max WS	370.50	129.40	130.58		130.63	0.013868	1.81	205.36	423.44	0.46
RIVER-2	Reach-1	4170.*	Max WS	371.63	128.80	130.01		130.06	0.013212	1.80	206.54	410.67	0.45
RIVER-2	Reach-1	4080.*	Max WS	372.76	128.20	129.62		129.66	0.008512	1.55	241.01	432.28	0.37
RIVER-2	Reach-1	3990.*	Max WS	373.89	127.60	129.38		129.40	0.004536	1.24	302.26	472.87	0.27

RIVER-2	Reach-1	3900	Max WS	375.01	127.00	129.16	129.18	0.003511	1.13	331.93	491.10	0.24
RIVER-2	Reach-1	3800.*	Max WS	376.44	126.70	128.88	128.90	0.003855	1.17	321.47	483.44	0.25
RIVER-2	Reach-1	3700.*	Max WS	377.87	126.40	128.60	128.62	0.004351	1.22	308.57	475.20	0.27
RIVER-2	Reach-1	3600.*	Max WS	379.29	126.10	128.32	128.35	0.004837	1.27	297.57	467.22	0.28
RIVER-2	Reach-1	3500.*	Max WS	380.72	125.80	128.05	128.08	0.004585	1.30	292.22	426.47	0.28
RIVER-2	Reach-1	3400.*	Max WS	382.14	125.50	127.78	127.81	0.004426	1.32	289.05	401.92	0.27
RIVER-2	Reach-1	3300.*	Max WS	383.54	125.20	127.51	127.54	0.004262	1.33	287.59	383.65	0.27
RIVER-2	Reach-1	3200.*	Max WS	384.94	124.90	127.25	127.28	0.004111	1.34	287.48	371.01	0.27
RIVER-2	Reach-1	3100.*	Max WS	386.34	124.60	126.99	127.02	0.003935	1.33	290.69	367.12	0.26
RIVER-2	Reach-1	3000.*	Max WS	387.74	124.30	126.74	126.77	0.003670	1.30	298.41	369.92	0.25
RIVER-2	Reach-1	2900	Max WS	389.14	124.00	126.51	126.54	0.003225	1.22	318.13	391.85	0.24
RIVER-2	Reach-1	2812.5*	Max WS	390.30	123.52	126.31	126.33	0.003332	1.17	333.12	448.60	0.24
RIVER-2	Reach-1	2725.*	Max WS	391.47	123.03	126.03	126.05	0.004187	1.21	322.78	489.88	0.26
RIVER-2	Reach-1	2637.5*	Max WS	392.62	122.55	125.70	125.73	0.005814	1.34	292.58	487.95	0.31
RIVER-2	Reach-1	2550.*	Max WS	393.76	122.07	125.42	125.45	0.006225	1.37	287.40	488.91	0.31
RIVER-2	Reach-1	2462.5*	Max WS	394.91	121.58	125.18	125.21	0.004885	1.29	305.71	473.54	0.28
RIVER-2	Reach-1	2375	Max WS	396.05	121.10	124.91	124.94	0.004155	1.28	309.06	428.86	0.27
RIVER-2	Reach-1	2279.16*	Max WS	397.30	121.07	124.61	124.64	0.005007	1.33	299.82	455.24	0.29
RIVER-2	Reach-1	2183.33*	Max WS	398.55	121.03	124.37	124.39	0.004915	1.26	317.01	513.92	0.28
RIVER-2	Reach-1	2087.5*	Max WS	399.79	121.00	124.15	124.17	0.003778	1.15	347.49	528.34	0.25
RIVER-2	Reach-1	1991.66*	Max WS	401.04	120.97	123.88	123.90	0.003629	1.13	354.15	535.02	0.25
RIVER-2	Reach-1	1895.83*	Max WS	402.27	120.93	123.62	123.63	0.003612	1.13	356.06	537.92	0.24
RIVER-2	Reach-1	1800	Max WS	403.50	120.90	123.43	123.44	0.002533	1.01	400.83	551.79	0.21
RIVER-2	Reach-1	1705.*	Max WS	404.72	120.43	123.26	123.28	0.002350	1.01	402.45	524.45	0.20
RIVER-2	Reach-1	1610.*	Max WS	405.94	119.95	123.06	123.08	0.002494	1.05	387.09	495.07	0.21
RIVER-2	Reach-1	1515.*	Max WS	407.16	119.47	122.80	122.82	0.003160	1.15	355.55	476.71	0.23
RIVER-2	Reach-1	1420	Max WS	408.37	119.00	122.51	122.53	0.003829	1.27	326.31	456.59	0.26
RIVER-2	Reach-1	1324.61*	Max WS	408.36	118.62	122.18	122.20	0.003773	1.26	328.92	461.75	0.26
RIVER-2	Reach-1	1229.23*	Max WS	408.34	118.23	121.85	121.87	0.004002	1.27	324.44	464.55	0.26
RIVER-2	Reach-1	1133.84*	Max WS	408.31	117.85	121.55	121.57	0.004061	1.27	325.47	468.50	0.26
RIVER-2	Reach-1	1038.46*	Max WS	408.29	117.46	121.21	121.24	0.004020	1.35	315.06	480.05	0.27
RIVER-2	Reach-1	943.076*	Max WS	408.28	117.08	120.86	120.89	0.004422	1.44	297.14	432.49	0.28
RIVER-2	Reach-1	847.692*	Max WS	408.25	116.69	120.51	120.54	0.004003	1.51	286.10	362.97	0.27
RIVER-2	Reach-1	752.307*	Max WS	408.23	116.31	120.14	120.17	0.004039	1.62	268.66	311.75	0.28
RIVER-2	Reach-1	656.923*	Max WS	408.22	115.92	119.77	119.81	0.004386	1.72	253.84	283.94	0.29
RIVER-2	Reach-1	561.538*	Max WS	408.21	115.54	119.44	119.48	0.004292	1.77	246.80	258.08	0.29
RIVER-2	Reach-1	466.153*	Max WS	408.19	115.15	119.14	119.19	0.003892	1.79	244.76	234.25	0.28
RIVER-2	Reach-1	370.769*	Max WS	408.08	114.77	118.86	118.91	0.003449	1.81	241.89	206.34	0.27
RIVER-2	Reach-1	275.384*	Max WS	407.20	114.38	118.59	118.64	0.003297	1.91	221.62	152.96	0.27
RIVER-2	Reach-1	180	Max WS	346.24	114.00	118.20	118.27	0.003659	2.08	166.20	99.06	0.28
RIVER-1	Reach-1	326	Max WS	79.09	169.00	170.33	170.41	0.005094	2.44	44.35	111.62	0.46
RIVER-1	Reach-1	325.5*	Max WS	78.90	168.75	170.11	170.18	0.004280	2.26	50.84	125.29	0.42
RIVER-1	Reach-1	325.*	Max WS	90.74	168.50	169.85	169.93	0.005466	2.52	54.66	134.92	0.47
RIVER-1	Reach-1	324.5*	Max WS	93.76	168.25	169.57	169.65	0.006449	2.68	54.57	143.93	0.51
RIVER-1	Reach-1	324	Max WS	93.54	168.00	169.28	169.35	0.006127	2.58	62.76	175.83	0.50
RIVER-1	Reach-1	323.*	Max WS	93.94	167.02	168.69	168.85	0.006800	3.20	33.96	64.92	0.54
RIVER-1	Reach-1	322	Max WS	94.32	166.04	167.87	168.10	0.009544	3.83	24.63	22.21	0.64
RIVER-1	Reach-1	320	Max WS	107.15	166.00	167.38	167.44	0.005972	2.83	88.71	243.06	0.50
RIVER-1	Reach-1	319.*	Max WS	107.18	166.00	167.18	167.21	0.002339	1.44	100.20	347.39	0.30
RIVER-1	Reach-1	318	Max WS	107.18	166.00	166.96	166.99	0.003078	1.30	82.58	165.25	0.32
RIVER-1	Reach-1	317.*	Max WS	107.71	165.50	166.70	166.72	0.002549	1.22	88.61	169.83	0.30
RIVER-1	Reach-1	316	Max WS	108.28	165.00	166.18	166.24	0.007208	1.99	54.52	109.03	0.50
RIVER-1	Reach-1	315.*	Max WS	110.08	164.50	165.54	165.59	0.005978	1.84	59.76	116.34	0.45
RIVER-1	Reach-1	314	Max WS	111.94	164.00	165.12	165.16	0.002564	1.66	75.74	222.06	0.32
RIVER-1	Reach-1	313.*	Max WS	112.92	163.50	164.78	164.85	0.004286	2.18	64.58	209.23	0.42
RIVER-1	Reach-1	312	Max WS	114.09	163.00	164.48	164.51	0.003163	1.84	116.47	340.96	0.36
RIVER-1	Reach-1	311.*	Max WS	115.41	162.50	163.92	164.04	0.009384	3.04	62.12	198.68	0.61
RIVER-1	Reach-1	310	Max WS	108.25	162.00	163.47	163.51	0.002279	1.77	105.38	220.65	0.31
RIVER-1	Reach-1	309.*	Max WS	117.86	161.26	162.95	163.09	0.008936	3.01	39.20	49.32	0.59
RIVER-1	Reach-1	308	Max WS	118.95	160.51	162.52	162.55	0.001426	1.45	110.70	156.68	0.25
RIVER-1	Reach-1	307.*	Max WS	119.55	159.76	162.32	162.38	0.003017	2.11	63.45	91.91	0.36
RIVER-1	Reach-1	306	Max WS	120.17	159.00	161.93	162.05	0.006182	2.81	42.78	44.42	0.50
RIVER-1	Reach-1	305.*	Max WS	121.43	159.00	161.40	161.50	0.005331	2.49	48.69	54.85	0.47
RIVER-1	Reach-1	304	Max WS	122.02	159.00	161.08	161.14	0.002887	1.86	77.21	370.90	0.35
RIVER-1	Reach-1	303.*	Max WS	122.78	158.75	160.90	160.95	0.001712	1.80	92.53	158.98	0.28
RIVER-1	Reach-1	302	Max WS	123.80	158.50	160.78	160.82	0.001362	1.98	110.35	148.49	0.26
RIVER-1	Reach-1	301.*	Max WS	124.75	158.25	160.63	160.69	0.001895	2.27	98.39	176.91	0.31
RIVER-1	Reach-1	300	Max WS	125.68	158.00	160.44	160.51	0.002470	2.42	96.26	217.63	0.34
RIVER-1	Reach-1	299.*	Max WS	126.29	158.31	160.24	160.30	0.002947	2.61	91.13	149.29	0.38

RIVER-1	Reach-1	298	Max WS	126.75	158.62	160.06		160.09	0.002432	2.25	111.14	150.32	0.34
RIVER-1	Reach-1	297.*	Max WS	125.41	158.31	159.86		159.89	0.001856	1.87	128.65	228.13	0.29
RIVER-1	Reach-1	296	Max WS	124.72	158.00	159.77		159.78	0.000372	0.85	271.14	387.53	0.13
RIVER-1	Reach-1	295.*	Max WS	123.36	158.01	159.70		159.72	0.000860	1.26	172.39	344.49	0.20
RIVER-1	Reach-1	294	Max WS	135.72	158.01	159.62		159.64	0.000839	1.20	170.51	251.99	0.19
RIVER-1	Reach-1	293.*	Max WS	135.49	157.51	159.55		159.56	0.000550	1.11	182.94	180.10	0.16
RIVER-1	Reach-1	292	Max WS	135.38	157.00	159.50		159.51	0.000493	1.22	174.97	129.31	0.16
RIVER-1	Reach-1	291.5	Max WS	135.38	157.00	159.37		159.46	0.002554	2.66	67.18	51.45	0.36
RIVER-1	Reach-1	290.62	Max WS	135.36	157.00	159.16	158.06	159.25	0.002002	2.37	57.19	32.96	0.32
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	135.33	157.00	158.57		158.76	0.006221	3.48	38.83	29.43	0.53
RIVER-1	Reach-1	288.66*	Max WS	134.59	156.50	158.11		158.32	0.008418	3.64	36.99	33.26	0.61
RIVER-1	Reach-1	288	Max WS	133.82	156.00	157.93		157.94	0.000355	0.89	261.95	294.98	0.13
RIVER-1	Reach-1	287.*	Max WS	133.64	156.00	157.88		157.89	0.000767	1.32	199.30	311.80	0.19
RIVER-1	Reach-1	286	Max WS	133.53	156.00	157.79		157.81	0.001025	1.53	180.71	288.11	0.22
RIVER-1	Reach-1	285.*	Max WS	133.69	155.50	157.59		157.71	0.004016	2.76	49.33	59.71	0.43
RIVER-1	Reach-1	284	Max WS	133.84	155.00	157.30		157.39	0.002654	2.42	55.28	38.41	0.36
RIVER-1	Reach-1	283.*	Max WS	134.13	154.75	156.96		157.08	0.003779	2.84	47.29	33.73	0.42
RIVER-1	Reach-1	282	Max WS	134.37	154.50	156.67		156.79	0.003317	3.10	65.93	82.64	0.41
RIVER-1	Reach-1	281.*	Max WS	134.75	154.25	156.24		156.43	0.004820	3.51	44.50	79.35	0.48
RIVER-1	Reach-1	280	Max WS	135.14	154.00	155.79		155.97	0.005176	3.45	39.16	25.79	0.49
RIVER-1	Reach-1	279.*	Max WS	135.48	153.25	155.44		155.58	0.003465	2.98	45.43	27.79	0.41
RIVER-1	Reach-1	278	Max WS	135.76	152.50	155.17		155.28	0.002384	2.70	50.58	29.52	0.35
RIVER-1	Reach-1	277.*	Max WS	153.72	152.45	154.78		154.94	0.004077	3.19	49.02	36.99	0.45
RIVER-1	Reach-1	276	Max WS	153.99	152.40	154.33		154.52	0.005238	3.51	50.99	70.89	0.50
RIVER-1	Reach-1	275.*	Max WS	154.32	151.90	154.04		154.10	0.003096	1.91	81.30	95.00	0.33
RIVER-1	Reach-1	274	Max WS	154.56	151.40	153.78		153.82	0.002865	1.54	100.52	105.59	0.28
RIVER-1	Reach-1	273.*	Max WS	154.67	151.30	153.52		153.55	0.002479	1.37	113.45	147.34	0.26
RIVER-1	Reach-1	272	Max WS	154.76	151.20	153.38		153.39	0.000955	0.99	173.43	225.23	0.16
RIVER-1	Reach-1	271.*	Max WS	154.86	150.85	153.21		153.24	0.002376	1.36	113.69	124.58	0.25
RIVER-1	Reach-1	270	Max WS	154.98	150.50	152.75		152.84	0.005751	2.41	64.42	58.16	0.40
RIVER-1	Reach-1	269.*	Max WS	155.32	150.12	152.24		152.32	0.004745	2.27	68.47	58.40	0.37
RIVER-1	Reach-1	268	Max WS	155.30	149.75	151.73		151.85	0.004617	2.81	55.17	32.75	0.38
RIVER-1	Reach-1	267.265*	Max WS	155.29	149.43	151.40		151.53	0.004161	2.92	53.17	32.42	0.40
RIVER-1	Reach-1	266.53	Max WS	155.28	149.10	151.14	150.25	151.27	0.003208	2.89	53.68	32.65	0.40
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	155.27	148.65	150.63		150.77	0.003585	3.02	51.44	31.90	0.42
RIVER-1	Reach-1	264.033*	Max WS	155.26	148.24	150.29		150.43	0.005069	2.99	51.98	38.42	0.45
RIVER-1	Reach-1	263.016*	Max WS	155.22	147.84	149.86		150.00	0.007609	2.99	52.27	57.49	0.49
RIVER-1	Reach-1	262	Max WS	155.14	147.43	149.61		149.64	0.001867	1.53	128.73	164.20	0.24
RIVER-1	Reach-1	261.*	Max WS	155.42	146.71	148.95		149.09	0.008992	3.01	52.54	51.54	0.50
RIVER-1	Reach-1	260	Max WS	155.67	146.00	148.35		148.41	0.004082	2.14	93.31	165.45	0.34
RIVER-1	Reach-1	259.*	Max WS	155.71	146.00	147.83		147.95	0.007618	2.78	58.62	71.09	0.46
RIVER-1	Reach-1	258	Max WS	155.75	146.00	147.51		147.55	0.003391	1.86	108.41	173.78	0.31
RIVER-1	Reach-1	257.*	Max WS	155.87	145.50	147.23		147.28	0.003185	2.05	109.49	180.22	0.31
RIVER-1	Reach-1	256	Max WS	156.01	145.00	146.79		146.90	0.007331	3.24	75.12	134.79	0.47
RIVER-1	Reach-1	255.*	Max WS	168.81	144.50	146.26		146.37	0.007150	3.12	72.95	97.83	0.47
RIVER-1	Reach-1	254	Max WS	168.92	144.00	145.70		145.81	0.007719	3.11	69.91	92.43	0.48
RIVER-1	Reach-1	253.*	Max WS	169.04	143.00	144.88		145.06	0.012258	3.82	58.67	97.65	0.60
RIVER-1	Reach-1	252	Max WS	169.13	142.00	144.40		144.46	0.003678	2.40	103.87	157.14	0.34
RIVER-1	Reach-1	251.*	Max WS	169.34	141.75	143.97		144.03	0.003691	2.24	102.68	152.45	0.33
RIVER-1	Reach-1	250	Max WS	169.55	141.50	143.63		143.68	0.003057	2.03	132.78	388.58	0.30
RIVER-1	Reach-1	249.*	Max WS	169.67	141.25	143.39		143.45	0.003795	2.11	111.37	336.44	0.33
RIVER-1	Reach-1	248	Max WS	169.70	141.00	143.08		143.15	0.003750	2.08	86.25	192.51	0.33
RIVER-1	Reach-1	247.*	Max WS	169.84	140.75	142.69		142.75	0.004600	2.23	114.85	280.66	0.36
RIVER-1	Reach-1	246	Max WS	170.00	140.50	142.42		142.44	0.001136	1.26	197.00	270.22	0.18
RIVER-1	Reach-1	245.*	Max WS	170.10	139.75	142.17		142.27	0.004793	2.87	80.80	106.70	0.39
RIVER-1	Reach-1	244	Max WS	170.20	139.00	141.87		141.95	0.004360	2.95	97.88	153.82	0.37
RIVER-1	Reach-1	243.*	Max WS	170.26	139.50	141.65		141.72	0.003389	2.36	104.28	159.51	0.33
RIVER-1	Reach-1	242	Max WS	170.32	140.00	141.46		141.50	0.003405	1.98	120.77	214.05	0.32
RIVER-1	Reach-1	241.*	Max WS	170.45	139.50	141.11		141.17	0.004590	2.24	108.83	196.91	0.36
RIVER-1	Reach-1	240	Max WS	170.58	139.00	140.82		140.86	0.002804	1.96	120.49	150.79	0.29
RIVER-1	Reach-1	239.*	Max WS	170.74	138.50	140.58		140.61	0.002923	1.73	127.40	216.90	0.29
RIVER-1	Reach-1	238	Max WS	170.71	138.00	140.23		140.28	0.004660	1.90	116.06	235.75	0.35
RIVER-1	Reach-1	237.25*	Max WS	128.04	137.62	140.00		140.02	0.001616	1.27	138.03	254.11	0.21
RIVER-1	Reach-1	236.5	Max WS	170.61	137.25	139.36	139.15	139.55	0.017264	3.59	59.09	221.97	0.67
RIVER-1	Reach-1	235.85	Max WS	170.57	136.60	138.83	137.83	138.96	0.002821	2.86	59.60	33.39	0.38
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	170.56	136.10	138.75		138.83	0.001519	2.31	73.91	35.87	0.28

RIVER-1	Reach-1	234.153*	Max WS	170.45	135.73	138.59		138.70	0.002186	2.64	64.49	29.73	0.32
RIVER-1	Reach-1	233.076*	Max WS	131.80	135.37	138.47		138.57	0.002185	2.48	58.28	133.49	0.29
RIVER-1	Reach-1	232	Max WS	170.56	135.00	138.12	137.35	138.45	0.010155	4.73	54.42	332.30	0.56
RIVER-1	Reach-1	231.*	Max WS	170.82	135.00	137.76		137.87	0.004721	3.08	113.56	418.38	0.39
RIVER-1	Reach-1	230	Max WS	170.28	135.00	137.67		137.67	0.000477	1.01	316.93	492.29	0.13
RIVER-1	Reach-1	229.*	Max WS	180.83	134.50	137.60		137.61	0.000777	1.40	260.26	441.49	0.16
RIVER-1	Reach-1	228	Max WS	180.93	134.00	137.48		137.51	0.001297	1.92	202.86	421.03	0.21
RIVER-1	Reach-1	227.*	Max WS	181.01	133.85	137.36		137.39	0.001434	1.81	186.39	352.92	0.22
RIVER-1	Reach-1	226	Max WS	181.11	133.70	137.05		137.13	0.005820	2.77	106.84	298.63	0.41
RIVER-1	Reach-1	225.*	Max WS	181.16	133.48	136.71		136.81	0.005283	2.99	105.08	277.60	0.40
RIVER-1	Reach-1	224	Max WS	181.22	133.25	136.38		136.50	0.005857	3.45	100.28	264.55	0.43
RIVER-1	Reach-1	223.*	Max WS	181.29	133.12	136.02		136.13	0.005733	3.40	106.47	262.38	0.43
RIVER-1	Reach-1	222	Max WS	181.36	133.00	135.77		135.82	0.002975	2.53	142.63	265.17	0.31
RIVER-1	Reach-1	221.*	Max WS	181.40	132.70	135.57		135.63	0.003146	2.70	138.34	278.56	0.32
RIVER-1	Reach-1	220	Max WS	181.45	132.40	135.24		135.40	0.006602	3.89	98.17	303.34	0.46
RIVER-1	Reach-1	219.*	Max WS	181.38	131.80	135.02		135.15	0.004157	3.36	91.28	165.95	0.37
RIVER-1	Reach-1	218	Max WS	181.39	131.20	134.98		135.00	0.000777	1.62	209.38	270.89	0.16
RIVER-1	Reach-1	217.*	Max WS	181.44	131.98	134.91		134.93	0.000989	1.60	199.88	311.05	0.18
RIVER-1	Reach-1	216	Max WS	181.52	132.75	134.81		134.83	0.001445	1.54	182.00	302.47	0.21
RIVER-1	Reach-1	215.*	Max WS	197.17	132.62	134.59		134.67	0.004483	2.61	106.08	220.27	0.37
RIVER-1	Reach-1	214	Max WS	197.10	132.50	134.25		134.33	0.004620	2.37	109.92	277.19	0.37
RIVER-1	Reach-1	213.*	Max WS	215.62	131.88	133.88		133.98	0.004299	2.88	114.97	194.27	0.41
RIVER-1	Reach-1	212	Max WS	215.59	131.25	133.59		133.69	0.003942	3.55	123.75	158.04	0.45
RIVER-1	Reach-1	211.065*	Max WS	215.57	130.32	132.66		133.02	0.013035	4.82	44.73	25.61	0.64
RIVER-1	Reach-1	210.13	Max WS	215.57	129.39	132.19		132.38	0.000884	3.51	61.49	35.62	0.37
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	215.56	128.67	132.12		132.21	0.000331	2.47	87.32	60.99	0.23
RIVER-1	Reach-1	205.91	Max WS	215.54	129.85	131.85		132.11	0.002555	4.07	52.90	32.89	0.57
RIVER-1	Reach-1	205.49	Max WS	215.54	129.75	131.74		132.00	0.002571	4.08	52.88	33.03	0.57
RIVER-1	Reach-1	204.965*	Max WS	215.53	129.62	131.61		131.87	0.002567	4.06	53.02	33.22	0.57
RIVER-1	Reach-1	204.44	Max WS	215.53	129.49	131.48		131.74	0.002559	4.05	53.19	33.43	0.57
RIVER-1	Reach-1	203.626*	Max WS	215.51	129.29	131.28		131.53	0.002572	4.05	53.22	33.62	0.57
RIVER-1	Reach-1	202.813*	Max WS	215.51	129.08	131.08		131.33	0.002505	4.00	53.85	33.94	0.56
RIVER-1	Reach-1	202	Max WS	215.49	128.88	130.88		131.12	0.002486	3.98	54.13	34.20	0.56
RIVER-1	Reach-1	201.36	Max WS	215.49	128.72	130.72		130.97	0.002499	4.00	53.86	33.90	0.56
RIVER-1	Reach-1	200.405*	Max WS	215.48	128.48	130.49		130.74	0.002459	3.98	54.10	33.87	0.56
RIVER-1	Reach-1	199.451*	Max WS	215.48	128.24	130.27		130.51	0.002383	3.94	54.65	33.92	0.55
RIVER-1	Reach-1	198.497*	Max WS	215.47	128.00	130.06		130.29	0.002265	3.88	55.56	34.02	0.53
RIVER-1	Reach-1	197.542*	Max WS	215.45	127.76	129.86		130.09	0.002089	3.77	57.08	34.25	0.52
RIVER-1	Reach-1	196.588*	Max WS	215.41	127.52	129.69		129.90	0.001863	3.63	59.33	34.61	0.49
RIVER-1	Reach-1	195.634*	Max WS	215.19	127.28	129.55		129.73	0.001587	3.44	62.64	35.18	0.45
RIVER-1	Reach-1	194.68*	Max WS	214.82	127.04	129.44		129.60	0.001296	3.20	67.07	35.93	0.41
RIVER-1	Reach-1	193.725*	Max WS	214.13	126.81	129.35		129.49	0.001045	2.97	72.11	36.78	0.37
RIVER-1	Reach-1	192.771*	Max WS	212.92	126.57	129.28		129.40	0.000811	2.71	78.45	37.82	0.33
RIVER-1	Reach-1	191.817*	Max WS	211.00	126.33	129.23		129.33	0.000621	2.47	85.55	38.94	0.29
RIVER-1	Reach-1	190.862*	Max WS	206.43	126.09	129.20		129.27	0.000462	2.21	93.42	40.14	0.26
RIVER-1	Reach-1	189.908*	Max WS	202.44	125.85	129.17		129.23	0.000347	1.99	101.88	41.38	0.22
RIVER-1	Reach-1	188.954*	Max WS	194.26	125.61	129.15		129.20	0.000251	1.75	110.92	42.68	0.19
RIVER-1	Reach-1	188	Max WS	164.14	125.37	129.14		129.17	0.000142	1.36	120.48	43.97	0.15
RIVER-1	Reach-1	187.7	Max WS	164.14	125.29	129.14		129.16	0.000095	1.20	136.98	43.97	0.12
RIVER-1	Reach-1	187.68		Lat Struct									
RIVER-1	Reach-1	187.65	Max WS	190.62	125.27	129.14		129.17	0.000097	1.24	155.41	50.66	0.12
RIVER-1	Reach-1	187.2	Max WS	291.74	125.15	129.11		129.14	0.000124	1.47	200.69	61.14	0.14
RIVER-1	Reach-1	187.15	Max WS	293.42	125.13	129.11		129.14	0.000129	1.48	197.84	59.13	0.14
RIVER-1	Reach-1	187	Max WS	293.42	125.09	129.11		129.14	0.000103	1.34	219.45	65.26	0.13
RIVER-1	Reach-1	186.81	Max WS	293.42	123.29	129.05		129.14	0.000165	2.45	119.67	69.19	0.18
RIVER-1	Reach-1	186.80		Culvert									
RIVER-1	Reach-1	185.39	Max WS	293.42	122.78	129.00		129.08	0.000114	2.14	136.94	47.08	0.15
RIVER-1	Reach-1	184.5	Max WS	293.40	126.00	129.02		129.04	0.000831	1.78	345.65	362.84	0.21
RIVER-1	Reach-1	184	Max WS	293.38	126.00	128.97		129.00	0.000756	1.84	336.95	357.08	0.21
RIVER-1	Reach-1	183.*	Max WS	301.96	126.00	128.84		128.92	0.002412	2.95	178.01	177.54	0.33
RIVER-1	Reach-1	182	Max WS	301.93	126.00	128.76		128.79	0.001448	2.10	220.47	177.40	0.23
RIVER-1	Reach-1	181.*	Max WS	302.20	126.00	128.58		128.63	0.002060	2.32	196.69	184.96	0.27
RIVER-1	Reach-1	180	Max WS	298.22	126.00	128.34		128.40	0.002898	2.48	192.30	268.33	0.31
RIVER-1	Reach-1	179.*	Max WS	327.65	125.00	128.09		128.15	0.002669	2.61	221.63	323.94	0.31
RIVER-1	Reach-1	178	Max WS	328.34	124.00	127.97		127.99	0.000805	1.54	376.34	418.16	0.17
RIVER-1	Reach-1	177.*	Max WS	329.50	124.00	127.81		127.84	0.001337	2.04	312.15	413.32	0.22
RIVER-1	Reach-1	176	Max WS	330.76	124.00	127.47		127.55	0.003430	3.11	219.76	419.78	0.34
RIVER-1	Reach-1	175.*	Max WS	336.39	123.50	127.20		127.33	0.004323	3.49	194.04	423.85	0.39

RIVER-1	Reach-1	174	Max WS	336.44	123.00	126.97	127.08	0.003790	3.30	212.24	537.96	0.36
RIVER-1	Reach-1	173.*	Max WS	336.41	123.50	126.86	126.89	0.002055	2.32	319.72	604.64	0.26
RIVER-1	Reach-1	172	Max WS	336.49	124.00	126.81	126.82	0.000513	1.12	570.04	735.30	0.13
RIVER-1	Reach-1	171.*	Max WS	337.11	124.00	126.73	126.74	0.000929	1.47	477.60	762.41	0.18
RIVER-1	Reach-1	170	Max WS	337.58	124.00	126.59	126.61	0.001568	1.83	385.91	668.50	0.23
RIVER-1	Reach-1	169.*	Max WS	337.55	123.50	126.47	126.51	0.002639	2.54	289.79	540.33	0.30
RIVER-1	Reach-1	168	Max WS	337.32	123.00	126.34	126.38	0.002465	2.54	287.40	527.34	0.29
RIVER-1	Reach-1	167.*	Max WS	336.98	122.50	126.20	126.24	0.001786	2.35	315.60	545.56	0.25
RIVER-1	Reach-1	166	Max WS	336.87	122.00	126.12	126.14	0.000948	1.81	398.52	599.14	0.18
RIVER-1	Reach-1	165.*	Max WS	337.06	121.00	125.88	125.92	0.001680	2.40	328.19	567.41	0.24
RIVER-1	Reach-1	164	Max WS	337.88	120.00	125.64	125.66	0.001296	1.93	394.84	671.89	0.20
RIVER-1	Reach-1	163.*	Max WS	338.34	120.00	125.47	125.53	0.002104	2.75	301.35	639.78	0.26
RIVER-1	Reach-1	162	Max WS	338.87	120.00	125.07	125.34	0.005506	4.55	115.26	295.65	0.43
RIVER-1	Reach-1	161.*	Max WS	339.23	120.25	124.77	124.90	0.003122	3.28	195.96	571.68	0.34
RIVER-1	Reach-1	160	Max WS	339.67	120.50	124.65	124.67	0.000914	1.70	394.63	625.13	0.18
RIVER-1	Reach-1	159.*	Max WS	340.17	120.25	124.57	124.59	0.000779	1.55	404.17	656.35	0.17
RIVER-1	Reach-1	158	Max WS	340.68	120.00	124.51	124.52	0.000637	1.36	438.43	713.00	0.15
RIVER-1	Reach-1	157.*	Max WS	341.04	119.50	124.44	124.47	0.000954	1.82	364.41	722.11	0.19
RIVER-1	Reach-1	156	Max WS	341.40	119.00	124.23	124.39	0.003530	3.64	183.76	646.67	0.35
RIVER-1	Reach-1	155.*	Max WS	341.78	119.00	123.92	124.02	0.002588	3.11	261.22	639.10	0.30
RIVER-1	Reach-1	154	Max WS	358.07	119.00	123.73	123.76	0.001074	1.97	429.86	684.45	0.19
RIVER-1	Reach-1	153.*	Max WS	371.20	119.00	123.64	123.67	0.001206	2.12	424.27	775.97	0.21
RIVER-1	Reach-1	152	Max WS	371.56	119.00	123.55	123.58	0.001134	1.97	445.71	867.01	0.20
RIVER-1	Reach-1	151.*	Max WS	378.67	119.00	123.41	123.45	0.001645	2.10	397.03	844.82	0.24
RIVER-1	Reach-1	150	Max WS	378.57	119.00	123.17	123.24	0.004330	2.78	272.46	724.13	0.37
RIVER-1	Reach-1	149.*	Max WS	381.01	118.50	122.90	122.96	0.002759	2.73	300.69	712.97	0.31
RIVER-1	Reach-1	148	Max WS	383.45	118.00	122.72	122.75	0.001471	2.26	382.16	648.26	0.23
RIVER-1	Reach-1	147.*	Max WS	385.32	117.92	122.58	122.63	0.002097	2.40	368.32	846.61	0.27
RIVER-1	Reach-1	146	Max WS	387.17	117.83	122.37	122.45	0.004489	2.97	304.59	1003.18	0.38
RIVER-1	Reach-1	145.*	Max WS	389.08	117.92	122.17	122.22	0.001882	1.81	330.76	940.96	0.25
RIVER-1	Reach-1	144	Max WS	390.83	118.00	121.96	122.00	0.003238	1.74	299.60	693.04	0.30
RIVER-1	Reach-1	143.*	Max WS	392.88	117.50	121.78	121.81	0.000885	1.47	432.74	878.12	0.18
RIVER-1	Reach-1	142	Max WS	394.96	117.00	121.70	121.73	0.000994	1.95	515.51	877.48	0.18
RIVER-1	Reach-1	141.*	Max WS	397.13	117.00	121.59	121.63	0.001613	2.46	433.74	908.50	0.24
RIVER-1	Reach-1	140	Max WS	398.91	117.00	121.38	121.48	0.003250	3.40	334.58	1033.24	0.33
RIVER-1	Reach-1	139.*	Max WS	399.88	117.50	121.23	121.27	0.002052	2.50	398.28	921.32	0.27
RIVER-1	Reach-1	138	Max WS	401.17	118.00	121.15	121.16	0.000922	1.58	545.89	947.15	0.18
RIVER-1	Reach-1	137.*	Max WS	402.74	118.00	121.07	121.09	0.001187	1.67	473.83	823.57	0.20
RIVER-1	Reach-1	136	Max WS	404.34	118.00	120.95	120.97	0.001501	1.69	386.85	537.38	0.22
RIVER-1	Reach-1	135.*	Max WS	405.94	117.50	120.84	120.86	0.001084	1.35	458.24	651.63	0.19
RIVER-1	Reach-1	134	Max WS	407.61	117.00	120.77	120.78	0.000759	1.07	543.38	727.13	0.15
RIVER-1	Reach-1	133.*	Max WS	409.58	117.00	120.68	120.70	0.000915	1.16	463.80	637.69	0.17
RIVER-1	Reach-1	132	Max WS	411.57	117.00	120.60	120.62	0.000731	1.03	478.53	573.47	0.15
RIVER-1	Reach-1	131.*	Max WS	412.60	117.00	120.53	120.55	0.000975	1.13	443.12	583.43	0.17
RIVER-1	Reach-1	130	Max WS	413.65	117.00	120.45	120.47	0.000975	1.08	502.17	795.11	0.17
RIVER-1	Reach-1	129.*	Max WS	414.20	117.00	120.37	120.39	0.001435	1.27	433.79	808.63	0.20
RIVER-1	Reach-1	128	Max WS	414.74	117.00	120.10	120.17	0.005368	2.13	221.32	576.56	0.38
RIVER-1	Reach-1	127.*	Max WS	414.72	116.71	119.82	119.88	0.003255	2.15	286.42	641.46	0.32
RIVER-1	Reach-1	126	Max WS	414.70	116.42	119.74	119.76	0.001421	1.89	457.07	688.00	0.22
RIVER-1	Reach-1	125.*	Max WS	414.70	116.21	119.72	119.74	0.001432	1.71	462.32	751.26	0.22
RIVER-1	Reach-1	124	Max WS	414.70	116.00	119.69	119.70	0.001026	1.31	531.64	800.53	0.18
RIVER-1	Reach-1	123.*	Max WS	414.69	116.18	119.62	119.64	0.001325	1.60	479.48	803.90	0.21
RIVER-1	Reach-1	122	Max WS	414.58	116.35	119.54	119.56	0.001737	1.85	460.72	930.09	0.24
RIVER-1	Reach-1	121.*	Max WS	451.09	115.68	119.32	119.37	0.002796	2.52	346.04	594.18	0.31
RIVER-1	Reach-1	120	Max WS	450.74	115.00	119.15	119.18	0.001473	2.21	409.23	575.69	0.23
RIVER-1	Reach-1	119.*	Max WS	450.54	114.50	118.99	119.07	0.001962	2.85	321.54	412.26	0.30
RIVER-1	Reach-1	118	Max WS	448.94	114.00	118.70	118.89	0.003373	4.09	206.59	262.25	0.43
RIVER-1	Reach-1	117.*	Max WS	448.00	114.50	118.63	118.70	0.001280	2.26	281.33	306.02	0.27
RIVER-1	Reach-1	116	Max WS	444.34	115.00	118.51	118.57	0.002233	2.17	263.80	343.65	0.33
RIVER-1	Reach-1	115.*	Max WS	435.37	114.50	118.36	118.41	0.001960	1.80	272.24	352.09	0.30
RIVER-1	Reach-1	114	Max WS	416.43	114.00	118.20	118.23	0.001719	1.47	299.25	393.16	0.27
RIVER-1	Reach-2	112.05	Max WS	762.67	112.00	118.20	118.28	0.001316	2.27	377.95	429.52	0.27
RIVER-1	Reach-2	112	Max WS	762.67	112.00	118.19	118.27	0.001331	2.28	374.99	427.72	0.27
RIVER-1	Reach-2	111.95	Lat Struct									
RIVER-1	Reach-2	111.*	Max WS	762.56	113.00	118.06	118.13	0.001878	2.27	384.24	371.57	0.31
RIVER-1	Reach-2	110	Max WS	762.43	114.00	117.92	117.98	0.002206	2.15	455.98	484.58	0.32
RIVER-1	Reach-2	109.*	Max WS	763.81	113.50	117.63	117.79	0.002672	3.51	359.19	387.39	0.39
RIVER-1	Reach-2	108	Max WS	764.99	113.00	117.40	117.56	0.002294	3.73	388.81	423.19	0.37
RIVER-1	Reach-2	107.*	Max WS	765.41	112.00	117.32	117.43	0.001597	3.21	466.72	493.27	0.31

RIVER-1	Reach-2	106	Max WS	765.81	111.00	117.27		117.35	0.001008	2.83	584.41	576.09	0.25
RIVER-1	Reach-2	105.*	Max WS	766.49	110.50	117.18		117.28	0.001337	3.20	535.79	539.44	0.28
RIVER-1	Reach-2	104	Max WS	767.14	110.00	117.09		117.21	0.001351	3.52	513.65	506.53	0.28
RIVER-1	Reach-2	103.*	Max WS	767.38	110.00	117.06		117.13	0.001544	2.89	556.28	526.87	0.29
RIVER-1	Reach-2	102	Max WS	670.88	110.00	117.05		117.09	0.000432	2.01	781.95	582.44	0.17
RIVER-1	Reach-2	101.*	Max WS	768.56	110.50	117.01		117.05	0.000616	2.34	770.66	578.14	0.20
RIVER-1	Reach-2	100	Max WS	769.49	111.00	116.96		117.01	0.000666	2.38	758.89	571.61	0.21
RIVER-1	Reach-2	99.*	Max WS	772.50	111.00	116.84		116.89	0.000707	2.47	728.91	570.20	0.21
RIVER-1	Reach-2	98	Max WS	775.58	111.00	116.71		116.77	0.000756	2.58	694.43	565.02	0.22
RIVER-1	Reach-2	97.*	Max WS	777.36	110.50	116.63		116.69	0.000730	2.56	693.27	545.26	0.22
RIVER-1	Reach-2	96	Max WS	779.12	110.00	116.56		116.61	0.000719	2.55	691.54	532.22	0.22
RIVER-1	Reach-2	95.*	Max WS	780.70	109.50	116.48		116.55	0.000793	2.73	635.05	520.70	0.23
RIVER-1	Reach-2	94	Max WS	782.28	109.00	116.39		116.47	0.000859	2.89	576.57	498.35	0.23
RIVER-1	Reach-2	93.*	Max WS	783.87	109.00	116.31		116.39	0.000770	2.77	575.13	470.80	0.22
RIVER-1	Reach-2	92	Max WS	785.47	109.00	116.24		116.32	0.000699	2.69	561.51	419.01	0.22
RIVER-1	Reach-2	91.*	Max WS	787.09	108.50	116.17		116.25	0.000715	2.66	564.58	435.23	0.22
RIVER-1	Reach-2	90	Max WS	788.70	108.00	116.10		116.18	0.000729	2.62	568.50	447.67	0.22
RIVER-1	Reach-2	89.*	Max WS	790.26	108.50	116.04		116.11	0.000646	2.57	606.32	431.57	0.21
RIVER-1	Reach-2	88	Max WS	791.82	109.00	115.98		116.05	0.000582	2.51	646.14	416.83	0.20
RIVER-1	Reach-2	87.*	Max WS	793.03	108.00	115.96		116.00	0.000259	1.84	790.05	439.14	0.14
RIVER-1	Reach-2	86	Max WS	794.19	107.00	115.95		115.98	0.000126	1.39	965.05	464.24	0.10
RIVER-1	Reach-2	85.*	Max WS	794.79	107.50	115.95		115.97	0.000165	1.42	1065.47	580.73	0.11
RIVER-1	Reach-2	84	Max WS	795.38	108.00	115.94		115.96	0.000185	1.30	1244.02	706.22	0.11
RIVER-1	Reach-2	83.*	Max WS	811.48	108.50	115.91		115.94	0.000327	1.71	1006.43	738.81	0.15
RIVER-1	Reach-2	82	Max WS	811.48	109.00	115.86		115.92	0.000705	2.36	730.48	782.68	0.21
RIVER-1	Reach-2	81.56	Max WS	661.99	108.22	115.79	112.04	115.85	0.000722	2.01	329.24	79.44	0.17
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	808.69	108.96	115.24		115.52	0.005153	4.26	189.89	65.40	0.44
RIVER-1	Reach-2	80.95	Max WS	808.82	108.83	115.27	112.25	115.41	0.000987	3.02	267.88	61.45	0.25
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	808.69	108.67	115.24		115.39	0.001085	3.10	261.25	62.90	0.27
RIVER-1	Reach-2	79.3849*	Max WS	808.40	108.33	115.06		115.26	0.001408	3.59	225.14	257.77	0.30
RIVER-1	Reach-2	78.39	Max WS	808.37	108.00	115.05		115.12	0.000573	2.57	574.78	327.24	0.20
RIVER-1	Reach-2	77.6566*	Max WS	808.36	107.80	115.05		115.08	0.000285	1.81	971.97	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	808.33	107.60	115.02		115.06	0.000435	2.21	878.88	746.06	0.17
RIVER-1	Reach-2	76.19	Max WS	808.29	107.40	114.95		115.05	0.000760	2.87	547.86	590.98	0.23
RIVER-1	Reach-2	75.86	Max WS	808.29	107.22	114.87	111.34	115.03	0.000912	3.19	253.56	335.68	0.25
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	808.29	106.63	114.64		114.80	0.001250	3.19	253.25	145.39	0.28
RIVER-1	Reach-2	74.7*	Max WS	808.28	106.82	114.63		114.72	0.000958	2.46	439.71	657.12	0.24
RIVER-1	Reach-2	74	Max WS	808.25	107.00	114.60		114.64	0.000814	1.89	778.19	1088.09	0.21
RIVER-1	Reach-2	73.*	Max WS	808.09	107.43	114.55		114.58	0.000477	1.71	986.21	1167.55	0.17
RIVER-1	Reach-2	72	Max WS	807.77	107.86	114.52		114.54	0.000336	1.64	1199.53	1232.39	0.15
RIVER-1	Reach-2	71.*	Max WS	1007.33	107.44	114.37		114.50	0.001147	2.84	387.38	192.53	0.25
RIVER-1	Reach-2	70	Max WS	1007.32	107.03	114.32		114.40	0.000740	2.24	450.77	96.85	0.18
RIVER-1	Reach-2	69.*	Max WS	1007.22	107.35	114.22		114.32	0.000914	2.48	406.67	86.94	0.20
RIVER-1	Reach-2	68	Max WS	1007.22	107.68	114.09		114.21	0.001202	2.73	368.83	83.86	0.23
RIVER-1	Reach-2	67	Max WS	1007.01	107.40	113.90		114.07	0.001831	3.32	339.03	125.78	0.28
RIVER-1	Reach-2	66	Max WS	1006.89	107.40	113.68		113.87	0.002220	3.56	312.04	118.09	0.31
RIVER-1	Reach-2	65.*	Max WS	1006.65	107.20	113.53		113.67	0.001664	3.10	334.88	134.57	0.29
RIVER-1	Reach-2	64	Max WS	1006.52	107.00	113.40		113.53	0.001226	2.87	350.51	104.65	0.28
RIVER-1	Reach-2	63.*	Max WS	1007.98	106.81	113.26		113.39	0.001526	2.90	347.97	121.89	0.30
RIVER-1	Reach-2	62.*	Max WS	1009.39	106.62	113.10		113.23	0.001802	2.90	347.98	143.67	0.32
RIVER-1	Reach-2	61.*	Max WS	1010.34	106.43	112.95		113.07	0.001565	2.77	368.80	161.31	0.30
RIVER-1	Reach-2	60	Max WS	1011.61	106.24	112.83		112.93	0.001226	2.51	415.30	185.27	0.27
RIVER-1	Reach-2	59.*	Max WS	1013.92	106.07	112.73		112.82	0.000959	2.48	426.79	184.09	0.24
RIVER-1	Reach-2	58	Max WS	1016.68	105.90	112.67		112.75	0.000536	2.30	595.18	447.24	0.19
RIVER-1	Reach-2	57.2	Max WS	1018.31	107.05	112.54	110.07	112.69	0.001417	3.29	419.72	392.50	0.30
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1018.72	107.05	112.45		112.64	0.001739	3.55	370.44	370.03	0.33
RIVER-1	Reach-2	56	Max WS	1021.11	105.90	112.42		112.51	0.000677	2.39	491.21	343.54	0.21
RIVER-1	Reach-2	55.*	Max WS	1023.31	105.85	112.37		112.44	0.000649	2.13	552.67	445.57	0.20
RIVER-1	Reach-2	54	Max WS	1025.51	105.80	112.32		112.38	0.000679	1.99	588.05	539.40	0.20
RIVER-1	Reach-2	53.*	Max WS	1031.69	105.70	112.25		112.30	0.000577	1.94	694.86	353.78	0.17
RIVER-1	Reach-2	52	Max WS	1037.68	105.60	112.15		112.19	0.000724	2.03	692.74	300.66	0.17
RIVER-1	Reach-2	51.*	Max WS	1040.63	105.57	112.06		112.11	0.000873	2.27	648.08	287.57	0.20
RIVER-1	Reach-2	50.*	Max WS	1043.37	105.54	111.96		112.02	0.000989	2.48	612.34	274.15	0.22
RIVER-1	Reach-2	49.*	Max WS	1046.07	105.50	111.85		111.92	0.001018	2.68	587.83	260.31	0.24
RIVER-1	Reach-2	48	Max WS	1048.73	105.47	111.74		111.83	0.000913	2.84	576.07	246.29	0.24

RIVER-1	Reach-2	47.*	Max WS	1051.36	105.68	111.66		111.73	0.000942	2.76	615.71	278.83	0.25
RIVER-1	Reach-2	46.*	Max WS	1054.20	105.88	111.57		111.64	0.000865	2.60	675.46	314.40	0.24
RIVER-1	Reach-2	45.*	Max WS	1056.79	106.08	111.50		111.55	0.000696	2.37	761.22	350.47	0.21
RIVER-1	Reach-2	44	Max WS	1059.61	106.29	111.45		111.49	0.000505	2.11	875.48	386.87	0.18
RIVER-1	Reach-2	43.*	Max WS	1062.22	106.30	111.39		111.44	0.000536	2.18	827.91	371.26	0.19
RIVER-1	Reach-2	42.*	Max WS	1064.84	106.31	111.34		111.39	0.000570	2.24	782.32	364.59	0.20
RIVER-1	Reach-2	41.*	Max WS	1067.45	106.32	111.27		111.33	0.000604	2.31	744.04	362.70	0.20
RIVER-1	Reach-2	40	Max WS	1070.06	106.33	111.21		111.27	0.000639	2.36	713.13	358.84	0.21
RIVER-1	Reach-2	39.*	Max WS	1069.86	106.17	111.16		111.21	0.000509	2.12	813.62	384.32	0.19
RIVER-1	Reach-2	38.*	Max WS	1069.85	106.01	111.13		111.16	0.000380	1.85	959.63	426.41	0.16
RIVER-1	Reach-2	37.*	Max WS	1069.83	105.84	111.11		111.13	0.000256	1.53	1158.03	460.22	0.13
RIVER-1	Reach-2	36	Max WS	1069.80	105.68	111.07		111.10	0.000367	1.85	999.02	480.10	0.16
RIVER-1	Reach-2	35.22	Max WS	1069.72	104.52	110.89		111.09	0.001281	3.53	302.90	68.01	0.29
RIVER-1	Reach-2	34.82	Max WS	1069.65	104.52	110.83	107.82	111.03	0.001329	3.58	299.02	67.68	0.30
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1069.38	104.30	110.51		110.87	0.003466	4.83	221.57	65.50	0.46
RIVER-1	Reach-2	33.67*	Max WS	1069.26	104.12	110.47		110.69	0.001799	3.75	285.20	75.95	0.34
RIVER-1	Reach-2	33	Max WS	1069.26	103.93	110.49		110.60	0.000761	2.66	536.72	464.19	0.23
RIVER-1	Reach-2	32.*	Max WS	1069.25	103.40	110.42		110.51	0.000768	2.45	557.88	513.40	0.22
RIVER-1	Reach-2	31.*	Max WS	1069.22	102.88	110.32		110.41	0.001117	2.54	510.59	532.59	0.26
RIVER-1	Reach-2	30	Max WS	1069.20	102.35	110.03		110.20	0.003386	3.32	324.41	318.77	0.42
RIVER-1	Reach-2	29.*	Max WS	1069.15	102.34	109.68		109.88	0.003553	3.59	331.48	490.06	0.44
RIVER-1	Reach-2	28.*	Max WS	1069.06	102.33	109.37		109.57	0.003450	3.75	399.45	677.00	0.44
RIVER-1	Reach-2	27.*	Max WS	1068.88	102.33	109.14		109.29	0.002645	3.53	557.92	787.28	0.39
RIVER-1	Reach-2	26	Max WS	1068.74	102.32	109.00		109.07	0.001512	2.88	834.37	916.02	0.30
RIVER-1	Reach-2	25.*	Max WS	1068.61	101.99	108.84		108.95	0.002255	3.32	713.03	952.87	0.36
RIVER-1	Reach-2	24.*	Max WS	1068.53	101.66	108.65		108.76	0.002541	3.30	649.15	746.46	0.37
RIVER-1	Reach-2	23.*	Max WS	1068.23	101.33	108.48		108.56	0.002681	3.15	693.40	874.93	0.37
RIVER-1	Reach-2	22	Max WS	1068.04	101.00	108.31		108.37	0.002248	2.69	793.60	974.43	0.34
RIVER-1	Reach-2	21.*	Max WS	1067.62	101.27	108.13		108.19	0.002351	2.77	758.27	844.24	0.34
RIVER-1	Reach-2	20.*	Max WS	1066.77	101.54	107.94		108.00	0.002336	2.87	753.43	770.00	0.35
RIVER-1	Reach-2	19.*	Max WS	1065.63	101.82	107.76		107.82	0.002209	2.99	758.94	738.54	0.34
RIVER-1	Reach-2	18	Max WS	1063.93	102.09	107.60		107.65	0.002055	3.07	773.81	714.22	0.33
RIVER-1	Reach-2	17.*	Max WS	1060.04	101.97	107.43		107.49	0.001900	3.08	821.45	806.10	0.32
RIVER-1	Reach-2	16.*	Max WS	1055.98	101.85	107.29		107.33	0.001616	2.80	1004.76	1185.48	0.30
RIVER-1	Reach-2	15.*	Max WS	1052.88	101.73	107.21		107.22	0.000826	1.91	1288.88	1206.37	0.21
RIVER-1	Reach-2	14	Max WS	1051.54	101.61	107.16		107.17	0.000424	1.29	1621.85	1221.49	0.15
RIVER-1	Reach-2	13.*	Max WS	1051.11	101.43	107.13		107.14	0.000327	1.05	1768.28	1224.94	0.13
RIVER-1	Reach-2	12.*	Max WS	1050.71	101.26	107.11		107.12	0.000244	0.97	1924.16	1216.04	0.11
RIVER-1	Reach-2	11.*	Max WS	1050.35	101.08	107.10		107.10	0.000183	0.91	2088.44	1201.16	0.10
RIVER-1	Reach-2	10	Max WS	1050.03	100.90	107.08		107.09	0.000140	0.82	2247.36	1170.69	0.09
RIVER-1	Reach-2	9.*	Max WS	1050.00	100.75	107.06		107.07	0.000214	1.06	1860.56	1026.40	0.11
RIVER-1	Reach-2	8.*	Max WS	1049.74	100.60	107.03		107.04	0.000388	1.43	1491.01	1006.58	0.15
RIVER-1	Reach-2	7.*	Max WS	1049.31	100.45	106.97		107.00	0.000672	2.03	1218.15	1126.42	0.20
RIVER-1	Reach-2	6	Max WS	1048.76	100.30	106.85		106.92	0.001433	3.11	931.31	1219.24	0.29
RIVER-1	Reach-2	5.*	Max WS	1048.25	100.15	106.72		106.79	0.001260	2.99	981.83	1291.22	0.28
RIVER-1	Reach-2	4.*	Max WS	1048.08	100.00	106.62		106.68	0.001076	2.83	1065.91	1437.61	0.26
RIVER-1	Reach-2	3.*	Max WS	1047.67	99.85	106.52		106.57	0.000917	2.66	1220.77	1756.00	0.24
RIVER-1	Reach-2	2	Max WS	1047.62	99.70	106.46		106.49	0.000555	2.10	1642.76	2211.31	0.19
RIVER-1	Reach-2	1.*	Max WS	1047.51	99.55	106.39		106.44	0.000790	2.58	1338.16	2140.66	0.22
RIVER-1	Reach-2	0	Max WS	1047.43	99.40	106.31	103.80	106.37	0.000810	2.67	1146.97	1863.13	0.23

Appendix P-6: HEC-RAS Results, Baseline Conditions Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 11:33:24 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.41	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	598.66	157.71	163.01		163.02	0.000054	0.45	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.15	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	600.13	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	600.12	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.65	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	597.20	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	598.62	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	597.19	154.11	163.01		163.01	0.000025	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	597.18	154.05	163.00		163.01	0.000022	0.33	1827.44	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	594.38	154.00	163.00		163.01	0.000020	0.30	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	594.38	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	594.37	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.73	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	595.70	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.68	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	594.36	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.34	152.00	163.00		163.00	0.000005	0.18	3310.35	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	595.60	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	595.56	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	594.31	152.00	163.00		163.00	0.000002	0.13	4521.19	625.06	0.01
RIVER-2	Reach-1	10662.5*	Max WS	594.28	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.25	152.00	163.00		163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.23	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	594.19	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	595.20	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.15	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	593.18	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.99	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.07	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.05	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	594.04	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	594.02	150.00	163.00		163.00	0.000001	0.08	7215.44	820.24	0.00
RIVER-2	Reach-1	9950	Max WS	594.76	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	593.99	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.95	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.92	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	593.21	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	593.83	149.36	163.00		163.00	0.000000	0.06	10071.08	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.79	148.73	163.00		163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.75	148.36	163.00		163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.71	148.00	163.00		163.00	0.000000	0.04	15722.64	1830.39	0.00
RIVER-2	Reach-1	9450.*	Max WS	593.67	147.00	163.00		163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.63	146.00	163.00		163.00	0.000000	0.03	18084.44	1807.32	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.60	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.28	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.51	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.46	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.31	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.42	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.29	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.35	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.33	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.30	140.56	154.39		154.57	0.003541	3.40	174.49	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004340	3.55	168.07	35.97	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.58	139.60	153.55		153.75	0.004419	3.56	168.12	36.59	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.22	139.11	153.11		153.30	0.004513	3.57	168.25	37.31	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004617	3.59	168.38	38.06	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.53	138.13	152.19		152.40	0.004687	3.60	168.63	38.53	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.18	137.64	151.73		151.93	0.004726	3.60	169.08	38.89	0.30
RIVER-2	Reach-1	7750.*	Max WS	611.84	137.15	151.26		151.46	0.004756	3.61	169.60	39.19	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.50	136.66	150.79		150.99	0.004776	3.61	170.14	39.40	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.32		150.52	0.004763	3.61	170.97	39.53	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.81	135.68	149.85		150.05	0.004736	3.61	171.91	39.62	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.48	135.19	149.38		149.58	0.004695	3.60	173.09	39.75	0.30
RIVER-2	Reach-1	7250.*	Max WS	625.15	134.70	148.90		149.10	0.004683	3.59	174.12	40.02	0.30
RIVER-2	Reach-1	7150.*	Max WS	627.81	134.21	148.39		148.59	0.004867	3.61	173.73	40.87	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.49	133.72	147.84		148.05	0.005468	3.65	172.58	44.58	0.33
RIVER-2	Reach-1	6950.*	Max WS	633.14	133.23	147.26		147.48	0.006096	3.72	170.24	47.03	0.34
RIVER-2	Reach-1	6850.*	Max WS	635.41	132.74	146.62		146.85	0.006827	3.83	165.73	47.69	0.36
RIVER-2	Reach-1	6750.*	Max WS	591.30	132.25	146.00		146.21	0.006504	3.65	162.00	48.47	0.35
RIVER-2	Reach-1	6650.*	Max WS	641.17	131.76	145.27		145.54	0.008842	4.17	153.68	46.79	0.41
RIVER-2	Reach-1	6550	Max WS	643.73	131.27	144.59		144.89	0.010092	4.36	147.59	46.02	0.43
RIVER-2	Reach-1	6466.66*	Max WS	645.90	132.84	143.94		144.17	0.007443	3.83	168.69	58.18	0.40
RIVER-2	Reach-1	6383.33*	Max WS	648.05	134.40	143.50		143.69	0.004312	3.47	186.78	52.97	0.33
RIVER-2	Reach-1	6300	Max WS	650.21	135.97	143.16		143.37	0.003327	3.68	176.45	39.26	0.31
RIVER-2	Reach-1	6250	Max WS	651.50	136.00	142.90		143.18	0.004615	4.18	155.76	36.32	0.36
RIVER-2	Reach-1	6200	Max WS	652.59	135.00	142.48		142.88	0.007058	5.11	127.58	28.45	0.43
RIVER-2	Reach-1	6100.*	Max WS	655.03	134.75	142.01		142.29	0.004861	4.26	153.75	35.76	0.36
RIVER-2	Reach-1	6000.*	Max WS	657.53	134.50	141.64		141.85	0.003705	3.67	179.22	43.73	0.32
RIVER-2	Reach-1	5900.*	Max WS	659.94	134.25	141.29		141.45	0.003188	3.27	202.03	53.40	0.30
RIVER-2	Reach-1	5800.*	Max WS	662.32	134.00	140.90		141.04	0.003867	3.00	220.83	78.27	0.31
RIVER-2	Reach-1	5700.*	Max WS	662.03	133.75	140.44		140.56	0.005416	2.79	237.40	125.36	0.35
RIVER-2	Reach-1	5600.*	Max WS	666.48	133.50	139.89		140.00	0.005889	2.75	243.17	145.06	0.36
RIVER-2	Reach-1	5500.*	Max WS	690.92	133.25	139.23		139.38	0.008841	3.04	229.19	161.33	0.43
RIVER-2	Reach-1	5400	Max WS	690.08	133.00	136.91		137.89	0.026414	7.96	86.65	28.96	0.81
RIVER-2	Reach-1	5304.54*	Max WS	692.26	132.73	135.70		136.02	0.009948	4.52	153.26	60.66	0.50
RIVER-2	Reach-1	5209.09*	Max WS	693.92	132.45	135.07		135.24	0.006420	3.34	207.50	93.81	0.40
RIVER-2	Reach-1	5113.63*	Max WS	695.49	132.18	134.59		134.70	0.005060	2.76	252.02	127.64	0.35
RIVER-2	Reach-1	5018.18*	Max WS	697.73	131.91	134.18		134.27	0.004345	2.40	290.83	162.40	0.32
RIVER-2	Reach-1	4922.72*	Max WS	699.54	131.64	133.82		133.90	0.003928	2.15	325.06	198.30	0.30
RIVER-2	Reach-1	4827.27*	Max WS	701.40	131.36	133.49		133.55	0.003746	1.97	355.22	238.14	0.28
RIVER-2	Reach-1	4731.81*	Max WS	703.33	131.09	133.16		133.21	0.003657	1.83	383.31	281.97	0.28
RIVER-2	Reach-1	4636.36*	Max WS	705.25	130.82	132.84		132.88	0.003709	1.72	408.88	333.74	0.27
RIVER-2	Reach-1	4540.90*	Max WS	707.29	130.55	132.48		132.53	0.004051	1.66	425.33	392.00	0.28
RIVER-2	Reach-1	4445.45*	Max WS	709.50	130.27	132.10		132.14	0.004738	1.66	427.41	444.27	0.30
RIVER-2	Reach-1	4350	Max WS	711.79	130.00	131.48		131.56	0.013715	2.26	315.30	458.78	0.48
RIVER-2	Reach-1	4260.*	Max WS	713.73	129.40	130.88		130.95	0.011080	2.11	339.24	469.78	0.44
RIVER-2	Reach-1	4170.*	Max WS	715.64	128.80	130.41		130.46	0.007523	1.87	382.84	471.11	0.37
RIVER-2	Reach-1	4080.*	Max WS	717.59	128.20	130.04		130.09	0.004959	1.63	439.64	485.05	0.30
RIVER-2	Reach-1	3990.*	Max WS	719.31	127.60	129.75		129.78	0.003736	1.49	483.63	496.14	0.27

RIVER-2	Reach-1	3900	Max WS	721.08	127.00	129.52		129.55	0.003216	1.41	511.74	508.93	0.25
RIVER-2	Reach-1	3800.*	Max WS	723.65	126.70	129.27		129.30	0.003204	1.42	510.81	502.45	0.25
RIVER-2	Reach-1	3700.*	Max WS	726.23	126.40	129.02		129.05	0.003165	1.42	511.30	496.44	0.25
RIVER-2	Reach-1	3600.*	Max WS	728.72	126.10	128.77		128.80	0.003099	1.42	513.37	491.17	0.24
RIVER-2	Reach-1	3500.*	Max WS	731.21	125.80	128.53		128.56	0.002997	1.41	517.90	487.07	0.24
RIVER-2	Reach-1	3400.*	Max WS	733.78	125.50	128.29		128.32	0.002921	1.41	521.86	484.48	0.24
RIVER-2	Reach-1	3300.*	Max WS	736.33	125.20	128.04		128.07	0.002877	1.40	524.83	483.28	0.24
RIVER-2	Reach-1	3200.*	Max WS	738.88	124.90	127.79		127.82	0.002854	1.40	526.22	481.03	0.24
RIVER-2	Reach-1	3100.*	Max WS	741.44	124.60	127.53		127.56	0.002874	1.41	524.74	477.65	0.24
RIVER-2	Reach-1	3000.*	Max WS	744.01	124.30	127.25		127.28	0.003104	1.44	515.56	481.63	0.25
RIVER-2	Reach-1	2900	Max WS	746.58	124.00	126.94		126.97	0.003493	1.46	510.18	510.00	0.26
RIVER-2	Reach-1	2812.5*	Max WS	748.72	123.52	126.65		126.68	0.003867	1.50	500.24	521.71	0.27
RIVER-2	Reach-1	2725.*	Max WS	750.83	123.03	126.38		126.41	0.003904	1.50	498.99	519.94	0.27
RIVER-2	Reach-1	2637.5*	Max WS	752.94	122.55	126.13		126.16	0.003669	1.48	509.09	519.54	0.26
RIVER-2	Reach-1	2550.*	Max WS	755.06	122.07	125.87		125.91	0.003505	1.46	516.65	518.55	0.26
RIVER-2	Reach-1	2462.5*	Max WS	757.18	121.58	125.59		125.63	0.003585	1.48	513.02	515.95	0.26
RIVER-2	Reach-1	2375	Max WS	759.28	121.10	125.33		125.37	0.003472	1.47	518.28	514.32	0.26
RIVER-2	Reach-1	2279.16*	Max WS	761.57	121.07	125.06		125.09	0.003344	1.44	529.74	525.95	0.25
RIVER-2	Reach-1	2183.33*	Max WS	763.82	121.03	124.77		124.80	0.003449	1.44	529.87	536.40	0.26
RIVER-2	Reach-1	2087.5*	Max WS	766.10	121.00	124.50		124.53	0.003392	1.42	537.63	547.03	0.25
RIVER-2	Reach-1	1991.66*	Max WS	768.36	120.97	124.26		124.29	0.003068	1.37	559.92	559.13	0.24
RIVER-2	Reach-1	1895.83*	Max WS	770.62	120.93	124.04		124.07	0.002647	1.30	591.65	571.92	0.23
RIVER-2	Reach-1	1800	Max WS	772.83	120.90	123.84		123.86	0.002155	1.22	634.62	581.45	0.21
RIVER-2	Reach-1	1705.*	Max WS	775.07	120.43	123.64		123.67	0.002354	1.28	605.59	550.22	0.21
RIVER-2	Reach-1	1610.*	Max WS	777.28	119.95	123.43		123.45	0.002657	1.36	573.34	523.25	0.23
RIVER-2	Reach-1	1515.*	Max WS	779.50	119.47	123.18		123.21	0.002994	1.46	538.28	503.22	0.24
RIVER-2	Reach-1	1420	Max WS	781.72	119.00	122.87		122.91	0.003628	1.61	497.72	479.05	0.27
RIVER-2	Reach-1	1324.61*	Max WS	781.68	118.62	122.54		122.58	0.003636	1.61	505.66	580.82	0.27
RIVER-2	Reach-1	1229.23*	Max WS	781.62	118.23	122.23		122.27	0.003500	1.57	522.15	580.93	0.26
RIVER-2	Reach-1	1133.84*	Max WS	781.55	117.85	121.92		121.96	0.003462	1.55	532.03	579.88	0.26
RIVER-2	Reach-1	1038.46*	Max WS	781.47	117.46	121.62		121.66	0.003441	1.52	539.36	576.63	0.26
RIVER-2	Reach-1	943.076*	Max WS	781.38	117.08	121.35		121.38	0.003373	1.49	547.43	572.95	0.26
RIVER-2	Reach-1	847.692*	Max WS	781.22	116.69	121.08		121.11	0.003382	1.46	550.66	568.29	0.25
RIVER-2	Reach-1	752.307*	Max WS	781.17	116.31	120.79		120.82	0.003340	1.50	535.13	522.40	0.25
RIVER-2	Reach-1	656.923*	Max WS	781.11	115.92	120.49		120.53	0.003402	1.57	511.01	471.53	0.26
RIVER-2	Reach-1	561.538*	Max WS	781.08	115.54	120.20		120.24	0.003477	1.64	489.29	429.83	0.26
RIVER-2	Reach-1	466.153*	Max WS	781.05	115.15	119.93		119.98	0.003497	1.68	468.88	385.58	0.27
RIVER-2	Reach-1	370.769*	Max WS	780.99	114.77	119.67		119.72	0.003817	1.78	427.83	327.55	0.28
RIVER-2	Reach-1	275.384*	Max WS	780.35	114.38	119.36		119.44	0.005471	2.15	350.58	261.61	0.34
RIVER-2	Reach-1	180	Max WS	736.14	114.00	118.77		118.94	0.006396	3.29	223.73	101.55	0.39
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005302	2.90	80.29	142.45	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.94	168.75	170.38		170.46	0.004623	2.71	87.88	152.20	0.45
RIVER-1	Reach-1	325.*	Max WS	166.61	168.50	170.10		170.19	0.005793	3.01	89.81	161.00	0.50
RIVER-1	Reach-1	324.5*	Max WS	170.90	168.25	169.79		169.90	0.006608	3.17	91.86	183.62	0.54
RIVER-1	Reach-1	324	Max WS	170.18	168.00	169.55		169.61	0.004506	2.67	114.61	200.80	0.45
RIVER-1	Reach-1	323.*	Max WS	170.25	167.02	169.06		169.27	0.007016	3.94	65.77	162.42	0.58
RIVER-1	Reach-1	322	Max WS	172.58	166.04	168.23	168.07	168.62	0.012362	5.11	38.12	54.46	0.76
RIVER-1	Reach-1	320	Max WS	196.51	166.00	167.56		167.62	0.006586	3.31	131.75	254.56	0.54
RIVER-1	Reach-1	319.*	Max WS	196.71	166.00	167.36		167.40	0.002629	1.78	166.48	371.47	0.33
RIVER-1	Reach-1	318	Max WS	196.62	166.00	167.19		167.22	0.002599	1.50	166.54	506.53	0.31
RIVER-1	Reach-1	317.*	Max WS	197.50	165.50	166.96		166.99	0.002425	1.40	150.21	391.53	0.30
RIVER-1	Reach-1	316	Max WS	198.39	165.00	166.46		166.53	0.007442	2.10	94.57	178.52	0.51
RIVER-1	Reach-1	315.*	Max WS	201.46	164.50	165.82		165.89	0.005613	2.05	98.38	155.82	0.45
RIVER-1	Reach-1	314	Max WS	204.59	164.00	165.38		165.43	0.002659	2.02	135.65	240.03	0.34
RIVER-1	Reach-1	313.*	Max WS	206.34	163.50	165.00		165.09	0.004883	2.71	116.93	276.60	0.46
RIVER-1	Reach-1	312	Max WS	208.43	163.00	164.68		164.71	0.003196	2.13	185.15	355.81	0.37
RIVER-1	Reach-1	311.*	Max WS	210.59	162.50	164.17		164.27	0.007147	3.16	114.84	231.66	0.55
RIVER-1	Reach-1	310	Max WS	212.94	162.00	163.78		163.81	0.002307	2.09	173.41	232.54	0.33
RIVER-1	Reach-1	309.*	Max WS	214.92	161.26	163.22		163.40	0.009007	3.62	86.30	261.80	0.62
RIVER-1	Reach-1	308	Max WS	217.01	160.51	162.83		162.87	0.001704	1.84	160.50	166.20	0.28
RIVER-1	Reach-1	307.*	Max WS	218.02	159.76	162.57		162.69	0.004598	2.91	98.03	310.70	0.46
RIVER-1	Reach-1	306	Max WS	219.12	159.00	162.19		162.36	0.007616	3.56	106.59	587.83	0.58
RIVER-1	Reach-1	305.*	Max WS	220.53	159.00	161.66		161.81	0.006705	3.20	103.28	519.25	0.54
RIVER-1	Reach-1	304	Max WS	218.97	159.00	161.41		161.43	0.001373	1.57	280.43	693.08	0.25
RIVER-1	Reach-1	303.*	Max WS	218.77	158.75	161.30		161.33	0.001334	1.90	255.11	665.32	0.26
RIVER-1	Reach-1	302	Max WS	220.10	158.50	161.16		161.24	0.002165	2.84	214.06	683.28	0.34
RIVER-1	Reach-1	301.*	Max WS	221.67	158.25	160.97		161.05	0.002266	2.81	175.47	321.89	0.35
RIVER-1	Reach-1	300	Max WS	222.79	158.00	160.80		160.86	0.002042	2.53	181.36	262.45	0.32
RIVER-1	Reach-1	299.*	Max WS	220.45	158.31	160.61		160.68	0.002642	2.87	159.05	210.37	0.37

RIVER-1	Reach-1	298	Max WS	215.34	158.62	160.46		160.49	0.001983	2.41	178.80	186.83	0.32
RIVER-1	Reach-1	297.*	Max WS	210.34	158.31	160.33		160.35	0.000914	1.63	276.29	362.59	0.22
RIVER-1	Reach-1	296	Max WS	210.66	158.00	160.29		160.29	0.000204	0.79	493.03	455.89	0.10
RIVER-1	Reach-1	295.*	Max WS	210.01	158.01	160.26		160.27	0.000337	1.01	376.61	393.23	0.13
RIVER-1	Reach-1	294	Max WS	228.55	158.01	160.22		160.24	0.000371	1.05	343.05	329.59	0.14
RIVER-1	Reach-1	293.*	Max WS	228.52	157.51	160.19		160.20	0.000348	1.13	310.51	221.98	0.14
RIVER-1	Reach-1	292	Max WS	228.46	157.00	160.14		160.16	0.000411	1.37	264.53	156.60	0.15
RIVER-1	Reach-1	291.5	Max WS	228.44	157.00	160.02		160.12	0.002184	3.04	104.79	72.65	0.35
RIVER-1	Reach-1	290.62	Max WS	228.38	157.00	159.78	158.47	159.91	0.002260	2.89	78.91	36.70	0.35
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	228.08	157.00	159.00		159.30	0.007447	4.38	52.12	32.02	0.60
RIVER-1	Reach-1	288.66*	Max WS	227.83	156.50	158.54		158.83	0.009255	4.35	52.76	59.04	0.66
RIVER-1	Reach-1	288	Max WS	226.07	156.00	158.33		158.34	0.000355	1.05	417.18	427.46	0.14
RIVER-1	Reach-1	287.*	Max WS	225.80	156.00	158.29		158.30	0.000526	1.29	352.77	388.33	0.17
RIVER-1	Reach-1	286	Max WS	225.76	156.00	158.24		158.25	0.000607	1.40	322.41	334.89	0.18
RIVER-1	Reach-1	285.*	Max WS	225.95	155.50	158.07		158.20	0.003197	3.05	103.90	171.61	0.40
RIVER-1	Reach-1	284	Max WS	226.19	155.00	157.77		157.91	0.003414	3.00	75.43	45.95	0.41
RIVER-1	Reach-1	283.*	Max WS	226.53	154.75	157.41		157.58	0.003850	3.42	79.40	89.13	0.45
RIVER-1	Reach-1	282	Max WS	226.96	154.50	157.14		157.30	0.003482	3.71	111.28	141.97	0.43
RIVER-1	Reach-1	281.*	Max WS	227.44	154.25	156.81		156.98	0.003538	3.66	96.07	113.44	0.43
RIVER-1	Reach-1	280	Max WS	227.96	154.00	156.40		156.62	0.004225	3.83	77.43	104.88	0.47
RIVER-1	Reach-1	279.*	Max WS	228.47	153.25	156.04		156.23	0.003747	3.55	70.46	66.48	0.44
RIVER-1	Reach-1	278	Max WS	229.02	152.50	155.69		155.87	0.003546	3.46	69.97	50.36	0.43
RIVER-1	Reach-1	277.*	Max WS	254.66	152.45	155.17		155.42	0.005434	4.11	69.62	75.61	0.53
RIVER-1	Reach-1	276	Max WS	255.04	152.40	154.69		154.94	0.005891	4.29	82.44	105.89	0.55
RIVER-1	Reach-1	275.*	Max WS	255.48	151.90	154.38		154.46	0.003133	2.31	122.90	149.93	0.34
RIVER-1	Reach-1	274	Max WS	255.77	151.40	154.12		154.17	0.003100	1.80	151.16	271.58	0.30
RIVER-1	Reach-1	273.*	Max WS	255.78	151.30	153.92		153.95	0.001778	1.49	191.29	241.84	0.23
RIVER-1	Reach-1	272	Max WS	256.10	151.20	153.83		153.84	0.000673	1.04	280.55	249.35	0.15
RIVER-1	Reach-1	271.*	Max WS	256.22	150.85	153.73		153.75	0.001444	1.34	205.11	253.99	0.21
RIVER-1	Reach-1	270	Max WS	256.32	150.50	153.34		153.42	0.005731	2.27	112.78	110.78	0.40
RIVER-1	Reach-1	269.*	Max WS	256.77	150.12	152.87		152.95	0.003738	2.29	112.17	78.96	0.34
RIVER-1	Reach-1	268	Max WS	256.76	149.75	152.35		152.53	0.004800	3.35	76.58	35.82	0.40
RIVER-1	Reach-1	267.265*	Max WS	256.73	149.43	152.00		152.19	0.004383	3.48	73.72	35.76	0.43
RIVER-1	Reach-1	266.53	Max WS	256.73	149.10	151.72	150.68	151.91	0.003530	3.49	73.62	36.25	0.43
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	256.70	148.65	151.10		151.33	0.004535	3.82	67.13	34.72	0.48
RIVER-1	Reach-1	264.033*	Max WS	256.66	148.24	150.68		150.90	0.006784	3.77	68.07	44.16	0.54
RIVER-1	Reach-1	263.016*	Max WS	256.55	147.84	150.30		150.43	0.005825	3.08	99.96	126.16	0.45
RIVER-1	Reach-1	262	Max WS	256.46	147.43	150.10		150.13	0.001556	1.66	222.60	287.59	0.22
RIVER-1	Reach-1	261.*	Max WS	256.82	146.71	149.30		149.50	0.011083	3.62	72.76	63.51	0.57
RIVER-1	Reach-1	260	Max WS	257.19	146.00	148.65		148.72	0.003517	2.31	144.82	172.36	0.33
RIVER-1	Reach-1	259.*	Max WS	257.25	146.00	148.08		148.28	0.009797	3.61	78.39	87.12	0.54
RIVER-1	Reach-1	258	Max WS	257.30	146.00	147.77		147.82	0.003297	2.12	155.66	184.41	0.32
RIVER-1	Reach-1	257.*	Max WS	257.52	145.50	147.49		147.55	0.003571	2.44	158.88	225.21	0.34
RIVER-1	Reach-1	256	Max WS	257.74	145.00	147.09		147.18	0.006377	3.42	141.84	278.47	0.46
RIVER-1	Reach-1	255.*	Max WS	273.96	144.50	146.57		146.71	0.008052	3.79	114.88	176.67	0.51
RIVER-1	Reach-1	254	Max WS	274.13	144.00	145.96		146.12	0.008519	3.70	95.89	102.09	0.52
RIVER-1	Reach-1	253.*	Max WS	274.30	143.00	145.15		145.36	0.012345	4.36	86.92	115.11	0.62
RIVER-1	Reach-1	252	Max WS	274.42	142.00	144.70		144.77	0.003603	2.68	156.70	190.32	0.35
RIVER-1	Reach-1	251.*	Max WS	274.78	141.75	144.23		144.30	0.004295	2.69	160.25	287.00	0.37
RIVER-1	Reach-1	250	Max WS	275.13	141.50	143.85		143.89	0.002561	1.99	227.66	426.61	0.28
RIVER-1	Reach-1	249.*	Max WS	275.26	141.25	143.62		143.67	0.003293	2.16	196.74	393.00	0.32
RIVER-1	Reach-1	248	Max WS	275.32	141.00	143.32		143.40	0.003899	2.39	163.31	372.85	0.35
RIVER-1	Reach-1	247.*	Max WS	275.52	140.75	142.96		143.00	0.003333	2.08	192.00	296.39	0.32
RIVER-1	Reach-1	246	Max WS	275.84	140.50	142.74		142.76	0.000983	1.32	283.48	277.97	0.18
RIVER-1	Reach-1	245.*	Max WS	275.98	139.75	142.44		142.57	0.005691	3.46	113.86	137.38	0.43
RIVER-1	Reach-1	244	Max WS	276.15	139.00	142.13		142.22	0.005042	3.44	144.34	207.00	0.41
RIVER-1	Reach-1	243.*	Max WS	276.25	139.50	141.89		141.97	0.004123	2.85	144.93	185.77	0.37
RIVER-1	Reach-1	242	Max WS	276.34	140.00	141.69		141.74	0.003517	2.25	171.44	229.30	0.33
RIVER-1	Reach-1	241.*	Max WS	276.52	139.50	141.37		141.42	0.004157	2.43	161.44	221.91	0.36
RIVER-1	Reach-1	240	Max WS	276.75	139.00	141.07		141.13	0.003227	2.32	161.03	202.36	0.32
RIVER-1	Reach-1	239.*	Max WS	276.99	138.50	140.79		140.84	0.003241	2.05	175.35	229.99	0.31
RIVER-1	Reach-1	238	Max WS	276.95	138.00	140.42		140.48	0.004841	2.19	161.42	244.67	0.37
RIVER-1	Reach-1	237.25*	Max WS	276.94	137.62	140.09		140.15	0.004961	2.34	161.19	261.03	0.38
RIVER-1	Reach-1	236.5	Max WS	276.84	137.25	139.71		139.79	0.006213	2.69	152.85	295.42	0.42
RIVER-1	Reach-1	235.85	Max WS	276.80	136.60	139.26	138.25	139.47	0.003942	3.73	74.29	35.94	0.46
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	276.80	136.10	139.13		139.28	0.002414	3.14	88.08	39.44	0.36

RIVER-1	Reach-1	234.153*	Max WS	276.79	135.73	138.93	139.14	0.003523	3.65	84.02	120.20	0.41
RIVER-1	Reach-1	233.076*	Max WS	276.77	135.37	138.71	138.92	0.005083	4.04	108.05	234.27	0.45
RIVER-1	Reach-1	232	Max WS	276.73	135.00	138.29	138.56	0.010532	5.06	121.24	413.51	0.58
RIVER-1	Reach-1	231.*	Max WS	276.29	135.00	137.98	138.05	0.003386	2.80	209.44	445.70	0.34
RIVER-1	Reach-1	230	Max WS	276.30	135.00	137.90	137.91	0.000498	1.11	431.87	502.89	0.13
RIVER-1	Reach-1	229.*	Max WS	290.23	134.50	137.82	137.84	0.000802	1.51	361.37	453.72	0.17
RIVER-1	Reach-1	228	Max WS	290.43	134.00	137.70	137.73	0.001286	2.02	296.34	430.96	0.21
RIVER-1	Reach-1	227.*	Max WS	290.61	133.85	137.57	137.61	0.001564	2.02	261.82	364.79	0.23
RIVER-1	Reach-1	226	Max WS	290.83	133.70	137.23	137.31	0.005613	2.95	163.04	307.91	0.41
RIVER-1	Reach-1	225.*	Max WS	290.95	133.48	136.90	137.00	0.005493	3.26	158.01	292.69	0.42
RIVER-1	Reach-1	224	Max WS	291.07	133.25	136.58	136.69	0.005664	3.61	155.30	282.00	0.43
RIVER-1	Reach-1	223.*	Max WS	291.22	133.12	136.22	136.31	0.005485	3.54	159.96	276.09	0.42
RIVER-1	Reach-1	222	Max WS	291.36	133.00	135.96	136.01	0.003344	2.83	193.19	275.29	0.33
RIVER-1	Reach-1	221.*	Max WS	291.51	132.70	135.75	135.81	0.003617	3.05	188.72	289.19	0.35
RIVER-1	Reach-1	220	Max WS	291.64	132.40	135.44	135.56	0.005900	3.90	158.80	311.58	0.44
RIVER-1	Reach-1	219.*	Max WS	291.59	131.80	135.28	135.40	0.004481	3.72	157.53	291.01	0.39
RIVER-1	Reach-1	218	Max WS	291.62	131.20	135.25	135.27	0.000911	1.86	296.91	347.53	0.18
RIVER-1	Reach-1	217.*	Max WS	291.77	131.98	135.16	135.19	0.001094	1.80	281.00	327.72	0.20
RIVER-1	Reach-1	216	Max WS	291.94	132.75	135.05	135.08	0.001526	1.73	254.57	307.93	0.22
RIVER-1	Reach-1	215.*	Max WS	313.11	132.62	134.81	134.91	0.004888	2.99	158.18	246.67	0.40
RIVER-1	Reach-1	214	Max WS	313.19	132.50	134.57	134.63	0.003013	2.23	201.42	290.04	0.31
RIVER-1	Reach-1	213.*	Max WS	346.60	131.88	134.37	134.43	0.002277	2.52	219.77	222.18	0.31
RIVER-1	Reach-1	212	Max WS	346.53	131.25	134.24	134.30	0.001826	2.93	235.36	181.76	0.32
RIVER-1	Reach-1	211.065*	Max WS	346.52	130.32	133.38	133.83	0.011906	5.35	64.81	29.53	0.64
RIVER-1	Reach-1	210.13	Max WS	346.50	129.39	132.92	133.23	0.001050	4.46	77.62	39.19	0.42
RIVER-1	Reach-1	209.23		Culvert								
RIVER-1	Reach-1	208.43	Max WS	346.50	128.67	132.73	132.90	0.000497	3.37	102.82	64.65	0.29
RIVER-1	Reach-1	205.91	Max WS	346.50	129.85	132.44	132.79	0.002561	4.71	73.53	36.71	0.59
RIVER-1	Reach-1	205.49	Max WS	346.47	129.75	132.34	132.68	0.002570	4.71	73.59	36.90	0.59
RIVER-1	Reach-1	204.965*	Max WS	346.47	129.62	132.20	132.55	0.002562	4.69	73.84	37.15	0.59
RIVER-1	Reach-1	204.44	Max WS	346.46	129.49	132.07	132.41	0.002549	4.67	74.15	37.41	0.58
RIVER-1	Reach-1	203.626*	Max WS	346.46	129.29	131.87	132.21	0.002547	4.66	74.37	37.69	0.58
RIVER-1	Reach-1	202.813*	Max WS	346.43	129.08	131.67	132.00	0.002470	4.60	75.38	38.12	0.58
RIVER-1	Reach-1	202	Max WS	346.42	128.88	131.48	131.81	0.002414	4.55	76.21	38.52	0.57
RIVER-1	Reach-1	201.36	Max WS	346.42	128.72	131.33	131.65	0.002430	4.57	75.76	38.13	0.57
RIVER-1	Reach-1	200.405*	Max WS	346.41	128.48	131.10	131.42	0.002388	4.55	76.14	38.10	0.57
RIVER-1	Reach-1	199.451*	Max WS	346.41	128.24	130.88	131.20	0.002317	4.51	76.88	38.15	0.56
RIVER-1	Reach-1	198.497*	Max WS	346.37	128.00	130.68	130.98	0.002220	4.44	77.96	38.25	0.55
RIVER-1	Reach-1	197.542*	Max WS	346.30	127.76	130.48	130.78	0.002083	4.35	79.64	38.46	0.53
RIVER-1	Reach-1	196.588*	Max WS	346.09	127.52	130.31	130.59	0.001903	4.22	82.09	38.78	0.51
RIVER-1	Reach-1	195.634*	Max WS	345.58	127.28	130.17	130.42	0.001685	4.04	85.54	39.30	0.48
RIVER-1	Reach-1	194.68*	Max WS	343.88	127.04	130.04	130.27	0.001442	3.82	89.97	39.94	0.45
RIVER-1	Reach-1	193.725*	Max WS	275.94	126.81	129.96	130.09	0.000773	2.88	95.94	40.83	0.33
RIVER-1	Reach-1	192.771*	Max WS	273.88	126.57	129.92	130.02	0.000610	2.64	103.69	41.98	0.30
RIVER-1	Reach-1	191.817*	Max WS	271.95	126.33	129.88	129.97	0.000482	2.43	112.08	43.15	0.27
RIVER-1	Reach-1	190.862*	Max WS	270.74	126.09	129.85	129.93	0.000384	2.24	121.08	44.39	0.24
RIVER-1	Reach-1	189.908*	Max WS	270.13	125.85	129.83	129.89	0.000309	2.07	130.54	45.63	0.22
RIVER-1	Reach-1	188.954*	Max WS	270.11	125.61	129.81	129.87	0.000251	1.92	140.53	46.91	0.20
RIVER-1	Reach-1	188	Max WS	269.47	125.37	129.80	129.85	0.000205	1.79	150.87	48.17	0.18
RIVER-1	Reach-1	187.7	Max WS	269.47	125.29	129.80	129.84	0.000144	1.61	166.96	46.84	0.15
RIVER-1	Reach-1	187.68		Lat Struct								
RIVER-1	Reach-1	187.65	Max WS	265.35	125.27	129.81	129.84	0.000103	1.42	189.78	52.64	0.13
RIVER-1	Reach-1	187.2	Max WS	504.85	125.15	129.69	129.77	0.000223	2.15	237.04	62.75	0.19
RIVER-1	Reach-1	187.15	Max WS	511.95	125.13	129.69	129.76	0.000243	2.20	233.07	61.87	0.20
RIVER-1	Reach-1	187	Max WS	511.95	125.09	129.70	129.76	0.000194	1.98	258.78	68.42	0.18
RIVER-1	Reach-1	186.81	Max WS	511.80	123.29	129.53	129.77	0.000384	3.94	129.75	71.92	0.28
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	185.39	Max WS	511.40	122.78	129.41	129.60	0.000280	3.51	145.77	48.70	0.24
RIVER-1	Reach-1	184.5	Max WS	511.60	126.00	129.49	129.52	0.000793	1.97	523.74	396.27	0.21
RIVER-1	Reach-1	184	Max WS	511.56	126.00	129.44	129.47	0.000751	2.06	512.31	388.44	0.21
RIVER-1	Reach-1	183.*	Max WS	521.71	126.00	129.29	129.40	0.002741	3.51	267.15	216.59	0.36
RIVER-1	Reach-1	182	Max WS	521.69	126.00	129.19	129.25	0.001828	2.61	303.74	203.90	0.26
RIVER-1	Reach-1	181.*	Max WS	523.11	126.00	128.97	129.04	0.002594	2.89	274.46	215.70	0.31
RIVER-1	Reach-1	180	Max WS	524.39	126.00	128.71	128.78	0.002922	2.80	296.72	300.51	0.32
RIVER-1	Reach-1	179.*	Max WS	568.32	125.00	128.45	128.51	0.002631	2.86	346.59	372.89	0.31
RIVER-1	Reach-1	178	Max WS	569.63	124.00	128.31	128.34	0.000935	1.81	524.53	440.75	0.18
RIVER-1	Reach-1	177.*	Max WS	571.91	124.00	128.13	128.16	0.001520	2.35	450.48	451.29	0.24
RIVER-1	Reach-1	176	Max WS	574.21	124.00	127.76	127.83	0.003315	3.29	345.93	447.34	0.34
RIVER-1	Reach-1	175.*	Max WS	582.46	123.50	127.49	127.59	0.004114	3.66	320.95	460.19	0.38

RIVER-1	Reach-1	174	Max WS	582.21	123.00	127.25	127.34	0.003300	3.30	369.56	567.41	0.34
RIVER-1	Reach-1	173.*	Max WS	581.95	123.50	127.14	127.18	0.001815	2.36	499.03	644.87	0.25
RIVER-1	Reach-1	172	Max WS	581.90	124.00	127.10	127.11	0.000562	1.27	783.88	748.13	0.14
RIVER-1	Reach-1	171.*	Max WS	582.77	124.00	127.02	127.03	0.000863	1.54	699.14	785.78	0.17
RIVER-1	Reach-1	170	Max WS	583.36	124.00	126.89	126.90	0.001319	1.84	583.85	689.52	0.21
RIVER-1	Reach-1	169.*	Max WS	583.45	123.50	126.79	126.82	0.002209	2.53	511.73	795.90	0.28
RIVER-1	Reach-1	168	Max WS	583.85	123.00	126.67	126.71	0.001941	2.46	479.91	606.53	0.26
RIVER-1	Reach-1	167.*	Max WS	584.41	122.50	126.56	126.59	0.001502	2.34	541.45	693.19	0.24
RIVER-1	Reach-1	166	Max WS	584.99	122.00	126.49	126.51	0.000974	1.99	671.20	851.81	0.19
RIVER-1	Reach-1	165.*	Max WS	585.97	121.00	126.20	126.24	0.001943	2.75	563.47	991.92	0.26
RIVER-1	Reach-1	164	Max WS	587.65	120.00	125.90	125.92	0.001505	2.20	575.02	762.24	0.22
RIVER-1	Reach-1	163.*	Max WS	588.52	120.00	125.74	125.79	0.002210	2.96	500.61	830.53	0.27
RIVER-1	Reach-1	162	Max WS	589.28	120.00	125.39	125.60	0.005575	4.86	306.96	736.66	0.44
RIVER-1	Reach-1	161.*	Max WS	588.78	120.25	125.08	125.18	0.002885	3.37	391.21	688.60	0.33
RIVER-1	Reach-1	160	Max WS	589.10	120.50	124.94	124.96	0.001053	1.95	588.61	716.39	0.20
RIVER-1	Reach-1	159.*	Max WS	589.50	120.25	124.84	124.87	0.000976	1.85	593.91	739.53	0.19
RIVER-1	Reach-1	158	Max WS	590.00	120.00	124.75	124.78	0.000864	1.69	621.25	769.25	0.18
RIVER-1	Reach-1	157.*	Max WS	590.48	119.50	124.67	124.71	0.001276	2.21	537.89	776.24	0.22
RIVER-1	Reach-1	156	Max WS	590.80	119.00	124.48	124.61	0.003583	3.85	367.90	748.79	0.36
RIVER-1	Reach-1	155.*	Max WS	591.29	119.00	124.20	124.27	0.002509	3.23	453.66	787.51	0.30
RIVER-1	Reach-1	154	Max WS	612.64	119.00	124.02	124.04	0.001212	2.20	631.61	799.53	0.20
RIVER-1	Reach-1	153.*	Max WS	630.11	119.00	123.92	123.95	0.001180	2.22	661.29	888.75	0.21
RIVER-1	Reach-1	152	Max WS	630.77	119.00	123.83	123.86	0.001042	2.01	696.38	922.88	0.20
RIVER-1	Reach-1	151.*	Max WS	644.25	119.00	123.70	123.72	0.001396	2.09	646.92	929.90	0.22
RIVER-1	Reach-1	150	Max WS	643.93	119.00	123.43	123.48	0.003149	2.60	490.08	866.19	0.32
RIVER-1	Reach-1	149.*	Max WS	648.47	118.50	123.15	123.21	0.002498	2.78	498.01	812.33	0.30
RIVER-1	Reach-1	148	Max WS	653.04	118.00	122.96	123.00	0.001733	2.58	555.13	785.00	0.25
RIVER-1	Reach-1	147.*	Max WS	656.53	117.92	122.81	122.85	0.002106	2.55	579.30	997.71	0.27
RIVER-1	Reach-1	146	Max WS	659.85	117.83	122.60	122.65	0.003118	2.66	541.61	1061.44	0.32
RIVER-1	Reach-1	145.*	Max WS	662.82	117.92	122.39	122.43	0.002100	2.07	549.81	1060.27	0.26
RIVER-1	Reach-1	144	Max WS	665.50	118.00	122.20	122.24	0.002833	1.86	518.86	1124.41	0.29
RIVER-1	Reach-1	143.*	Max WS	668.80	117.50	122.04	122.07	0.001065	1.73	674.93	1006.32	0.20
RIVER-1	Reach-1	142	Max WS	672.29	117.00	121.95	121.97	0.001107	2.16	739.42	958.57	0.20
RIVER-1	Reach-1	141.*	Max WS	675.57	117.00	121.82	121.85	0.001646	2.60	656.41	999.33	0.24
RIVER-1	Reach-1	140	Max WS	678.40	117.00	121.64	121.69	0.002185	2.93	607.70	1061.33	0.27
RIVER-1	Reach-1	139.*	Max WS	680.36	117.50	121.52	121.55	0.001516	2.30	678.18	1000.95	0.24
RIVER-1	Reach-1	138	Max WS	682.57	118.00	121.45	121.46	0.000801	1.59	832.49	971.21	0.17
RIVER-1	Reach-1	137.*	Max WS	685.28	118.00	121.36	121.38	0.001049	1.72	761.92	999.65	0.20
RIVER-1	Reach-1	136	Max WS	687.69	118.00	121.25	121.28	0.001682	1.98	662.92	1112.34	0.24
RIVER-1	Reach-1	135.*	Max WS	690.40	117.50	121.15	121.17	0.001232	1.61	696.84	966.27	0.20
RIVER-1	Reach-1	134	Max WS	693.38	117.00	121.07	121.08	0.000881	1.30	777.25	907.32	0.17
RIVER-1	Reach-1	133.*	Max WS	696.99	117.00	120.97	120.99	0.001106	1.43	667.16	778.24	0.19
RIVER-1	Reach-1	132	Max WS	700.63	117.00	120.86	120.88	0.001023	1.36	634.81	632.01	0.18
RIVER-1	Reach-1	131.*	Max WS	702.50	117.00	120.76	120.79	0.001356	1.48	623.09	835.60	0.21
RIVER-1	Reach-1	130	Max WS	704.45	117.00	120.67	120.69	0.001251	1.36	676.74	813.86	0.20
RIVER-1	Reach-1	129.*	Max WS	705.42	117.00	120.57	120.60	0.001797	1.58	601.25	836.26	0.23
RIVER-1	Reach-1	128	Max WS	706.39	117.00	120.32	120.40	0.005330	2.44	395.97	862.49	0.39
RIVER-1	Reach-1	127.*	Max WS	706.24	116.71	120.11	120.16	0.002811	2.26	481.85	706.14	0.30
RIVER-1	Reach-1	126	Max WS	706.23	116.42	120.05	120.07	0.001401	2.03	674.91	784.78	0.22
RIVER-1	Reach-1	125.*	Max WS	706.22	116.21	120.02	120.04	0.001280	1.78	703.56	831.02	0.21
RIVER-1	Reach-1	124	Max WS	706.21	116.00	120.00	120.02	0.000935	1.40	786.75	851.80	0.18
RIVER-1	Reach-1	123.*	Max WS	706.17	116.18	119.94	119.96	0.001115	1.64	750.35	895.25	0.20
RIVER-1	Reach-1	122	Max WS	706.03	116.35	119.88	119.90	0.001067	1.62	789.95	979.65	0.19
RIVER-1	Reach-1	121.*	Max WS	775.05	115.68	119.72	119.75	0.001918	2.11	595.11	643.71	0.26
RIVER-1	Reach-1	120	Max WS	774.84	115.00	119.58	119.61	0.001193	2.11	669.99	634.79	0.21
RIVER-1	Reach-1	119.*	Max WS	774.51	114.50	119.44	119.50	0.001834	2.88	573.31	600.44	0.29
RIVER-1	Reach-1	118	Max WS	765.52	114.00	119.13	119.35	0.004317	4.80	382.27	552.65	0.50
RIVER-1	Reach-1	117.*	Max WS	756.62	114.50	119.04	119.15	0.001897	2.91	434.22	525.78	0.33
RIVER-1	Reach-1	116	Max WS	721.27	115.00	118.94	119.01	0.001934	2.34	425.43	403.11	0.31
RIVER-1	Reach-1	115.*	Max WS	656.91	114.50	118.84	118.88	0.001297	1.71	466.57	456.45	0.25
RIVER-1	Reach-1	114	Max WS	584.90	114.00	118.77	118.79	0.000674	1.18	558.23	510.00	0.18
RIVER-1	Reach-2	112.05	Max WS	1321.05	112.00	118.77	118.88	0.001560	2.73	666.97	578.23	0.30
RIVER-1	Reach-2	112	Max WS	1321.05	112.00	118.77	118.87	0.001582	2.74	662.06	576.03	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1315.29	113.00	118.66	118.75	0.001827	2.56	658.69	566.59	0.31
RIVER-1	Reach-2	110	Max WS	1264.86	114.00	118.59	118.64	0.001363	2.04	854.70	679.35	0.27
RIVER-1	Reach-2	109.*	Max WS	1240.14	113.50	118.41	118.47	0.002306	2.67	736.41	610.21	0.35
RIVER-1	Reach-2	108	Max WS	1237.17	113.00	118.22	118.31	0.001419	3.20	810.82	600.17	0.30
RIVER-1	Reach-2	107.*	Max WS	1237.09	112.00	118.18	118.24	0.000970	2.60	983.26	692.48	0.25

RIVER-1	Reach-2	106	Max WS	1237.37	111.00	118.16		118.20	0.000614	2.39	1179.18	763.75	0.20
RIVER-1	Reach-2	105.*	Max WS	1237.73	110.50	118.11		118.15	0.000755	2.41	1148.88	776.23	0.21
RIVER-1	Reach-2	104	Max WS	1238.08	110.00	118.07		118.11	0.000731	2.77	1148.68	783.90	0.21
RIVER-1	Reach-2	103.*	Max WS	1237.95	110.00	118.06		118.09	0.000743	2.14	1238.54	879.74	0.21
RIVER-1	Reach-2	102	Max WS	1048.84	110.00	118.05		118.07	0.000258	1.71	1503.90	854.52	0.13
RIVER-1	Reach-2	101.*	Max WS	1307.85	110.50	118.02		118.05	0.000415	2.13	1491.38	839.73	0.17
RIVER-1	Reach-2	100	Max WS	1308.67	111.00	117.99		118.02	0.000429	2.13	1481.23	829.43	0.17
RIVER-1	Reach-2	99.*	Max WS	1311.27	111.00	117.92		117.94	0.000417	2.13	1482.50	828.52	0.17
RIVER-1	Reach-2	98	Max WS	1313.88	111.00	117.84		117.87	0.000406	2.13	1486.59	831.08	0.17
RIVER-1	Reach-2	97.*	Max WS	1315.74	110.50	117.80		117.83	0.000398	2.12	1480.04	811.30	0.17
RIVER-1	Reach-2	96	Max WS	1317.18	110.00	117.76		117.78	0.000394	2.11	1472.70	791.28	0.16
RIVER-1	Reach-2	95.*	Max WS	1318.42	109.50	117.72		117.75	0.000403	2.16	1446.62	796.24	0.17
RIVER-1	Reach-2	94	Max WS	1320.06	109.00	117.67		117.71	0.000412	2.21	1419.53	799.61	0.17
RIVER-1	Reach-2	93.*	Max WS	1321.70	109.00	117.63		117.67	0.000392	2.19	1367.53	718.18	0.16
RIVER-1	Reach-2	92	Max WS	1323.34	109.00	117.59		117.63	0.000389	2.27	1262.43	607.84	0.17
RIVER-1	Reach-2	91.*	Max WS	1325.04	108.50	117.56		117.60	0.000364	2.18	1302.77	778.46	0.16
RIVER-1	Reach-2	90	Max WS	1326.73	108.00	117.53		117.56	0.000309	2.01	1578.46	1197.06	0.15
RIVER-1	Reach-2	89.*	Max WS	1328.66	108.50	117.50		117.53	0.000303	2.05	1520.44	1177.49	0.15
RIVER-1	Reach-2	88	Max WS	1330.39	109.00	117.47		117.50	0.000292	2.05	1489.63	957.39	0.14
RIVER-1	Reach-2	87.*	Max WS	1331.83	108.00	117.46		117.48	0.000150	1.61	1995.23	1246.30	0.11
RIVER-1	Reach-2	86	Max WS	1333.28	107.00	117.45		117.47	0.000076	1.24	2602.76	1335.92	0.08
RIVER-1	Reach-2	85.*	Max WS	1334.00	107.50	117.45		117.46	0.000078	1.15	2785.70	1381.94	0.08
RIVER-1	Reach-2	84	Max WS	1334.71	108.00	117.45		117.46	0.000072	0.99	3074.72	1430.68	0.07
RIVER-1	Reach-2	83.*	Max WS	1354.32	108.50	117.44		117.45	0.000106	1.19	2647.63	1335.79	0.09
RIVER-1	Reach-2	82	Max WS	1354.27	109.00	117.43		117.44	0.000150	1.35	2341.66	1262.91	0.10
RIVER-1	Reach-2	81.56	Max WS	1354.26	108.22	117.34	113.29	117.45	0.000940	2.74	779.50	1356.75	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1354.26	108.96	116.09		116.55	0.006675	5.46	248.00	71.36	0.52
RIVER-1	Reach-2	80.95	Max WS	1354.26	108.83	116.13	113.10	116.41	0.001612	4.20	322.27	64.82	0.33
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1354.26	108.67	116.06		116.35	0.001775	4.31	314.14	66.32	0.35
RIVER-1	Reach-2	79.3849*	Max WS	1354.23	108.33	115.98		116.16	0.001249	3.81	700.60	617.95	0.30
RIVER-1	Reach-2	78.39	Max WS	1354.09	108.00	115.91		115.99	0.000628	2.98	854.64	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1354.07	107.80	115.91		115.94	0.000272	1.95	1450.96	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1354.06	107.60	115.89		115.92	0.000311	2.07	1558.92	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1353.83	107.40	115.84		115.91	0.000569	2.77	1241.22	952.61	0.20
RIVER-1	Reach-2	75.86	Max WS	1352.69	107.22	115.65	112.37	115.88	0.001214	4.05	545.90	444.27	0.30
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1353.57	106.63	115.66		115.86	0.001309	3.78	537.30	412.73	0.30
RIVER-1	Reach-2	74.7*	Max WS	1353.54	106.82	115.69		115.74	0.000472	2.09	1235.45	836.57	0.18
RIVER-1	Reach-2	74	Max WS	1353.48	107.00	115.68		115.70	0.000228	1.28	2057.73	1262.65	0.12
RIVER-1	Reach-2	73.*	Max WS	1353.42	107.43	115.67		115.68	0.000158	1.21	2380.62	1324.22	0.10
RIVER-1	Reach-2	72	Max WS	1353.39	107.86	115.66		115.67	0.000122	1.18	2690.07	1385.54	0.09
RIVER-1	Reach-2	71.*	Max WS	1631.87	107.44	115.54		115.67	0.000990	3.10	764.56	465.04	0.24
RIVER-1	Reach-2	70	Max WS	1631.85	107.03	115.43		115.56	0.000985	2.92	561.52	102.76	0.22
RIVER-1	Reach-2	69.*	Max WS	1631.82	107.35	115.28		115.45	0.001325	3.24	503.28	94.76	0.25
RIVER-1	Reach-2	68	Max WS	1631.82	107.68	115.10		115.30	0.001708	3.58	455.75	89.55	0.28
RIVER-1	Reach-2	67	Max WS	1631.81	107.40	114.90		115.12	0.002120	3.97	470.02	135.37	0.31
RIVER-1	Reach-2	66	Max WS	1631.80	107.40	114.63		114.89	0.002610	4.29	434.13	133.51	0.34
RIVER-1	Reach-2	65.*	Max WS	1631.78	107.20	114.44		114.66	0.001903	3.81	480.00	174.03	0.32
RIVER-1	Reach-2	64	Max WS	1631.78	107.00	114.28		114.48	0.001626	3.61	467.08	186.84	0.33
RIVER-1	Reach-2	63.*	Max WS	1634.24	106.81	114.12		114.32	0.001731	3.55	478.56	226.58	0.33
RIVER-1	Reach-2	62.*	Max WS	1636.71	106.62	113.96		114.15	0.001770	3.46	495.50	196.97	0.33
RIVER-1	Reach-2	61.*	Max WS	1639.19	106.43	113.82		113.99	0.001559	3.30	529.97	208.23	0.31
RIVER-1	Reach-2	60	Max WS	1641.62	106.24	113.72		113.85	0.001223	2.99	598.34	228.71	0.28
RIVER-1	Reach-2	59.*	Max WS	1645.99	106.07	113.61		113.74	0.001041	2.98	671.47	356.87	0.26
RIVER-1	Reach-2	58	Max WS	1650.38	105.90	113.57		113.66	0.000550	2.60	1005.10	472.54	0.20
RIVER-1	Reach-2	57.2	Max WS	1653.90	107.05	113.47	110.94	113.61	0.001135	3.38	795.97	416.02	0.28
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1655.24	107.05	113.40		113.56	0.001349	3.61	735.40	397.95	0.30
RIVER-1	Reach-2	56	Max WS	1659.19	105.90	113.34		113.45	0.000708	2.78	828.71	382.46	0.22
RIVER-1	Reach-2	55.*	Max WS	1662.85	105.85	113.31		113.38	0.000587	2.35	980.06	470.82	0.20
RIVER-1	Reach-2	54	Max WS	1666.47	105.80	113.27		113.33	0.000523	2.09	1111.12	559.03	0.19
RIVER-1	Reach-2	53.*	Max WS	1676.10	105.70	113.19		113.25	0.000561	2.19	1047.83	395.19	0.18
RIVER-1	Reach-2	52	Max WS	1685.68	105.60	113.09		113.14	0.000695	2.22	985.39	323.20	0.18
RIVER-1	Reach-2	51.*	Max WS	1690.40	105.57	113.00		113.07	0.000830	2.50	930.23	311.99	0.20
RIVER-1	Reach-2	50.*	Max WS	1695.15	105.54	112.90		112.98	0.000945	2.75	883.68	300.83	0.23
RIVER-1	Reach-2	49.*	Max WS	1699.89	105.50	112.79		112.88	0.001014	3.01	847.47	290.45	0.25
RIVER-1	Reach-2	48	Max WS	1704.52	105.47	112.68		112.79	0.000996	3.31	821.79	281.00	0.26

RIVER-1	Reach-2	47.*	Max WS	1709.17	105.68	112.59		112.68	0.000951	3.12	894.27	316.29	0.26
RIVER-1	Reach-2	46.*	Max WS	1713.90	105.88	112.51		112.59	0.000830	2.88	988.64	351.24	0.24
RIVER-1	Reach-2	45.*	Max WS	1718.61	106.08	112.45		112.51	0.000662	2.60	1109.54	384.78	0.21
RIVER-1	Reach-2	44	Max WS	1723.23	106.29	112.40		112.44	0.000490	2.35	1259.81	425.50	0.19
RIVER-1	Reach-2	43.*	Max WS	1727.52	106.30	112.34		112.40	0.000517	2.45	1204.55	420.56	0.19
RIVER-1	Reach-2	42.*	Max WS	1731.89	106.31	112.29		112.35	0.000546	2.53	1156.55	415.80	0.20
RIVER-1	Reach-2	41.*	Max WS	1736.16	106.32	112.23		112.29	0.000575	2.59	1115.09	410.92	0.20
RIVER-1	Reach-2	40	Max WS	1740.52	106.33	112.17		112.24	0.000603	2.64	1080.95	406.19	0.21
RIVER-1	Reach-2	39.*	Max WS	1740.43	106.17	112.12		112.18	0.000492	2.40	1212.07	441.70	0.19
RIVER-1	Reach-2	38.*	Max WS	1740.42	106.01	112.09		112.13	0.000372	2.11	1394.58	478.00	0.16
RIVER-1	Reach-2	37.*	Max WS	1740.46	105.84	112.07		112.10	0.000263	1.79	1621.43	504.06	0.14
RIVER-1	Reach-2	36	Max WS	1740.43	105.68	112.03		112.07	0.000339	2.04	1475.85	517.25	0.16
RIVER-1	Reach-2	35.22	Max WS	1740.41	104.52	111.74		112.10	0.002046	4.80	362.62	72.86	0.38
RIVER-1	Reach-2	34.82	Max WS	1740.40	104.52	111.64	108.80	112.01	0.002164	4.90	355.48	72.30	0.39
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1740.32	104.30	111.00		111.72	0.006141	6.84	254.58	68.50	0.62
RIVER-1	Reach-2	33.67*	Max WS	1740.27	104.12	110.95		111.40	0.003367	5.40	322.15	79.24	0.47
RIVER-1	Reach-2	33	Max WS	1740.31	103.93	111.05		111.20	0.001077	3.41	829.98	594.15	0.27
RIVER-1	Reach-2	32.*	Max WS	1740.26	103.40	110.94		111.07	0.001071	3.13	868.73	675.22	0.27
RIVER-1	Reach-2	31.*	Max WS	1740.21	102.88	110.79		110.93	0.001484	3.20	821.60	747.79	0.31
RIVER-1	Reach-2	30	Max WS	1740.17	102.35	110.46		110.69	0.003775	4.01	646.70	1069.06	0.46
RIVER-1	Reach-2	29.*	Max WS	1740.15	102.34	110.10		110.34	0.003955	4.27	645.79	957.36	0.47
RIVER-1	Reach-2	28.*	Max WS	1740.02	102.33	109.78		110.00	0.003579	4.27	728.40	907.07	0.46
RIVER-1	Reach-2	27.*	Max WS	1739.97	102.33	109.56		109.70	0.002608	3.88	927.87	972.29	0.40
RIVER-1	Reach-2	26	Max WS	1739.92	102.32	109.42		109.49	0.001575	3.21	1245.52	1071.17	0.31
RIVER-1	Reach-2	25.*	Max WS	1739.82	101.99	109.27		109.36	0.002106	3.54	1157.87	1158.96	0.35
RIVER-1	Reach-2	24.*	Max WS	1739.72	101.66	109.08		109.20	0.002761	3.82	1053.94	1238.95	0.40
RIVER-1	Reach-2	23.*	Max WS	1739.61	101.33	108.90		108.99	0.002399	3.36	1112.59	1079.44	0.36
RIVER-1	Reach-2	22	Max WS	1739.54	101.00	108.76		108.81	0.001855	2.80	1262.49	1126.38	0.31
RIVER-1	Reach-2	21.*	Max WS	1739.38	101.27	108.60		108.65	0.001970	2.91	1225.79	1115.65	0.33
RIVER-1	Reach-2	20.*	Max WS	1739.31	101.54	108.43		108.49	0.002130	3.05	1187.06	1076.28	0.34
RIVER-1	Reach-2	19.*	Max WS	1739.20	101.82	108.23		108.30	0.002410	3.22	1149.38	1029.07	0.36
RIVER-1	Reach-2	18	Max WS	1739.01	102.09	108.04		108.11	0.002929	3.53	1124.18	1089.70	0.39
RIVER-1	Reach-2	17.*	Max WS	1738.69	101.97	107.85		107.90	0.002278	3.07	1286.58	1231.77	0.35
RIVER-1	Reach-2	16.*	Max WS	1738.38	101.85	107.70		107.73	0.001439	2.51	1501.74	1236.55	0.28
RIVER-1	Reach-2	15.*	Max WS	1738.05	101.73	107.62		107.63	0.000841	1.95	1790.94	1240.48	0.21
RIVER-1	Reach-2	14	Max WS	1737.82	101.61	107.56		107.58	0.000501	1.45	2122.02	1247.30	0.16
RIVER-1	Reach-2	13.*	Max WS	1737.80	101.43	107.53		107.54	0.000411	1.25	2262.92	1253.80	0.15
RIVER-1	Reach-2	12.*	Max WS	1737.69	101.26	107.50		107.51	0.000331	1.21	2406.88	1245.53	0.13
RIVER-1	Reach-2	11.*	Max WS	1737.60	101.08	107.48		107.49	0.000268	1.16	2558.33	1235.22	0.12
RIVER-1	Reach-2	10	Max WS	1737.58	100.90	107.46		107.47	0.000222	1.09	2702.28	1220.60	0.11
RIVER-1	Reach-2	9.*	Max WS	1737.56	100.75	107.43		107.44	0.000374	1.42	2272.35	1201.70	0.15
RIVER-1	Reach-2	8.*	Max WS	1737.42	100.60	107.38		107.40	0.000571	1.88	1897.59	1283.14	0.18
RIVER-1	Reach-2	7.*	Max WS	1737.40	100.45	107.30		107.34	0.000892	2.50	1615.38	1268.78	0.23
RIVER-1	Reach-2	6	Max WS	1737.35	100.30	107.17		107.25	0.001663	3.55	1340.75	1357.51	0.32
RIVER-1	Reach-2	5.*	Max WS	1737.22	100.15	107.01		107.09	0.001599	3.55	1381.13	1481.12	0.32
RIVER-1	Reach-2	4.*	Max WS	1737.12	100.00	106.87		106.95	0.001478	3.46	1457.62	1607.35	0.31
RIVER-1	Reach-2	3.*	Max WS	1736.98	99.85	106.75		106.82	0.001379	3.39	1692.16	2177.22	0.30
RIVER-1	Reach-2	2	Max WS	1736.92	99.70	106.67		106.70	0.000815	2.64	2106.31	2293.52	0.23
RIVER-1	Reach-2	1.*	Max WS	1736.84	99.55	106.56		106.63	0.001292	3.39	1705.45	2258.04	0.29
RIVER-1	Reach-2	0	Max WS	1736.85	99.40	106.41	105.86	106.53	0.001699	3.94	1340.01	1990.50	0.33

Appendix P-7: HEC-RAS Results, Anatolia III – Alternative 'A' Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 12:01:45 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	319.02	158.00	162.26		162.26	0.000028	0.30	1053.95	296.98	0.03
RIVER-2	Reach-1	11850.*	Max WS	318.10	157.71	162.26		162.26	0.000028	0.30	1071.62	314.59	0.03
RIVER-2	Reach-1	11800	Max WS	317.18	157.42	162.26		162.26	0.000011	0.20	1567.27	412.19	0.02
RIVER-2	Reach-1	11750.*	Max WS	316.27	156.96	162.26		162.26	0.000012	0.21	1530.12	400.13	0.02
RIVER-2	Reach-1	11700	Max WS	317.16	156.50	162.26		162.26	0.000010	0.20	1562.08	376.83	0.02
RIVER-2	Reach-1	11650.*	Max WS	315.39	156.25	162.26		162.26	0.000011	0.21	1476.20	351.23	0.02
RIVER-2	Reach-1	11600	Max WS	315.39	156.00	162.26		162.26	0.000011	0.22	1426.17	331.19	0.02
RIVER-2	Reach-1	11550.*	Max WS	315.38	155.05	162.26		162.26	0.000011	0.22	1440.70	337.28	0.02
RIVER-2	Reach-1	11500	Max WS	315.37	154.11	162.26		162.26	0.000011	0.22	1450.46	338.65	0.02
RIVER-2	Reach-1	11450.*	Max WS	314.51	154.05	162.26		162.26	0.000010	0.20	1541.01	374.30	0.02
RIVER-2	Reach-1	11400	Max WS	315.35	154.00	162.26		162.26	0.000009	0.19	1642.67	403.12	0.02
RIVER-2	Reach-1	11350.*	Max WS	315.35	154.00	162.26		162.26	0.000008	0.18	1720.82	407.18	0.02
RIVER-2	Reach-1	11300	Max WS	314.50	154.00	162.26		162.26	0.000007	0.17	1889.63	455.23	0.01
RIVER-2	Reach-1	11250.*	Max WS	314.50	154.00	162.26		162.26	0.000005	0.15	2068.50	462.11	0.01
RIVER-2	Reach-1	11200	Max WS	314.49	154.00	162.25		162.26	0.000004	0.14	2260.05	478.49	0.01
RIVER-2	Reach-1	11150.*	Max WS	315.27	153.00	162.25		162.25	0.000003	0.13	2475.19	498.27	0.01
RIVER-2	Reach-1	11100	Max WS	314.47	152.00	162.25		162.25	0.000003	0.12	2688.48	533.88	0.01
RIVER-2	Reach-1	11050.*	Max WS	314.46	152.00	162.25		162.25	0.000002	0.11	2893.23	545.86	0.01
RIVER-2	Reach-1	11000	Max WS	313.67	152.00	162.25		162.25	0.000002	0.10	3156.66	574.08	0.01
RIVER-2	Reach-1	10887.5*	Max WS	313.66	152.00	162.25		162.25	0.000001	0.09	3544.63	584.15	0.01
RIVER-2	Reach-1	10775.*	Max WS	314.39	152.00	162.25		162.25	0.000001	0.08	4062.98	603.40	0.01
RIVER-2	Reach-1	10662.5*	Max WS	314.37	152.00	162.25		162.25	0.000001	0.07	4656.72	639.10	0.00
RIVER-2	Reach-1	10550	Max WS	314.34	152.00	162.25		162.25	0.000000	0.06	5300.80	681.71	0.00
RIVER-2	Reach-1	10490.*	Max WS	314.30	151.60	162.25		162.25	0.000000	0.05	5881.47	785.23	0.00
RIVER-2	Reach-1	10430.*	Max WS	314.28	151.20	162.25		162.25	0.000000	0.05	6425.27	882.60	0.00
RIVER-2	Reach-1	10370.*	Max WS	314.25	150.80	162.25		162.25	0.000000	0.05	6934.94	981.91	0.00
RIVER-2	Reach-1	10310.*	Max WS	314.21	150.40	162.25		162.25	0.000000	0.04	7425.21	1052.67	0.00
RIVER-2	Reach-1	10250	Max WS	314.79	150.00	162.25		162.25	0.000000	0.04	7920.65	1129.89	0.00
RIVER-2	Reach-1	10200.*	Max WS	313.64	150.00	162.25		162.25	0.000000	0.04	7404.53	965.93	0.00
RIVER-2	Reach-1	10150	Max WS	314.17	150.00	162.25		162.25	0.000000	0.05	6907.02	856.56	0.00
RIVER-2	Reach-1	10100.*	Max WS	314.15	150.00	162.25		162.25	0.000000	0.05	6583.04	847.82	0.00
RIVER-2	Reach-1	10050	Max WS	313.63	150.00	162.25		162.25	0.000000	0.05	6356.18	775.23	0.00
RIVER-2	Reach-1	10000.*	Max WS	314.11	150.00	162.25		162.25	0.000000	0.05	6613.16	795.07	0.00
RIVER-2	Reach-1	9950	Max WS	314.09	150.00	162.25		162.25	0.000000	0.05	6884.85	815.03	0.00

RIVER-2	Reach-1	9900.*	Max WS	314.07	150.00	162.25		162.25	0.000000	0.04	7538.18	1039.59	0.00
RIVER-2	Reach-1	9850	Max WS	313.61	150.00	162.25		162.25	0.000000	0.04	8149.41	1201.12	0.00
RIVER-2	Reach-1	9800.*	Max WS	314.44	150.00	162.25		162.25	0.000000	0.04	7946.07	1391.53	0.00
RIVER-2	Reach-1	9750	Max WS	313.59	150.00	162.25		162.25	0.000000	0.04	8242.18	1456.41	0.00
RIVER-2	Reach-1	9675.*	Max WS	314.31	149.36	162.25		162.25	0.000000	0.04	8938.59	1495.74	0.00
RIVER-2	Reach-1	9600	Max WS	313.99	148.73	162.25		162.25	0.000000	0.03	9722.62	1534.90	0.00
RIVER-2	Reach-1	9550.*	Max WS	313.94	148.36	162.25		162.25	0.000000	0.03	11983.13	1678.72	0.00
RIVER-2	Reach-1	9500	Max WS	313.55	148.00	162.25		162.25	0.000000	0.02	14412.61	1729.97	0.00
RIVER-2	Reach-1	9450.*	Max WS	313.85	147.00	162.25		162.25	0.000000	0.02	15411.87	1761.69	0.00
RIVER-2	Reach-1	9400	Max WS	313.80	146.00	162.25		162.25	0.000000	0.02	16748.33	1776.63	0.00
RIVER-2	Reach-1	9350.*	Max WS	313.98	145.51	162.25		162.25	0.000000	0.02	16193.90	1704.95	0.00
RIVER-2	Reach-1	9300	Max WS	313.75	145.02	162.25		162.25	0.000000	0.02	15520.29	1608.95	0.00
RIVER-2	Reach-1	9200.*	Max WS	313.53	144.51	162.25		162.25	0.000000	0.02	14492.15	1432.17	0.00
RIVER-2	Reach-1	9100	Max WS	313.64	144.00	162.25		162.25	0.000000	0.02	13415.52	1249.52	0.00
RIVER-2	Reach-1	9050.*	Max WS	313.50	144.00	162.25		162.25	0.000000	0.02	13005.73	1127.96	0.00
RIVER-2	Reach-1	9000	Max WS	313.59	144.00	162.25		162.25	0.000000	0.02	12674.67	1022.80	0.00
RIVER-2	Reach-1	8900.*	Max WS	313.50	143.08	162.25		162.25	0.000000	0.02	13031.35	995.70	0.00
RIVER-2	Reach-1	8800	Max WS	313.55	142.16	162.25		162.25	0.000000	0.02	13247.20	950.91	0.00
RIVER-2	Reach-1	8700.*	Max WS	313.50	143.70	162.25		162.25	0.000000	0.03	12461.84	980.52	0.00
RIVER-2	Reach-1	8600	Max WS	313.48	145.24	162.25	145.81	162.25	0.000000	0.03	11936.12	988.38	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	313.48	140.56	152.52		152.64	0.003338	2.76	113.40	29.32	0.25
RIVER-2	Reach-1	8350	Max WS	314.81	140.09	152.13		152.26	0.004218	2.91	108.09	28.78	0.26
RIVER-2	Reach-1	8250.*	Max WS	316.14	139.60	151.72		151.85	0.004237	2.92	108.28	29.01	0.27
RIVER-2	Reach-1	8150.*	Max WS	317.48	139.11	151.30		151.43	0.004281	2.93	108.41	29.28	0.27
RIVER-2	Reach-1	8050.*	Max WS	318.82	138.62	150.87		151.01	0.004343	2.94	108.47	29.56	0.27
RIVER-2	Reach-1	7950.*	Max WS	320.15	138.13	150.44		150.57	0.004418	2.95	108.49	29.87	0.27
RIVER-2	Reach-1	7850.*	Max WS	321.50	137.64	149.99		150.13	0.004520	2.96	108.55	30.43	0.28
RIVER-2	Reach-1	7750.*	Max WS	322.85	137.15	149.54		149.67	0.004678	2.98	108.51	31.29	0.28
RIVER-2	Reach-1	7650.*	Max WS	324.19	136.66	149.06		149.20	0.004847	2.99	108.42	32.15	0.29
RIVER-2	Reach-1	7550.*	Max WS	325.53	136.17	148.58		148.72	0.004919	3.00	108.45	32.38	0.29
RIVER-2	Reach-1	7450.*	Max WS	326.89	135.68	148.08		148.23	0.005002	3.02	108.36	32.52	0.29
RIVER-2	Reach-1	7350.*	Max WS	328.23	135.19	147.58		147.73	0.005081	3.03	108.23	32.57	0.29
RIVER-2	Reach-1	7250.*	Max WS	329.58	134.70	147.07		147.22	0.005139	3.05	108.18	32.54	0.29
RIVER-2	Reach-1	7150.*	Max WS	330.94	134.21	146.56		146.71	0.005236	3.07	107.82	32.39	0.30
RIVER-2	Reach-1	7050.*	Max WS	332.29	133.72	146.03		146.18	0.005332	3.09	107.44	32.20	0.30
RIVER-2	Reach-1	6950.*	Max WS	333.65	133.23	145.50		145.65	0.005487	3.13	106.66	31.90	0.30
RIVER-2	Reach-1	6850.*	Max WS	335.00	132.74	144.95		145.10	0.005696	3.17	105.52	31.49	0.31
RIVER-2	Reach-1	6750.*	Max WS	336.36	132.25	144.36		144.53	0.006077	3.25	103.42	30.92	0.31
RIVER-2	Reach-1	6650.*	Max WS	337.73	131.76	143.72		143.90	0.006820	3.39	99.67	30.15	0.33
RIVER-2	Reach-1	6550	Max WS	339.09	131.27	142.90		143.12	0.008997	3.73	90.97	28.76	0.37
RIVER-2	Reach-1	6466.66*	Max WS	340.22	132.84	142.19		142.40	0.008335	3.72	91.40	31.66	0.39
RIVER-2	Reach-1	6383.33*	Max WS	341.36	134.40	141.67		141.83	0.005421	3.27	104.53	37.16	0.34
RIVER-2	Reach-1	6300	Max WS	342.50	135.97	141.33		141.48	0.003198	3.07	111.40	31.77	0.29
RIVER-2	Reach-1	6250	Max WS	343.19	136.00	141.09		141.28	0.004683	3.56	96.31	29.07	0.34
RIVER-2	Reach-1	6200	Max WS	343.87	135.00	140.74		141.01	0.006322	4.16	82.63	23.37	0.39
RIVER-2	Reach-1	6100.*	Max WS	345.24	134.75	140.27		140.46	0.004705	3.55	97.21	29.22	0.34
RIVER-2	Reach-1	6000.*	Max WS	346.63	134.50	139.88		140.03	0.003940	3.16	109.67	35.22	0.32
RIVER-2	Reach-1	5900.*	Max WS	348.00	134.25	139.53		139.66	0.003597	2.91	119.68	41.25	0.30
RIVER-2	Reach-1	5800.*	Max WS	349.38	134.00	139.18		139.30	0.003577	2.77	126.30	47.14	0.30
RIVER-2	Reach-1	5700.*	Max WS	350.76	133.75	138.81		138.93	0.003940	2.74	127.98	52.37	0.31
RIVER-2	Reach-1	5600.*	Max WS	352.13	133.50	138.36		138.49	0.005064	2.90	121.50	55.34	0.34
RIVER-2	Reach-1	5500.*	Max WS	353.51	133.25	137.64		137.84	0.008208	3.59	98.39	46.34	0.43
RIVER-2	Reach-1	5400	Max WS	354.88	133.00	135.90		136.46	0.020685	6.00	59.16	25.45	0.69
RIVER-2	Reach-1	5304.54*	Max WS	356.20	132.73	134.91		135.08	0.007893	3.33	107.01	56.53	0.43
RIVER-2	Reach-1	5209.09*	Max WS	357.52	132.45	134.38		134.47	0.005273	2.47	144.55	88.83	0.34
RIVER-2	Reach-1	5113.63*	Max WS	358.84	132.18	133.96		134.03	0.004341	2.06	173.94	121.64	0.30
RIVER-2	Reach-1	5018.18*	Max WS	360.16	131.91	133.59		133.64	0.004027	1.83	196.37	155.06	0.29
RIVER-2	Reach-1	4922.72*	Max WS	361.48	131.64	133.25		133.30	0.003901	1.69	214.33	187.59	0.28
RIVER-2	Reach-1	4827.27*	Max WS	362.80	131.36	132.94		132.98	0.003829	1.58	229.92	219.47	0.27
RIVER-2	Reach-1	4731.81*	Max WS	364.11	131.09	132.63		132.67	0.003887	1.50	242.82	253.23	0.27
RIVER-2	Reach-1	4636.36*	Max WS	365.43	130.82	132.33		132.37	0.004182	1.45	252.04	292.14	0.28
RIVER-2	Reach-1	4540.90*	Max WS	366.74	130.55	132.03		132.06	0.004553	1.41	260.22	335.61	0.28
RIVER-2	Reach-1	4445.45*	Max WS	368.05	130.27	131.75		131.78	0.004502	1.31	281.33	402.40	0.28
RIVER-2	Reach-1	4350	Max WS	369.36	130.00	131.20		131.26	0.016999	1.91	193.37	424.78	0.50
RIVER-2	Reach-1	4260.*	Max WS	370.50	129.40	130.58		130.63	0.013868	1.81	205.36	423.44	0.46
RIVER-2	Reach-1	4170.*	Max WS	371.63	128.80	130.01		130.06	0.013213	1.80	206.54	410.67	0.45
RIVER-2	Reach-1	4080.*	Max WS	372.76	128.20	129.62		129.66	0.008512	1.55	241.01	432.28	0.37
RIVER-2	Reach-1	3990.*	Max WS	373.88	127.60	129.38		129.40	0.004536	1.24	302.26	472.87	0.27

RIVER-2	Reach-1	3900	Max WS	375.01	127.00	129.16	129.18	0.003511	1.13	331.93	491.10	0.24
RIVER-2	Reach-1	3800.*	Max WS	376.44	126.70	128.88	128.90	0.003855	1.17	321.47	483.44	0.25
RIVER-2	Reach-1	3700.*	Max WS	377.87	126.40	128.60	128.62	0.004351	1.22	308.57	475.20	0.27
RIVER-2	Reach-1	3600.*	Max WS	379.29	126.10	128.32	128.35	0.004837	1.27	297.57	467.22	0.28
RIVER-2	Reach-1	3500.*	Max WS	380.72	125.80	128.05	128.08	0.004585	1.30	292.22	426.47	0.28
RIVER-2	Reach-1	3400.*	Max WS	382.13	125.50	127.78	127.81	0.004426	1.32	289.05	401.92	0.27
RIVER-2	Reach-1	3300.*	Max WS	383.54	125.20	127.51	127.54	0.004262	1.33	287.59	383.65	0.27
RIVER-2	Reach-1	3200.*	Max WS	384.94	124.90	127.25	127.28	0.004111	1.34	287.48	371.01	0.27
RIVER-2	Reach-1	3100.*	Max WS	386.34	124.60	126.99	127.02	0.003935	1.33	290.69	367.12	0.26
RIVER-2	Reach-1	3000.*	Max WS	387.74	124.30	126.74	126.77	0.003670	1.30	298.41	369.92	0.25
RIVER-2	Reach-1	2900	Max WS	389.14	124.00	126.51	126.54	0.003225	1.22	318.13	391.85	0.24
RIVER-2	Reach-1	2812.5*	Max WS	390.30	123.52	126.31	126.33	0.003332	1.17	333.12	448.60	0.24
RIVER-2	Reach-1	2725.*	Max WS	391.47	123.03	126.03	126.05	0.004187	1.21	322.78	489.88	0.26
RIVER-2	Reach-1	2637.5*	Max WS	392.63	122.55	125.70	125.73	0.005814	1.34	292.58	487.95	0.31
RIVER-2	Reach-1	2550.*	Max WS	393.76	122.07	125.42	125.45	0.006225	1.37	287.40	488.91	0.31
RIVER-2	Reach-1	2462.5*	Max WS	394.90	121.58	125.18	125.21	0.004885	1.29	305.71	473.54	0.28
RIVER-2	Reach-1	2375	Max WS	396.05	121.10	124.91	124.94	0.004155	1.28	309.06	428.86	0.27
RIVER-2	Reach-1	2279.16*	Max WS	397.30	121.07	124.61	124.64	0.005007	1.33	299.82	455.24	0.29
RIVER-2	Reach-1	2183.33*	Max WS	398.54	121.03	124.37	124.39	0.004915	1.26	317.01	513.92	0.28
RIVER-2	Reach-1	2087.5*	Max WS	399.79	121.00	124.15	124.17	0.003778	1.15	347.49	528.34	0.25
RIVER-2	Reach-1	1991.66*	Max WS	401.03	120.97	123.88	123.90	0.003629	1.13	354.15	535.02	0.25
RIVER-2	Reach-1	1895.83*	Max WS	402.26	120.93	123.62	123.63	0.003612	1.13	356.06	537.92	0.24
RIVER-2	Reach-1	1800	Max WS	403.50	120.90	123.43	123.44	0.002533	1.01	400.83	551.79	0.21
RIVER-2	Reach-1	1705.*	Max WS	404.72	120.43	123.26	123.28	0.002350	1.01	402.45	524.45	0.20
RIVER-2	Reach-1	1610.*	Max WS	405.94	119.95	123.06	123.08	0.002494	1.05	387.09	495.07	0.21
RIVER-2	Reach-1	1515.*	Max WS	407.15	119.47	122.80	122.82	0.003159	1.15	355.55	476.71	0.23
RIVER-2	Reach-1	1420	Max WS	408.37	119.00	122.51	122.53	0.003828	1.27	326.31	456.59	0.26
RIVER-2	Reach-1	1324.61*	Max WS	408.35	118.62	122.18	122.20	0.003773	1.26	328.92	461.75	0.26
RIVER-2	Reach-1	1229.23*	Max WS	408.33	118.23	121.85	121.87	0.004002	1.27	324.44	464.55	0.26
RIVER-2	Reach-1	1133.84*	Max WS	408.31	117.85	121.55	121.57	0.004061	1.27	325.47	468.50	0.26
RIVER-2	Reach-1	1038.46*	Max WS	408.29	117.46	121.21	121.24	0.004020	1.35	315.06	480.05	0.27
RIVER-2	Reach-1	943.076*	Max WS	408.27	117.08	120.86	120.89	0.004422	1.44	297.14	432.49	0.28
RIVER-2	Reach-1	847.692*	Max WS	408.26	116.69	120.51	120.54	0.004003	1.51	286.10	362.97	0.27
RIVER-2	Reach-1	752.307*	Max WS	408.23	116.31	120.14	120.17	0.004041	1.62	268.60	311.74	0.28
RIVER-2	Reach-1	656.923*	Max WS	408.21	115.92	119.77	119.81	0.004397	1.72	253.64	283.90	0.29
RIVER-2	Reach-1	561.538*	Max WS	408.20	115.54	119.44	119.48	0.004309	1.77	246.46	258.01	0.29
RIVER-2	Reach-1	466.153*	Max WS	408.20	115.15	119.14	119.18	0.003921	1.80	244.15	234.11	0.28
RIVER-2	Reach-1	370.769*	Max WS	408.16	114.77	118.86	118.91	0.003500	1.82	240.77	206.31	0.27
RIVER-2	Reach-1	275.384*	Max WS	407.95	114.38	118.57	118.63	0.003392	1.93	219.93	152.91	0.27
RIVER-2	Reach-1	180	Max WS	325.96	114.00	118.16	118.22	0.003534	2.01	161.82	98.86	0.28
RIVER-1	Reach-1	326	Max WS	79.09	169.00	170.32	170.41	0.005168	2.45	44.03	111.30	0.46
RIVER-1	Reach-1	325.5*	Max WS	78.92	168.75	170.10	170.17	0.004553	2.31	49.30	123.58	0.43
RIVER-1	Reach-1	325.*	Max WS	87.93	168.50	169.84	169.92	0.005493	2.51	52.98	134.01	0.47
RIVER-1	Reach-1	324.5*	Max WS	90.65	168.25	169.56	169.64	0.006354	2.64	53.29	142.36	0.51
RIVER-1	Reach-1	324	Max WS	90.48	168.00	169.26	169.34	0.006258	2.58	60.45	174.81	0.50
RIVER-1	Reach-1	323.*	Max WS	90.84	167.02	168.67	168.82	0.006939	3.18	32.44	62.46	0.55
RIVER-1	Reach-1	322	Max WS	91.00	166.04	167.85	168.07	0.009191	3.74	24.32	22.09	0.63
RIVER-1	Reach-1	320	Max WS	103.60	166.00	167.37	167.43	0.006041	2.83	86.19	242.38	0.50
RIVER-1	Reach-1	319.*	Max WS	103.65	166.00	167.16	167.19	0.002451	1.45	94.24	345.11	0.31
RIVER-1	Reach-1	318	Max WS	103.72	166.00	166.95	166.97	0.003144	1.30	79.77	161.73	0.33
RIVER-1	Reach-1	317.*	Max WS	104.04	165.50	166.69	166.71	0.002548	1.21	86.16	166.69	0.30
RIVER-1	Reach-1	316	Max WS	104.67	165.00	166.17	166.23	0.007160	1.97	53.06	106.68	0.49
RIVER-1	Reach-1	315.*	Max WS	106.48	164.50	165.52	165.58	0.005969	1.83	58.19	114.24	0.45
RIVER-1	Reach-1	314	Max WS	108.37	164.00	165.10	165.14	0.002544	1.63	73.10	221.23	0.32
RIVER-1	Reach-1	313.*	Max WS	109.36	163.50	164.77	164.84	0.004275	2.15	62.12	206.98	0.42
RIVER-1	Reach-1	312	Max WS	110.48	163.00	164.47	164.50	0.003203	1.83	112.73	340.06	0.36
RIVER-1	Reach-1	311.*	Max WS	109.20	162.50	163.92	164.02	0.008927	2.94	60.38	198.33	0.59
RIVER-1	Reach-1	310	Max WS	107.84	162.00	163.47	163.51	0.002277	1.77	105.10	220.62	0.31
RIVER-1	Reach-1	309.*	Max WS	114.30	161.26	162.94	163.07	0.008783	2.97	38.51	48.76	0.59
RIVER-1	Reach-1	308	Max WS	115.43	160.51	162.51	162.53	0.001436	1.44	108.01	156.21	0.25
RIVER-1	Reach-1	307.*	Max WS	116.04	159.76	162.30	162.36	0.002996	2.09	61.89	90.26	0.36
RIVER-1	Reach-1	306	Max WS	116.66	159.00	161.91	162.03	0.006106	2.78	41.96	43.82	0.50
RIVER-1	Reach-1	305.*	Max WS	118.00	159.00	161.39	161.48	0.005232	2.46	47.91	54.24	0.46
RIVER-1	Reach-1	304	Max WS	118.58	159.00	161.07	161.12	0.002916	1.85	72.17	319.41	0.35
RIVER-1	Reach-1	303.*	Max WS	119.50	158.75	160.89	160.93	0.001721	1.79	89.89	156.81	0.28
RIVER-1	Reach-1	302	Max WS	120.52	158.50	160.76	160.80	0.001359	1.97	107.89	147.14	0.26
RIVER-1	Reach-1	301.*	Max WS	121.50	158.25	160.61	160.67	0.001869	2.24	95.70	169.38	0.31
RIVER-1	Reach-1	300	Max WS	122.47	158.00	160.43	160.50	0.002513	2.43	92.75	215.92	0.35
RIVER-1	Reach-1	299.*	Max WS	123.26	158.31	160.22	160.28	0.003026	2.62	88.16	146.72	0.38

RIVER-1	Reach-1	298	Max WS	123.66	158.62	160.04		160.07	0.002518	2.27	107.71	148.27	0.34
RIVER-1	Reach-1	297.*	Max WS	122.79	158.31	159.83		159.86	0.001994	1.91	121.44	215.53	0.30
RIVER-1	Reach-1	296	Max WS	121.87	158.00	159.73		159.74	0.000418	0.89	255.51	380.92	0.14
RIVER-1	Reach-1	295.*	Max WS	120.87	158.01	159.65		159.67	0.001071	1.36	153.62	340.61	0.22
RIVER-1	Reach-1	294	Max WS	125.97	158.01	159.55		159.57	0.000947	1.23	153.90	248.22	0.21
RIVER-1	Reach-1	293.*	Max WS	125.74	157.51	159.48		159.49	0.000587	1.11	170.13	175.07	0.17
RIVER-1	Reach-1	292	Max WS	125.62	157.00	159.42		159.43	0.000504	1.20	165.45	128.03	0.16
RIVER-1	Reach-1	291.5	Max WS	125.61	157.00	159.30		159.38	0.002593	2.60	63.43	50.19	0.36
RIVER-1	Reach-1	290.62	Max WS	125.57	157.00	159.09	158.01	159.17	0.001945	2.29	54.85	32.53	0.31
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	125.57	157.00	158.51		158.69	0.006188	3.39	36.99	29.05	0.53
RIVER-1	Reach-1	288.66*	Max WS	124.94	156.50	158.06		158.25	0.008348	3.56	35.13	32.50	0.60
RIVER-1	Reach-1	288	Max WS	124.21	156.00	157.88		157.88	0.000368	0.89	246.01	293.10	0.13
RIVER-1	Reach-1	287.*	Max WS	123.99	156.00	157.82		157.83	0.000773	1.29	182.98	285.05	0.19
RIVER-1	Reach-1	286	Max WS	123.84	156.00	157.74		157.75	0.001095	1.54	164.37	272.38	0.23
RIVER-1	Reach-1	285.*	Max WS	123.98	155.50	157.52		157.64	0.004120	2.70	45.97	43.63	0.43
RIVER-1	Reach-1	284	Max WS	124.13	155.00	157.23		157.31	0.002581	2.36	52.68	37.33	0.35
RIVER-1	Reach-1	283.*	Max WS	124.42	154.75	156.90		157.02	0.003640	2.74	45.37	33.08	0.41
RIVER-1	Reach-1	282	Max WS	124.69	154.50	156.60		156.72	0.003520	3.11	59.96	81.83	0.42
RIVER-1	Reach-1	281.*	Max WS	125.04	154.25	156.14		156.33	0.005275	3.52	37.66	56.83	0.50
RIVER-1	Reach-1	280	Max WS	125.45	154.00	155.68		155.87	0.005536	3.44	36.42	25.32	0.51
RIVER-1	Reach-1	279.*	Max WS	125.84	153.25	155.32		155.46	0.003611	2.98	42.28	26.76	0.42
RIVER-1	Reach-1	278	Max WS	126.21	152.50	155.04		155.15	0.002509	2.69	46.95	26.74	0.35
RIVER-1	Reach-1	277.*	Max WS	135.99	152.45	154.68		154.82	0.003764	3.00	45.68	33.84	0.43
RIVER-1	Reach-1	276	Max WS	136.27	152.40	154.25		154.42	0.005100	3.34	45.44	63.02	0.49
RIVER-1	Reach-1	275.*	Max WS	136.61	151.90	153.96		154.01	0.003081	1.84	74.45	74.15	0.32
RIVER-1	Reach-1	274	Max WS	136.86	151.40	153.69		153.73	0.002870	1.49	91.64	100.69	0.28
RIVER-1	Reach-1	273.*	Max WS	136.97	151.30	153.44		153.46	0.002587	1.35	101.70	124.63	0.26
RIVER-1	Reach-1	272	Max WS	137.05	151.20	153.28		153.30	0.001070	0.99	151.93	220.07	0.17
RIVER-1	Reach-1	271.*	Max WS	137.14	150.85	153.10		153.13	0.002530	1.37	100.46	114.99	0.26
RIVER-1	Reach-1	270	Max WS	137.24	150.50	152.63		152.71	0.005996	2.39	57.48	54.15	0.41
RIVER-1	Reach-1	269.*	Max WS	137.58	150.12	152.10		152.18	0.004845	2.26	60.85	52.97	0.37
RIVER-1	Reach-1	268	Max WS	137.56	149.75	151.60		151.71	0.004616	2.70	50.87	32.09	0.38
RIVER-1	Reach-1	267.265*	Max WS	137.55	149.43	151.27		151.39	0.004157	2.81	48.99	31.70	0.40
RIVER-1	Reach-1	266.53	Max WS	137.54	149.10	151.01	150.17	151.13	0.003170	2.77	49.59	31.87	0.39
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	137.53	148.65	150.54		150.67	0.003334	2.83	48.53	31.34	0.40
RIVER-1	Reach-1	264.033*	Max WS	137.53	148.24	150.23		150.35	0.004504	2.77	49.60	37.53	0.42
RIVER-1	Reach-1	263.016*	Max WS	137.47	147.84	149.78		149.91	0.007370	2.84	48.43	44.87	0.48
RIVER-1	Reach-1	262	Max WS	137.38	147.43	149.51		149.53	0.002129	1.55	112.17	158.60	0.25
RIVER-1	Reach-1	261.*	Max WS	137.66	146.71	148.87		149.00	0.008491	2.87	48.61	48.70	0.49
RIVER-1	Reach-1	260	Max WS	137.91	146.00	148.29		148.35	0.004219	2.10	82.93	164.02	0.34
RIVER-1	Reach-1	259.*	Max WS	137.95	146.00	147.78		147.89	0.007087	2.60	55.03	67.74	0.44
RIVER-1	Reach-1	258	Max WS	137.99	146.00	147.46		147.50	0.003368	1.80	99.55	171.71	0.31
RIVER-1	Reach-1	257.*	Max WS	138.12	145.50	147.17		147.22	0.003265	2.01	98.67	176.35	0.31
RIVER-1	Reach-1	256	Max WS	138.27	145.00	146.71		146.81	0.006961	3.03	65.82	104.43	0.46
RIVER-1	Reach-1	255.*	Max WS	145.94	144.50	146.18		146.28	0.007260	3.02	64.96	93.81	0.46
RIVER-1	Reach-1	254	Max WS	146.06	144.00	145.63		145.73	0.007440	2.95	63.69	89.97	0.47
RIVER-1	Reach-1	253.*	Max WS	146.18	143.00	144.81		144.98	0.012341	3.69	51.78	94.02	0.60
RIVER-1	Reach-1	252	Max WS	146.23	142.00	144.30		144.36	0.003849	2.35	89.49	146.78	0.34
RIVER-1	Reach-1	251.*	Max WS	146.46	141.75	143.89		143.94	0.003575	2.15	90.92	138.90	0.33
RIVER-1	Reach-1	250	Max WS	146.61	141.50	143.57		143.61	0.002882	1.93	111.58	293.36	0.29
RIVER-1	Reach-1	249.*	Max WS	146.67	141.25	143.32		143.38	0.003645	2.03	91.50	237.82	0.33
RIVER-1	Reach-1	248	Max WS	146.79	141.00	143.01		143.07	0.003508	1.93	76.02	79.72	0.32
RIVER-1	Reach-1	247.*	Max WS	146.85	140.75	142.62		142.69	0.005142	2.29	94.36	268.69	0.38
RIVER-1	Reach-1	246	Max WS	147.01	140.50	142.34		142.36	0.001204	1.25	175.27	268.23	0.19
RIVER-1	Reach-1	245.*	Max WS	147.10	139.75	142.09		142.18	0.004574	2.72	72.82	99.78	0.38
RIVER-1	Reach-1	244	Max WS	147.21	139.00	141.80		141.88	0.004238	2.83	86.98	143.29	0.36
RIVER-1	Reach-1	243.*	Max WS	147.27	139.50	141.59		141.65	0.003171	2.23	94.41	152.42	0.31
RIVER-1	Reach-1	242	Max WS	147.33	140.00	141.39		141.43	0.003469	1.92	106.84	209.83	0.32
RIVER-1	Reach-1	241.*	Max WS	147.45	139.50	141.05		141.10	0.004889	2.22	95.37	190.99	0.37
RIVER-1	Reach-1	240	Max WS	147.58	139.00	140.76		140.79	0.002697	1.88	110.87	149.57	0.28
RIVER-1	Reach-1	239.*	Max WS	147.70	138.50	140.52		140.55	0.002793	1.64	116.08	191.01	0.28
RIVER-1	Reach-1	238	Max WS	147.68	138.00	140.18		140.23	0.004618	1.82	104.52	233.43	0.35
RIVER-1	Reach-1	237.25*	Max WS	128.52	137.62	140.00		140.02	0.001610	1.27	138.62	254.29	0.21
RIVER-1	Reach-1	236.5	Max WS	149.23	137.25	139.30	139.08	139.49	0.017754	3.49	48.11	182.46	0.67
RIVER-1	Reach-1	235.85	Max WS	145.47	136.60	138.75	137.71	138.85	0.002344	2.56	56.92	32.91	0.34
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	142.90	136.10	138.68		138.74	0.001176	2.00	71.42	35.45	0.25

RIVER-1	Reach-1	234.153*	Max WS	141.51	135.73	138.55		138.62	0.001601	2.24	63.12	29.50	0.27
RIVER-1	Reach-1	233.076*	Max WS	127.66	135.37	138.45		138.55	0.002113	2.43	56.22	115.35	0.28
RIVER-1	Reach-1	232	Max WS	147.63	135.00	138.07	137.17	138.36	0.008928	4.37	41.06	220.84	0.52
RIVER-1	Reach-1	231.*	Max WS	147.52	135.00	137.70		137.83	0.005117	3.14	88.77	407.88	0.40
RIVER-1	Reach-1	230	Max WS	147.27	135.00	137.61		137.62	0.000467	0.98	288.70	489.65	0.12
RIVER-1	Reach-1	229.*	Max WS	155.87	134.50	137.54		137.56	0.000743	1.35	236.58	438.52	0.16
RIVER-1	Reach-1	228	Max WS	155.93	134.00	137.43		137.46	0.001237	1.85	181.40	418.95	0.20
RIVER-1	Reach-1	227.*	Max WS	156.03	133.85	137.32		137.35	0.001301	1.71	170.92	350.44	0.21
RIVER-1	Reach-1	226	Max WS	156.14	133.70	136.99		137.08	0.005871	2.72	91.44	277.93	0.41
RIVER-1	Reach-1	225.*	Max WS	156.19	133.48	136.67		136.76	0.004988	2.85	92.55	272.72	0.39
RIVER-1	Reach-1	224	Max WS	156.25	133.25	136.33		136.45	0.005612	3.32	87.69	260.39	0.42
RIVER-1	Reach-1	223.*	Max WS	156.31	133.12	135.95		136.08	0.006058	3.42	90.18	258.06	0.44
RIVER-1	Reach-1	222	Max WS	156.34	133.00	135.70		135.75	0.003207	2.56	123.47	261.24	0.32
RIVER-1	Reach-1	221.*	Max WS	156.38	132.70	135.48		135.55	0.003712	2.86	113.89	273.25	0.35
RIVER-1	Reach-1	220	Max WS	156.43	132.40	135.16		135.35	0.007471	4.03	73.94	257.23	0.49
RIVER-1	Reach-1	219.*	Max WS	156.36	131.80	134.95		135.07	0.003841	3.16	79.79	148.46	0.36
RIVER-1	Reach-1	218	Max WS	156.33	131.20	134.91		134.93	0.000716	1.53	189.71	257.76	0.16
RIVER-1	Reach-1	217.*	Max WS	156.38	131.98	134.84		134.86	0.000941	1.53	180.00	260.57	0.18
RIVER-1	Reach-1	216	Max WS	156.45	132.75	134.74		134.76	0.001447	1.50	161.59	255.90	0.21
RIVER-1	Reach-1	215.*	Max WS	167.88	132.62	134.53		134.61	0.004042	2.42	93.87	213.54	0.35
RIVER-1	Reach-1	214	Max WS	167.84	132.50	134.19		134.26	0.004500	2.26	91.80	274.58	0.36
RIVER-1	Reach-1	213.*	Max WS	186.30	131.88	133.79		133.89	0.004406	2.81	99.00	187.79	0.41
RIVER-1	Reach-1	212	Max WS	186.25	131.25	133.44		133.57	0.004915	3.76	100.84	153.07	0.50
RIVER-1	Reach-1	211.065*	Max WS	186.24	130.32	132.48		132.81	0.013134	4.63	40.23	24.64	0.64
RIVER-1	Reach-1	210.13	Max WS	186.23	129.39	132.00		132.16	0.000833	3.25	57.33	34.70	0.35
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	186.23	128.67	131.94		132.02	0.000294	2.25	82.95	59.95	0.22
RIVER-1	Reach-1	205.91	Max WS	186.22	129.85	131.69		131.92	0.002596	3.91	47.58	31.83	0.56
RIVER-1	Reach-1	205.49	Max WS	186.21	129.75	131.58		131.82	0.002617	3.92	47.54	31.96	0.57
RIVER-1	Reach-1	204.965*	Max WS	186.20	129.62	131.45		131.69	0.002613	3.91	47.65	32.13	0.57
RIVER-1	Reach-1	204.44	Max WS	186.19	129.49	131.32		131.55	0.002608	3.90	47.78	32.31	0.56
RIVER-1	Reach-1	203.626*	Max WS	186.19	129.29	131.11		131.35	0.002626	3.90	47.77	32.49	0.57
RIVER-1	Reach-1	202.813*	Max WS	186.17	129.08	130.91		131.14	0.002553	3.85	48.35	32.79	0.56
RIVER-1	Reach-1	202	Max WS	186.17	128.88	130.71		130.94	0.002529	3.83	48.63	33.04	0.56
RIVER-1	Reach-1	201.36	Max WS	186.15	128.72	130.55		130.78	0.002543	3.85	48.39	32.76	0.56
RIVER-1	Reach-1	200.405*	Max WS	186.15	128.48	130.32		130.55	0.002501	3.83	48.62	32.73	0.55
RIVER-1	Reach-1	199.451*	Max WS	186.14	128.24	130.10		130.32	0.002420	3.79	49.13	32.78	0.55
RIVER-1	Reach-1	198.497*	Max WS	186.13	128.00	129.89		130.11	0.002284	3.72	50.07	32.90	0.53
RIVER-1	Reach-1	197.542*	Max WS	186.08	127.76	129.70		129.91	0.002075	3.60	51.70	33.17	0.51
RIVER-1	Reach-1	196.588*	Max WS	185.95	127.52	129.54		129.73	0.001803	3.43	54.20	33.60	0.48
RIVER-1	Reach-1	195.634*	Max WS	126.19	127.28	129.43		129.50	0.000668	2.16	58.38	34.36	0.29
RIVER-1	Reach-1	194.68*	Max WS	125.78	127.04	129.39		129.45	0.000481	1.93	65.26	35.59	0.25
RIVER-1	Reach-1	193.725*	Max WS	125.32	126.81	129.36		129.41	0.000353	1.73	72.44	36.84	0.22
RIVER-1	Reach-1	192.771*	Max WS	124.80	126.57	129.34		129.38	0.000259	1.55	80.54	38.18	0.19
RIVER-1	Reach-1	191.817*	Max WS	124.77	126.33	129.32		129.35	0.000194	1.40	89.08	39.52	0.16
RIVER-1	Reach-1	190.862*	Max WS	124.13	126.09	129.31		129.34	0.000146	1.27	98.10	40.89	0.14
RIVER-1	Reach-1	189.908*	Max WS	124.08	125.85	129.30		129.32	0.000112	1.15	107.47	42.24	0.13
RIVER-1	Reach-1	188.954*	Max WS	124.05	125.61	129.30		129.31	0.000088	1.06	117.26	43.62	0.11
RIVER-1	Reach-1	188	Max WS	124.03	125.37	129.29		129.31	0.000069	0.97	127.34	44.95	0.10
RIVER-1	Reach-1	187.7	Max WS	317.23	125.29	129.14		129.22	0.000353	2.32	137.00	43.97	0.23
RIVER-1	Reach-1	187.65	Max WS	317.74	125.27	129.16		129.22	0.000266	2.06	155.98	50.70	0.20
RIVER-1	Reach-1	187.2	Max WS	317.68	125.15	129.17		129.21	0.000139	1.57	204.38	61.31	0.15
RIVER-1	Reach-1	187.15	Max WS	317.68	125.13	129.17		129.21	0.000143	1.58	201.46	59.42	0.15
RIVER-1	Reach-1	187	Max WS	317.23	125.09	129.17		129.20	0.000115	1.42	223.48	65.59	0.14
RIVER-1	Reach-1	186.81	Max WS	317.23	123.29	129.10		129.21	0.000187	2.63	120.75	69.48	0.19
RIVER-1	Reach-1	186.80		Culvert									
RIVER-1	Reach-1	185.39	Max WS	316.71	122.78	129.05		129.13	0.000129	2.30	137.95	47.26	0.16
RIVER-1	Reach-1	184.5	Max WS	316.66	126.00	129.07		129.10	0.000838	1.81	364.47	366.51	0.21
RIVER-1	Reach-1	184	Max WS	316.49	126.00	129.02		129.05	0.000770	1.88	355.02	361.08	0.21
RIVER-1	Reach-1	183.*	Max WS	320.91	126.00	128.89		128.98	0.002420	3.00	187.26	182.02	0.33
RIVER-1	Reach-1	182	Max WS	320.84	126.00	128.81		128.84	0.001466	2.14	229.69	180.67	0.23
RIVER-1	Reach-1	181.*	Max WS	321.91	126.00	128.63		128.68	0.002072	2.36	206.16	189.19	0.27
RIVER-1	Reach-1	180	Max WS	323.01	126.00	128.39		128.45	0.002876	2.52	205.75	272.69	0.31
RIVER-1	Reach-1	179.*	Max WS	355.05	125.00	128.14		128.20	0.002688	2.66	236.28	330.17	0.31
RIVER-1	Reach-1	178	Max WS	355.44	124.00	128.01		128.03	0.000831	1.59	393.92	422.50	0.17
RIVER-1	Reach-1	177.*	Max WS	356.74	124.00	127.85		127.88	0.001373	2.09	328.71	418.89	0.22
RIVER-1	Reach-1	176	Max WS	358.38	124.00	127.50		127.59	0.003439	3.14	235.11	423.22	0.35
RIVER-1	Reach-1	175.*	Max WS	363.66	123.50	127.24		127.36	0.004308	3.52	209.78	429.37	0.39
RIVER-1	Reach-1	174	Max WS	362.62	123.00	127.00		127.11	0.003738	3.31	231.30	544.48	0.36

RIVER-1	Reach-1	173.*	Max WS	361.64	123.50	126.89	126.93	0.002015	2.32	340.44	610.29	0.26
RIVER-1	Reach-1	172	Max WS	361.58	124.00	126.84	126.85	0.000519	1.14	594.77	736.71	0.13
RIVER-1	Reach-1	171.*	Max WS	361.77	124.00	126.76	126.77	0.000922	1.48	501.91	766.03	0.18
RIVER-1	Reach-1	170	Max WS	361.96	124.00	126.63	126.64	0.001534	1.83	407.07	670.40	0.22
RIVER-1	Reach-1	169.*	Max WS	361.52	123.50	126.50	126.54	0.002680	2.58	307.24	575.04	0.30
RIVER-1	Reach-1	168	Max WS	360.35	123.00	126.37	126.41	0.002486	2.57	303.47	542.90	0.29
RIVER-1	Reach-1	167.*	Max WS	357.58	122.50	126.23	126.27	0.001787	2.37	333.74	567.36	0.25
RIVER-1	Reach-1	166	Max WS	356.32	122.00	126.15	126.17	0.000962	1.84	419.08	627.97	0.19
RIVER-1	Reach-1	165.*	Max WS	352.96	121.00	125.92	125.95	0.001642	2.39	346.80	588.59	0.24
RIVER-1	Reach-1	164	Max WS	353.85	120.00	125.67	125.69	0.001219	1.89	417.53	674.84	0.19
RIVER-1	Reach-1	163.*	Max WS	353.23	120.00	125.51	125.56	0.001993	2.69	326.35	667.98	0.26
RIVER-1	Reach-1	162	Max WS	353.83	120.00	125.09	125.38	0.005770	4.69	123.66	368.00	0.44
RIVER-1	Reach-1	161.*	Max WS	352.94	120.25	124.79	124.92	0.003138	3.30	207.41	578.61	0.34
RIVER-1	Reach-1	160	Max WS	353.11	120.50	124.66	124.69	0.000927	1.72	405.67	630.25	0.18
RIVER-1	Reach-1	159.*	Max WS	353.57	120.25	124.58	124.61	0.000799	1.57	414.18	661.09	0.17
RIVER-1	Reach-1	158	Max WS	354.08	120.00	124.52	124.54	0.000658	1.39	447.79	716.09	0.15
RIVER-1	Reach-1	157.*	Max WS	354.46	119.50	124.45	124.48	0.000988	1.86	372.88	724.79	0.19
RIVER-1	Reach-1	156	Max WS	354.84	119.00	124.24	124.41	0.003620	3.70	193.21	675.68	0.36
RIVER-1	Reach-1	155.*	Max WS	354.22	119.00	123.93	124.03	0.002675	3.16	266.60	641.54	0.30
RIVER-1	Reach-1	154	Max WS	365.49	119.00	123.74	123.76	0.001095	1.99	433.43	685.31	0.19
RIVER-1	Reach-1	153.*	Max WS	374.32	119.00	123.65	123.68	0.001196	2.11	428.70	777.56	0.21
RIVER-1	Reach-1	152	Max WS	374.39	119.00	123.56	123.59	0.001116	1.96	451.61	868.37	0.20
RIVER-1	Reach-1	151.*	Max WS	384.55	119.00	123.42	123.46	0.001638	2.10	403.13	847.70	0.24
RIVER-1	Reach-1	150	Max WS	384.00	119.00	123.18	123.25	0.004310	2.79	278.10	740.98	0.37
RIVER-1	Reach-1	149.*	Max WS	386.55	118.50	122.90	122.97	0.002736	2.72	306.19	717.18	0.31
RIVER-1	Reach-1	148	Max WS	389.25	118.00	122.72	122.76	0.001477	2.26	386.45	652.02	0.23
RIVER-1	Reach-1	147.*	Max WS	391.37	117.92	122.59	122.63	0.002106	2.41	372.91	851.25	0.27
RIVER-1	Reach-1	146	Max WS	393.43	117.83	122.38	122.45	0.004440	2.96	310.61	1004.70	0.37
RIVER-1	Reach-1	145.*	Max WS	395.67	117.92	122.18	122.22	0.001904	1.82	335.49	950.42	0.25
RIVER-1	Reach-1	144	Max WS	397.22	118.00	121.96	122.00	0.003252	1.75	303.85	700.28	0.30
RIVER-1	Reach-1	143.*	Max WS	399.16	117.50	121.79	121.82	0.000889	1.47	439.61	882.32	0.18
RIVER-1	Reach-1	142	Max WS	401.49	117.00	121.71	121.73	0.000996	1.96	521.66	879.81	0.18
RIVER-1	Reach-1	141.*	Max WS	403.95	117.00	121.59	121.63	0.001625	2.48	438.74	911.62	0.24
RIVER-1	Reach-1	140	Max WS	405.25	117.00	121.39	121.48	0.003250	3.40	339.64	1033.76	0.33
RIVER-1	Reach-1	139.*	Max WS	404.94	117.50	121.23	121.28	0.002042	2.49	403.35	922.46	0.27
RIVER-1	Reach-1	138	Max WS	405.68	118.00	121.15	121.17	0.000917	1.58	551.68	947.64	0.18
RIVER-1	Reach-1	137.*	Max WS	407.13	118.00	121.07	121.09	0.001190	1.68	479.48	840.94	0.20
RIVER-1	Reach-1	136	Max WS	408.72	118.00	120.95	120.98	0.001545	1.71	390.47	559.27	0.23
RIVER-1	Reach-1	135.*	Max WS	410.30	117.50	120.84	120.86	0.001084	1.35	462.29	654.50	0.19
RIVER-1	Reach-1	134	Max WS	411.91	117.00	120.77	120.78	0.000757	1.07	547.90	728.71	0.15
RIVER-1	Reach-1	133.*	Max WS	414.12	117.00	120.69	120.70	0.000918	1.16	467.57	641.32	0.17
RIVER-1	Reach-1	132	Max WS	416.37	117.00	120.61	120.62	0.000736	1.04	481.63	574.77	0.15
RIVER-1	Reach-1	131.*	Max WS	417.58	117.00	120.53	120.55	0.000982	1.13	445.92	584.80	0.17
RIVER-1	Reach-1	130	Max WS	418.76	117.00	120.46	120.47	0.000980	1.09	505.75	795.50	0.17
RIVER-1	Reach-1	129.*	Max WS	419.39	117.00	120.37	120.39	0.001447	1.28	436.79	809.10	0.21
RIVER-1	Reach-1	128	Max WS	420.00	117.00	120.10	120.17	0.005398	2.14	223.88	587.30	0.38
RIVER-1	Reach-1	127.*	Max WS	419.80	116.71	119.83	119.88	0.003233	2.15	290.85	643.92	0.32
RIVER-1	Reach-1	126	Max WS	419.68	116.42	119.75	119.77	0.001408	1.89	462.31	688.98	0.22
RIVER-1	Reach-1	125.*	Max WS	419.57	116.21	119.72	119.74	0.001413	1.70	468.49	753.14	0.22
RIVER-1	Reach-1	124	Max WS	419.56	116.00	119.70	119.71	0.001010	1.31	538.61	801.79	0.18
RIVER-1	Reach-1	123.*	Max WS	419.51	116.18	119.63	119.65	0.001296	1.59	487.37	805.53	0.21
RIVER-1	Reach-1	122	Max WS	419.44	116.35	119.55	119.57	0.001658	1.81	472.55	931.88	0.23
RIVER-1	Reach-1	121.*	Max WS	463.01	115.68	119.33	119.38	0.002736	2.49	356.40	596.33	0.30
RIVER-1	Reach-1	120	Max WS	462.80	115.00	119.16	119.20	0.001472	2.21	419.29	582.85	0.23
RIVER-1	Reach-1	119.*	Max WS	462.46	114.50	119.01	119.09	0.002057	2.93	328.63	441.77	0.30
RIVER-1	Reach-1	118	Max WS	462.00	114.00	118.70	118.91	0.003530	4.19	208.11	263.44	0.44
RIVER-1	Reach-1	117.*	Max WS	461.31	114.50	118.63	118.70	0.001353	2.32	281.91	306.48	0.27
RIVER-1	Reach-1	116	Max WS	455.95	115.00	118.50	118.57	0.002418	2.25	260.48	342.10	0.34
RIVER-1	Reach-1	115.*	Max WS	441.43	114.50	118.33	118.38	0.002185	1.88	262.15	345.91	0.31
RIVER-1	Reach-1	114	Max WS	401.16	114.00	118.16	118.19	0.001860	1.49	282.03	384.13	0.28
RIVER-1	Reach-2	112.05	Max WS	727.12	112.00	118.16	118.23	0.001283	2.22	359.17	418.01	0.27
RIVER-1	Reach-2	112	Max WS	727.18	112.00	118.15	118.23	0.001297	2.23	356.29	416.22	0.27
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	726.72	113.00	118.01	118.09	0.001843	2.24	368.72	360.67	0.31
RIVER-1	Reach-2	110	Max WS	726.43	114.00	117.87	117.94	0.002241	2.15	433.46	471.26	0.33
RIVER-1	Reach-2	109.*	Max WS	727.47	113.50	117.58	117.73	0.002666	3.49	339.09	375.32	0.39
RIVER-1	Reach-2	108	Max WS	728.73	113.00	117.35	117.51	0.002294	3.71	367.17	412.07	0.37
RIVER-1	Reach-2	107.*	Max WS	729.08	112.00	117.27	117.38	0.001565	3.18	442.03	469.54	0.31
RIVER-1	Reach-2	106	Max WS	729.61	111.00	117.22	117.30	0.001003	2.81	555.42	565.24	0.25

RIVER-1	Reach-2	105.*	Max WS	730.42	110.50	117.13		117.24	0.001321	3.18	509.51	526.82	0.28
RIVER-1	Reach-2	104	Max WS	731.13	110.00	117.03		117.16	0.001336	3.49	488.00	491.71	0.28
RIVER-1	Reach-2	103.*	Max WS	731.29	110.00	117.00		117.08	0.001552	2.88	528.62	511.09	0.29
RIVER-1	Reach-2	102	Max WS	640.54	110.00	117.00		117.03	0.000427	1.98	751.30	567.77	0.17
RIVER-1	Reach-2	101.*	Max WS	732.56	110.50	116.95		117.00	0.000608	2.31	740.53	565.30	0.20
RIVER-1	Reach-2	100	Max WS	733.65	111.00	116.91		116.95	0.000659	2.36	729.37	559.44	0.20
RIVER-1	Reach-2	99.*	Max WS	736.90	111.00	116.79		116.84	0.000698	2.44	701.04	558.26	0.21
RIVER-1	Reach-2	98	Max WS	740.17	111.00	116.67		116.72	0.000743	2.54	668.32	553.27	0.22
RIVER-1	Reach-2	97.*	Max WS	742.08	110.50	116.59		116.64	0.000715	2.52	669.25	536.44	0.21
RIVER-1	Reach-2	96	Max WS	744.02	110.00	116.51		116.57	0.000704	2.52	668.76	525.09	0.21
RIVER-1	Reach-2	95.*	Max WS	745.73	109.50	116.43		116.50	0.000771	2.68	613.98	512.55	0.22
RIVER-1	Reach-2	94	Max WS	747.46	109.00	116.35		116.43	0.000828	2.82	558.40	489.14	0.23
RIVER-1	Reach-2	93.*	Max WS	749.19	109.00	116.27		116.36	0.000737	2.70	559.65	464.77	0.22
RIVER-1	Reach-2	92	Max WS	750.91	109.00	116.21		116.29	0.000663	2.62	549.29	414.62	0.21
RIVER-1	Reach-2	91.*	Max WS	752.66	108.50	116.14		116.22	0.000677	2.58	553.44	431.63	0.21
RIVER-1	Reach-2	90	Max WS	754.47	108.00	116.08		116.15	0.000688	2.54	558.81	444.89	0.21
RIVER-1	Reach-2	89.*	Max WS	756.08	108.50	116.02		116.09	0.000606	2.48	598.61	429.40	0.20
RIVER-1	Reach-2	88	Max WS	757.82	109.00	115.97		116.03	0.000543	2.42	640.23	415.20	0.19
RIVER-1	Reach-2	87.*	Max WS	759.14	108.00	115.95		115.98	0.000241	1.77	784.66	437.61	0.13
RIVER-1	Reach-2	86	Max WS	760.38	107.00	115.94		115.96	0.000117	1.33	959.58	462.83	0.09
RIVER-1	Reach-2	85.*	Max WS	761.11	107.50	115.94		115.96	0.000154	1.37	1058.86	579.45	0.10
RIVER-1	Reach-2	84	Max WS	761.76	108.00	115.93		115.94	0.000172	1.25	1236.26	704.86	0.11
RIVER-1	Reach-2	83.*	Max WS	779.18	108.50	115.90		115.93	0.000306	1.65	999.42	737.50	0.14
RIVER-1	Reach-2	82	Max WS	779.18	109.00	115.85		115.91	0.000657	2.28	726.03	781.53	0.20
RIVER-1	Reach-2	81.56	Max WS	663.38	108.22	115.79	112.05	115.85	0.000724	2.01	329.39	79.45	0.17
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	774.27	108.96	115.17		115.44	0.005078	4.18	185.24	64.90	0.44
RIVER-1	Reach-2	80.95	Max WS	774.27	108.83	115.20	112.20	115.33	0.000950	2.94	263.43	61.16	0.25
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	773.78	108.67	115.17		115.31	0.001045	3.01	256.82	62.61	0.26
RIVER-1	Reach-2	79.3849*	Max WS	773.01	108.33	115.00		115.19	0.001346	3.48	221.87	225.53	0.30
RIVER-1	Reach-2	78.39	Max WS	773.19	108.00	114.99		115.06	0.000566	2.54	553.69	325.77	0.20
RIVER-1	Reach-2	77.6566*	Max WS	772.99	107.80	114.99		115.01	0.000287	1.80	935.69	555.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	772.97	107.60	114.95		115.00	0.000446	2.22	829.45	735.66	0.17
RIVER-1	Reach-2	76.19	Max WS	772.93	107.40	114.88		114.98	0.000765	2.86	509.10	562.46	0.23
RIVER-1	Reach-2	75.86	Max WS	772.92	107.22	114.81	111.25	114.96	0.000868	3.08	250.58	307.65	0.24
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	772.78	106.63	114.59		114.74	0.001189	3.09	250.01	114.91	0.27
RIVER-1	Reach-2	74.7*	Max WS	772.77	106.82	114.57		114.66	0.000957	2.43	404.03	644.58	0.24
RIVER-1	Reach-2	74	Max WS	772.74	107.00	114.54		114.59	0.000866	1.92	717.66	1077.72	0.22
RIVER-1	Reach-2	73.*	Max WS	772.63	107.43	114.49		114.53	0.000503	1.73	917.63	1156.84	0.17
RIVER-1	Reach-2	72	Max WS	772.33	107.86	114.46		114.48	0.000353	1.67	1124.60	1224.21	0.15
RIVER-1	Reach-2	71.*	Max WS	978.98	107.44	114.31		114.43	0.001145	2.82	375.55	183.02	0.25
RIVER-1	Reach-2	70	Max WS	978.97	107.03	114.26		114.33	0.000729	2.20	444.85	96.52	0.18
RIVER-1	Reach-2	69.*	Max WS	978.96	107.35	114.16		114.25	0.000894	2.44	401.54	86.50	0.20
RIVER-1	Reach-2	68	Max WS	978.86	107.68	114.04		114.15	0.001179	2.69	364.13	83.54	0.23
RIVER-1	Reach-2	67	Max WS	978.64	107.40	113.85		114.01	0.001811	3.28	332.31	123.91	0.28
RIVER-1	Reach-2	66	Max WS	978.39	107.40	113.63		113.81	0.002192	3.51	306.10	116.33	0.31
RIVER-1	Reach-2	65.*	Max WS	978.25	107.20	113.48		113.62	0.001647	3.06	328.34	132.23	0.29
RIVER-1	Reach-2	64	Max WS	978.11	107.00	113.35		113.48	0.001198	2.83	345.69	103.67	0.27
RIVER-1	Reach-2	63.*	Max WS	979.63	106.81	113.22		113.34	0.001498	2.86	342.57	120.62	0.30
RIVER-1	Reach-2	62.*	Max WS	980.90	106.62	113.06		113.18	0.001801	2.87	341.78	140.99	0.32
RIVER-1	Reach-2	61.*	Max WS	982.28	106.43	112.90		113.02	0.001562	2.74	361.85	158.98	0.30
RIVER-1	Reach-2	60	Max WS	983.60	106.24	112.79		112.88	0.001224	2.49	407.23	183.12	0.27
RIVER-1	Reach-2	59.*	Max WS	986.02	106.07	112.68		112.77	0.000949	2.44	418.95	180.56	0.24
RIVER-1	Reach-2	58	Max WS	988.91	105.90	112.63		112.70	0.000532	2.28	575.74	446.60	0.19
RIVER-1	Reach-2	57.2	Max WS	990.61	107.05	112.49	110.02	112.65	0.001429	3.28	401.06	391.70	0.30
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	991.02	107.05	112.41		112.59	0.001745	3.53	353.98	366.26	0.33
RIVER-1	Reach-2	56	Max WS	993.82	105.90	112.38		112.46	0.000669	2.36	476.64	340.51	0.21
RIVER-1	Reach-2	55.*	Max WS	996.13	105.85	112.33		112.40	0.000647	2.11	533.55	440.26	0.20
RIVER-1	Reach-2	54	Max WS	998.45	105.80	112.27		112.33	0.000683	1.98	564.76	538.58	0.20
RIVER-1	Reach-2	53.*	Max WS	1004.95	105.70	112.20		112.25	0.000576	1.93	679.72	351.90	0.17
RIVER-1	Reach-2	52	Max WS	1011.22	105.60	112.11		112.15	0.000725	2.02	679.84	299.63	0.17
RIVER-1	Reach-2	51.*	Max WS	1014.32	105.57	112.02		112.07	0.000875	2.26	635.83	286.51	0.20
RIVER-1	Reach-2	50.*	Max WS	1017.18	105.54	111.92		111.98	0.000991	2.47	600.74	273.02	0.22
RIVER-1	Reach-2	49.*	Max WS	1019.99	105.50	111.81		111.88	0.001015	2.66	576.98	258.65	0.24
RIVER-1	Reach-2	48	Max WS	1022.77	105.47	111.70		111.79	0.000908	2.82	565.87	244.98	0.24
RIVER-1	Reach-2	47.*	Max WS	1025.51	105.68	111.61		111.69	0.000941	2.75	604.15	277.15	0.25

RIVER-1	Reach-2	46.*	Max WS	1028.21	105.88	111.53		111.60	0.000866	2.58	662.32	312.68	0.24
RIVER-1	Reach-2	45.*	Max WS	1031.17	106.08	111.46		111.51	0.000698	2.36	746.50	348.74	0.21
RIVER-1	Reach-2	44	Max WS	1034.12	106.29	111.41		111.45	0.000506	2.10	859.19	385.30	0.18
RIVER-1	Reach-2	43.*	Max WS	1036.85	106.30	111.35		111.40	0.000537	2.17	812.31	369.77	0.19
RIVER-1	Reach-2	42.*	Max WS	1039.59	106.31	111.29		111.35	0.000571	2.23	767.00	361.32	0.20
RIVER-1	Reach-2	41.*	Max WS	1042.33	106.32	111.23		111.29	0.000606	2.30	728.68	360.31	0.20
RIVER-1	Reach-2	40	Max WS	1045.07	106.33	111.17		111.23	0.000643	2.35	697.78	356.52	0.21
RIVER-1	Reach-2	39.*	Max WS	1044.85	106.17	111.12		111.17	0.000511	2.11	797.08	381.81	0.19
RIVER-1	Reach-2	38.*	Max WS	1044.83	106.01	111.09		111.12	0.000381	1.84	941.16	424.58	0.16
RIVER-1	Reach-2	37.*	Max WS	1044.80	105.84	111.06		111.08	0.000256	1.52	1138.05	458.44	0.13
RIVER-1	Reach-2	36	Max WS	1044.69	105.68	111.02		111.06	0.000370	1.85	978.02	478.83	0.16
RIVER-1	Reach-2	35.22	Max WS	1044.68	104.52	110.85		111.04	0.001253	3.48	300.22	67.79	0.29
RIVER-1	Reach-2	34.82	Max WS	1044.68	104.52	110.80	107.78	110.99	0.001299	3.52	296.44	67.47	0.30
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1044.29	104.30	110.48		110.83	0.003390	4.75	219.63	65.32	0.46
RIVER-1	Reach-2	33.67*	Max WS	1044.29	104.12	110.44		110.65	0.001755	3.69	282.97	75.74	0.34
RIVER-1	Reach-2	33	Max WS	1044.16	103.93	110.46		110.56	0.000751	2.63	522.17	456.78	0.22
RIVER-1	Reach-2	32.*	Max WS	1044.15	103.40	110.39		110.48	0.000759	2.42	542.68	503.05	0.22
RIVER-1	Reach-2	31.*	Max WS	1044.12	102.88	110.28		110.38	0.001114	2.52	494.18	526.45	0.26
RIVER-1	Reach-2	30	Max WS	1044.09	102.35	110.01		110.18	0.003374	3.29	317.81	202.07	0.42
RIVER-1	Reach-2	29.*	Max WS	1044.07	102.34	109.66		109.85	0.003500	3.54	323.19	463.06	0.43
RIVER-1	Reach-2	28.*	Max WS	1043.89	102.33	109.35		109.55	0.003434	3.72	386.55	666.76	0.43
RIVER-1	Reach-2	27.*	Max WS	1043.75	102.33	109.12		109.27	0.002637	3.51	543.90	779.41	0.39
RIVER-1	Reach-2	26	Max WS	1043.66	102.32	108.99		109.06	0.001504	2.86	818.67	909.57	0.30
RIVER-1	Reach-2	25.*	Max WS	1043.45	101.99	108.82		108.93	0.002268	3.32	694.53	944.73	0.36
RIVER-1	Reach-2	24.*	Max WS	1043.37	101.66	108.64		108.74	0.002537	3.28	635.05	737.87	0.37
RIVER-1	Reach-2	23.*	Max WS	1043.13	101.33	108.46		108.54	0.002660	3.12	676.33	849.32	0.37
RIVER-1	Reach-2	22	Max WS	1042.95	101.00	108.29		108.35	0.002271	2.69	774.75	967.87	0.34
RIVER-1	Reach-2	21.*	Max WS	1042.51	101.27	108.11		108.17	0.002367	2.76	741.94	830.22	0.35
RIVER-1	Reach-2	20.*	Max WS	1041.95	101.54	107.92		107.98	0.002347	2.88	736.95	763.30	0.35
RIVER-1	Reach-2	19.*	Max WS	1040.67	101.82	107.74		107.80	0.002216	3.01	742.40	731.64	0.34
RIVER-1	Reach-2	18	Max WS	1038.62	102.09	107.57		107.63	0.002056	3.08	757.53	707.36	0.33
RIVER-1	Reach-2	17.*	Max WS	1035.23	101.97	107.41		107.46	0.001909	3.10	802.85	797.41	0.33
RIVER-1	Reach-2	16.*	Max WS	1029.97	101.85	107.27		107.31	0.001669	2.85	974.57	1182.69	0.30
RIVER-1	Reach-2	15.*	Max WS	1027.04	101.73	107.18		107.20	0.000849	1.94	1255.49	1204.13	0.21
RIVER-1	Reach-2	14	Max WS	1025.09	101.61	107.13		107.14	0.000431	1.30	1587.18	1219.70	0.15
RIVER-1	Reach-2	13.*	Max WS	1024.16	101.43	107.10		107.11	0.000330	1.06	1733.28	1222.14	0.13
RIVER-1	Reach-2	12.*	Max WS	1023.71	101.26	107.08		107.09	0.000246	0.97	1889.29	1213.95	0.11
RIVER-1	Reach-2	11.*	Max WS	1023.28	101.08	107.07		107.07	0.000183	0.90	2054.01	1198.83	0.10
RIVER-1	Reach-2	10	Max WS	1022.90	100.90	107.06		107.06	0.000139	0.82	2213.99	1163.06	0.09
RIVER-1	Reach-2	9.*	Max WS	1022.55	100.75	107.04		107.04	0.000212	1.05	1831.60	1020.64	0.11
RIVER-1	Reach-2	8.*	Max WS	1022.24	100.60	107.00		107.01	0.000384	1.42	1463.48	959.19	0.15
RIVER-1	Reach-2	7.*	Max WS	1021.64	100.45	106.94		106.97	0.000682	2.03	1186.02	1112.46	0.20
RIVER-1	Reach-2	6	Max WS	1019.95	100.30	106.82		106.90	0.001480	3.14	895.49	1209.72	0.30
RIVER-1	Reach-2	5.*	Max WS	1018.55	100.15	106.69		106.77	0.001298	3.02	943.64	1280.29	0.28
RIVER-1	Reach-2	4.*	Max WS	1017.47	100.00	106.59		106.65	0.001101	2.84	1024.10	1407.20	0.26
RIVER-1	Reach-2	3.*	Max WS	1016.74	99.85	106.49		106.54	0.000905	2.62	1171.75	1667.41	0.24
RIVER-1	Reach-2	2	Max WS	1016.54	99.70	106.43		106.46	0.000574	2.13	1580.35	2199.65	0.19
RIVER-1	Reach-2	1.*	Max WS	1016.47	99.55	106.36		106.42	0.000814	2.61	1279.13	2121.19	0.23
RIVER-1	Reach-2	0	Max WS	1016.39	99.40	106.28	103.73	106.34	0.000822	2.68	1096.02	1828.18	0.23

Appendix P-8: HEC-RAS Results, Anatolia III – Alternative 'A' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X    X    X    X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 11:56:36 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.38	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	601.65	157.71	163.01		163.02	0.000055	0.46	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.15	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	598.66	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.66	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.65	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	597.19	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.19	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	595.77	154.11	163.01		163.01	0.000024	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	597.16	154.05	163.00		163.01	0.000022	0.33	1827.44	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	597.14	154.00	163.00		163.01	0.000020	0.31	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.75	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	594.38	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.72	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	594.37	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.68	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	594.35	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.34	152.00	163.00		163.00	0.000005	0.18	3310.35	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	594.33	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.31	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	595.49	152.00	163.00		163.00	0.000002	0.13	4521.19	625.06	0.01
RIVER-2	Reach-1	10662.5*	Max WS	593.11	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.25	152.00	163.00		163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	595.34	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	595.26	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	594.17	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.13	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	594.08	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.06	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	593.16	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.02	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	593.99	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	593.98	150.00	163.00		163.00	0.000001	0.08	7215.35	820.23	0.00
RIVER-2	Reach-1	9950	Max WS	593.96	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	593.16	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.92	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	594.64	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	593.87	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	594.51	149.36	163.00		163.00	0.000000	0.06	10070.95	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.17	148.73	163.00		163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.80	148.36	163.00		163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.75	148.00	163.00		163.00	0.000000	0.04	15722.64	1830.39	0.00
RIVER-2	Reach-1	9450.*	Max WS	593.70	147.00	163.00		163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.63	146.00	163.00		163.00	0.000000	0.03	18084.44	1807.32	0.00
RIVER-2	Reach-1	9350.*	Max WS	594.00	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.57	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.77	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.48	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.28	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.41	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.28	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.36	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.33	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.28	140.56	154.39		154.57	0.003541	3.40	174.49	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004340	3.55	168.07	35.97	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.58	139.60	153.55		153.75	0.004419	3.56	168.12	36.59	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.22	139.11	153.11		153.30	0.004513	3.57	168.25	37.31	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.87	138.62	152.65		152.85	0.004617	3.59	168.38	38.06	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.53	138.13	152.19		152.40	0.004687	3.60	168.63	38.53	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.17	137.64	151.73		151.93	0.004726	3.60	169.08	38.89	0.30
RIVER-2	Reach-1	7750.*	Max WS	611.83	137.15	151.26		151.46	0.004756	3.61	169.60	39.19	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.50	136.66	150.79		150.99	0.004776	3.61	170.14	39.40	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.32		150.52	0.004763	3.61	170.97	39.53	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.81	135.68	149.85		150.05	0.004736	3.61	171.91	39.62	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.48	135.19	149.38		149.58	0.004695	3.60	173.09	39.75	0.30
RIVER-2	Reach-1	7250.*	Max WS	625.15	134.70	148.90		149.10	0.004683	3.59	174.12	40.02	0.30
RIVER-2	Reach-1	7150.*	Max WS	627.81	134.21	148.39		148.59	0.004867	3.61	173.73	40.87	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.47	133.72	147.84		148.05	0.005468	3.65	172.58	44.58	0.33
RIVER-2	Reach-1	6950.*	Max WS	633.15	133.23	147.26		147.48	0.006097	3.72	170.24	47.03	0.34
RIVER-2	Reach-1	6850.*	Max WS	635.41	132.74	146.62		146.85	0.006827	3.83	165.73	47.69	0.36
RIVER-2	Reach-1	6750.*	Max WS	594.95	132.25	146.00		146.21	0.006585	3.67	162.01	48.47	0.35
RIVER-2	Reach-1	6650.*	Max WS	641.15	131.76	145.27		145.54	0.008842	4.17	153.68	46.79	0.41
RIVER-2	Reach-1	6550	Max WS	643.74	131.27	144.59		144.89	0.010092	4.36	147.59	46.02	0.43
RIVER-2	Reach-1	6466.66*	Max WS	645.92	132.84	143.94		144.17	0.007444	3.83	168.69	58.18	0.40
RIVER-2	Reach-1	6383.33*	Max WS	648.08	134.40	143.50		143.69	0.004313	3.47	186.78	52.96	0.33
RIVER-2	Reach-1	6300	Max WS	650.24	135.97	143.16		143.37	0.003328	3.69	176.44	39.26	0.31
RIVER-2	Reach-1	6250	Max WS	651.54	136.00	142.90		143.18	0.004617	4.18	155.75	36.31	0.36
RIVER-2	Reach-1	6200	Max WS	652.84	135.00	142.48		142.88	0.007067	5.12	127.56	28.45	0.43
RIVER-2	Reach-1	6100.*	Max WS	655.29	134.75	142.01		142.29	0.004869	4.26	153.71	35.75	0.36
RIVER-2	Reach-1	6000.*	Max WS	657.68	134.50	141.64		141.85	0.003711	3.67	179.14	43.72	0.32
RIVER-2	Reach-1	5900.*	Max WS	658.85	134.25	141.29		141.45	0.003177	3.26	201.93	53.33	0.30
RIVER-2	Reach-1	5800.*	Max WS	661.38	134.00	140.90		141.04	0.003852	3.00	220.76	78.15	0.31
RIVER-2	Reach-1	5700.*	Max WS	661.98	133.75	140.44		140.56	0.005414	2.79	237.43	125.37	0.35
RIVER-2	Reach-1	5600.*	Max WS	665.82	133.50	139.89		140.00	0.005879	2.75	243.14	145.05	0.36
RIVER-2	Reach-1	5500.*	Max WS	690.11	133.25	139.23		139.37	0.008872	3.04	228.77	161.25	0.44
RIVER-2	Reach-1	5400	Max WS	689.47	133.00	136.91		137.89	0.026421	7.96	86.59	28.96	0.81
RIVER-2	Reach-1	5304.54*	Max WS	691.71	132.73	135.70		136.02	0.009942	4.51	153.21	60.65	0.50
RIVER-2	Reach-1	5209.09*	Max WS	693.37	132.45	135.07		135.24	0.006417	3.34	207.43	93.81	0.40
RIVER-2	Reach-1	5113.63*	Max WS	694.97	132.18	134.59		134.70	0.005057	2.76	251.95	127.63	0.35
RIVER-2	Reach-1	5018.18*	Max WS	697.31	131.91	134.18		134.27	0.004342	2.40	290.78	162.40	0.32
RIVER-2	Reach-1	4922.72*	Max WS	699.15	131.64	133.82		133.90	0.003926	2.15	325.00	198.30	0.30
RIVER-2	Reach-1	4827.27*	Max WS	701.06	131.36	133.49		133.55	0.003744	1.97	355.17	238.13	0.28
RIVER-2	Reach-1	4731.81*	Max WS	703.02	131.09	133.16		133.21	0.003654	1.83	383.28	281.96	0.28
RIVER-2	Reach-1	4636.36*	Max WS	705.00	130.82	132.84		132.88	0.003708	1.72	408.81	333.72	0.27
RIVER-2	Reach-1	4540.90*	Max WS	707.09	130.55	132.48		132.53	0.004050	1.66	425.29	391.99	0.28
RIVER-2	Reach-1	4445.45*	Max WS	709.49	130.27	132.10		132.14	0.004739	1.66	427.37	444.26	0.30
RIVER-2	Reach-1	4350	Max WS	711.78	130.00	131.48		131.56	0.013721	2.26	315.26	458.77	0.48
RIVER-2	Reach-1	4260.*	Max WS	713.60	129.40	130.88		130.95	0.011080	2.11	339.20	469.77	0.44
RIVER-2	Reach-1	4170.*	Max WS	715.54	128.80	130.41		130.46	0.007521	1.87	382.84	471.11	0.37
RIVER-2	Reach-1	4080.*	Max WS	717.33	128.20	130.04		130.09	0.004956	1.63	439.64	485.05	0.30
RIVER-2	Reach-1	3990.*	Max WS	719.38	127.60	129.75		129.78	0.003734	1.49	483.72	496.15	0.27

RIVER-2	Reach-1	3900	Max WS	721.39	127.00	129.52		129.55	0.003217	1.41	511.84	508.94	0.25
RIVER-2	Reach-1	3800.*	Max WS	723.96	126.70	129.27		129.30	0.003203	1.42	510.96	502.46	0.25
RIVER-2	Reach-1	3700.*	Max WS	726.44	126.40	129.02		129.05	0.003164	1.42	511.45	496.46	0.25
RIVER-2	Reach-1	3600.*	Max WS	728.99	126.10	128.77		128.80	0.003100	1.42	513.47	491.18	0.24
RIVER-2	Reach-1	3500.*	Max WS	731.45	125.80	128.53		128.56	0.002997	1.41	518.00	487.08	0.24
RIVER-2	Reach-1	3400.*	Max WS	733.94	125.50	128.29		128.32	0.002921	1.41	521.96	484.49	0.24
RIVER-2	Reach-1	3300.*	Max WS	736.45	125.20	128.04		128.07	0.002877	1.40	524.93	483.29	0.24
RIVER-2	Reach-1	3200.*	Max WS	739.02	124.90	127.79		127.82	0.002853	1.40	526.36	481.04	0.24
RIVER-2	Reach-1	3100.*	Max WS	741.58	124.60	127.53		127.56	0.002874	1.41	524.83	477.66	0.24
RIVER-2	Reach-1	3000.*	Max WS	744.15	124.30	127.25		127.28	0.003104	1.44	515.61	481.64	0.25
RIVER-2	Reach-1	2900	Max WS	746.74	124.00	126.94		126.97	0.003494	1.46	510.23	510.03	0.26
RIVER-2	Reach-1	2812.5*	Max WS	748.88	123.52	126.65		126.68	0.003867	1.50	500.29	521.72	0.27
RIVER-2	Reach-1	2725.*	Max WS	750.97	123.03	126.38		126.41	0.003903	1.50	499.10	519.96	0.27
RIVER-2	Reach-1	2637.5*	Max WS	753.09	122.55	126.13		126.16	0.003668	1.48	509.19	519.55	0.26
RIVER-2	Reach-1	2550.*	Max WS	755.22	122.07	125.87		125.91	0.003504	1.46	516.75	518.56	0.26
RIVER-2	Reach-1	2462.5*	Max WS	757.32	121.58	125.60		125.63	0.003585	1.48	513.07	515.96	0.26
RIVER-2	Reach-1	2375	Max WS	759.43	121.10	125.33		125.37	0.003472	1.47	518.33	514.32	0.26
RIVER-2	Reach-1	2279.16*	Max WS	761.71	121.07	125.06		125.09	0.003343	1.44	529.85	525.96	0.25
RIVER-2	Reach-1	2183.33*	Max WS	763.96	121.03	124.77		124.80	0.003449	1.44	529.92	536.41	0.26
RIVER-2	Reach-1	2087.5*	Max WS	766.24	121.00	124.50		124.53	0.003393	1.43	537.69	547.03	0.25
RIVER-2	Reach-1	1991.66*	Max WS	768.50	120.97	124.26		124.29	0.003068	1.37	559.98	559.13	0.24
RIVER-2	Reach-1	1895.83*	Max WS	770.75	120.93	124.04		124.07	0.002647	1.30	591.70	571.93	0.23
RIVER-2	Reach-1	1800	Max WS	772.99	120.90	123.84		123.86	0.002155	1.22	634.68	581.46	0.21
RIVER-2	Reach-1	1705.*	Max WS	775.21	120.43	123.64		123.67	0.002354	1.28	605.65	550.23	0.21
RIVER-2	Reach-1	1610.*	Max WS	777.41	119.95	123.43		123.45	0.002657	1.36	573.39	523.26	0.23
RIVER-2	Reach-1	1515.*	Max WS	779.64	119.47	123.18		123.21	0.002994	1.46	538.33	503.22	0.24
RIVER-2	Reach-1	1420	Max WS	781.85	119.00	122.87		122.91	0.003628	1.61	497.77	479.06	0.27
RIVER-2	Reach-1	1324.61*	Max WS	781.81	118.62	122.54		122.58	0.003636	1.61	505.72	580.83	0.27
RIVER-2	Reach-1	1229.23*	Max WS	781.74	118.23	122.23		122.27	0.003500	1.57	522.21	580.94	0.26
RIVER-2	Reach-1	1133.84*	Max WS	781.70	117.85	121.92		121.96	0.003464	1.55	532.03	579.88	0.26
RIVER-2	Reach-1	1038.46*	Max WS	781.59	117.46	121.62		121.66	0.003442	1.52	539.36	576.63	0.26
RIVER-2	Reach-1	943.076*	Max WS	781.49	117.08	121.35		121.38	0.003377	1.49	547.26	572.92	0.26
RIVER-2	Reach-1	847.692*	Max WS	781.38	116.69	121.08		121.11	0.003392	1.47	550.15	568.08	0.25
RIVER-2	Reach-1	752.307*	Max WS	781.26	116.31	120.79		120.82	0.003354	1.50	534.19	521.67	0.26
RIVER-2	Reach-1	656.923*	Max WS	781.21	115.92	120.49		120.52	0.003423	1.58	509.50	470.27	0.26
RIVER-2	Reach-1	561.538*	Max WS	781.16	115.54	120.20		120.24	0.003516	1.65	487.06	428.49	0.27
RIVER-2	Reach-1	466.153*	Max WS	781.15	115.15	119.92		119.97	0.003555	1.70	465.80	383.99	0.27
RIVER-2	Reach-1	370.769*	Max WS	781.10	114.77	119.66		119.71	0.003901	1.80	423.98	325.29	0.28
RIVER-2	Reach-1	275.384*	Max WS	780.63	114.38	119.34		119.42	0.005633	2.18	345.86	258.15	0.34
RIVER-2	Reach-1	180	Max WS	727.86	114.00	118.73		118.90	0.006695	3.32	218.98	101.34	0.40
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005342	2.91	80.02	142.24	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.96	168.75	170.36		170.45	0.004835	2.76	86.21	151.06	0.46
RIVER-1	Reach-1	325.*	Max WS	162.87	168.50	170.09		170.18	0.005796	2.99	88.10	159.31	0.50
RIVER-1	Reach-1	324.5*	Max WS	166.77	168.25	169.78		169.89	0.006614	3.15	89.92	182.18	0.54
RIVER-1	Reach-1	324	Max WS	165.95	168.00	169.54		169.60	0.004552	2.66	112.08	200.15	0.45
RIVER-1	Reach-1	323.*	Max WS	166.07	167.02	169.04		169.25	0.007059	3.93	63.34	155.14	0.58
RIVER-1	Reach-1	322	Max WS	168.52	166.04	168.21	168.01	168.60	0.012266	5.06	37.33	53.51	0.75
RIVER-1	Reach-1	320	Max WS	191.74	166.00	167.55		167.61	0.006529	3.28	129.91	254.07	0.54
RIVER-1	Reach-1	319.*	Max WS	192.00	166.00	167.36		167.39	0.002597	1.76	163.99	370.83	0.33
RIVER-1	Reach-1	318	Max WS	192.08	166.00	167.18		167.21	0.002618	1.49	162.18	505.44	0.32
RIVER-1	Reach-1	317.*	Max WS	192.74	165.50	166.95		166.98	0.002436	1.39	146.11	373.85	0.30
RIVER-1	Reach-1	316	Max WS	193.71	165.00	166.45		166.52	0.007493	2.10	92.36	175.30	0.51
RIVER-1	Reach-1	315.*	Max WS	196.71	164.50	165.81		165.87	0.005622	2.04	96.52	154.15	0.45
RIVER-1	Reach-1	314	Max WS	199.84	164.00	165.37		165.42	0.002637	2.00	133.40	239.39	0.34
RIVER-1	Reach-1	313.*	Max WS	201.71	163.50	164.99		165.08	0.004858	2.69	114.49	273.02	0.46
RIVER-1	Reach-1	312	Max WS	203.68	163.00	164.67		164.71	0.003184	2.11	182.31	355.21	0.37
RIVER-1	Reach-1	311.*	Max WS	205.83	162.50	164.16		164.26	0.007144	3.14	112.83	230.13	0.55
RIVER-1	Reach-1	310	Max WS	208.19	162.00	163.77		163.81	0.002278	2.07	171.39	232.16	0.32
RIVER-1	Reach-1	309.*	Max WS	210.16	161.26	163.21		163.40	0.008957	3.59	84.27	260.55	0.62
RIVER-1	Reach-1	308	Max WS	212.25	160.51	162.82		162.86	0.001676	1.82	158.91	165.89	0.28
RIVER-1	Reach-1	307.*	Max WS	213.25	159.76	162.56		162.68	0.004478	2.86	96.50	299.06	0.45
RIVER-1	Reach-1	306	Max WS	214.40	159.00	162.18		162.36	0.007544	3.53	103.00	570.31	0.58
RIVER-1	Reach-1	305.*	Max WS	215.64	159.00	161.66		161.80	0.006680	3.17	99.11	497.17	0.54
RIVER-1	Reach-1	304	Max WS	214.72	159.00	161.40		161.42	0.001408	1.58	272.61	692.24	0.25
RIVER-1	Reach-1	303.*	Max WS	214.50	158.75	161.28		161.32	0.001394	1.93	243.89	661.89	0.26
RIVER-1	Reach-1	302	Max WS	215.81	158.50	161.14		161.22	0.002243	2.88	202.22	648.07	0.35
RIVER-1	Reach-1	301.*	Max WS	217.40	158.25	160.95		161.02	0.002118	2.70	170.35	269.66	0.34
RIVER-1	Reach-1	300	Max WS	218.60	158.00	160.78		160.84	0.002098	2.55	176.29	260.03	0.33
RIVER-1	Reach-1	299.*	Max WS	217.85	158.31	160.59		160.66	0.002781	2.92	153.69	205.70	0.38

RIVER-1	Reach-1	298	Max WS	213.51	158.62	160.42		160.46	0.002157	2.48	172.08	183.48	0.33
RIVER-1	Reach-1	297.*	Max WS	208.06	158.31	160.28		160.30	0.001067	1.72	258.01	354.10	0.23
RIVER-1	Reach-1	296	Max WS	207.55	158.00	160.23		160.24	0.000231	0.82	466.65	450.71	0.11
RIVER-1	Reach-1	295.*	Max WS	206.83	158.01	160.20		160.21	0.000391	1.06	352.22	387.04	0.14
RIVER-1	Reach-1	294	Max WS	217.52	158.01	160.16		160.17	0.000399	1.06	321.67	323.42	0.14
RIVER-1	Reach-1	293.*	Max WS	217.41	157.51	160.12		160.13	0.000360	1.12	295.78	217.58	0.14
RIVER-1	Reach-1	292	Max WS	217.23	157.00	160.08		160.09	0.000416	1.35	254.09	152.13	0.15
RIVER-1	Reach-1	291.5	Max WS	217.22	157.00	159.95		160.05	0.002202	3.00	100.09	66.97	0.35
RIVER-1	Reach-1	290.62	Max WS	217.21	157.00	159.72	158.43	159.84	0.002228	2.84	76.56	36.31	0.34
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	217.01	157.00	158.97		159.25	0.007128	4.24	51.13	31.84	0.59
RIVER-1	Reach-1	288.66*	Max WS	216.68	156.50	158.51		158.79	0.008997	4.23	51.29	43.15	0.65
RIVER-1	Reach-1	288	Max WS	215.06	156.00	158.29		158.30	0.000366	1.05	399.37	427.10	0.14
RIVER-1	Reach-1	287.*	Max WS	214.74	156.00	158.25		158.26	0.000548	1.30	335.92	386.63	0.17
RIVER-1	Reach-1	286	Max WS	214.69	156.00	158.19		158.21	0.000633	1.41	307.05	331.65	0.18
RIVER-1	Reach-1	285.*	Max WS	214.88	155.50	158.02		158.16	0.003277	3.03	96.02	155.17	0.41
RIVER-1	Reach-1	284	Max WS	215.12	155.00	157.73		157.86	0.003322	2.93	73.33	45.22	0.41
RIVER-1	Reach-1	283.*	Max WS	215.53	154.75	157.36		157.53	0.003883	3.38	75.19	88.20	0.45
RIVER-1	Reach-1	282	Max WS	215.92	154.50	157.10		157.25	0.003545	3.69	104.83	138.12	0.43
RIVER-1	Reach-1	281.*	Max WS	216.45	154.25	156.76		156.93	0.003567	3.63	90.74	109.36	0.43
RIVER-1	Reach-1	280	Max WS	216.95	154.00	156.34		156.56	0.004431	3.84	70.67	102.00	0.48
RIVER-1	Reach-1	279.*	Max WS	217.46	153.25	155.95		156.14	0.003913	3.55	65.24	58.21	0.45
RIVER-1	Reach-1	278	Max WS	217.97	152.50	155.59		155.78	0.003615	3.47	65.37	44.32	0.43
RIVER-1	Reach-1	277.*	Max WS	233.43	152.45	155.10		155.34	0.005215	3.93	64.91	68.57	0.52
RIVER-1	Reach-1	276	Max WS	233.79	152.40	154.63		154.87	0.005754	4.15	76.01	99.20	0.54
RIVER-1	Reach-1	275.*	Max WS	234.13	151.90	154.32		154.40	0.003093	2.23	114.38	140.44	0.34
RIVER-1	Reach-1	274	Max WS	234.32	151.40	154.06		154.11	0.003171	1.75	136.32	214.37	0.30
RIVER-1	Reach-1	273.*	Max WS	234.05	151.30	153.86		153.89	0.001825	1.45	175.85	230.61	0.23
RIVER-1	Reach-1	272	Max WS	234.21	151.20	153.76		153.78	0.000672	1.01	263.81	245.73	0.15
RIVER-1	Reach-1	271.*	Max WS	234.28	150.85	153.66		153.68	0.001497	1.32	187.30	247.16	0.21
RIVER-1	Reach-1	270	Max WS	234.41	150.50	153.24		153.32	0.006107	2.30	102.06	103.50	0.41
RIVER-1	Reach-1	269.*	Max WS	234.85	150.12	152.74		152.82	0.003956	2.29	102.40	75.00	0.35
RIVER-1	Reach-1	268	Max WS	234.82	149.75	152.23		152.39	0.004793	3.26	72.08	35.20	0.40
RIVER-1	Reach-1	267.265*	Max WS	234.81	149.43	151.88		152.06	0.004380	3.39	69.33	35.07	0.42
RIVER-1	Reach-1	266.53	Max WS	234.79	149.10	151.60	150.59	151.78	0.003500	3.38	69.37	35.51	0.43
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	234.78	148.65	151.01		151.22	0.004398	3.68	63.77	34.13	0.47
RIVER-1	Reach-1	264.033*	Max WS	234.76	148.24	150.60		150.80	0.006594	3.65	64.31	42.87	0.53
RIVER-1	Reach-1	263.016*	Max WS	234.61	147.84	150.21		150.35	0.006360	3.12	88.49	120.41	0.47
RIVER-1	Reach-1	262	Max WS	234.54	147.43	150.00		150.03	0.001391	1.55	199.10	207.16	0.21
RIVER-1	Reach-1	261.*	Max WS	234.93	146.71	149.23		149.42	0.010696	3.51	68.68	61.28	0.56
RIVER-1	Reach-1	260	Max WS	235.30	146.00	148.60		148.66	0.003582	2.27	134.91	171.05	0.33
RIVER-1	Reach-1	259.*	Max WS	235.35	146.00	148.04		148.21	0.009369	3.45	74.39	84.18	0.53
RIVER-1	Reach-1	258	Max WS	235.41	146.00	147.72		147.77	0.003259	2.06	146.98	182.51	0.31
RIVER-1	Reach-1	257.*	Max WS	235.63	145.50	147.46		147.51	0.003161	2.26	151.89	204.67	0.32
RIVER-1	Reach-1	256	Max WS	235.85	145.00	147.05		147.15	0.006584	3.42	130.77	276.21	0.46
RIVER-1	Reach-1	255.*	Max WS	245.76	144.50	146.51		146.65	0.008255	3.74	103.66	168.26	0.51
RIVER-1	Reach-1	254	Max WS	245.93	144.00	145.90		146.04	0.008326	3.56	89.38	99.76	0.51
RIVER-1	Reach-1	253.*	Max WS	246.10	143.00	145.08		145.29	0.012356	4.24	79.49	109.82	0.62
RIVER-1	Reach-1	252	Max WS	246.23	142.00	144.63		144.69	0.003619	2.61	142.96	181.25	0.34
RIVER-1	Reach-1	251.*	Max WS	246.58	141.75	144.17		144.24	0.004086	2.57	145.66	261.29	0.36
RIVER-1	Reach-1	250	Max WS	246.80	141.50	143.82		143.85	0.002467	1.93	211.80	425.66	0.28
RIVER-1	Reach-1	249.*	Max WS	246.97	141.25	143.57		143.62	0.003399	2.14	177.08	386.91	0.32
RIVER-1	Reach-1	248	Max WS	247.12	141.00	143.26		143.34	0.004029	2.37	142.22	369.61	0.35
RIVER-1	Reach-1	247.*	Max WS	247.31	140.75	142.90		142.94	0.003552	2.11	173.07	292.61	0.33
RIVER-1	Reach-1	246	Max WS	247.65	140.50	142.66		142.68	0.001011	1.31	261.90	276.06	0.18
RIVER-1	Reach-1	245.*	Max WS	247.80	139.75	142.38		142.50	0.005484	3.32	105.45	130.27	0.42
RIVER-1	Reach-1	244	Max WS	247.96	139.00	142.07		142.17	0.005112	3.40	132.28	203.86	0.41
RIVER-1	Reach-1	243.*	Max WS	248.07	139.50	141.84		141.91	0.003942	2.73	134.98	179.77	0.36
RIVER-1	Reach-1	242	Max WS	248.16	140.00	141.63		141.68	0.003523	2.19	158.39	225.47	0.33
RIVER-1	Reach-1	241.*	Max WS	248.37	139.50	141.31		141.36	0.004239	2.38	148.05	215.74	0.36
RIVER-1	Reach-1	240	Max WS	248.57	139.00	141.02		141.06	0.003041	2.20	150.70	165.94	0.31
RIVER-1	Reach-1	239.*	Max WS	248.80	138.50	140.74		140.78	0.003167	1.97	163.66	226.87	0.31
RIVER-1	Reach-1	238	Max WS	248.79	138.00	140.37		140.43	0.004860	2.13	149.63	242.39	0.37
RIVER-1	Reach-1	237.25*	Max WS	233.12	137.62	140.06		140.11	0.003930	2.05	154.77	259.13	0.34
RIVER-1	Reach-1	236.5	Max WS	248.75	137.25	139.63		139.72	0.007772	2.87	127.91	281.22	0.47
RIVER-1	Reach-1	235.85	Max WS	248.72	136.60	139.16	138.15	139.35	0.003660	3.52	70.76	35.34	0.44
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	248.72	136.10	139.04		139.17	0.002197	2.94	84.61	37.62	0.35

RIVER-1	Reach-1	234.153*	Max WS	248.69	135.73	138.85	139.03	0.003245	3.42	75.70	84.38	0.39
RIVER-1	Reach-1	233.076*	Max WS	248.68	135.37	138.65	138.86	0.004961	3.92	94.06	229.02	0.44
RIVER-1	Reach-1	232	Max WS	248.67	135.00	138.25	138.55	0.010890	5.09	104.41	409.35	0.59
RIVER-1	Reach-1	231.*	Max WS	248.42	135.00	137.93	138.00	0.003611	2.85	186.98	442.03	0.35
RIVER-1	Reach-1	230	Max WS	248.32	135.00	137.84	137.85	0.000501	1.09	401.78	500.14	0.13
RIVER-1	Reach-1	229.*	Max WS	259.44	134.50	137.76	137.78	0.000804	1.49	333.79	450.41	0.17
RIVER-1	Reach-1	228	Max WS	259.65	134.00	137.64	137.67	0.001313	2.01	270.23	428.15	0.21
RIVER-1	Reach-1	227.*	Max WS	259.82	133.85	137.51	137.55	0.001563	1.98	240.58	361.49	0.23
RIVER-1	Reach-1	226	Max WS	260.02	133.70	137.19	137.27	0.005588	2.89	149.50	306.11	0.41
RIVER-1	Reach-1	225.*	Max WS	260.14	133.48	136.85	136.95	0.005507	3.21	143.79	288.72	0.41
RIVER-1	Reach-1	224	Max WS	260.26	133.25	136.53	136.64	0.005542	3.53	142.92	278.17	0.42
RIVER-1	Reach-1	223.*	Max WS	260.40	133.12	136.17	136.26	0.005458	3.48	146.98	272.83	0.42
RIVER-1	Reach-1	222	Max WS	260.56	133.00	135.91	135.96	0.003276	2.76	179.71	272.63	0.33
RIVER-1	Reach-1	221.*	Max WS	260.71	132.70	135.70	135.77	0.003446	2.94	176.86	286.72	0.34
RIVER-1	Reach-1	220	Max WS	260.84	132.40	135.39	135.52	0.006036	3.89	143.59	309.54	0.45
RIVER-1	Reach-1	219.*	Max WS	260.75	131.80	135.21	135.35	0.004609	3.71	139.39	286.81	0.40
RIVER-1	Reach-1	218	Max WS	260.78	131.20	135.18	135.21	0.000884	1.81	274.87	345.75	0.18
RIVER-1	Reach-1	217.*	Max WS	260.98	131.98	135.10	135.12	0.001066	1.75	260.84	325.90	0.19
RIVER-1	Reach-1	216	Max WS	261.16	132.75	134.99	135.01	0.001520	1.69	235.37	306.49	0.22
RIVER-1	Reach-1	215.*	Max WS	276.89	132.62	134.74	134.84	0.004894	2.91	141.75	239.02	0.40
RIVER-1	Reach-1	214	Max WS	276.91	132.50	134.48	134.54	0.003435	2.28	173.41	286.17	0.33
RIVER-1	Reach-1	213.*	Max WS	310.06	131.88	134.23	134.30	0.002738	2.64	188.86	218.69	0.34
RIVER-1	Reach-1	212	Max WS	309.99	131.25	134.07	134.13	0.002200	3.07	204.45	179.85	0.35
RIVER-1	Reach-1	211.065*	Max WS	309.97	130.32	133.19	133.62	0.012270	5.24	59.19	28.49	0.64
RIVER-1	Reach-1	210.13	Max WS	309.96	129.39	132.72	133.00	0.001016	4.23	73.33	38.24	0.41
RIVER-1	Reach-1	209.23		Culvert								
RIVER-1	Reach-1	208.43	Max WS	309.96	128.67	132.57	132.72	0.000455	3.14	98.75	63.69	0.28
RIVER-1	Reach-1	205.91	Max WS	309.93	129.85	132.28	132.61	0.002588	4.57	67.76	35.68	0.58
RIVER-1	Reach-1	205.49	Max WS	309.93	129.75	132.18	132.50	0.002599	4.57	67.80	35.86	0.59
RIVER-1	Reach-1	204.965*	Max WS	309.92	129.62	132.05	132.37	0.002590	4.56	68.04	36.10	0.58
RIVER-1	Reach-1	204.44	Max WS	309.89	129.49	131.92	132.23	0.002574	4.53	68.34	36.35	0.58
RIVER-1	Reach-1	203.626*	Max WS	309.88	129.29	131.71	132.03	0.002572	4.52	68.53	36.61	0.58
RIVER-1	Reach-1	202.813*	Max WS	309.88	129.08	131.52	131.83	0.002494	4.46	69.46	37.02	0.57
RIVER-1	Reach-1	202	Max WS	309.87	128.88	131.32	131.63	0.002450	4.42	70.09	37.38	0.57
RIVER-1	Reach-1	201.36	Max WS	309.85	128.72	131.17	131.47	0.002462	4.44	69.73	37.01	0.57
RIVER-1	Reach-1	200.405*	Max WS	309.85	128.48	130.94	131.24	0.002411	4.42	70.16	37.00	0.57
RIVER-1	Reach-1	199.451*	Max WS	309.84	128.24	130.73	131.02	0.002328	4.37	70.97	37.07	0.56
RIVER-1	Reach-1	198.497*	Max WS	309.79	128.00	130.52	130.81	0.002209	4.29	72.20	37.20	0.54
RIVER-1	Reach-1	197.542*	Max WS	309.71	127.76	130.34	130.61	0.002044	4.18	74.12	37.47	0.52
RIVER-1	Reach-1	196.588*	Max WS	225.40	127.52	130.23	130.36	0.000902	2.86	78.94	38.23	0.35
RIVER-1	Reach-1	195.634*	Max WS	224.23	127.28	130.17	130.28	0.000702	2.61	85.87	39.35	0.31
RIVER-1	Reach-1	194.68*	Max WS	222.95	127.04	130.13	130.22	0.000543	2.38	93.53	40.52	0.28
RIVER-1	Reach-1	193.725*	Max WS	221.55	126.81	130.10	130.17	0.000426	2.18	101.40	41.70	0.25
RIVER-1	Reach-1	192.771*	Max WS	219.99	126.57	130.07	130.13	0.000331	2.00	110.25	42.99	0.22
RIVER-1	Reach-1	191.817*	Max WS	219.95	126.33	130.05	130.10	0.000263	1.84	119.55	44.27	0.20
RIVER-1	Reach-1	190.862*	Max WS	218.15	126.09	130.03	130.08	0.000207	1.69	129.33	45.58	0.18
RIVER-1	Reach-1	189.908*	Max WS	218.07	125.85	130.02	130.06	0.000168	1.56	139.47	46.87	0.16
RIVER-1	Reach-1	188.954*	Max WS	218.03	125.61	130.01	130.04	0.000136	1.45	150.06	48.19	0.15
RIVER-1	Reach-1	188	Max WS	215.93	125.37	130.00	130.03	0.000110	1.34	160.92	49.48	0.13
RIVER-1	Reach-1	187.7	Max WS	543.99	125.29	129.70	129.87	0.000638	3.35	162.17	46.40	0.32
RIVER-1	Reach-1	187.65	Max WS	543.98	125.27	129.73	129.87	0.000464	2.97	185.62	52.41	0.28
RIVER-1	Reach-1	187.2	Max WS	543.28	125.15	129.76	129.84	0.000246	2.28	241.16	62.93	0.20
RIVER-1	Reach-1	187.15	Max WS	543.28	125.13	129.76	129.84	0.000259	2.29	237.38	62.20	0.21
RIVER-1	Reach-1	187	Max WS	543.27	125.09	129.77	129.84	0.000207	2.06	263.61	68.80	0.19
RIVER-1	Reach-1	186.81	Max WS	542.68	123.29	129.58	129.85	0.000420	4.15	130.84	72.22	0.29
RIVER-1	Reach-1	186.80		Culvert								
RIVER-1	Reach-1	185.39	Max WS	541.77	122.78	129.44	129.65	0.000309	3.70	146.54	48.84	0.25
RIVER-1	Reach-1	184.5	Max WS	542.54	126.00	129.54	129.56	0.000810	2.02	541.72	399.49	0.22
RIVER-1	Reach-1	184	Max WS	541.77	126.00	129.48	129.51	0.000770	2.11	529.30	391.28	0.22
RIVER-1	Reach-1	183.*	Max WS	547.98	126.00	129.34	129.44	0.002785	3.57	276.33	220.09	0.36
RIVER-1	Reach-1	182	Max WS	547.54	126.00	129.23	129.29	0.001871	2.67	312.04	206.22	0.27
RIVER-1	Reach-1	181.*	Max WS	549.34	126.00	129.00	129.08	0.002657	2.95	282.14	218.16	0.32
RIVER-1	Reach-1	180	Max WS	550.49	126.00	128.74	128.81	0.002971	2.85	305.77	303.12	0.33
RIVER-1	Reach-1	179.*	Max WS	591.90	125.00	128.48	128.54	0.002625	2.88	357.75	376.27	0.31
RIVER-1	Reach-1	178	Max WS	593.28	124.00	128.34	128.37	0.000944	1.83	537.51	442.52	0.19
RIVER-1	Reach-1	177.*	Max WS	596.09	124.00	128.15	128.19	0.001541	2.38	461.84	453.72	0.24
RIVER-1	Reach-1	176	Max WS	599.04	124.00	127.78	127.85	0.003374	3.33	354.71	449.19	0.35
RIVER-1	Reach-1	175.*	Max WS	606.53	123.50	127.51	127.61	0.004178	3.70	329.29	461.92	0.39
RIVER-1	Reach-1	174	Max WS	605.33	123.00	127.27	127.35	0.003327	3.33	379.85	569.08	0.34

RIVER-1	Reach-1	173.*	Max WS	603.33	123.50	127.16	127.19	0.001826	2.37	510.79	647.26	0.25
RIVER-1	Reach-1	172	Max WS	603.09	124.00	127.12	127.13	0.000572	1.29	797.43	749.03	0.14
RIVER-1	Reach-1	171.*	Max WS	603.03	124.00	127.03	127.05	0.000871	1.56	712.67	787.11	0.17
RIVER-1	Reach-1	170	Max WS	602.47	124.00	126.90	126.92	0.001328	1.85	594.89	690.70	0.21
RIVER-1	Reach-1	169.*	Max WS	602.62	123.50	126.80	126.84	0.002189	2.53	524.79	797.14	0.28
RIVER-1	Reach-1	168	Max WS	602.84	123.00	126.69	126.72	0.001959	2.48	489.64	609.85	0.26
RIVER-1	Reach-1	167.*	Max WS	602.79	122.50	126.57	126.60	0.001539	2.38	551.07	701.69	0.24
RIVER-1	Reach-1	166	Max WS	603.33	122.00	126.50	126.52	0.000995	2.01	681.44	855.24	0.19
RIVER-1	Reach-1	165.*	Max WS	602.51	121.00	126.22	126.26	0.001942	2.76	575.70	996.65	0.26
RIVER-1	Reach-1	164	Max WS	603.51	120.00	125.91	125.93	0.001524	2.22	585.78	774.58	0.22
RIVER-1	Reach-1	163.*	Max WS	604.59	120.00	125.75	125.80	0.002216	2.98	511.45	838.52	0.27
RIVER-1	Reach-1	162	Max WS	605.12	120.00	125.40	125.61	0.005575	4.87	316.14	742.72	0.44
RIVER-1	Reach-1	161.*	Max WS	602.91	120.25	125.09	125.19	0.002889	3.38	399.85	693.44	0.33
RIVER-1	Reach-1	160	Max WS	602.57	120.50	124.95	124.98	0.001061	1.97	597.45	720.29	0.20
RIVER-1	Reach-1	159.*	Max WS	602.36	120.25	124.85	124.88	0.000986	1.86	602.29	744.33	0.19
RIVER-1	Reach-1	158	Max WS	602.40	120.00	124.76	124.79	0.000872	1.70	629.64	771.63	0.18
RIVER-1	Reach-1	157.*	Max WS	602.76	119.50	124.68	124.72	0.001285	2.23	546.05	778.65	0.22
RIVER-1	Reach-1	156	Max WS	602.20	119.00	124.49	124.62	0.003585	3.86	374.72	750.95	0.36
RIVER-1	Reach-1	155.*	Max WS	601.67	119.00	124.20	124.28	0.002557	3.26	456.73	788.57	0.30
RIVER-1	Reach-1	154	Max WS	617.06	119.00	124.02	124.04	0.001228	2.22	632.57	802.06	0.20
RIVER-1	Reach-1	153.*	Max WS	630.06	119.00	123.92	123.95	0.001174	2.21	662.54	889.19	0.21
RIVER-1	Reach-1	152	Max WS	630.66	119.00	123.83	123.86	0.001034	2.00	698.32	923.30	0.20
RIVER-1	Reach-1	151.*	Max WS	648.00	119.00	123.70	123.73	0.001401	2.09	648.87	930.53	0.22
RIVER-1	Reach-1	150	Max WS	646.96	119.00	123.43	123.48	0.003149	2.60	491.81	866.80	0.32
RIVER-1	Reach-1	149.*	Max WS	651.51	118.50	123.16	123.21	0.002497	2.78	499.96	813.22	0.30
RIVER-1	Reach-1	148	Max WS	655.98	118.00	122.96	123.00	0.001735	2.58	556.94	786.30	0.25
RIVER-1	Reach-1	147.*	Max WS	659.78	117.92	122.81	122.85	0.002106	2.55	581.60	998.74	0.27
RIVER-1	Reach-1	146	Max WS	662.96	117.83	122.60	122.65	0.003112	2.66	543.84	1061.88	0.32
RIVER-1	Reach-1	145.*	Max WS	665.55	117.92	122.39	122.43	0.002100	2.07	551.83	1060.85	0.26
RIVER-1	Reach-1	144	Max WS	668.22	118.00	122.20	122.24	0.002833	1.86	520.78	1124.74	0.29
RIVER-1	Reach-1	143.*	Max WS	671.33	117.50	122.04	122.07	0.001068	1.74	676.44	1006.69	0.20
RIVER-1	Reach-1	142	Max WS	674.89	117.00	121.95	121.97	0.001111	2.16	740.57	958.97	0.20
RIVER-1	Reach-1	141.*	Max WS	677.44	117.00	121.82	121.85	0.001648	2.60	657.31	999.52	0.24
RIVER-1	Reach-1	140	Max WS	679.66	117.00	121.64	121.69	0.002189	2.94	608.13	1061.37	0.27
RIVER-1	Reach-1	139.*	Max WS	681.08	117.50	121.52	121.55	0.001518	2.30	678.28	1000.98	0.24
RIVER-1	Reach-1	138	Max WS	683.03	118.00	121.45	121.46	0.000802	1.60	832.59	971.22	0.17
RIVER-1	Reach-1	137.*	Max WS	685.59	118.00	121.36	121.38	0.001050	1.72	761.92	999.65	0.20
RIVER-1	Reach-1	136	Max WS	687.55	118.00	121.25	121.28	0.001681	1.98	663.03	1112.35	0.24
RIVER-1	Reach-1	135.*	Max WS	690.14	117.50	121.15	121.17	0.001230	1.61	697.13	966.57	0.20
RIVER-1	Reach-1	134	Max WS	692.90	117.00	121.07	121.09	0.000879	1.30	777.71	908.33	0.17
RIVER-1	Reach-1	133.*	Max WS	696.93	117.00	120.97	120.99	0.001104	1.43	667.71	778.43	0.19
RIVER-1	Reach-1	132	Max WS	701.04	117.00	120.86	120.88	0.001022	1.36	635.25	632.16	0.18
RIVER-1	Reach-1	131.*	Max WS	703.10	117.00	120.77	120.79	0.001354	1.48	623.84	835.83	0.21
RIVER-1	Reach-1	130	Max WS	705.34	117.00	120.67	120.69	0.001250	1.36	677.48	813.94	0.20
RIVER-1	Reach-1	129.*	Max WS	706.41	117.00	120.57	120.60	0.001795	1.58	602.09	836.39	0.23
RIVER-1	Reach-1	128	Max WS	707.30	117.00	120.32	120.40	0.005295	2.43	397.60	863.17	0.39
RIVER-1	Reach-1	127.*	Max WS	707.09	116.71	120.11	120.16	0.002774	2.25	484.81	707.00	0.30
RIVER-1	Reach-1	126	Max WS	706.86	116.42	120.05	120.07	0.001381	2.02	678.92	787.08	0.22
RIVER-1	Reach-1	125.*	Max WS	706.84	116.21	120.03	120.05	0.001259	1.77	708.22	832.40	0.21
RIVER-1	Reach-1	124	Max WS	706.81	116.00	120.01	120.02	0.000944	1.41	791.84	873.82	0.18
RIVER-1	Reach-1	123.*	Max WS	706.70	116.18	119.95	119.97	0.001091	1.62	756.71	897.94	0.19
RIVER-1	Reach-1	122	Max WS	706.58	116.35	119.89	119.91	0.001035	1.60	798.48	980.90	0.19
RIVER-1	Reach-1	121.*	Max WS	785.93	115.68	119.73	119.76	0.001918	2.11	600.91	644.82	0.26
RIVER-1	Reach-1	120	Max WS	785.67	115.00	119.58	119.61	0.001200	2.12	675.27	635.84	0.21
RIVER-1	Reach-1	119.*	Max WS	785.60	114.50	119.45	119.51	0.001850	2.90	577.76	601.33	0.29
RIVER-1	Reach-1	118	Max WS	780.44	114.00	119.12	119.36	0.004621	4.96	376.58	551.59	0.51
RIVER-1	Reach-1	117.*	Max WS	774.79	114.50	119.02	119.14	0.002058	3.03	424.96	520.65	0.34
RIVER-1	Reach-1	116	Max WS	754.03	115.00	118.90	118.98	0.002293	2.52	411.44	398.82	0.34
RIVER-1	Reach-1	115.*	Max WS	609.04	114.50	118.79	118.83	0.001248	1.66	444.19	440.66	0.24
RIVER-1	Reach-1	114	Max WS	537.74	114.00	118.73	118.75	0.000637	1.13	534.58	500.46	0.17
RIVER-1	Reach-2	112.05	Max WS	1265.61	112.00	118.73	118.83	0.001544	2.69	640.19	566.14	0.30
RIVER-1	Reach-2	112	Max WS	1265.61	112.00	118.72	118.82	0.001565	2.71	635.39	563.95	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1260.98	113.00	118.61	118.70	0.001855	2.54	630.79	542.75	0.32
RIVER-1	Reach-2	110	Max WS	1219.00	114.00	118.54	118.59	0.001412	2.04	817.71	665.77	0.27
RIVER-1	Reach-2	109.*	Max WS	1198.36	113.50	118.34	118.41	0.002382	2.77	697.38	588.73	0.35
RIVER-1	Reach-2	108	Max WS	1193.28	113.00	118.15	118.24	0.001484	3.25	767.58	584.49	0.31
RIVER-1	Reach-2	107.*	Max WS	1192.26	112.00	118.11	118.17	0.001015	2.65	931.41	675.64	0.25
RIVER-1	Reach-2	106	Max WS	1191.84	111.00	118.08	118.12	0.000640	2.42	1120.37	747.99	0.20

RIVER-1	Reach-2	105.*	Max WS	1191.28	110.50	118.03		118.08	0.000793	2.47	1087.23	756.80	0.22
RIVER-1	Reach-2	104	Max WS	1190.68	110.00	117.98		118.04	0.000770	2.82	1084.65	765.46	0.21
RIVER-1	Reach-2	103.*	Max WS	1190.41	110.00	117.97		118.00	0.000761	2.15	1167.48	819.54	0.21
RIVER-1	Reach-2	102	Max WS	1009.79	110.00	117.97		117.99	0.000268	1.73	1433.52	835.72	0.13
RIVER-1	Reach-2	101.*	Max WS	1243.97	110.50	117.94		117.97	0.000421	2.13	1421.96	821.22	0.17
RIVER-1	Reach-2	100	Max WS	1243.20	111.00	117.91		117.94	0.000432	2.12	1412.76	808.48	0.17
RIVER-1	Reach-2	99.*	Max WS	1244.46	111.00	117.83		117.86	0.000420	2.12	1414.16	808.51	0.17
RIVER-1	Reach-2	98	Max WS	1245.85	111.00	117.76		117.79	0.000407	2.12	1418.00	811.91	0.17
RIVER-1	Reach-2	97.*	Max WS	1246.93	110.50	117.72		117.74	0.000398	2.11	1413.44	791.68	0.16
RIVER-1	Reach-2	96	Max WS	1248.08	110.00	117.67		117.70	0.000391	2.09	1407.78	770.89	0.16
RIVER-1	Reach-2	95.*	Max WS	1249.06	109.50	117.63		117.66	0.000402	2.14	1381.33	777.05	0.17
RIVER-1	Reach-2	94	Max WS	1250.54	109.00	117.59		117.63	0.000411	2.19	1354.31	781.55	0.17
RIVER-1	Reach-2	93.*	Max WS	1252.04	109.00	117.55		117.59	0.000388	2.17	1309.35	704.16	0.16
RIVER-1	Reach-2	92	Max WS	1253.15	109.00	117.51		117.55	0.000382	2.23	1213.72	597.68	0.16
RIVER-1	Reach-2	91.*	Max WS	1254.73	108.50	117.48		117.51	0.000358	2.14	1249.07	604.66	0.16
RIVER-1	Reach-2	90	Max WS	1256.67	108.00	117.45		117.48	0.000310	2.00	1482.15	1183.76	0.15
RIVER-1	Reach-2	89.*	Max WS	1258.51	108.50	117.42		117.45	0.000301	2.02	1427.51	1104.69	0.15
RIVER-1	Reach-2	88	Max WS	1260.15	109.00	117.39		117.42	0.000287	2.01	1415.83	887.63	0.14
RIVER-1	Reach-2	87.*	Max WS	1261.54	108.00	117.38		117.40	0.000148	1.59	1896.49	1216.46	0.11
RIVER-1	Reach-2	86	Max WS	1262.91	107.00	117.37		117.39	0.000074	1.21	2496.89	1314.24	0.08
RIVER-1	Reach-2	85.*	Max WS	1263.59	107.50	117.37		117.38	0.000077	1.13	2676.10	1358.45	0.08
RIVER-1	Reach-2	84	Max WS	1264.28	108.00	117.37		117.38	0.000071	0.97	2961.33	1407.54	0.07
RIVER-1	Reach-2	83.*	Max WS	1283.29	108.50	117.36		117.37	0.000104	1.17	2541.85	1318.53	0.09
RIVER-1	Reach-2	82	Max WS	1283.26	109.00	117.35		117.36	0.000150	1.34	2241.45	1252.04	0.10
RIVER-1	Reach-2	81.56	Max WS	1283.25	108.22	117.27	113.19	117.38	0.000940	2.71	679.47	1347.02	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1280.05	108.96	115.99		116.43	0.006480	5.31	240.94	70.66	0.51
RIVER-1	Reach-2	80.95	Max WS	1281.09	108.83	116.03	112.99	116.29	0.001531	4.06	315.77	64.43	0.32
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1271.82	108.67	115.96		116.23	0.001658	4.13	308.00	65.93	0.34
RIVER-1	Reach-2	79.3849*	Max WS	1266.58	108.33	115.87		116.06	0.001287	3.81	632.62	608.07	0.30
RIVER-1	Reach-2	78.39	Max WS	1256.97	108.00	115.81		115.88	0.000599	2.88	821.72	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1257.57	107.80	115.81		115.83	0.000262	1.90	1394.64	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1253.78	107.60	115.79		115.82	0.000307	2.04	1479.46	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1246.65	107.40	115.74		115.81	0.000559	2.72	1146.42	911.78	0.20
RIVER-1	Reach-2	75.86	Max WS	1237.82	107.22	115.57	112.17	115.78	0.001107	3.84	511.86	438.83	0.28
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1242.29	106.63	115.58		115.76	0.001210	3.60	504.12	399.31	0.29
RIVER-1	Reach-2	74.7*	Max WS	1243.53	106.82	115.60		115.65	0.000454	2.02	1164.02	826.68	0.17
RIVER-1	Reach-2	74	Max WS	1244.17	107.00	115.60		115.61	0.000223	1.25	1949.77	1250.67	0.12
RIVER-1	Reach-2	73.*	Max WS	1242.76	107.43	115.58		115.59	0.000152	1.17	2267.90	1312.49	0.10
RIVER-1	Reach-2	72	Max WS	1241.99	107.86	115.57		115.58	0.000116	1.13	2572.67	1373.69	0.09
RIVER-1	Reach-2	71.*	Max WS	1575.37	107.44	115.45		115.58	0.001010	3.09	723.90	446.73	0.24
RIVER-1	Reach-2	70	Max WS	1575.37	107.03	115.35		115.47	0.000961	2.86	553.09	102.32	0.21
RIVER-1	Reach-2	69.*	Max WS	1575.39	107.35	115.21		115.36	0.001286	3.18	495.93	94.18	0.24
RIVER-1	Reach-2	68	Max WS	1575.36	107.68	115.03		115.22	0.001658	3.51	449.35	89.15	0.28
RIVER-1	Reach-2	67	Max WS	1575.33	107.40	114.83		115.04	0.002084	3.91	460.61	134.89	0.31
RIVER-1	Reach-2	66	Max WS	1575.30	107.40	114.57		114.82	0.002563	4.22	425.44	133.06	0.34
RIVER-1	Reach-2	65.*	Max WS	1575.28	107.20	114.38		114.59	0.001869	3.74	469.42	172.70	0.32
RIVER-1	Reach-2	64	Max WS	1575.27	107.00	114.22		114.42	0.001595	3.54	456.55	183.33	0.32
RIVER-1	Reach-2	63.*	Max WS	1578.27	106.81	114.07		114.26	0.001703	3.49	466.40	219.75	0.33
RIVER-1	Reach-2	62.*	Max WS	1581.27	106.62	113.91		114.09	0.001747	3.40	484.88	193.62	0.33
RIVER-1	Reach-2	61.*	Max WS	1584.26	106.43	113.77		113.93	0.001534	3.25	519.18	205.43	0.31
RIVER-1	Reach-2	60	Max WS	1587.23	106.24	113.66		113.80	0.001203	2.94	586.72	226.20	0.28
RIVER-1	Reach-2	59.*	Max WS	1592.56	106.07	113.56		113.69	0.001027	2.94	653.19	353.25	0.26
RIVER-1	Reach-2	58	Max WS	1597.95	105.90	113.52		113.60	0.000540	2.57	980.98	466.19	0.20
RIVER-1	Reach-2	57.2	Max WS	1602.19	107.05	113.42	110.88	113.56	0.001129	3.35	774.51	412.81	0.28
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1603.89	107.05	113.35		113.51	0.001343	3.57	715.49	395.41	0.30
RIVER-1	Reach-2	56	Max WS	1608.64	105.90	113.29		113.40	0.000697	2.74	810.08	380.95	0.22
RIVER-1	Reach-2	55.*	Max WS	1613.05	105.85	113.26		113.33	0.000582	2.32	957.07	469.38	0.20
RIVER-1	Reach-2	54	Max WS	1617.53	105.80	113.22		113.28	0.000522	2.07	1083.54	557.83	0.19
RIVER-1	Reach-2	53.*	Max WS	1629.27	105.70	113.14		113.20	0.000555	2.16	1028.87	393.00	0.18
RIVER-1	Reach-2	52	Max WS	1641.00	105.60	113.04		113.09	0.000689	2.20	970.26	322.07	0.17
RIVER-1	Reach-2	51.*	Max WS	1646.67	105.57	112.96		113.02	0.000823	2.47	915.88	310.78	0.20
RIVER-1	Reach-2	50.*	Max WS	1652.47	105.54	112.86		112.93	0.000938	2.72	870.06	299.51	0.23
RIVER-1	Reach-2	49.*	Max WS	1658.08	105.50	112.75		112.84	0.001005	2.98	834.55	288.97	0.24
RIVER-1	Reach-2	48	Max WS	1663.76	105.47	112.63		112.74	0.000985	3.28	809.55	279.26	0.26
RIVER-1	Reach-2	47.*	Max WS	1669.53	105.68	112.55		112.64	0.000945	3.10	880.58	314.61	0.25

RIVER-1	Reach-2	46.*	Max WS	1675.18	105.88	112.47		112.54	0.000826	2.86	973.54	349.57	0.24
RIVER-1	Reach-2	45.*	Max WS	1680.81	106.08	112.41		112.46	0.000660	2.59	1092.98	383.64	0.21
RIVER-1	Reach-2	44	Max WS	1686.54	106.29	112.36		112.40	0.000490	2.33	1241.45	424.54	0.19
RIVER-1	Reach-2	43.*	Max WS	1691.88	106.30	112.30		112.35	0.000517	2.43	1186.40	419.55	0.19
RIVER-1	Reach-2	42.*	Max WS	1697.10	106.31	112.24		112.30	0.000546	2.51	1138.53	414.73	0.20
RIVER-1	Reach-2	41.*	Max WS	1702.32	106.32	112.18		112.25	0.000577	2.58	1097.20	409.77	0.20
RIVER-1	Reach-2	40	Max WS	1707.63	106.33	112.12		112.19	0.000606	2.63	1063.15	404.95	0.21
RIVER-1	Reach-2	39.*	Max WS	1707.51	106.17	112.08		112.13	0.000494	2.39	1192.68	439.68	0.19
RIVER-1	Reach-2	38.*	Max WS	1707.50	106.01	112.05		112.09	0.000373	2.10	1373.50	475.89	0.16
RIVER-1	Reach-2	37.*	Max WS	1707.47	105.84	112.02		112.05	0.000263	1.78	1599.18	502.62	0.14
RIVER-1	Reach-2	36	Max WS	1707.45	105.68	111.99		112.03	0.000341	2.03	1452.92	513.70	0.16
RIVER-1	Reach-2	35.22	Max WS	1707.43	104.52	111.70		112.05	0.002013	4.75	359.79	72.64	0.38
RIVER-1	Reach-2	34.82	Max WS	1707.43	104.52	111.60	108.76	111.97	0.002127	4.84	352.81	72.09	0.39
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1707.33	104.30	110.98		111.68	0.006004	6.74	253.19	68.38	0.62
RIVER-1	Reach-2	33.67*	Max WS	1707.14	104.12	110.93		111.37	0.003284	5.32	320.61	79.10	0.47
RIVER-1	Reach-2	33	Max WS	1707.27	103.93	111.02		111.17	0.001065	3.38	815.91	588.57	0.27
RIVER-1	Reach-2	32.*	Max WS	1707.21	103.40	110.92		111.05	0.001060	3.11	853.86	670.51	0.27
RIVER-1	Reach-2	31.*	Max WS	1707.20	102.88	110.77		110.91	0.001472	3.18	806.90	743.96	0.30
RIVER-1	Reach-2	30	Max WS	1707.13	102.35	110.44		110.67	0.003780	3.99	627.12	1036.21	0.46
RIVER-1	Reach-2	29.*	Max WS	1707.10	102.34	110.08		110.33	0.003943	4.25	631.10	951.33	0.47
RIVER-1	Reach-2	28.*	Max WS	1706.95	102.33	109.76		109.98	0.003585	4.26	712.16	896.99	0.46
RIVER-1	Reach-2	27.*	Max WS	1706.83	102.33	109.54		109.69	0.002609	3.87	910.82	964.55	0.40
RIVER-1	Reach-2	26	Max WS	1706.70	102.32	109.40		109.47	0.001571	3.20	1226.93	1064.64	0.31
RIVER-1	Reach-2	25.*	Max WS	1706.59	101.99	109.25		109.34	0.002108	3.53	1136.66	1146.75	0.35
RIVER-1	Reach-2	24.*	Max WS	1706.40	101.66	109.06		109.18	0.002784	3.82	1031.24	1229.49	0.40
RIVER-1	Reach-2	23.*	Max WS	1706.18	101.33	108.88		108.97	0.002415	3.35	1091.63	1070.35	0.37
RIVER-1	Reach-2	22	Max WS	1706.10	101.00	108.74		108.79	0.001870	2.79	1239.81	1119.17	0.32
RIVER-1	Reach-2	21.*	Max WS	1705.95	101.27	108.58		108.63	0.001985	2.91	1202.68	1106.71	0.33
RIVER-1	Reach-2	20.*	Max WS	1705.64	101.54	108.41		108.47	0.002111	3.02	1164.47	1047.38	0.34
RIVER-1	Reach-2	19.*	Max WS	1705.47	101.82	108.21		108.27	0.002340	3.15	1129.34	985.12	0.36
RIVER-1	Reach-2	18	Max WS	1704.99	102.09	108.02		108.08	0.002622	3.34	1105.40	972.89	0.37
RIVER-1	Reach-2	17.*	Max WS	1704.54	101.97	107.83		107.88	0.002294	3.09	1264.45	1227.59	0.35
RIVER-1	Reach-2	16.*	Max WS	1703.88	101.85	107.68		107.71	0.001442	2.53	1478.76	1233.67	0.28
RIVER-1	Reach-2	15.*	Max WS	1703.58	101.73	107.60		107.62	0.000839	1.96	1767.89	1238.56	0.21
RIVER-1	Reach-2	14	Max WS	1703.16	101.61	107.55		107.56	0.000497	1.45	2099.21	1246.14	0.16
RIVER-1	Reach-2	13.*	Max WS	1703.04	101.43	107.51		107.52	0.000407	1.24	2240.24	1252.52	0.15
RIVER-1	Reach-2	12.*	Max WS	1703.01	101.26	107.49		107.49	0.000327	1.20	2384.84	1244.06	0.13
RIVER-1	Reach-2	11.*	Max WS	1702.90	101.08	107.46		107.47	0.000264	1.15	2536.73	1233.65	0.12
RIVER-1	Reach-2	10	Max WS	1702.97	100.90	107.45		107.45	0.000218	1.08	2681.31	1218.62	0.11
RIVER-1	Reach-2	9.*	Max WS	1702.79	100.75	107.42		107.43	0.000369	1.41	2252.30	1199.23	0.14
RIVER-1	Reach-2	8.*	Max WS	1702.72	100.60	107.37		107.39	0.000562	1.86	1877.18	1269.01	0.18
RIVER-1	Reach-2	7.*	Max WS	1702.65	100.45	107.29		107.32	0.000883	2.48	1596.43	1258.82	0.23
RIVER-1	Reach-2	6	Max WS	1702.58	100.30	107.15		107.23	0.001653	3.53	1321.52	1349.04	0.32
RIVER-1	Reach-2	5.*	Max WS	1702.42	100.15	107.00		107.08	0.001588	3.53	1361.77	1474.35	0.31
RIVER-1	Reach-2	4.*	Max WS	1702.34	100.00	106.86		106.94	0.001450	3.42	1438.60	1589.35	0.30
RIVER-1	Reach-2	3.*	Max WS	1702.12	99.85	106.74		106.81	0.001372	3.37	1667.16	2171.95	0.30
RIVER-1	Reach-2	2	Max WS	1702.03	99.70	106.65		106.69	0.000808	2.62	2080.42	2289.00	0.23
RIVER-1	Reach-2	1.*	Max WS	1702.01	99.55	106.55		106.62	0.001284	3.38	1679.96	2250.10	0.29
RIVER-1	Reach-2	0	Max WS	1701.97	99.40	106.40	105.84	106.52	0.001683	3.91	1317.01	1975.30	0.33

Appendix P-9: HEC-RAS Results, Anatolia III – Alternative 'B' Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/14/2010 8:08:45 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	301.37	158.00	162.21		162.21	0.000026	0.29	1038.99	296.39	0.03
RIVER-2	Reach-1	11850.*	Max WS	300.51	157.71	162.21		162.21	0.000026	0.28	1055.80	313.31	0.03
RIVER-2	Reach-1	11800	Max WS	301.35	157.42	162.21		162.21	0.000011	0.19	1546.56	411.04	0.02
RIVER-2	Reach-1	11750.*	Max WS	299.66	156.96	162.21		162.21	0.000011	0.20	1510.02	399.14	0.02
RIVER-2	Reach-1	11700	Max WS	300.50	156.50	162.21		162.21	0.000009	0.19	1543.16	375.56	0.02
RIVER-2	Reach-1	11650.*	Max WS	301.33	156.25	162.21		162.21	0.000010	0.21	1458.57	349.75	0.02
RIVER-2	Reach-1	11600	Max WS	299.66	156.00	162.21		162.21	0.000011	0.21	1409.60	330.16	0.02
RIVER-2	Reach-1	11550.*	Max WS	298.83	155.05	162.21		162.21	0.000011	0.21	1423.83	336.34	0.02
RIVER-2	Reach-1	11500	Max WS	299.64	154.11	162.21		162.21	0.000010	0.21	1433.52	337.51	0.02
RIVER-2	Reach-1	11450.*	Max WS	299.63	154.05	162.21		162.21	0.000010	0.20	1522.29	373.15	0.02
RIVER-2	Reach-1	11400	Max WS	298.82	154.00	162.21		162.21	0.000009	0.18	1622.56	400.99	0.02
RIVER-2	Reach-1	11350.*	Max WS	299.61	154.00	162.21		162.21	0.000007	0.18	1700.50	405.65	0.02
RIVER-2	Reach-1	11300	Max WS	298.02	154.00	162.21		162.21	0.000006	0.16	1866.91	453.52	0.01
RIVER-2	Reach-1	11250.*	Max WS	298.80	154.00	162.21		162.21	0.000005	0.15	2045.43	460.65	0.01
RIVER-2	Reach-1	11200	Max WS	298.79	154.00	162.20		162.21	0.000004	0.13	2236.17	476.87	0.01
RIVER-2	Reach-1	11150.*	Max WS	298.77	153.00	162.20		162.20	0.000003	0.12	2450.37	496.61	0.01
RIVER-2	Reach-1	11100	Max WS	298.76	152.00	162.20		162.20	0.000002	0.11	2661.88	532.52	0.01
RIVER-2	Reach-1	11050.*	Max WS	298.74	152.00	162.20		162.20	0.000002	0.10	2866.03	544.33	0.01
RIVER-2	Reach-1	11000	Max WS	298.01	152.00	162.20		162.20	0.000002	0.10	3128.06	572.49	0.01
RIVER-2	Reach-1	10887.5*	Max WS	298.71	152.00	162.20		162.20	0.000001	0.08	3515.53	582.27	0.01
RIVER-2	Reach-1	10775.*	Max WS	298.69	152.00	162.20		162.20	0.000001	0.07	4032.91	601.95	0.01
RIVER-2	Reach-1	10662.5*	Max WS	297.99	152.00	162.20		162.20	0.000000	0.06	4624.87	637.79	0.00
RIVER-2	Reach-1	10550	Max WS	297.97	152.00	162.20		162.20	0.000000	0.06	5266.74	680.61	0.00
RIVER-2	Reach-1	10490.*	Max WS	298.63	151.60	162.20		162.20	0.000000	0.05	5842.24	783.63	0.00
RIVER-2	Reach-1	10430.*	Max WS	298.58	151.20	162.20		162.20	0.000000	0.05	6381.17	881.15	0.00
RIVER-2	Reach-1	10370.*	Max WS	298.53	150.80	162.20		162.20	0.000000	0.04	6885.99	980.38	0.00
RIVER-2	Reach-1	10310.*	Max WS	297.94	150.40	162.20		162.20	0.000000	0.04	7372.77	1049.46	0.00
RIVER-2	Reach-1	10250	Max WS	297.91	150.00	162.20		162.20	0.000000	0.04	7864.33	1127.38	0.00
RIVER-2	Reach-1	10200.*	Max WS	297.89	150.00	162.20		162.20	0.000000	0.04	7356.37	964.43	0.00
RIVER-2	Reach-1	10150	Max WS	298.41	150.00	162.20		162.20	0.000000	0.04	6864.32	855.24	0.00
RIVER-2	Reach-1	10100.*	Max WS	297.87	150.00	162.20		162.20	0.000000	0.05	6540.89	842.78	0.00
RIVER-2	Reach-1	10050	Max WS	298.36	150.00	162.20		162.20	0.000000	0.05	6317.54	773.36	0.00
RIVER-2	Reach-1	10000.*	Max WS	297.85	150.00	162.20		162.20	0.000000	0.05	6573.53	793.30	0.00
RIVER-2	Reach-1	9950	Max WS	298.33	150.00	162.20		162.20	0.000000	0.04	6844.25	812.42	0.00

RIVER-2	Reach-1	9900.*	Max WS	297.85	150.00	162.20		162.20	0.000000	0.04	7486.40	1036.24	0.00
RIVER-2	Reach-1	9850	Max WS	298.28	150.00	162.20		162.20	0.000000	0.04	8089.57	1197.48	0.00
RIVER-2	Reach-1	9800.*	Max WS	297.82	150.00	162.20		162.20	0.000000	0.04	7876.82	1384.26	0.00
RIVER-2	Reach-1	9750	Max WS	298.23	150.00	162.20		162.20	0.000000	0.04	8169.43	1453.12	0.00
RIVER-2	Reach-1	9675.*	Max WS	297.77	149.36	162.20		162.20	0.000000	0.03	8864.04	1492.50	0.00
RIVER-2	Reach-1	9600	Max WS	298.15	148.73	162.20		162.20	0.000000	0.03	9645.95	1531.69	0.00
RIVER-2	Reach-1	9550.*	Max WS	298.09	148.36	162.20		162.20	0.000000	0.03	11899.26	1675.81	0.00
RIVER-2	Reach-1	9500	Max WS	298.04	148.00	162.20		162.20	0.000000	0.02	14326.19	1726.57	0.00
RIVER-2	Reach-1	9450.*	Max WS	297.72	147.00	162.20		162.20	0.000000	0.02	15323.84	1759.31	0.00
RIVER-2	Reach-1	9400	Max WS	297.99	146.00	162.20		162.20	0.000000	0.02	16659.54	1774.57	0.00
RIVER-2	Reach-1	9350.*	Max WS	297.94	145.51	162.20		162.20	0.000000	0.02	16108.71	1702.71	0.00
RIVER-2	Reach-1	9300	Max WS	297.87	145.02	162.20		162.20	0.000000	0.02	15439.88	1607.28	0.00
RIVER-2	Reach-1	9200.*	Max WS	297.66	144.51	162.20		162.20	0.000000	0.02	14420.58	1430.46	0.00
RIVER-2	Reach-1	9100	Max WS	297.62	144.00	162.20		162.20	0.000000	0.02	13353.10	1247.14	0.00
RIVER-2	Reach-1	9050.*	Max WS	297.60	144.00	162.20		162.20	0.000000	0.02	12949.43	1123.82	0.00
RIVER-2	Reach-1	9000	Max WS	297.59	144.00	162.20		162.20	0.000000	0.02	12623.58	1020.43	0.00
RIVER-2	Reach-1	8900.*	Max WS	297.63	143.08	162.20		162.20	0.000000	0.02	12981.61	993.79	0.00
RIVER-2	Reach-1	8800	Max WS	297.60	142.16	162.20		162.20	0.000000	0.02	13199.78	949.08	0.00
RIVER-2	Reach-1	8700.*	Max WS	297.58	143.70	162.20		162.20	0.000000	0.02	12412.93	979.42	0.00
RIVER-2	Reach-1	8600	Max WS	297.56	145.24	162.20	145.79	162.20	0.000000	0.03	11886.80	987.68	0.00
RIVER-2	Reach-1	8500		Inl Struct									
RIVER-2	Reach-1	8450	Max WS	297.54	140.56	152.38		152.49	0.003336	2.72	109.34	28.84	0.25
RIVER-2	Reach-1	8350	Max WS	298.87	140.09	151.99		152.12	0.004223	2.87	104.17	28.24	0.26
RIVER-2	Reach-1	8250.*	Max WS	300.20	139.60	151.58		151.71	0.004244	2.88	104.35	28.47	0.26
RIVER-2	Reach-1	8150.*	Max WS	301.53	139.11	151.16		151.29	0.004292	2.89	104.45	28.73	0.27
RIVER-2	Reach-1	8050.*	Max WS	302.86	138.62	150.74		150.87	0.004358	2.90	104.49	29.01	0.27
RIVER-2	Reach-1	7950.*	Max WS	304.19	138.13	150.30		150.43	0.004434	2.91	104.51	29.31	0.27
RIVER-2	Reach-1	7850.*	Max WS	305.53	137.64	149.86		149.99	0.004521	2.92	104.57	29.71	0.27
RIVER-2	Reach-1	7750.*	Max WS	306.86	137.15	149.41		149.54	0.004685	2.94	104.50	30.56	0.28
RIVER-2	Reach-1	7650.*	Max WS	308.21	136.66	148.94		149.07	0.004873	2.95	104.39	31.51	0.29
RIVER-2	Reach-1	7550.*	Max WS	309.54	136.17	148.45		148.59	0.004955	2.96	104.50	31.87	0.29
RIVER-2	Reach-1	7450.*	Max WS	310.89	135.68	147.96		148.10	0.005036	2.98	104.45	32.03	0.29
RIVER-2	Reach-1	7350.*	Max WS	312.23	135.19	147.46		147.60	0.005114	2.99	104.36	32.09	0.29
RIVER-2	Reach-1	7250.*	Max WS	313.58	134.70	146.96		147.10	0.005169	3.00	104.36	32.08	0.29
RIVER-2	Reach-1	7150.*	Max WS	314.93	134.21	146.44		146.58	0.005261	3.03	104.07	31.95	0.30
RIVER-2	Reach-1	7050.*	Max WS	316.27	133.72	145.92		146.06	0.005349	3.05	103.79	31.78	0.30
RIVER-2	Reach-1	6950.*	Max WS	317.63	133.23	145.39		145.53	0.005493	3.08	103.12	31.50	0.30
RIVER-2	Reach-1	6850.*	Max WS	318.98	132.74	144.84		144.99	0.005688	3.12	102.13	31.10	0.30
RIVER-2	Reach-1	6750.*	Max WS	320.33	132.25	144.26		144.42	0.006049	3.20	100.22	30.57	0.31
RIVER-2	Reach-1	6650.*	Max WS	321.69	131.76	143.62		143.79	0.006770	3.33	96.69	29.81	0.33
RIVER-2	Reach-1	6550	Max WS	323.05	131.27	142.80		143.01	0.008999	3.67	88.05	28.42	0.37
RIVER-2	Reach-1	6466.66*	Max WS	324.18	132.84	142.09		142.30	0.008123	3.67	88.37	30.36	0.38
RIVER-2	Reach-1	6383.33*	Max WS	325.32	134.40	141.58		141.74	0.005339	3.21	101.33	36.46	0.34
RIVER-2	Reach-1	6300	Max WS	326.45	135.97	141.26		141.40	0.003080	2.99	109.03	31.46	0.28
RIVER-2	Reach-1	6250	Max WS	327.14	136.00	141.02		141.21	0.004489	3.46	94.43	28.81	0.34
RIVER-2	Reach-1	6200	Max WS	327.83	135.00	140.70		140.95	0.005945	4.02	81.60	23.24	0.38
RIVER-2	Reach-1	6000.*	Max WS	330.57	134.50	139.85		140.00	0.003658	3.04	108.86	35.10	0.30
RIVER-2	Reach-1	5800.*	Max WS	333.31	134.00	139.22		139.32	0.003149	2.61	127.86	47.41	0.28
RIVER-2	Reach-1	5600.*	Max WS	336.06	133.50	138.55		138.65	0.003715	2.54	132.49	58.50	0.30
RIVER-2	Reach-1	5400	Max WS	338.80	133.00	135.83		136.37	0.020418	5.89	57.54	25.23	0.69
RIVER-2	Reach-1	5304.54*	Max WS	340.11	132.73	134.86		135.03	0.007771	3.26	104.38	56.29	0.42
RIVER-2	Reach-1	5209.09*	Max WS	341.43	132.45	134.34		134.43	0.005241	2.43	140.66	88.51	0.34
RIVER-2	Reach-1	5113.63*	Max WS	342.75	132.18	133.92		133.98	0.004360	2.03	168.77	121.23	0.30
RIVER-2	Reach-1	5018.18*	Max WS	344.07	131.91	133.55		133.60	0.004051	1.81	190.47	154.59	0.29
RIVER-2	Reach-1	4922.72*	Max WS	345.38	131.64	133.22		133.26	0.003922	1.66	207.82	186.74	0.28
RIVER-2	Reach-1	4827.27*	Max WS	346.69	131.36	132.90		132.94	0.003855	1.56	222.91	218.57	0.27
RIVER-2	Reach-1	4731.81*	Max WS	348.01	131.09	132.60		132.64	0.003918	1.48	235.39	252.25	0.27
RIVER-2	Reach-1	4636.36*	Max WS	349.31	130.82	132.31		132.34	0.004203	1.43	244.41	290.55	0.27
RIVER-2	Reach-1	4540.90*	Max WS	350.63	130.55	132.01		132.04	0.004508	1.39	253.14	332.59	0.28
RIVER-2	Reach-1	4445.45*	Max WS	351.93	130.27	131.74		131.77	0.004326	1.27	276.83	401.14	0.27
RIVER-2	Reach-1	4350	Max WS	353.24	130.00	131.19		131.24	0.017567	1.90	186.04	422.65	0.50
RIVER-2	Reach-1	4285.71*	Max WS	354.06	129.57	130.73		130.78	0.013696	1.74	202.55	432.35	0.45
RIVER-2	Reach-1	4221.42*	Max WS	354.86	129.14	130.31		130.36	0.013190	1.77	200.41	407.72	0.45
RIVER-2	Reach-1	4157.14*	Max WS	355.67	128.71	129.92		129.97	0.013426	1.78	199.33	406.18	0.45
RIVER-2	Reach-1	4092.85*	Max WS	356.47	128.29	129.63		129.67	0.010068	1.62	220.58	420.13	0.39
RIVER-2	Reach-1	4028.57*	Max WS	357.27	127.86	129.45		129.48	0.005731	1.33	269.22	451.63	0.30
RIVER-2	Reach-1	3964.28*	Max WS	358.07	127.43	129.30		129.32	0.003977	1.16	308.08	479.52	0.26
RIVER-2	Reach-1	3900	Max WS	358.87	127.00	129.14		129.15	0.003574	1.12	321.29	490.02	0.24
RIVER-2	Reach-1	3800.*	Max WS	360.30	126.70	128.86		128.88	0.004909	1.24	290.96	482.29	0.28

RIVER-2	Reach-1	3700.*	Max WS	361.73	126.40	128.58		128.61	0.004833	1.27	284.57	448.33	0.28
RIVER-2	Reach-1	3600.*	Max WS	363.14	126.10	128.31		128.33	0.004459	1.29	281.01	406.58	0.27
RIVER-2	Reach-1	3500.*	Max WS	364.56	125.80	128.04		128.06	0.004263	1.30	279.74	386.37	0.27
RIVER-2	Reach-1	3400.*	Max WS	365.97	125.50	127.77		127.79	0.004136	1.31	278.45	371.20	0.27
RIVER-2	Reach-1	3300.*	Max WS	367.38	125.20	127.50		127.52	0.004055	1.32	277.91	361.89	0.27
RIVER-2	Reach-1	3200.*	Max WS	368.78	124.90	127.23		127.26	0.003965	1.33	277.97	353.97	0.26
RIVER-2	Reach-1	3100.*	Max WS	370.17	124.60	126.97		126.99	0.003866	1.32	280.77	354.10	0.26
RIVER-2	Reach-1	3000.*	Max WS	371.57	124.30	126.72		126.74	0.003635	1.29	288.66	360.33	0.25
RIVER-2	Reach-1	2900	Max WS	372.96	124.00	126.49		126.51	0.003202	1.21	308.61	385.06	0.24
RIVER-2	Reach-1	2812.5*	Max WS	374.12	123.52	126.29		126.31	0.003263	1.15	325.53	444.21	0.24
RIVER-2	Reach-1	2725.*	Max WS	375.29	123.03	126.02		126.04	0.004106	1.19	316.27	488.73	0.26
RIVER-2	Reach-1	2637.5*	Max WS	376.44	122.55	125.68		125.71	0.005979	1.33	282.54	486.43	0.31
RIVER-2	Reach-1	2550.*	Max WS	377.58	122.07	125.39		125.42	0.006676	1.39	272.56	480.64	0.32
RIVER-2	Reach-1	2462.5*	Max WS	378.71	121.58	125.15		125.17	0.005099	1.31	289.61	454.78	0.29
RIVER-2	Reach-1	2375	Max WS	379.86	121.10	124.88		124.90	0.004261	1.28	295.98	417.62	0.27
RIVER-2	Reach-1	2279.16*	Max WS	381.11	121.07	124.59		124.61	0.005135	1.32	289.21	451.33	0.29
RIVER-2	Reach-1	2183.33*	Max WS	382.35	121.03	124.35		124.37	0.004986	1.24	307.57	512.59	0.28
RIVER-2	Reach-1	2087.5*	Max WS	383.59	121.00	124.13		124.15	0.003724	1.13	340.15	527.17	0.25
RIVER-2	Reach-1	1991.66*	Max WS	384.83	120.97	123.86		123.88	0.003677	1.12	343.36	532.11	0.25
RIVER-2	Reach-1	1895.83*	Max WS	386.06	120.93	123.59		123.61	0.003758	1.13	342.54	535.05	0.25
RIVER-2	Reach-1	1800	Max WS	387.29	120.90	123.41		123.42	0.002551	0.99	389.87	550.36	0.21
RIVER-2	Reach-1	1705.*	Max WS	388.52	120.43	123.25		123.26	0.002325	0.99	393.65	523.25	0.20
RIVER-2	Reach-1	1610.*	Max WS	389.73	119.95	123.04		123.06	0.002453	1.03	379.23	493.84	0.21
RIVER-2	Reach-1	1515.*	Max WS	390.95	119.47	122.78		122.80	0.003142	1.13	346.98	474.45	0.23
RIVER-2	Reach-1	1420	Max WS	392.16	119.00	122.49		122.51	0.003822	1.25	318.38	455.49	0.26
RIVER-2	Reach-1	1324.61*	Max WS	392.15	118.62	122.16		122.18	0.003785	1.24	320.39	460.19	0.25
RIVER-2	Reach-1	1229.23*	Max WS	392.13	118.23	121.83		121.85	0.004064	1.26	314.89	462.73	0.26
RIVER-2	Reach-1	1133.84*	Max WS	392.11	117.85	121.52		121.55	0.004143	1.27	313.34	459.45	0.27
RIVER-2	Reach-1	1038.46*	Max WS	392.09	117.46	121.18		121.21	0.004092	1.35	300.99	468.53	0.27
RIVER-2	Reach-1	943.076*	Max WS	392.06	117.08	120.83		120.86	0.004377	1.44	285.96	419.77	0.28
RIVER-2	Reach-1	847.692*	Max WS	392.05	116.69	120.48		120.52	0.003983	1.50	277.23	357.64	0.27
RIVER-2	Reach-1	752.307*	Max WS	392.02	116.31	120.10		120.14	0.004193	1.62	258.24	309.94	0.28
RIVER-2	Reach-1	656.923*	Max WS	392.01	115.92	119.73		119.77	0.004618	1.72	242.95	281.85	0.30
RIVER-2	Reach-1	561.538*	Max WS	392.00	115.54	119.40		119.45	0.004459	1.77	237.23	256.06	0.30
RIVER-2	Reach-1	466.153*	Max WS	392.00	115.15	119.10		119.15	0.004004	1.78	235.99	232.21	0.28
RIVER-2	Reach-1	370.769*	Max WS	391.95	114.77	118.82		118.87	0.003543	1.81	233.64	206.17	0.27
RIVER-2	Reach-1	275.384*	Max WS	391.55	114.38	118.54		118.60	0.003361	1.90	214.97	152.77	0.27
RIVER-2	Reach-1	180	Max WS	309.30	114.00	118.13		118.19	0.003355	1.94	159.18	98.75	0.27
RIVER-1	Reach-1	326	Max WS	79.09	169.00	170.32		170.41	0.005165	2.45	44.04	111.31	0.46
RIVER-1	Reach-1	325.5*	Max WS	78.92	168.75	170.10		170.17	0.004548	2.31	49.33	123.61	0.43
RIVER-1	Reach-1	325.*	Max WS	87.93	168.50	169.84		169.92	0.005472	2.50	53.08	134.06	0.47
RIVER-1	Reach-1	324.5*	Max WS	90.58	168.25	169.55		169.64	0.006516	2.67	52.66	141.56	0.51
RIVER-1	Reach-1	324	Max WS	90.55	168.00	169.29		169.35	0.005267	2.41	65.13	177.25	0.46
RIVER-1	Reach-1	323.5*	Max WS	90.53	167.51	169.01		169.15	0.007271	3.11	38.83	127.18	0.55
RIVER-1	Reach-1	323.*	Max WS	87.36	167.02	168.72		168.84	0.005346	2.88	35.68	66.96	0.48
RIVER-1	Reach-1	322.5*	Max WS	86.71	166.53	168.56		168.64	0.003030	2.46	42.30	66.19	0.37
RIVER-1	Reach-1	322	Max WS	86.84	166.04	168.48		168.54	0.001612	2.06	53.78	70.05	0.28
RIVER-1	Reach-1	321.*	Max WS	103.00	166.02	167.64	167.61	168.09	0.021107	5.41	19.49	26.06	0.94
RIVER-1	Reach-1	320	Max WS	103.33	166.00	167.38		167.43	0.005746	2.77	87.62	242.76	0.49
RIVER-1	Reach-1	319.*	Max WS	103.39	166.00	167.19		167.22	0.002016	1.35	104.30	348.96	0.28
RIVER-1	Reach-1	318	Max WS	103.31	166.00	167.05		167.07	0.001760	1.06	100.79	327.88	0.25
RIVER-1	Reach-1	316	Max WS	104.43	165.00	166.17		166.23	0.006999	1.95	53.49	107.38	0.49
RIVER-1	Reach-1	315.5*	Max WS	105.38	164.75	165.83		165.89	0.006911	1.92	54.95	112.24	0.48
RIVER-1	Reach-1	315.*	Max WS	106.35	164.50	165.52		165.57	0.006088	1.84	57.65	113.51	0.46
RIVER-1	Reach-1	314.5*	Max WS	107.28	164.25	165.27		165.32	0.004259	1.70	62.96	106.84	0.39
RIVER-1	Reach-1	314	Max WS	108.26	164.00	165.10		165.14	0.002541	1.63	73.06	221.21	0.32
RIVER-1	Reach-1	313.*	Max WS	109.34	163.50	164.77		164.84	0.004280	2.15	62.06	206.93	0.42
RIVER-1	Reach-1	312	Max WS	110.56	163.00	164.47		164.50	0.003260	1.84	111.95	339.87	0.36
RIVER-1	Reach-1	311.*	Max WS	111.91	162.50	163.92		164.03	0.009252	3.00	60.75	198.40	0.60
RIVER-1	Reach-1	310	Max WS	113.31	162.00	163.48		163.51	0.002437	1.84	106.37	220.74	0.32
RIVER-1	Reach-1	309.*	Max WS	114.42	161.26	162.92		163.06	0.009196	3.02	37.83	48.21	0.60
RIVER-1	Reach-1	308	Max WS	115.48	160.51	162.56		162.58	0.001186	1.35	115.84	157.57	0.23
RIVER-1	Reach-1	306	Max WS	116.70	159.00	161.86		161.99	0.006890	2.92	39.91	42.28	0.53
RIVER-1	Reach-1	304	Max WS	117.81	159.00	161.07		161.12	0.002899	1.84	71.67	313.76	0.34
RIVER-1	Reach-1	302	Max WS	119.66	158.50	160.76		160.80	0.001357	1.96	107.29	146.81	0.26
RIVER-1	Reach-1	301.*	Max WS	120.69	158.25	160.61		160.67	0.001856	2.23	95.03	166.47	0.30
RIVER-1	Reach-1	300	Max WS	121.62	158.00	160.42		160.49	0.002523	2.43	91.87	215.49	0.35
RIVER-1	Reach-1	299.*	Max WS	122.39	158.31	160.21		160.28	0.003036	2.62	87.47	146.12	0.38
RIVER-1	Reach-1	298	Max WS	122.94	158.62	160.03		160.06	0.002536	2.27	106.95	147.81	0.34

RIVER-1	Reach-1	297.*	Max WS	122.28	158.31	159.82		159.85	0.002032	1.92	119.77	212.50	0.31
RIVER-1	Reach-1	296	Max WS	121.81	158.00	159.72		159.73	0.000436	0.90	251.51	379.21	0.14
RIVER-1	Reach-1	295.*	Max WS	120.58	158.01	159.64		159.66	0.001145	1.40	148.72	339.59	0.23
RIVER-1	Reach-1	294	Max WS	125.68	158.01	159.53		159.55	0.001031	1.27	148.65	247.02	0.21
RIVER-1	Reach-1	293.*	Max WS	125.52	157.51	159.45		159.46	0.000638	1.14	165.27	174.41	0.17
RIVER-1	Reach-1	292	Max WS	125.48	157.00	159.39		159.40	0.000543	1.23	161.31	127.46	0.17
RIVER-1	Reach-1	291.5	Max WS	125.44	157.00	159.26		159.34	0.002860	2.68	61.26	49.44	0.37
RIVER-1	Reach-1	290.62	Max WS	125.44	157.00	159.02	158.01	159.11	0.002201	2.39	52.54	32.10	0.33
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	125.20	157.00	158.36		158.59	0.008889	3.83	32.69	28.15	0.63
RIVER-1	Reach-1	288	Max WS	123.80	156.00	157.88		157.88	0.000367	0.88	245.66	293.06	0.13
RIVER-1	Reach-1	287.*	Max WS	123.63	156.00	157.82		157.83	0.000770	1.29	182.69	284.56	0.19
RIVER-1	Reach-1	286	Max WS	123.52	156.00	157.73		157.75	0.001093	1.53	164.12	272.14	0.23
RIVER-1	Reach-1	285.*	Max WS	123.66	155.50	157.52		157.63	0.004120	2.70	45.89	43.16	0.43
RIVER-1	Reach-1	284	Max WS	123.82	155.00	157.23		157.31	0.002573	2.35	52.64	37.31	0.35
RIVER-1	Reach-1	283.*	Max WS	124.11	154.75	156.90		157.02	0.003616	2.73	45.39	33.09	0.41
RIVER-1	Reach-1	282	Max WS	124.37	154.50	156.61		156.73	0.003416	3.07	60.64	81.92	0.41
RIVER-1	Reach-1	281.5*	Max WS	124.53	154.38	156.40		156.55	0.004104	3.27	50.78	80.82	0.45
RIVER-1	Reach-1	281.*	Max WS	11.75	154.25	156.35		156.35	0.000028	0.28	53.11	81.41	0.04
RIVER-1	Reach-1	280.5*	Max WS	8.13	154.12	156.35		156.35	0.000009	0.17	61.02	84.87	0.02
RIVER-1	Reach-1	280	Max WS	125.12	154.00	155.70		155.88	0.005320	3.40	36.84	25.39	0.50
RIVER-1	Reach-1	279.5*	Max WS	125.29	153.62	155.50		155.66	0.004275	3.13	39.98	26.63	0.45
RIVER-1	Reach-1	279.*	Max WS	125.49	153.25	155.32		155.46	0.003594	2.97	42.27	26.76	0.42
RIVER-1	Reach-1	278.5*	Max WS	125.66	152.88	155.17		155.29	0.002988	2.82	44.57	26.45	0.38
RIVER-1	Reach-1	278	Max WS	125.86	152.50	155.05		155.16	0.002475	2.67	47.09	26.85	0.35
RIVER-1	Reach-1	277.5*	Max WS	135.60	152.48	154.86		155.00	0.003269	2.95	46.07	29.42	0.40
RIVER-1	Reach-1	277.*	Max WS	135.74	152.45	154.68		154.82	0.003770	3.00	45.58	33.74	0.43
RIVER-1	Reach-1	276.5*	Max WS	135.88	152.42	154.47		154.62	0.004441	3.13	44.05	37.07	0.46
RIVER-1	Reach-1	276	Max WS	136.01	152.40	154.22		154.40	0.005461	3.41	43.76	60.44	0.51
RIVER-1	Reach-1	275.5*	Max WS	136.17	152.15	154.09		154.17	0.003701	2.29	60.58	74.09	0.38
RIVER-1	Reach-1	275.*	Max WS	136.33	151.90	153.95		154.01	0.003094	1.84	74.20	73.98	0.32
RIVER-1	Reach-1	274.5*	Max WS	136.49	151.65	153.83		153.87	0.002704	1.60	85.10	88.14	0.29
RIVER-1	Reach-1	274	Max WS	136.63	151.40	153.70		153.73	0.002816	1.48	92.19	101.00	0.27
RIVER-1	Reach-1	273.5*	Max WS	136.70	151.35	153.56		153.60	0.002748	1.43	95.60	108.58	0.27
RIVER-1	Reach-1	273.*	Max WS	136.75	151.30	153.44		153.47	0.002557	1.34	102.04	125.09	0.26
RIVER-1	Reach-1	272.5*	Max WS	136.74	151.25	153.34		153.36	0.001876	1.20	117.02	167.71	0.22
RIVER-1	Reach-1	272	Max WS	136.79	151.20	153.28		153.29	0.001071	0.99	151.66	220.00	0.17
RIVER-1	Reach-1	271.*	Max WS	136.92	150.85	153.10		153.13	0.002532	1.37	100.30	114.87	0.26
RIVER-1	Reach-1	270	Max WS	137.02	150.50	152.62		152.71	0.006000	2.39	57.39	54.10	0.41
RIVER-1	Reach-1	269.*	Max WS	137.36	150.12	152.10		152.18	0.004847	2.26	60.75	52.90	0.37
RIVER-1	Reach-1	268	Max WS	137.35	149.75	151.59		151.71	0.004620	2.70	50.80	32.08	0.38
RIVER-1	Reach-1	267.265*	Max WS	137.33	149.43	151.27		151.39	0.004163	2.81	48.91	31.69	0.40
RIVER-1	Reach-1	266.53	Max WS	137.33	149.10	151.01	150.17	151.13	0.003178	2.77	49.49	31.85	0.39
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	137.32	148.65	150.28		150.46	0.005672	3.39	40.46	29.76	0.51
RIVER-1	Reach-1	262	Max WS	137.07	147.43	149.49		149.52	0.002242	1.58	109.86	157.80	0.25
RIVER-1	Reach-1	261.5*	Max WS	137.20	147.07	149.28		149.36	0.004410	2.35	64.02	110.12	0.36
RIVER-1	Reach-1	261.*	Max WS	137.33	146.71	148.98		149.09	0.006452	2.57	54.42	52.79	0.43
RIVER-1	Reach-1	260.5*	Max WS	137.47	146.36	148.57		148.69	0.009417	2.84	48.64	50.91	0.50
RIVER-1	Reach-1	260	Max WS	137.60	146.00	148.28		148.34	0.004224	2.10	82.71	163.99	0.35
RIVER-1	Reach-1	259.*	Max WS	137.63	146.00	147.78		147.89	0.007014	2.59	55.15	67.84	0.44
RIVER-1	Reach-1	258	Max WS	137.63	146.00	147.48		147.52	0.003011	1.73	103.50	172.64	0.29
RIVER-1	Reach-1	256	Max WS	137.85	145.00	146.85		146.93	0.004986	2.74	84.61	175.37	0.39
RIVER-1	Reach-1	254	Max WS	145.65	144.00	145.49		145.65	0.013244	3.63	51.27	84.83	0.61
RIVER-1	Reach-1	252	Max WS	145.81	142.00	144.29		144.35	0.004088	2.41	86.84	144.79	0.35
RIVER-1	Reach-1	250	Max WS	145.79	141.50	143.55		143.60	0.003027	1.96	106.28	264.27	0.30
RIVER-1	Reach-1	248	Max WS	145.95	141.00	142.91		142.98	0.004428	2.10	69.53	63.17	0.35
RIVER-1	Reach-1	246	Max WS	146.16	140.50	142.34		142.35	0.001210	1.25	174.31	268.14	0.19
RIVER-1	Reach-1	245.*	Max WS	146.26	139.75	142.09		142.18	0.004568	2.71	72.50	99.49	0.38
RIVER-1	Reach-1	244	Max WS	146.35	139.00	141.80		141.87	0.004230	2.83	86.59	142.91	0.36
RIVER-1	Reach-1	243.*	Max WS	146.42	139.50	141.59		141.65	0.003162	2.22	94.04	152.15	0.31
RIVER-1	Reach-1	242	Max WS	146.48	140.00	141.39		141.43	0.003470	1.92	106.34	209.68	0.32
RIVER-1	Reach-1	241.*	Max WS	146.60	139.50	141.04		141.09	0.004913	2.23	94.78	190.72	0.37
RIVER-1	Reach-1	240	Max WS	146.72	139.00	140.75		140.79	0.002712	1.88	110.24	149.49	0.28
RIVER-1	Reach-1	239.*	Max WS	55.20	138.50	140.66		140.67	0.000212	0.49	146.17	222.11	0.08
RIVER-1	Reach-1	238	Max WS	52.64	138.00	140.65		140.65	0.000072	0.30	218.63	255.48	0.05
RIVER-1	Reach-1	236.5	Max WS	146.61	137.25	139.38		139.50	0.011247	2.95	64.12	237.69	0.54
RIVER-1	Reach-1	235.85	Max WS	131.55	136.60	139.13	137.64	139.18	0.001067	1.89	69.75	35.17	0.24
RIVER-1	Reach-1	235.84		Bridge									

RIVER-1	Reach-1	235.23	Max WS	132.03	136.10	139.11		139.15	0.000563	1.51	87.41	38.54	0.18
RIVER-1	Reach-1	232	Max WS	146.61	135.00	138.05	137.16	138.35	0.009266	4.43	37.07	174.22	0.53
RIVER-1	Reach-1	230	Max WS	146.07	135.00	137.63		137.64	0.000414	0.93	299.43	490.65	0.12
RIVER-1	Reach-1	228	Max WS	154.47	134.00	137.48		137.51	0.000938	1.64	203.53	421.09	0.18
RIVER-1	Reach-1	226	Max WS	154.60	133.70	137.04		137.10	0.004468	2.41	104.14	294.55	0.36
RIVER-1	Reach-1	224	Max WS	154.80	133.25	136.30		136.45	0.006347	3.50	80.82	258.09	0.44
RIVER-1	Reach-1	222	Max WS	154.91	133.00	135.73		135.77	0.002674	2.36	131.67	262.93	0.29
RIVER-1	Reach-1	220	Max WS	154.89	132.40	135.12		135.34	0.008362	4.22	65.35	217.62	0.52
RIVER-1	Reach-1	218	Max WS	154.57	131.20	134.94		134.96	0.000639	1.46	197.90	263.30	0.15
RIVER-1	Reach-1	216	Max WS	154.60	132.75	134.79		134.81	0.001132	1.35	176.32	297.96	0.19
RIVER-1	Reach-1	214	Max WS	166.13	132.50	134.70		134.71	0.000550	1.00	237.04	294.89	0.13
RIVER-1	Reach-1	213.*	Max WS	183.19	131.88	134.66		134.67	0.000303	1.01	286.53	229.54	0.12
RIVER-1	Reach-1	212	Max WS	183.18	131.25	134.65		134.66	0.000222	1.13	311.20	186.36	0.12
RIVER-1	Reach-1	211.782*	Max WS	183.18	131.22	134.64		134.65	0.000346	1.42	260.54	176.73	0.14
RIVER-1	Reach-1	211.565*	Max WS	183.17	131.19	134.63		134.65	0.000490	1.69	216.33	152.01	0.17
RIVER-1	Reach-1	211.347*	Max WS	183.15	131.16	134.61		134.64	0.000664	1.97	182.72	131.95	0.20
RIVER-1	Reach-1	211.13*	Max WS	183.17	131.12	134.59		134.63	0.000797	2.17	159.30	108.72	0.22
RIVER-1	Reach-1	210.912*	Max WS	183.14	131.09	134.56		134.61	0.000947	2.36	141.59	93.63	0.24
RIVER-1	Reach-1	210.695*	Max WS	183.14	131.06	134.54		134.60	0.001118	2.57	127.24	82.49	0.26
RIVER-1	Reach-1	210.477*	Max WS	183.19	131.03	132.58	133.28	135.04	0.110082	13.05	16.86	25.45	2.18
RIVER-1	Reach-1	210.13	Max WS	15.59	129.39	132.16		132.16	0.000005	0.26	60.99	35.51	0.03
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	15.59	128.67	132.16		132.16	0.000002	0.18	88.37	61.24	0.02
RIVER-1	Reach-1	205.91	Max WS	183.10	129.85	131.80		132.00	0.002006	3.56	51.39	32.59	0.50
RIVER-1	Reach-1	205.49	Max WS	183.06	129.75	131.73		131.92	0.001899	3.49	52.46	32.95	0.49
RIVER-1	Reach-1	204.44	Max WS	183.05	129.49	131.58		131.74	0.001556	3.24	56.43	34.07	0.44
RIVER-1	Reach-1	202	Max WS	183.00	128.88	131.28		131.39	0.001306	2.67	68.64	37.10	0.35
RIVER-1	Reach-1	201.1*	Max WS	183.00	128.80	131.23		131.34	0.001254	2.65	68.98	36.37	0.34
RIVER-1	Reach-1	200.2	Max WS	182.99	128.72	131.17		131.28	0.001200	2.63	69.45	35.70	0.33
RIVER-1	Reach-1	200	Max WS	182.99	128.69	131.04		131.25	0.001802	3.71	49.28	35.08	0.43
RIVER-1	Reach-1	199		Culvert									
RIVER-1	Reach-1	198.78	Max WS	182.93	128.48	130.71		130.95	0.002134	3.91	46.84	34.05	0.46
RIVER-1	Reach-1	198	Max WS	182.92	128.35	130.70		130.81	0.001288	2.68	68.24	36.10	0.34
RIVER-1	Reach-1	196.*	Max WS	182.89	128.02	130.47		130.57	0.001099	2.54	72.07	36.73	0.32
RIVER-1	Reach-1	194.*	Max WS	182.89	127.68	130.29		130.38	0.000875	2.34	78.02	37.69	0.29
RIVER-1	Reach-1	192	Max WS	182.86	127.35	130.16		130.23	0.000676	2.14	85.32	38.83	0.25
RIVER-1	Reach-1	191.5	Max WS	182.86	127.27	130.15		130.20	0.000399	1.78	103.01	41.52	0.20
RIVER-1	Reach-1	191.14	Max WS	129.16	127.21	130.02		130.12	0.000667	2.55	50.65	41.26	0.27
RIVER-1	Reach-1	191		Culvert									
RIVER-1	Reach-1	190	Max WS	126.92	127.02	129.89		129.99	0.000602	2.45	51.70	41.49	0.26
RIVER-1	Reach-1	189	Max WS	127.71	126.85	129.92		129.94	0.000157	1.15	110.83	42.27	0.13
RIVER-1	Reach-1	186	Max WS	126.56	126.34	129.88		129.90	0.000093	0.96	131.42	44.17	0.10
RIVER-1	Reach-1	185.5*	Max WS	319.33	126.25	129.60		129.73	0.003164	2.90	110.11	40.32	0.31
RIVER-1	Reach-1	185.*	Max WS	319.17	126.17	129.37		129.55	0.004067	3.42	93.36	37.31	0.38
RIVER-1	Reach-1	184.5*	Max WS	318.82	126.08	129.03		129.30	0.005756	4.16	76.56	34.75	0.49
RIVER-1	Reach-1	184	Max WS	318.77	126.00	128.99		129.08	0.001834	2.86	197.96	199.90	0.32
RIVER-1	Reach-1	182	Max WS	322.78	126.00	128.82		128.85	0.001452	2.13	231.56	181.33	0.23
RIVER-1	Reach-1	180	Max WS	324.61	126.00	128.40		128.46	0.002844	2.51	207.47	273.25	0.31
RIVER-1	Reach-1	178	Max WS	355.99	124.00	128.11		128.12	0.000627	1.41	435.18	428.35	0.15
RIVER-1	Reach-1	176	Max WS	358.81	124.00	127.47		127.57	0.003880	3.32	223.55	420.63	0.37
RIVER-1	Reach-1	174	Max WS	361.94	123.00	127.00		127.11	0.003772	3.32	229.83	544.23	0.36
RIVER-1	Reach-1	172	Max WS	360.60	124.00	126.84		126.85	0.000515	1.13	595.28	736.73	0.13
RIVER-1	Reach-1	171.*	Max WS	360.77	124.00	126.76		126.77	0.000911	1.47	502.91	766.13	0.18
RIVER-1	Reach-1	170	Max WS	361.21	124.00	126.63		126.65	0.001502	1.82	409.34	670.61	0.22
RIVER-1	Reach-1	169.5*	Max WS	361.14	123.75	126.58		126.60	0.002016	2.18	365.68	675.03	0.26
RIVER-1	Reach-1	169.*	Max WS	360.69	123.50	126.51		126.55	0.002632	2.56	309.20	578.82	0.30
RIVER-1	Reach-1	168.5*	Max WS	360.13	123.25	126.43		126.47	0.002517	2.55	297.41	496.58	0.29
RIVER-1	Reach-1	168	Max WS	359.42	123.00	126.36		126.41	0.002497	2.58	302.33	542.46	0.29
RIVER-1	Reach-1	167.5*	Max WS	358.64	122.75	126.29		126.33	0.002234	2.55	310.85	552.37	0.28
RIVER-1	Reach-1	167.*	Max WS	357.10	122.50	126.22		126.26	0.001824	2.39	330.06	563.01	0.25
RIVER-1	Reach-1	166.5*	Max WS	356.09	122.25	126.18		126.21	0.001337	2.11	367.67	584.97	0.22
RIVER-1	Reach-1	166	Max WS	355.71	122.00	126.15		126.17	0.000968	1.85	416.88	624.96	0.19
RIVER-1	Reach-1	165.5*	Max WS	354.01	121.50	126.05		126.08	0.001280	2.14	379.37	606.53	0.21
RIVER-1	Reach-1	165.*	Max WS	352.10	121.00	125.92		125.96	0.001588	2.35	351.53	593.86	0.23
RIVER-1	Reach-1	164.5*	Max WS	351.07	120.50	125.78		125.82	0.001820	2.43	348.47	691.58	0.24
RIVER-1	Reach-1	164	Max WS	351.10	120.00	125.66		125.68	0.001247	1.91	411.80	674.09	0.20
RIVER-1	Reach-1	163.5*	Max WS	351.16	120.00	125.59		125.62	0.001514	2.24	368.63	657.92	0.22
RIVER-1	Reach-1	163.*	Max WS	351.28	120.00	125.50		125.55	0.002030	2.72	321.23	662.67	0.26
RIVER-1	Reach-1	162.5*	Max WS	351.44	120.00	125.37		125.47	0.002913	3.35	257.34	661.56	0.31

RIVER-1	Reach-1	162	Max WS	351.51	120.00	125.12	125.38	0.005412	4.56	132.97	430.12	0.43
RIVER-1	Reach-1	161.5*	Max WS	351.32	120.12	124.88	125.12	0.004875	4.20	131.82	418.90	0.42
RIVER-1	Reach-1	161.*	Max WS	351.16	120.25	124.78	124.91	0.003253	3.35	200.32	574.33	0.34
RIVER-1	Reach-1	160.5*	Max WS	350.98	120.38	124.70	124.77	0.001805	2.44	292.59	604.51	0.26
RIVER-1	Reach-1	160	Max WS	351.06	120.50	124.66	124.69	0.000924	1.72	404.09	629.46	0.18
RIVER-1	Reach-1	159.*	Max WS	351.36	120.25	124.58	124.60	0.000795	1.57	412.73	660.40	0.17
RIVER-1	Reach-1	158	Max WS	351.92	120.00	124.52	124.54	0.000654	1.38	446.50	715.67	0.15
RIVER-1	Reach-1	157.*	Max WS	352.39	119.50	124.45	124.48	0.000981	1.85	371.79	724.45	0.19
RIVER-1	Reach-1	156	Max WS	352.81	119.00	124.24	124.41	0.003606	3.69	191.80	671.41	0.36
RIVER-1	Reach-1	155.*	Max WS	351.82	119.00	123.93	124.02	0.002671	3.16	264.86	640.75	0.30
RIVER-1	Reach-1	154	Max WS	363.17	119.00	123.74	123.76	0.001095	1.99	431.30	684.79	0.19
RIVER-1	Reach-1	153.*	Max WS	371.89	119.00	123.64	123.67	0.001199	2.11	426.06	776.61	0.21
RIVER-1	Reach-1	152	Max WS	371.88	119.00	123.56	123.58	0.001119	1.96	448.57	867.67	0.20
RIVER-1	Reach-1	151.*	Max WS	381.79	119.00	123.42	123.45	0.001644	2.11	399.99	846.22	0.24
RIVER-1	Reach-1	150	Max WS	381.05	119.00	123.17	123.24	0.004320	2.78	275.08	732.00	0.37
RIVER-1	Reach-1	149.*	Max WS	383.54	118.50	122.90	122.97	0.002745	2.72	303.40	715.44	0.31
RIVER-1	Reach-1	148	Max WS	386.29	118.00	122.72	122.76	0.001473	2.26	384.36	650.20	0.23
RIVER-1	Reach-1	147.*	Max WS	388.31	117.92	122.59	122.63	0.002100	2.40	370.69	849.01	0.27
RIVER-1	Reach-1	146	Max WS	390.39	117.83	122.37	122.45	0.004460	2.96	307.79	1003.99	0.37
RIVER-1	Reach-1	145.*	Max WS	392.58	117.92	122.18	122.22	0.001893	1.81	333.40	946.26	0.25
RIVER-1	Reach-1	144	Max WS	394.14	118.00	121.96	122.00	0.003248	1.74	301.68	696.60	0.30
RIVER-1	Reach-1	143.*	Max WS	395.84	117.50	121.79	121.82	0.000886	1.47	436.26	880.27	0.18
RIVER-1	Reach-1	142	Max WS	398.16	117.00	121.71	121.73	0.000994	1.95	518.76	878.71	0.18
RIVER-1	Reach-1	141.*	Max WS	400.66	117.00	121.59	121.63	0.001618	2.47	436.46	910.37	0.24
RIVER-1	Reach-1	140	Max WS	401.98	117.00	121.38	121.48	0.003264	3.41	336.33	1033.42	0.33
RIVER-1	Reach-1	139.*	Max WS	401.57	117.50	121.23	121.28	0.002058	2.50	399.20	921.52	0.27
RIVER-1	Reach-1	138	Max WS	402.21	118.00	121.15	121.16	0.000923	1.58	546.75	947.22	0.18
RIVER-1	Reach-1	137.*	Max WS	403.55	118.00	121.07	121.09	0.001189	1.67	474.65	826.12	0.20
RIVER-1	Reach-1	136	Max WS	404.83	118.00	120.95	120.97	0.001506	1.69	387.39	540.70	0.22
RIVER-1	Reach-1	135.*	Max WS	406.36	117.50	120.84	120.86	0.001083	1.35	458.89	652.09	0.19
RIVER-1	Reach-1	134	Max WS	407.94	117.00	120.77	120.78	0.000757	1.07	544.18	727.41	0.15
RIVER-1	Reach-1	133.*	Max WS	410.14	117.00	120.68	120.70	0.000914	1.16	464.56	638.43	0.17
RIVER-1	Reach-1	132	Max WS	412.36	117.00	120.60	120.62	0.000731	1.03	479.28	573.78	0.15
RIVER-1	Reach-1	131.*	Max WS	413.57	117.00	120.53	120.55	0.000975	1.13	443.82	583.77	0.17
RIVER-1	Reach-1	130	Max WS	414.74	117.00	120.46	120.47	0.000975	1.08	503.13	795.22	0.17
RIVER-1	Reach-1	129.*	Max WS	415.37	117.00	120.37	120.39	0.001436	1.28	434.69	808.77	0.20
RIVER-1	Reach-1	128	Max WS	415.96	117.00	120.10	120.17	0.005376	2.13	221.90	579.00	0.38
RIVER-1	Reach-1	127.*	Max WS	415.72	116.71	119.82	119.88	0.003235	2.15	287.96	642.36	0.32
RIVER-1	Reach-1	126	Max WS	415.58	116.42	119.75	119.77	0.001409	1.88	459.14	688.39	0.22
RIVER-1	Reach-1	125.*	Max WS	415.45	116.21	119.72	119.74	0.001415	1.70	464.87	752.04	0.22
RIVER-1	Reach-1	124	Max WS	415.44	116.00	119.70	119.71	0.001012	1.30	534.68	801.08	0.18
RIVER-1	Reach-1	123.*	Max WS	415.32	116.18	119.63	119.64	0.001299	1.59	483.42	804.72	0.21
RIVER-1	Reach-1	122	Max WS	415.29	116.35	119.54	119.57	0.001673	1.82	467.61	931.14	0.24
RIVER-1	Reach-1	121.*	Max WS	458.06	115.68	119.33	119.38	0.002749	2.50	352.70	595.56	0.30
RIVER-1	Reach-1	120	Max WS	457.58	115.00	119.16	119.20	0.001466	2.21	416.14	582.17	0.23
RIVER-1	Reach-1	119.*	Max WS	456.94	114.50	119.01	119.08	0.002011	2.89	326.96	435.02	0.30
RIVER-1	Reach-1	118	Max WS	455.67	114.00	118.71	118.90	0.003399	4.11	209.46	264.49	0.44
RIVER-1	Reach-1	117.*	Max WS	454.58	114.50	118.64	118.71	0.001291	2.28	284.77	308.82	0.27
RIVER-1	Reach-1	116	Max WS	451.12	115.00	118.52	118.59	0.002218	2.17	268.28	345.71	0.32
RIVER-1	Reach-1	115.*	Max WS	440.78	114.50	118.37	118.42	0.001923	1.79	277.76	355.31	0.29
RIVER-1	Reach-1	114	Max WS	419.29	114.00	118.23	118.26	0.001582	1.43	310.58	398.98	0.26
RIVER-1	Reach-1	113.*	Max WS	389.51	113.00	118.13	118.15	0.000617	1.19	336.32	295.44	0.17
RIVER-1	Reach-2	112.05	Max WS	698.81	112.00	118.13	118.20	0.001235	2.17	348.10	411.07	0.26
RIVER-1	Reach-2	112	Max WS	698.72	112.00	118.12	118.20	0.001247	2.17	345.40	409.36	0.26
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	698.52	113.00	117.99	118.06	0.001767	2.18	361.13	350.09	0.30
RIVER-1	Reach-2	110	Max WS	698.16	114.00	117.86	117.92	0.002158	2.10	425.36	466.37	0.32
RIVER-1	Reach-2	109.5*	Max WS	698.54	113.75	117.70	117.81	0.002988	2.90	348.60	393.42	0.39
RIVER-1	Reach-2	109.*	Max WS	698.39	113.50	117.54	117.69	0.002646	3.47	323.93	366.01	0.39
RIVER-1	Reach-2	108.5*	Max WS	698.08	113.25	117.41	117.58	0.002529	3.67	328.97	379.02	0.39
RIVER-1	Reach-2	108	Max WS	698.26	113.00	117.30	117.47	0.002283	3.68	349.77	402.92	0.37
RIVER-1	Reach-2	107.*	Max WS	698.58	112.00	117.22	117.34	0.001528	3.14	422.67	450.07	0.31
RIVER-1	Reach-2	106	Max WS	698.90	111.00	117.18	117.26	0.000992	2.78	532.21	556.41	0.25
RIVER-1	Reach-2	105.*	Max WS	699.46	110.50	117.09	117.20	0.001296	3.16	488.79	516.66	0.28
RIVER-1	Reach-2	104	Max WS	700.13	110.00	116.99	117.12	0.001309	3.44	468.56	480.52	0.28
RIVER-1	Reach-2	103.75*	Max WS	700.07	110.00	116.98	117.10	0.001383	3.48	468.77	478.16	0.28
RIVER-1	Reach-2	103.5*	Max WS	700.13	110.00	116.97	117.09	0.001453	3.47	473.13	477.40	0.29
RIVER-1	Reach-2	103.25*	Max WS	700.07	110.00	116.97	117.06	0.001698	3.12	485.94	489.99	0.31
RIVER-1	Reach-2	103.*	Max WS	700.26	110.00	116.96	117.04	0.001537	2.86	508.65	500.65	0.29

RIVER-1	Reach-2	102.75*	Max WS	700.19	110.00	116.95		117.02	0.001275	2.69	535.15	510.19	0.27
RIVER-1	Reach-2	102.5*	Max WS	697.17	110.00	116.95		117.01	0.000963	2.54	593.49	566.81	0.24
RIVER-1	Reach-2	102.25*	Max WS	676.09	110.00	116.95		117.00	0.000648	2.28	663.92	561.89	0.20
RIVER-1	Reach-2	102	Max WS	631.13	110.00	116.96		116.99	0.000444	2.01	726.77	557.42	0.17
RIVER-1	Reach-2	101.*	Max WS	701.27	110.50	116.91		116.95	0.000581	2.25	725.51	555.41	0.19
RIVER-1	Reach-2	100	Max WS	702.18	111.00	116.87		116.91	0.000645	2.32	707.51	550.25	0.20
RIVER-1	Reach-2	98	Max WS	708.09	111.00	116.63		116.69	0.000717	2.48	650.74	545.22	0.21
RIVER-1	Reach-2	96	Max WS	711.61	110.00	116.49		116.54	0.000672	2.45	654.85	520.69	0.21
RIVER-1	Reach-2	94	Max WS	714.75	109.00	116.33		116.41	0.000776	2.73	550.03	484.84	0.22
RIVER-1	Reach-2	92	Max WS	717.92	109.00	116.20		116.27	0.000612	2.51	546.14	413.48	0.20
RIVER-1	Reach-2	90	Max WS	721.15	108.00	116.08		116.15	0.000625	2.42	560.64	445.42	0.20
RIVER-1	Reach-2	88	Max WS	724.29	109.00	115.98		116.04	0.000487	2.30	646.26	416.86	0.18
RIVER-1	Reach-2	86	Max WS	726.69	107.00	115.95		115.97	0.000106	1.27	964.40	464.07	0.09
RIVER-1	Reach-2	84	Max WS	727.88	108.00	115.94		115.95	0.000155	1.19	1244.66	706.33	0.10
RIVER-1	Reach-2	82	Max WS	743.78	109.00	115.87		115.92	0.000582	2.14	737.85	784.58	0.19
RIVER-1	Reach-2	81.56	Max WS	698.08	108.22	115.81	112.13	115.88	0.000790	2.11	331.00	79.59	0.18
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	740.49	108.96	115.06		115.33	0.005208	4.16	178.13	64.12	0.44
RIVER-1	Reach-2	81.125*	Max WS	740.68	108.90	115.09		115.27	0.001601	3.36	220.57	63.06	0.32
RIVER-1	Reach-2	80.95	Max WS	740.87	108.83	115.12	112.14	115.25	0.000919	2.87	258.57	60.85	0.24
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	740.49	108.67	115.09		115.22	0.001012	2.94	251.95	62.28	0.26
RIVER-1	Reach-2	80.1312*	Max WS	740.49	108.59	115.06		115.20	0.001070	3.04	243.85	59.71	0.26
RIVER-1	Reach-2	79.8825*	Max WS	740.30	108.50	115.02		115.17	0.001134	3.14	235.56	57.12	0.27
RIVER-1	Reach-2	79.6337*	Max WS	740.10	108.42	114.98		115.14	0.001212	3.26	226.91	54.54	0.28
RIVER-1	Reach-2	79.3849*	Max WS	739.90	108.33	114.93		115.11	0.001298	3.39	218.24	51.95	0.29
RIVER-1	Reach-2	79.1362*	Max WS	739.90	108.25	114.88		115.08	0.001370	3.54	211.23	397.64	0.30
RIVER-1	Reach-2	78.8875*	Max WS	739.89	108.17	114.91		115.04	0.000961	3.06	420.03	405.96	0.25
RIVER-1	Reach-2	78.6387*	Max WS	740.05	108.08	114.92		115.00	0.000643	2.59	531.30	366.04	0.21
RIVER-1	Reach-2	78.39	Max WS	740.04	108.00	114.91		114.97	0.000571	2.52	527.62	314.54	0.20
RIVER-1	Reach-2	78.1455*	Max WS	739.89	107.93	114.91		114.96	0.000439	2.21	655.18	394.13	0.17
RIVER-1	Reach-2	77.9011*	Max WS	740.02	107.87	114.91		114.94	0.000377	2.04	754.95	472.46	0.16
RIVER-1	Reach-2	77.6566*	Max WS	739.88	107.80	114.90		114.93	0.000351	1.97	825.76	549.96	0.15
RIVER-1	Reach-2	77.4122*	Max WS	739.88	107.73	114.89		114.93	0.000342	1.94	874.65	627.19	0.15
RIVER-1	Reach-2	77.1677*	Max WS	739.87	107.67	114.88		114.92	0.000411	2.11	819.91	683.19	0.17
RIVER-1	Reach-2	76.9233*	Max WS	739.87	107.60	114.87		114.92	0.000469	2.25	771.98	721.73	0.18
RIVER-1	Reach-2	76.6788*	Max WS	739.86	107.53	114.84		114.92	0.000593	2.51	655.98	715.13	0.20
RIVER-1	Reach-2	76.4344*	Max WS	739.85	107.47	114.82		114.91	0.000713	2.74	540.95	630.20	0.22
RIVER-1	Reach-2	76.19	Max WS	739.85	107.40	114.79		114.90	0.000793	2.87	460.67	524.65	0.23
RIVER-1	Reach-2	75.86	Max WS	739.84	107.22	114.73	111.16	114.87	0.000839	3.00	246.54	269.72	0.24
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	739.80	106.63	114.53		114.67	0.001142	3.00	246.29	79.86	0.27
RIVER-1	Reach-2	75.1666*	Max WS	739.80	106.69	114.53		114.64	0.001017	2.73	276.48	175.19	0.25
RIVER-1	Reach-2	74.9333*	Max WS	739.80	106.75	114.52		114.62	0.000969	2.54	314.39	340.33	0.24
RIVER-1	Reach-2	74.7*	Max WS	739.79	106.82	114.52		114.60	0.000957	2.40	367.58	589.36	0.24
RIVER-1	Reach-2	74.4666*	Max WS	739.79	106.88	114.50		114.58	0.000963	2.27	441.84	774.93	0.24
RIVER-1	Reach-2	74.2333*	Max WS	739.78	106.94	114.49		114.56	0.000958	2.13	540.95	919.66	0.23
RIVER-1	Reach-2	74	Max WS	739.75	107.00	114.48		114.53	0.000939	1.97	652.37	1066.43	0.23
RIVER-1	Reach-2	73.5*	Max WS	739.70	107.21	114.45		114.49	0.000704	1.86	738.25	1102.17	0.20
RIVER-1	Reach-2	73.*	Max WS	739.67	107.43	114.43		114.46	0.000542	1.78	841.69	1144.37	0.18
RIVER-1	Reach-2	72.5*	Max WS	739.46	107.65	114.41		114.44	0.000445	1.73	940.06	1182.72	0.17
RIVER-1	Reach-2	72	Max WS	739.42	107.86	114.39		114.42	0.000381	1.71	1041.05	1215.02	0.16
RIVER-1	Reach-2	71.5*	Max WS	938.65	107.65	114.28		114.41	0.001285	2.97	419.71	414.54	0.27
RIVER-1	Reach-2	71.*	Max WS	938.63	107.44	114.22		114.34	0.001139	2.77	359.62	169.37	0.24
RIVER-1	Reach-2	70.5*	Max WS	938.50	107.24	114.19		114.29	0.000883	2.45	387.03	110.14	0.21
RIVER-1	Reach-2	70	Max WS	938.50	107.03	114.18		114.25	0.000710	2.15	436.73	96.07	0.18
RIVER-1	Reach-2	69.*	Max WS	938.49	107.35	114.08		114.17	0.000863	2.38	394.59	85.91	0.20
RIVER-1	Reach-2	68	Max WS	938.37	107.68	113.96		114.07	0.001141	2.62	357.79	83.10	0.22
RIVER-1	Reach-2	67.5*	Max WS	938.26	107.54	113.90		114.01	0.001294	2.85	366.37	104.37	0.24
RIVER-1	Reach-2	67	Max WS	938.13	107.40	113.79		113.94	0.001755	3.21	324.84	121.80	0.28
RIVER-1	Reach-2	66	Max WS	937.86	107.40	113.58		113.75	0.002111	3.42	300.05	114.51	0.30
RIVER-1	Reach-2	65.*	Max WS	937.71	107.20	113.43		113.57	0.001582	2.97	322.32	128.23	0.28
RIVER-1	Reach-2	64	Max WS	937.40	107.00	113.31		113.43	0.001132	2.74	341.59	102.83	0.27
RIVER-1	Reach-2	63.5*	Max WS	937.40	106.90	113.25		113.37	0.001260	2.75	340.43	111.06	0.28
RIVER-1	Reach-2	63.*	Max WS	937.23	106.81	113.19		113.31	0.001407	2.77	338.92	119.76	0.29
RIVER-1	Reach-2	62.5*	Max WS	937.06	106.71	113.11		113.23	0.001560	2.77	338.25	129.11	0.30
RIVER-1	Reach-2	62.*	Max WS	936.88	106.62	113.03		113.15	0.001687	2.76	338.90	139.73	0.31
RIVER-1	Reach-2	61.5*	Max WS	936.51	106.53	112.96		113.07	0.001615	2.74	342.28	146.51	0.30
RIVER-1	Reach-2	61.*	Max WS	936.31	106.43	112.89		113.00	0.001466	2.64	358.10	158.24	0.29

RIVER-1	Reach-2	60.5*	Max WS	936.10	106.33	112.83		112.93	0.001297	2.51	379.25	170.34	0.27
RIVER-1	Reach-2	60	Max WS	935.89	106.24	112.78		112.87	0.001114	2.37	406.50	182.92	0.26
RIVER-1	Reach-2	59.*	Max WS	935.67	106.07	112.69		112.77	0.000860	2.33	416.86	180.21	0.23
RIVER-1	Reach-2	58	Max WS	935.45	105.90	112.64		112.71	0.000469	2.15	582.00	446.81	0.18
RIVER-1	Reach-2	57.2	Max WS	935.25	107.05	112.53	109.93	112.66	0.001211	3.04	415.96	392.34	0.28
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	934.69	107.05	112.40		112.56	0.001573	3.35	350.33	365.25	0.32
RIVER-1	Reach-2	56	Max WS	934.48	105.90	112.37		112.45	0.000595	2.23	474.80	340.13	0.20
RIVER-1	Reach-2	54	Max WS	934.30	105.80	112.28		112.33	0.000593	1.85	568.05	538.69	0.19
RIVER-1	Reach-2	52	Max WS	1007.60	105.60	112.09		112.13	0.000734	2.02	674.93	299.24	0.18
RIVER-1	Reach-2	50.*	Max WS	1005.97	105.54	111.90		111.97	0.000985	2.46	597.05	272.46	0.22
RIVER-1	Reach-2	48	Max WS	1004.32	105.47	111.70		111.78	0.000877	2.77	565.53	244.93	0.24
RIVER-1	Reach-2	46.*	Max WS	1003.31	105.88	111.57		111.62	0.000671	2.29	718.64	314.15	0.21
RIVER-1	Reach-2	44	Max WS	1002.39	106.29	111.46		111.50	0.000444	1.99	880.94	387.39	0.17
RIVER-1	Reach-2	42.*	Max WS	1002.11	106.31	111.37		111.41	0.000487	2.09	793.33	366.92	0.18
RIVER-1	Reach-2	40	Max WS	1001.66	106.33	111.26		111.31	0.000526	2.16	731.89	361.65	0.19
RIVER-1	Reach-2	38.*	Max WS	1001.61	106.01	111.20		111.22	0.000308	1.68	988.21	429.25	0.14
RIVER-1	Reach-2	36	Max WS	1001.49	105.68	111.14		111.17	0.000295	1.68	1032.46	482.11	0.14
RIVER-1	Reach-2	35.22	Max WS	1001.50	104.52	110.99		111.15	0.001055	3.23	309.67	68.58	0.27
RIVER-1	Reach-2	34.82	Max WS	1001.48	104.52	110.94	107.71	111.11	0.001086	3.27	306.51	68.31	0.27
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1001.36	104.30	110.42		110.75	0.003271	4.64	216.01	64.98	0.45
RIVER-1	Reach-2	33.67*	Max WS	1001.29	104.12	110.39		110.59	0.001683	3.59	278.79	75.36	0.33
RIVER-1	Reach-2	33	Max WS	1001.29	103.93	110.40		110.50	0.000738	2.58	495.45	442.85	0.22
RIVER-1	Reach-2	32.*	Max WS	1001.27	103.40	110.34		110.42	0.000746	2.38	514.76	483.46	0.22
RIVER-1	Reach-2	31.*	Max WS	1001.26	102.88	110.23		110.32	0.001107	2.49	465.78	515.66	0.26
RIVER-1	Reach-2	30	Max WS	1001.24	102.35	109.96		110.12	0.003316	3.24	309.19	162.68	0.41
RIVER-1	Reach-2	28.*	Max WS	1000.92	102.33	109.29		109.50	0.003538	3.72	352.92	638.84	0.44
RIVER-1	Reach-2	26	Max WS	1000.60	102.32	108.93		109.00	0.001594	2.91	767.97	888.43	0.30
RIVER-1	Reach-2	24.*	Max WS	1000.29	101.66	108.60		108.70	0.002563	3.26	607.05	720.52	0.37
RIVER-1	Reach-2	22	Max WS	999.95	101.00	108.26		108.32	0.002264	2.66	748.93	958.82	0.34
RIVER-1	Reach-2	20.*	Max WS	999.40	101.54	107.90		107.96	0.002293	2.84	718.27	755.63	0.34
RIVER-1	Reach-2	18	Max WS	997.99	102.09	107.55		107.61	0.001984	3.04	742.96	701.16	0.33
RIVER-1	Reach-2	16.*	Max WS	994.73	101.85	107.29		107.32	0.001458	2.66	998.72	1184.92	0.28
RIVER-1	Reach-2	14	Max WS	992.82	101.61	107.15		107.16	0.000383	1.22	1615.13	1221.15	0.14
RIVER-1	Reach-2	12.*	Max WS	992.28	101.26	107.11		107.11	0.000219	0.92	1921.97	1215.91	0.11
RIVER-1	Reach-2	10	Max WS	992.03	100.90	107.08		107.09	0.000125	0.78	2247.83	1170.79	0.08
RIVER-1	Reach-2	6	Max WS	989.43	100.30	106.68		106.80	0.002173	3.70	726.49	1157.61	0.36
RIVER-1	Reach-2	2	Max WS	986.92	99.70	106.18		106.26	0.001371	3.14	1030.36	2073.23	0.29
RIVER-1	Reach-2	0	Max WS	986.77	99.40	105.93	103.66	106.07	0.001633	3.59	605.75	720.81	0.32

Appendix P-10: HEC-RAS Results, Anatolia III – Alternative 'B' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX   XXXX       XXXX       XX     XXXX
X     X  X       X    X     X   X     X  X    X
X     X  X       X          X   X    X    X   X
XXXXXXX  XXXX    X      XXX XXXX     XXXXXX    XXXX
X     X  X       X          X  X     X    X       X
X     X  X       X    X     X   X    X    X       X
X     X  XXXXXX   XXXX       X    X  X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/14/2010 7:59:10 AM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	585.19	158.00	162.98		162.98	0.000052	0.46	1269.52	305.36	0.04
RIVER-2	Reach-1	11850.*	Max WS	583.69	157.71	162.98		162.98	0.000053	0.45	1303.11	333.41	0.04
RIVER-2	Reach-1	11800	Max WS	583.68	157.42	162.97		162.98	0.000022	0.31	1866.46	424.58	0.03
RIVER-2	Reach-1	11750.*	Max WS	583.67	156.96	162.97		162.98	0.000023	0.32	1821.35	415.60	0.03
RIVER-2	Reach-1	11700	Max WS	582.20	156.50	162.97		162.97	0.000021	0.32	1837.35	394.59	0.03
RIVER-2	Reach-1	11650.*	Max WS	582.20	156.25	162.97		162.97	0.000024	0.34	1733.78	370.74	0.03
RIVER-2	Reach-1	11600	Max WS	582.18	156.00	162.97		162.97	0.000024	0.35	1667.23	346.19	0.03
RIVER-2	Reach-1	11550.*	Max WS	580.75	155.05	162.97		162.97	0.000024	0.34	1685.36	350.64	0.03
RIVER-2	Reach-1	11500	Max WS	579.34	154.11	162.97		162.97	0.000024	0.34	1696.83	354.78	0.03
RIVER-2	Reach-1	11450.*	Max WS	579.33	154.05	162.97		162.97	0.000022	0.32	1812.41	390.02	0.03
RIVER-2	Reach-1	11400	Max WS	580.71	154.00	162.97		162.97	0.000020	0.30	1939.49	433.36	0.02
RIVER-2	Reach-1	11350.*	Max WS	577.96	154.00	162.96		162.97	0.000017	0.29	2018.18	433.40	0.02
RIVER-2	Reach-1	11300	Max WS	577.95	154.00	162.96		162.97	0.000014	0.26	2220.84	478.49	0.02
RIVER-2	Reach-1	11250.*	Max WS	579.30	154.00	162.96		162.96	0.000011	0.24	2403.62	484.32	0.02
RIVER-2	Reach-1	11200	Max WS	577.95	154.00	162.96		162.96	0.000009	0.22	2607.12	501.40	0.02
RIVER-2	Reach-1	11150.*	Max WS	577.94	153.00	162.96		162.96	0.000007	0.20	2836.90	523.22	0.02
RIVER-2	Reach-1	11100	Max WS	579.23	152.00	162.96		162.96	0.000006	0.19	3073.31	553.23	0.01
RIVER-2	Reach-1	11050.*	Max WS	577.92	152.00	162.96		162.96	0.000005	0.18	3288.41	570.54	0.01
RIVER-2	Reach-1	11000	Max WS	577.91	152.00	162.96		162.96	0.000004	0.16	3575.88	610.57	0.01
RIVER-2	Reach-1	10887.5*	Max WS	579.14	152.00	162.96		162.96	0.000003	0.15	3966.72	608.43	0.01
RIVER-2	Reach-1	10775.*	Max WS	577.90	152.00	162.96		162.96	0.000002	0.13	4497.21	623.95	0.01
RIVER-2	Reach-1	10662.5*	Max WS	577.87	152.00	162.96		162.96	0.000001	0.11	5115.39	656.91	0.01
RIVER-2	Reach-1	10550	Max WS	577.84	152.00	162.96		162.96	0.000001	0.10	5788.60	697.23	0.01
RIVER-2	Reach-1	10490.*	Max WS	578.95	151.60	162.96		162.96	0.000001	0.09	6444.90	806.74	0.01
RIVER-2	Reach-1	10430.*	Max WS	577.80	151.20	162.96		162.96	0.000001	0.08	7058.32	907.26	0.01
RIVER-2	Reach-1	10370.*	Max WS	577.78	150.80	162.96		162.96	0.000001	0.08	7637.50	1004.54	0.00
RIVER-2	Reach-1	10310.*	Max WS	577.74	150.40	162.96		162.96	0.000001	0.07	8192.60	1107.08	0.00
RIVER-2	Reach-1	10250	Max WS	578.66	150.00	162.96		162.96	0.000000	0.07	8734.65	1172.15	0.00
RIVER-2	Reach-1	10200.*	Max WS	577.69	150.00	162.96		162.96	0.000001	0.07	8116.19	1039.24	0.00
RIVER-2	Reach-1	10150	Max WS	578.57	150.00	162.96		162.96	0.000001	0.08	7519.54	875.19	0.00
RIVER-2	Reach-1	10100.*	Max WS	578.51	150.00	162.96		162.96	0.000001	0.08	7194.57	880.30	0.00
RIVER-2	Reach-1	10050	Max WS	577.66	150.00	162.96		162.96	0.000001	0.08	6913.95	801.74	0.01
RIVER-2	Reach-1	10000.*	Max WS	577.64	150.00	162.96		162.96	0.000001	0.08	7183.96	818.92	0.00
RIVER-2	Reach-1	9950	Max WS	576.81	150.00	162.96		162.96	0.000001	0.08	7473.50	842.51	0.00

RIVER-2	Reach-1	9900.*	Max WS	577.61	150.00	162.96		162.96	0.000001	0.07	8296.15	1100.69	0.00
RIVER-2	Reach-1	9850	Max WS	577.59	150.00	162.96		162.96	0.000000	0.06	9013.32	1239.75	0.00
RIVER-2	Reach-1	9800.*	Max WS	577.55	150.00	162.96		162.96	0.000001	0.06	8960.36	1484.39	0.00
RIVER-2	Reach-1	9750	Max WS	577.51	150.00	162.96		162.96	0.000001	0.06	9288.77	1502.95	0.00
RIVER-2	Reach-1	9675.*	Max WS	577.47	149.36	162.96		162.96	0.000000	0.06	10012.04	1536.93	0.00
RIVER-2	Reach-1	9600	Max WS	577.44	148.73	162.96		162.96	0.000000	0.05	10824.31	1580.25	0.00
RIVER-2	Reach-1	9550.*	Max WS	577.42	148.36	162.96		162.96	0.000000	0.04	13184.83	1717.03	0.00
RIVER-2	Reach-1	9500	Max WS	577.39	148.00	162.96		162.96	0.000000	0.04	15653.31	1789.58	0.00
RIVER-2	Reach-1	9450.*	Max WS	577.35	147.00	162.96		162.96	0.000000	0.03	16670.80	1800.26	0.00
RIVER-2	Reach-1	9400	Max WS	576.96	146.00	162.96		162.96	0.000000	0.03	18015.25	1805.75	0.00
RIVER-2	Reach-1	9350.*	Max WS	577.63	145.51	162.96		162.96	0.000000	0.03	17410.99	1736.53	0.00
RIVER-2	Reach-1	9300	Max WS	577.27	145.02	162.96		162.96	0.000000	0.03	16666.64	1632.54	0.00
RIVER-2	Reach-1	9200.*	Max WS	577.20	144.51	162.96		162.96	0.000000	0.04	15513.66	1455.02	0.00
RIVER-2	Reach-1	9100	Max WS	576.97	144.00	162.96		162.96	0.000000	0.04	14310.55	1278.82	0.00
RIVER-2	Reach-1	9050.*	Max WS	576.96	144.00	162.96		162.96	0.000000	0.04	13821.78	1175.89	0.00
RIVER-2	Reach-1	9000	Max WS	577.10	144.00	162.96		162.96	0.000000	0.04	13409.87	1056.40	0.00
RIVER-2	Reach-1	8900.*	Max WS	576.96	143.08	162.96		162.96	0.000000	0.04	13745.10	1023.56	0.00
RIVER-2	Reach-1	8800	Max WS	577.03	142.16	162.96		162.96	0.000000	0.04	13928.92	976.78	0.00
RIVER-2	Reach-1	8700.*	Max WS	577.00	143.70	162.96		162.96	0.000000	0.04	13160.82	995.56	0.00
RIVER-2	Reach-1	8600	Max WS	576.99	145.24	162.96	145.97	162.96	0.000000	0.05	12638.70	998.30	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	576.98	140.56	154.30		154.48	0.003526	3.37	171.33	35.55	0.27
RIVER-2	Reach-1	8350	Max WS	579.70	140.09	153.90		154.09	0.004328	3.51	164.97	35.63	0.29
RIVER-2	Reach-1	8250.*	Max WS	582.42	139.60	153.46		153.66	0.004401	3.53	165.02	36.17	0.29
RIVER-2	Reach-1	8150.*	Max WS	585.15	139.11	153.02		153.22	0.004498	3.54	165.13	36.89	0.30
RIVER-2	Reach-1	8050.*	Max WS	587.86	138.62	152.57		152.77	0.004608	3.56	165.24	37.64	0.30
RIVER-2	Reach-1	7950.*	Max WS	590.60	138.13	152.11		152.31	0.004687	3.57	165.46	38.16	0.30
RIVER-2	Reach-1	7850.*	Max WS	593.33	137.64	151.65		151.84	0.004732	3.58	165.87	38.53	0.30
RIVER-2	Reach-1	7750.*	Max WS	596.07	137.15	151.18		151.38	0.004770	3.58	166.34	38.83	0.31
RIVER-2	Reach-1	7650.*	Max WS	598.80	136.66	150.70		150.90	0.004799	3.59	166.79	39.04	0.31
RIVER-2	Reach-1	7550.*	Max WS	601.53	136.17	150.23		150.43	0.004796	3.59	167.51	39.17	0.31
RIVER-2	Reach-1	7450.*	Max WS	604.26	135.68	149.75		149.96	0.004783	3.59	168.31	39.25	0.31
RIVER-2	Reach-1	7350.*	Max WS	606.99	135.19	149.28		149.48	0.004748	3.59	169.29	39.27	0.30
RIVER-2	Reach-1	7250.*	Max WS	609.69	134.70	148.80		149.00	0.004747	3.58	170.10	39.46	0.30
RIVER-2	Reach-1	7150.*	Max WS	612.16	134.21	148.29		148.49	0.004857	3.61	169.59	39.54	0.31
RIVER-2	Reach-1	7050.*	Max WS	614.11	133.72	147.74		147.95	0.005309	3.65	168.15	41.76	0.32
RIVER-2	Reach-1	6950.*	Max WS	603.54	133.23	147.17		147.38	0.005708	3.63	166.10	44.62	0.33
RIVER-2	Reach-1	6850.*	Max WS	589.36	132.74	146.61		146.81	0.005908	3.57	165.06	47.33	0.34
RIVER-2	Reach-1	6750.*	Max WS	591.11	132.25	146.00		146.20	0.006507	3.65	161.89	48.41	0.35
RIVER-2	Reach-1	6650.*	Max WS	626.22	131.76	145.27		145.53	0.008428	4.07	153.76	46.83	0.40
RIVER-2	Reach-1	6550	Max WS	628.86	131.27	144.50		144.80	0.010107	4.38	143.49	43.90	0.43
RIVER-2	Reach-1	6466.66*	Max WS	631.11	132.84	143.84		144.07	0.007713	3.88	162.60	56.09	0.40
RIVER-2	Reach-1	6383.33*	Max WS	633.37	134.40	143.38		143.57	0.004517	3.51	180.25	51.83	0.33
RIVER-2	Reach-1	6300	Max WS	635.66	135.97	143.03		143.24	0.003453	3.71	171.14	38.70	0.31
RIVER-2	Reach-1	6250	Max WS	637.02	136.00	142.76		143.04	0.004842	4.23	150.48	35.73	0.36
RIVER-2	Reach-1	6200	Max WS	638.39	135.00	142.31		142.73	0.007467	5.19	122.91	27.96	0.44
RIVER-2	Reach-1	6000.*	Max WS	643.86	134.50	141.27		141.51	0.004552	3.94	163.60	41.97	0.35
RIVER-2	Reach-1	5800.*	Max WS	538.68	134.00	140.56		140.68	0.002478	2.70	199.20	58.46	0.26
RIVER-2	Reach-1	5600.*	Max WS	651.04	133.50	139.94		140.05	0.005041	2.60	251.77	146.87	0.34
RIVER-2	Reach-1	5400	Max WS	656.00	133.00	136.77		137.75	0.027321	7.94	82.60	28.47	0.82
RIVER-2	Reach-1	5304.54*	Max WS	658.43	132.73	135.64		135.94	0.009719	4.41	149.41	60.33	0.49
RIVER-2	Reach-1	5209.09*	Max WS	660.86	132.45	135.01		135.18	0.006307	3.27	202.23	93.40	0.39
RIVER-2	Reach-1	5113.63*	Max WS	663.27	132.18	134.53		134.65	0.004997	2.70	245.48	127.15	0.34
RIVER-2	Reach-1	5018.18*	Max WS	665.70	131.91	134.14		134.22	0.004285	2.35	283.52	161.85	0.31
RIVER-2	Reach-1	4922.72*	Max WS	668.15	131.64	133.78		133.85	0.003878	2.11	317.02	197.67	0.29
RIVER-2	Reach-1	4827.27*	Max WS	670.59	131.36	133.45		133.51	0.003676	1.94	346.54	236.08	0.28
RIVER-2	Reach-1	4731.81*	Max WS	673.03	131.09	133.13		133.18	0.003600	1.80	373.90	279.78	0.27
RIVER-2	Reach-1	4636.36*	Max WS	675.47	130.82	132.80		132.85	0.003696	1.70	397.00	329.88	0.27
RIVER-2	Reach-1	4540.90*	Max WS	677.90	130.55	132.45		132.49	0.004101	1.65	411.82	388.92	0.28
RIVER-2	Reach-1	4445.45*	Max WS	680.33	130.27	132.07		132.11	0.004710	1.63	416.47	441.50	0.30
RIVER-2	Reach-1	4350	Max WS	682.78	130.00	131.45		131.53	0.014491	2.26	301.51	455.06	0.49
RIVER-2	Reach-1	4285.71*	Max WS	684.28	129.57	131.01		131.08	0.011655	2.09	327.57	473.67	0.44
RIVER-2	Reach-1	4221.42*	Max WS	685.78	129.14	130.63		130.70	0.009941	2.01	341.04	463.68	0.41
RIVER-2	Reach-1	4157.14*	Max WS	687.28	128.71	130.32		130.37	0.007202	1.82	378.51	470.92	0.36
RIVER-2	Reach-1	4092.85*	Max WS	688.77	128.29	130.08		130.12	0.005038	1.62	426.20	482.94	0.30
RIVER-2	Reach-1	4028.57*	Max WS	690.27	127.86	129.85		129.89	0.004004	1.50	459.96	490.33	0.27
RIVER-2	Reach-1	3964.28*	Max WS	691.77	127.43	129.66		129.69	0.003508	1.43	482.30	498.43	0.26
RIVER-2	Reach-1	3900	Max WS	693.26	127.00	129.50		129.53	0.003124	1.38	503.85	508.16	0.24
RIVER-2	Reach-1	3800.*	Max WS	695.92	126.70	129.25		129.28	0.003491	1.43	486.05	501.81	0.26

RIVER-2	Reach-1	3700.*	Max WS	698.58	126.40	129.00		129.03	0.003390	1.43	489.09	495.77	0.25
RIVER-2	Reach-1	3600.*	Max WS	701.22	126.10	128.76		128.79	0.003285	1.42	492.63	490.30	0.25
RIVER-2	Reach-1	3500.*	Max WS	703.86	125.80	128.51		128.54	0.003167	1.42	497.39	485.91	0.25
RIVER-2	Reach-1	3400.*	Max WS	706.50	125.50	128.26		128.30	0.003087	1.41	501.12	482.95	0.24
RIVER-2	Reach-1	3300.*	Max WS	709.14	125.20	128.02		128.05	0.003030	1.41	504.37	481.32	0.24
RIVER-2	Reach-1	3200.*	Max WS	711.77	124.90	127.76		127.79	0.003010	1.41	505.89	479.77	0.24
RIVER-2	Reach-1	3100.*	Max WS	714.41	124.60	127.50		127.53	0.003012	1.41	505.33	476.00	0.24
RIVER-2	Reach-1	3000.*	Max WS	717.05	124.30	127.22		127.25	0.003192	1.44	499.12	479.44	0.25
RIVER-2	Reach-1	2900	Max WS	719.68	124.00	126.91		126.95	0.003461	1.45	497.77	503.20	0.26
RIVER-2	Reach-1	2812.5*	Max WS	721.87	123.52	126.63		126.66	0.003865	1.48	488.58	519.36	0.27
RIVER-2	Reach-1	2725.*	Max WS	724.08	123.03	126.35		126.39	0.003952	1.49	485.61	517.72	0.27
RIVER-2	Reach-1	2637.5*	Max WS	726.27	122.55	126.10		126.14	0.003722	1.47	495.29	517.58	0.26
RIVER-2	Reach-1	2550.*	Max WS	728.46	122.07	125.85		125.88	0.003503	1.44	505.15	517.10	0.26
RIVER-2	Reach-1	2462.5*	Max WS	730.65	121.58	125.57		125.61	0.003566	1.45	502.51	514.76	0.26
RIVER-2	Reach-1	2375	Max WS	732.84	121.10	125.31		125.35	0.003464	1.44	507.23	513.17	0.26
RIVER-2	Reach-1	2279.16*	Max WS	735.24	121.07	125.04		125.07	0.003379	1.42	516.51	524.62	0.25
RIVER-2	Reach-1	2183.33*	Max WS	737.63	121.03	124.74		124.78	0.003516	1.43	515.35	534.98	0.26
RIVER-2	Reach-1	2087.5*	Max WS	740.02	121.00	124.48		124.51	0.003423	1.41	524.68	545.80	0.25
RIVER-2	Reach-1	1991.66*	Max WS	742.40	120.97	124.24		124.27	0.003076	1.36	547.63	558.02	0.24
RIVER-2	Reach-1	1895.83*	Max WS	744.78	120.93	124.02		124.04	0.002649	1.29	579.07	570.82	0.23
RIVER-2	Reach-1	1800	Max WS	747.16	120.90	123.82		123.84	0.002161	1.20	620.63	579.72	0.21
RIVER-2	Reach-1	1705.*	Max WS	749.51	120.43	123.62		123.64	0.002367	1.27	591.91	548.78	0.21
RIVER-2	Reach-1	1610.*	Max WS	751.86	119.95	123.40		123.43	0.002661	1.34	561.02	521.44	0.23
RIVER-2	Reach-1	1515.*	Max WS	754.22	119.47	123.15		123.19	0.002999	1.44	527.07	501.69	0.24
RIVER-2	Reach-1	1420	Max WS	756.56	119.00	122.85		122.89	0.003640	1.59	487.10	477.69	0.27
RIVER-2	Reach-1	1324.61*	Max WS	756.54	118.62	122.52		122.56	0.003643	1.59	493.18	549.75	0.27
RIVER-2	Reach-1	1229.23*	Max WS	756.53	118.23	122.21		122.24	0.003539	1.56	508.75	579.58	0.26
RIVER-2	Reach-1	1133.84*	Max WS	756.49	117.85	121.90		121.93	0.003511	1.54	518.31	577.77	0.26
RIVER-2	Reach-1	1038.46*	Max WS	756.48	117.46	121.60		121.63	0.003483	1.51	526.18	574.45	0.26
RIVER-2	Reach-1	943.076*	Max WS	756.43	117.08	121.32		121.36	0.003435	1.48	533.31	570.43	0.26
RIVER-2	Reach-1	847.692*	Max WS	756.38	116.69	121.05		121.08	0.003451	1.47	531.12	554.35	0.26
RIVER-2	Reach-1	752.307*	Max WS	756.35	116.31	120.75		120.78	0.003438	1.52	512.85	504.77	0.26
RIVER-2	Reach-1	656.923*	Max WS	756.33	115.92	120.44		120.48	0.003476	1.60	489.74	453.27	0.26
RIVER-2	Reach-1	561.538*	Max WS	756.32	115.54	120.16		120.20	0.003613	1.67	468.58	417.22	0.27
RIVER-2	Reach-1	466.153*	Max WS	756.26	115.15	119.88		119.93	0.003644	1.71	449.17	375.31	0.27
RIVER-2	Reach-1	370.769*	Max WS	756.02	114.77	119.61		119.67	0.003945	1.81	410.36	317.19	0.28
RIVER-2	Reach-1	275.384*	Max WS	754.92	114.38	119.31		119.39	0.005261	2.19	336.68	240.05	0.33
RIVER-2	Reach-1	180	Max WS	720.36	114.00	118.73		118.90	0.006563	3.29	218.92	101.34	0.39
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005342	2.91	80.02	142.24	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.96	168.75	170.36		170.45	0.004835	2.76	86.21	151.06	0.46
RIVER-1	Reach-1	325.*	Max WS	162.86	168.50	170.09		170.18	0.005801	2.99	88.06	159.27	0.50
RIVER-1	Reach-1	324.5*	Max WS	166.75	168.25	169.78		169.89	0.006513	3.14	90.50	182.63	0.53
RIVER-1	Reach-1	324	Max WS	165.76	168.00	169.55		169.61	0.004205	2.58	115.31	200.98	0.43
RIVER-1	Reach-1	323.5*	Max WS	164.53	167.51	169.39		169.48	0.003837	2.82	107.64	206.15	0.42
RIVER-1	Reach-1	323.*	Max WS	158.76	167.02	169.25		169.35	0.002962	2.79	102.43	208.59	0.38
RIVER-1	Reach-1	322.5*	Max WS	158.33	166.53	169.16		169.25	0.002134	2.65	104.87	211.50	0.33
RIVER-1	Reach-1	322	Max WS	158.54	166.04	169.10		169.18	0.001552	2.50	113.34	239.47	0.29
RIVER-1	Reach-1	321.*	Max WS	189.62	166.02	167.85	168.32	168.82	0.036097	8.03	26.90	43.84	1.27
RIVER-1	Reach-1	320	Max WS	190.11	166.00	167.55		167.61	0.006283	3.22	130.88	254.33	0.53
RIVER-1	Reach-1	319.*	Max WS	190.27	166.00	167.38		167.41	0.002295	1.68	171.31	372.71	0.31
RIVER-1	Reach-1	318	Max WS	190.13	166.00	167.26		167.28	0.001593	1.25	202.46	515.42	0.25
RIVER-1	Reach-1	316	Max WS	192.20	165.00	166.45		166.52	0.007237	2.06	93.13	176.43	0.50
RIVER-1	Reach-1	315.5*	Max WS	193.78	164.75	166.11		166.18	0.006760	2.07	93.67	168.00	0.49
RIVER-1	Reach-1	315.*	Max WS	195.45	164.50	165.80		165.86	0.005811	2.06	94.81	152.61	0.46
RIVER-1	Reach-1	314.5*	Max WS	197.14	164.25	165.54		165.61	0.004360	2.07	97.35	205.14	0.41
RIVER-1	Reach-1	314	Max WS	198.85	164.00	165.36		165.42	0.002631	2.00	132.94	239.26	0.34
RIVER-1	Reach-1	313.*	Max WS	200.78	163.50	164.99		165.08	0.004841	2.68	114.16	272.53	0.46
RIVER-1	Reach-1	312	Max WS	203.01	163.00	164.67		164.71	0.003168	2.11	182.20	355.19	0.37
RIVER-1	Reach-1	311.*	Max WS	205.33	162.50	164.16		164.26	0.007183	3.14	112.37	229.78	0.55
RIVER-1	Reach-1	310	Max WS	207.51	162.00	163.76		163.80	0.002320	2.08	169.88	231.88	0.33
RIVER-1	Reach-1	309.*	Max WS	209.78	161.26	163.23		163.40	0.008423	3.51	87.27	262.39	0.60
RIVER-1	Reach-1	308	Max WS	210.62	160.51	162.88		162.92	0.001383	1.70	169.29	167.90	0.26
RIVER-1	Reach-1	306	Max WS	214.50	159.00	162.15	161.83	162.36	0.009022	3.79	85.20	473.85	0.63
RIVER-1	Reach-1	304	Max WS	212.11	159.00	161.40		161.43	0.001329	1.54	276.63	692.67	0.25
RIVER-1	Reach-1	302	Max WS	214.73	158.50	161.14		161.22	0.002254	2.88	199.41	632.95	0.35
RIVER-1	Reach-1	301.*	Max WS	216.31	158.25	160.95		161.02	0.002075	2.67	169.20	258.06	0.33
RIVER-1	Reach-1	300	Max WS	217.51	158.00	160.77		160.83	0.002115	2.55	174.91	259.36	0.33
RIVER-1	Reach-1	299.*	Max WS	217.71	158.31	160.58		160.65	0.002839	2.94	152.15	204.34	0.38
RIVER-1	Reach-1	298	Max WS	214.72	158.62	160.41		160.45	0.002263	2.53	169.68	182.27	0.34

RIVER-1	Reach-1	297.*	Max WS	209.69	158.31	160.26		160.28	0.001185	1.80	249.32	350.17	0.25
RIVER-1	Reach-1	296	Max WS	209.22	158.00	160.20		160.21	0.000256	0.86	452.85	447.97	0.11
RIVER-1	Reach-1	295.*	Max WS	208.48	158.01	160.16		160.17	0.000441	1.11	338.89	383.57	0.15
RIVER-1	Reach-1	294	Max WS	219.14	158.01	160.12		160.13	0.000450	1.11	308.97	317.68	0.15
RIVER-1	Reach-1	293.*	Max WS	218.82	157.51	160.07		160.09	0.000399	1.16	286.25	214.68	0.15
RIVER-1	Reach-1	292	Max WS	218.80	157.00	160.03		160.04	0.000458	1.40	246.76	148.92	0.16
RIVER-1	Reach-1	291.5	Max WS	218.79	157.00	159.89		160.00	0.002465	3.12	96.15	61.26	0.37
RIVER-1	Reach-1	290.62	Max WS	218.77	157.00	159.63	158.43	159.77	0.002565	2.99	73.25	35.76	0.37
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	218.13	157.00	158.80		159.16	0.009906	4.76	45.85	30.83	0.69
RIVER-1	Reach-1	288	Max WS	215.95	156.00	158.29		158.30	0.000365	1.05	400.64	427.12	0.14
RIVER-1	Reach-1	287.*	Max WS	215.62	156.00	158.25		158.26	0.000547	1.30	337.12	386.75	0.17
RIVER-1	Reach-1	286	Max WS	215.45	156.00	158.20		158.21	0.000631	1.41	308.15	331.88	0.18
RIVER-1	Reach-1	285.*	Max WS	215.68	155.50	158.03		158.16	0.003274	3.03	96.53	156.39	0.41
RIVER-1	Reach-1	284	Max WS	215.89	155.00	157.73		157.86	0.003331	2.94	73.46	45.26	0.41
RIVER-1	Reach-1	283.*	Max WS	216.28	154.75	157.36		157.53	0.003900	3.39	75.29	88.22	0.45
RIVER-1	Reach-1	282	Max WS	216.66	154.50	157.10		157.26	0.003572	3.70	104.75	137.81	0.44
RIVER-1	Reach-1	281.5*	Max WS	216.90	154.38	156.93		157.09	0.003437	3.60	98.11	114.09	0.43
RIVER-1	Reach-1	281.*	Max WS	217.18	154.25	156.76		156.93	0.003579	3.63	90.90	109.49	0.43
RIVER-1	Reach-1	280.5*	Max WS	217.42	154.12	156.56		156.76	0.003857	3.70	82.28	105.49	0.45
RIVER-1	Reach-1	280	Max WS	217.66	154.00	156.34		156.56	0.004398	3.84	71.30	102.28	0.48
RIVER-1	Reach-1	279.5*	Max WS	217.93	153.62	156.15		156.35	0.004036	3.68	66.10	76.17	0.46
RIVER-1	Reach-1	279.*	Max WS	218.16	153.25	155.97		156.16	0.003830	3.52	66.28	59.94	0.45
RIVER-1	Reach-1	278.5*	Max WS	218.43	152.88	155.79		155.97	0.003679	3.46	66.44	51.35	0.44
RIVER-1	Reach-1	278	Max WS	218.66	152.50	155.62		155.80	0.003525	3.43	66.55	45.94	0.43
RIVER-1	Reach-1	277.5*	Max WS	233.97	152.48	155.36		155.58	0.004769	3.81	64.89	50.86	0.49
RIVER-1	Reach-1	277.*	Max WS	234.17	152.45	155.11		155.35	0.005170	3.92	65.42	69.37	0.51
RIVER-1	Reach-1	276.5*	Max WS	234.37	152.42	154.85		155.10	0.005612	4.10	68.13	83.53	0.54
RIVER-1	Reach-1	276	Max WS	234.51	152.40	154.60		154.85	0.006225	4.26	73.09	96.06	0.56
RIVER-1	Reach-1	275.5*	Max WS	234.72	152.15	154.46		154.58	0.003881	2.83	96.40	118.52	0.41
RIVER-1	Reach-1	275.*	Max WS	234.91	151.90	154.33		154.40	0.003087	2.23	114.82	140.94	0.34
RIVER-1	Reach-1	274.5*	Max WS	234.99	151.65	154.20		154.26	0.002871	1.92	128.37	162.80	0.31
RIVER-1	Reach-1	274	Max WS	235.00	151.40	154.07		154.12	0.003086	1.74	138.53	228.55	0.29
RIVER-1	Reach-1	273.5*	Max WS	234.87	151.35	153.95		153.99	0.002534	1.63	151.00	199.39	0.27
RIVER-1	Reach-1	273.*	Max WS	234.86	151.30	153.86		153.89	0.001843	1.46	175.66	230.40	0.23
RIVER-1	Reach-1	272.5*	Max WS	234.85	151.25	153.80		153.82	0.001144	1.23	216.24	242.07	0.19
RIVER-1	Reach-1	272	Max WS	234.86	151.20	153.76		153.78	0.000669	1.01	264.65	245.92	0.15
RIVER-1	Reach-1	271.*	Max WS	235.03	150.85	153.66		153.69	0.001489	1.32	188.29	247.55	0.21
RIVER-1	Reach-1	270	Max WS	235.15	150.50	153.24		153.33	0.006082	2.29	102.51	103.82	0.41
RIVER-1	Reach-1	269.*	Max WS	235.59	150.12	152.75		152.83	0.003952	2.29	102.69	75.12	0.35
RIVER-1	Reach-1	268	Max WS	235.55	149.75	152.23		152.40	0.004802	3.26	72.19	35.21	0.40
RIVER-1	Reach-1	267.265*	Max WS	235.55	149.43	151.88		152.06	0.004395	3.39	69.40	35.08	0.43
RIVER-1	Reach-1	266.53	Max WS	235.54	149.10	151.60	150.60	151.78	0.003521	3.39	69.38	35.51	0.43
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	235.50	148.65	150.75		151.04	0.006651	4.25	55.39	32.63	0.58
RIVER-1	Reach-1	262	Max WS	235.20	147.43	149.93		149.96	0.001636	1.64	185.18	191.99	0.23
RIVER-1	Reach-1	261.5*	Max WS	235.39	147.07	149.76		149.83	0.003575	2.30	125.45	145.38	0.33
RIVER-1	Reach-1	261.*	Max WS	235.58	146.71	149.41		149.55	0.007383	3.03	79.93	67.24	0.47
RIVER-1	Reach-1	260.5*	Max WS	235.76	146.36	148.88		149.08	0.011592	3.58	69.24	108.85	0.58
RIVER-1	Reach-1	260	Max WS	235.95	146.00	148.60		148.66	0.003581	2.27	135.20	171.09	0.33
RIVER-1	Reach-1	259.*	Max WS	236.00	146.00	148.04		148.22	0.009307	3.44	74.74	84.44	0.53
RIVER-1	Reach-1	258	Max WS	236.06	146.00	147.74		147.78	0.003119	2.02	149.53	183.07	0.31
RIVER-1	Reach-1	256	Max WS	236.46	145.00	147.12		147.19	0.004632	2.95	149.99	280.11	0.39
RIVER-1	Reach-1	254	Max WS	246.54	144.00	145.75		145.96	0.013754	4.26	74.62	94.26	0.64
RIVER-1	Reach-1	252	Max WS	246.85	142.00	144.59		144.66	0.004110	2.74	136.05	177.35	0.37
RIVER-1	Reach-1	250	Max WS	247.55	141.50	143.81		143.85	0.002600	1.97	207.80	425.42	0.28
RIVER-1	Reach-1	248	Max WS	247.64	141.00	143.22		143.31	0.004983	2.57	124.55	366.87	0.39
RIVER-1	Reach-1	246	Max WS	248.24	140.50	142.66		142.68	0.001011	1.31	262.37	276.10	0.18
RIVER-1	Reach-1	245.*	Max WS	248.39	139.75	142.38		142.50	0.005489	3.32	105.63	130.44	0.42
RIVER-1	Reach-1	244	Max WS	248.54	139.00	142.07		142.17	0.005111	3.40	132.53	203.93	0.41
RIVER-1	Reach-1	243.*	Max WS	248.64	139.50	141.84		141.92	0.003946	2.74	135.20	179.91	0.36
RIVER-1	Reach-1	242	Max WS	248.75	140.00	141.63		141.68	0.003524	2.20	158.66	225.55	0.33
RIVER-1	Reach-1	241.*	Max WS	248.96	139.50	141.31		141.36	0.004237	2.38	148.33	215.89	0.36
RIVER-1	Reach-1	240	Max WS	249.17	139.00	141.02		141.07	0.003045	2.21	150.90	166.73	0.31
RIVER-1	Reach-1	239.*	Max WS	249.39	138.50	140.74		140.79	0.003166	1.98	163.95	226.95	0.31
RIVER-1	Reach-1	238	Max WS	45.73	138.00	140.58		140.58	0.000069	0.29	201.37	252.27	0.05
RIVER-1	Reach-1	236.5	Max WS	249.33	137.25	139.65		139.73	0.006808	2.73	135.37	285.53	0.44
RIVER-1	Reach-1	235.85	Max WS	249.17	136.60	139.23	138.15	139.41	0.003315	3.40	73.34	35.78	0.42
RIVER-1	Reach-1	235.84		Bridge									

RIVER-1	Reach-1	235.23	Max WS	248.94	136.10	139.18		139.30	0.001809	2.76	90.28	42.20	0.32
RIVER-1	Reach-1	232	Max WS	248.93	135.00	138.28		138.51	0.008889	4.64	118.35	412.79	0.53
RIVER-1	Reach-1	230	Max WS	248.26	135.00	137.89		137.90	0.000413	1.01	428.10	502.55	0.12
RIVER-1	Reach-1	228	Max WS	259.66	134.00	137.74		137.76	0.000870	1.68	315.05	432.96	0.17
RIVER-1	Reach-1	226	Max WS	260.06	133.70	137.20		137.28	0.005253	2.81	153.27	306.61	0.39
RIVER-1	Reach-1	224	Max WS	260.28	133.25	136.49		136.63	0.006731	3.84	131.58	274.61	0.46
RIVER-1	Reach-1	222	Max WS	260.57	133.00	135.92		135.97	0.003153	2.72	182.19	273.12	0.32
RIVER-1	Reach-1	220	Max WS	260.66	132.40	135.45		135.54	0.004480	3.40	162.05	312.02	0.39
RIVER-1	Reach-1	218	Max WS	260.71	131.20	135.35		135.37	0.000536	1.45	333.94	350.51	0.14
RIVER-1	Reach-1	216	Max WS	261.02	132.75	135.25		135.27	0.000646	1.21	317.15	312.56	0.15
RIVER-1	Reach-1	214	Max WS	276.68	132.50	135.20		135.20	0.000371	0.97	389.59	316.67	0.11
RIVER-1	Reach-1	213.*	Max WS	309.42	131.88	135.17		135.18	0.000317	1.17	405.03	242.13	0.12
RIVER-1	Reach-1	212	Max WS	309.39	131.25	135.15		135.16	0.000285	1.42	405.58	191.93	0.13
RIVER-1	Reach-1	211.782*	Max WS	309.38	131.22	135.14		135.16	0.000416	1.72	349.73	182.49	0.16
RIVER-1	Reach-1	211.565*	Max WS	309.38	131.19	135.12		135.15	0.000621	2.11	296.49	172.38	0.20
RIVER-1	Reach-1	211.347*	Max WS	309.20	131.16	135.10		135.14	0.000837	2.45	250.45	146.62	0.23
RIVER-1	Reach-1	211.13*	Max WS	309.20	131.12	135.07		135.13	0.001090	2.79	215.17	126.48	0.26
RIVER-1	Reach-1	210.912*	Max WS	308.98	131.09	135.03		135.11	0.001331	3.08	188.13	106.59	0.29
RIVER-1	Reach-1	210.695*	Max WS	308.73	131.06	134.99		135.08	0.001619	3.39	166.65	92.76	0.32
RIVER-1	Reach-1	210.477*	Max WS	309.83	131.03	132.95	133.81	135.94	0.099045	15.00	28.03	34.76	2.17
RIVER-1	Reach-1	210.13	Max WS	309.92	129.39	132.95		133.19	0.000815	3.96	78.32	39.35	0.37
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	309.83	128.67	132.83		132.97	0.000365	2.94	105.45	65.27	0.25
RIVER-1	Reach-1	205.91	Max WS	309.70	129.85	132.67		132.89	0.001491	3.77	82.19	38.20	0.45
RIVER-1	Reach-1	205.49	Max WS	309.56	129.75	132.63		132.84	0.001380	3.66	84.60	38.80	0.44
RIVER-1	Reach-1	204.44	Max WS	309.55	129.49	132.53		132.71	0.001107	3.37	91.94	40.49	0.39
RIVER-1	Reach-1	202	Max WS	309.41	128.88	132.34		132.46	0.000947	2.77	111.64	44.59	0.31
RIVER-1	Reach-1	201.1*	Max WS	309.41	128.80	132.29		132.41	0.000918	2.77	111.54	43.36	0.30
RIVER-1	Reach-1	200.2	Max WS	309.40	128.72	132.25		132.37	0.000888	2.77	111.57	42.19	0.30
RIVER-1	Reach-1	200	Max WS	309.32	128.69	132.06		132.36	0.001544	4.37	70.73	41.21	0.42
RIVER-1	Reach-1	199		Culvert									
RIVER-1	Reach-1	198.78	Max WS	308.93	128.48	131.62		131.96	0.001941	4.68	65.98	39.39	0.47
RIVER-1	Reach-1	198	Max WS	309.06	128.35	131.71		131.84	0.000993	2.87	107.75	42.15	0.32
RIVER-1	Reach-1	196.*	Max WS	308.94	128.02	131.54		131.66	0.000831	2.69	114.71	43.13	0.29
RIVER-1	Reach-1	194.*	Max WS	308.96	127.68	131.41		131.51	0.000671	2.50	123.73	44.37	0.26
RIVER-1	Reach-1	192	Max WS	308.93	127.35	131.30		131.39	0.000538	2.31	133.81	45.71	0.24
RIVER-1	Reach-1	191.5	Max WS	308.93	127.27	131.30		131.36	0.000352	2.01	153.36	46.12	0.19
RIVER-1	Reach-1	191.14	Max WS	308.79	127.21	131.06		131.37	0.001343	4.46	69.27	45.39	0.40
RIVER-1	Reach-1	191		Culvert									
RIVER-1	Reach-1	190	Max WS	216.86	127.02	130.81		130.96	0.000699	3.18	68.17	45.15	0.29
RIVER-1	Reach-1	189	Max WS	218.55	126.85	130.87		130.90	0.000178	1.43	152.91	46.08	0.14
RIVER-1	Reach-1	186	Max WS	216.06	126.34	130.83		130.85	0.000117	1.23	174.97	47.96	0.11
RIVER-1	Reach-1	185.5*	Max WS	544.57	126.25	130.36		130.59	0.004379	3.83	142.31	43.66	0.37
RIVER-1	Reach-1	185.*	Max WS	544.41	126.17	130.00		130.33	0.006043	4.61	118.07	40.39	0.48
RIVER-1	Reach-1	184.5*	Max WS	543.62	126.08	129.43	128.75	129.99	0.010113	5.97	94.65	108.51	0.67
RIVER-1	Reach-1	184	Max WS	543.56	126.00	129.43		129.54	0.002128	3.43	291.92	228.75	0.36
RIVER-1	Reach-1	182	Max WS	549.22	126.00	129.22		129.27	0.001936	2.70	308.88	205.33	0.27
RIVER-1	Reach-1	180	Max WS	551.04	126.00	128.75		128.82	0.002886	2.82	309.30	304.13	0.32
RIVER-1	Reach-1	178	Max WS	593.41	124.00	128.44		128.46	0.000745	1.66	582.87	448.66	0.17
RIVER-1	Reach-1	176	Max WS	599.45	124.00	127.74		127.83	0.003798	3.51	339.50	445.97	0.37
RIVER-1	Reach-1	174	Max WS	603.61	123.00	127.28		127.36	0.003253	3.30	382.35	569.49	0.34
RIVER-1	Reach-1	172	Max WS	600.62	124.00	127.12		127.13	0.000565	1.28	798.32	749.09	0.14
RIVER-1	Reach-1	171.*	Max WS	600.49	124.00	127.04		127.05	0.000857	1.54	714.40	787.28	0.17
RIVER-1	Reach-1	170	Max WS	600.88	124.00	126.91		126.93	0.001300	1.84	598.00	691.03	0.21
RIVER-1	Reach-1	169.5*	Max WS	601.31	123.75	126.86		126.89	0.001773	2.22	563.34	778.41	0.25
RIVER-1	Reach-1	169.*	Max WS	601.05	123.50	126.81		126.84	0.002145	2.51	527.50	797.39	0.28
RIVER-1	Reach-1	168.5*	Max WS	600.80	123.25	126.74		126.78	0.002382	2.69	478.74	687.53	0.29
RIVER-1	Reach-1	168	Max WS	600.52	123.00	126.68		126.71	0.002022	2.52	482.58	607.44	0.27
RIVER-1	Reach-1	167.5*	Max WS	600.31	122.75	126.61		126.65	0.001833	2.50	504.83	642.61	0.26
RIVER-1	Reach-1	167.*	Max WS	600.08	122.50	126.56		126.59	0.001595	2.41	539.86	692.22	0.24
RIVER-1	Reach-1	166.5*	Max WS	600.58	122.25	126.51		126.54	0.001320	2.26	593.29	760.49	0.22
RIVER-1	Reach-1	166	Max WS	600.38	122.00	126.48		126.50	0.001050	2.06	665.58	849.92	0.20
RIVER-1	Reach-1	165.5*	Max WS	601.40	121.50	126.38		126.40	0.001207	2.22	630.70	840.66	0.21
RIVER-1	Reach-1	165.*	Max WS	601.17	121.00	126.22		126.26	0.001873	2.71	582.78	999.38	0.26
RIVER-1	Reach-1	164.5*	Max WS	600.82	120.50	126.05		126.08	0.001978	2.67	555.93	897.20	0.26
RIVER-1	Reach-1	164	Max WS	601.26	120.00	125.89		125.92	0.001580	2.26	574.34	761.45	0.22
RIVER-1	Reach-1	163.5*	Max WS	601.54	120.00	125.82		125.86	0.001992	2.69	534.10	814.50	0.26
RIVER-1	Reach-1	163.*	Max WS	602.16	120.00	125.73		125.78	0.002417	3.09	491.43	823.71	0.29
RIVER-1	Reach-1	162.5*	Max WS	602.54	120.00	125.61		125.70	0.003089	3.60	433.42	798.02	0.33

RIVER-1	Reach-1	162	Max WS	602.57	120.00	125.40	125.61	0.005449	4.82	318.59	744.10	0.43
RIVER-1	Reach-1	161.5*	Max WS	601.84	120.12	125.22	125.38	0.004319	4.23	337.33	699.66	0.40
RIVER-1	Reach-1	161.*	Max WS	600.41	120.25	125.08	125.18	0.002978	3.42	392.59	689.38	0.33
RIVER-1	Reach-1	160.5*	Max WS	599.39	120.38	125.00	125.05	0.001812	2.61	481.78	697.61	0.26
RIVER-1	Reach-1	160	Max WS	599.17	120.50	124.94	124.97	0.001059	1.96	595.14	719.28	0.20
RIVER-1	Reach-1	159.*	Max WS	598.95	120.25	124.85	124.88	0.000984	1.86	599.98	743.01	0.19
RIVER-1	Reach-1	158	Max WS	599.51	120.00	124.76	124.79	0.000871	1.70	627.25	770.95	0.18
RIVER-1	Reach-1	157.*	Max WS	599.81	119.50	124.67	124.72	0.001286	2.23	543.56	777.92	0.22
RIVER-1	Reach-1	156	Max WS	599.24	119.00	124.49	124.62	0.003600	3.87	372.17	750.14	0.36
RIVER-1	Reach-1	155.*	Max WS	598.59	119.00	124.20	124.27	0.002565	3.26	454.12	787.67	0.30
RIVER-1	Reach-1	154	Max WS	613.41	119.00	124.02	124.04	0.001218	2.21	630.18	795.73	0.20
RIVER-1	Reach-1	153.*	Max WS	626.41	119.00	123.92	123.95	0.001172	2.21	660.14	888.34	0.21
RIVER-1	Reach-1	152	Max WS	627.02	119.00	123.83	123.86	0.001031	2.00	696.01	922.80	0.20
RIVER-1	Reach-1	151.*	Max WS	644.22	119.00	123.70	123.72	0.001397	2.09	646.82	929.87	0.22
RIVER-1	Reach-1	150	Max WS	643.07	119.00	123.43	123.48	0.003148	2.60	489.65	866.04	0.32
RIVER-1	Reach-1	149.*	Max WS	647.53	118.50	123.15	123.21	0.002498	2.78	497.44	812.07	0.30
RIVER-1	Reach-1	148	Max WS	652.26	118.00	122.96	123.00	0.001732	2.58	554.74	784.73	0.25
RIVER-1	Reach-1	147.*	Max WS	655.71	117.92	122.81	122.85	0.002106	2.55	578.70	997.44	0.27
RIVER-1	Reach-1	146	Max WS	659.13	117.83	122.60	122.64	0.003124	2.67	540.76	1061.27	0.32
RIVER-1	Reach-1	145.*	Max WS	661.68	117.92	122.39	122.43	0.002104	2.07	548.44	1059.87	0.26
RIVER-1	Reach-1	144	Max WS	663.71	118.00	122.20	122.24	0.002846	1.86	516.62	1124.01	0.29
RIVER-1	Reach-1	143.*	Max WS	666.70	117.50	122.04	122.07	0.001066	1.73	672.81	1005.80	0.20
RIVER-1	Reach-1	142	Max WS	670.21	117.00	121.95	121.97	0.001108	2.16	737.32	957.84	0.20
RIVER-1	Reach-1	141.*	Max WS	673.16	117.00	121.82	121.85	0.001654	2.61	653.51	998.73	0.24
RIVER-1	Reach-1	140	Max WS	675.17	117.00	121.64	121.69	0.002205	2.95	603.56	1060.91	0.28
RIVER-1	Reach-1	139.*	Max WS	676.46	117.50	121.52	121.55	0.001524	2.30	673.98	999.79	0.24
RIVER-1	Reach-1	138	Max WS	677.65	118.00	121.44	121.46	0.000802	1.59	828.32	970.87	0.17
RIVER-1	Reach-1	137.*	Max WS	680.17	118.00	121.36	121.38	0.001050	1.72	757.53	998.45	0.20
RIVER-1	Reach-1	136	Max WS	682.63	118.00	121.25	121.28	0.001691	1.99	657.81	1111.69	0.24
RIVER-1	Reach-1	135.*	Max WS	684.60	117.50	121.14	121.17	0.001229	1.61	692.41	961.68	0.20
RIVER-1	Reach-1	134	Max WS	687.82	117.00	121.06	121.08	0.000875	1.30	773.19	898.27	0.17
RIVER-1	Reach-1	133.*	Max WS	691.77	117.00	120.96	120.99	0.001103	1.43	664.05	777.16	0.19
RIVER-1	Reach-1	132	Max WS	695.83	117.00	120.86	120.88	0.001018	1.35	632.60	631.26	0.18
RIVER-1	Reach-1	131.*	Max WS	697.87	117.00	120.76	120.79	0.001352	1.47	620.41	834.76	0.21
RIVER-1	Reach-1	130	Max WS	700.07	117.00	120.67	120.69	0.001248	1.36	674.30	813.60	0.20
RIVER-1	Reach-1	129.*	Max WS	701.14	117.00	120.57	120.60	0.001794	1.58	598.91	835.90	0.23
RIVER-1	Reach-1	128	Max WS	702.04	117.00	120.32	120.40	0.005317	2.43	394.16	861.75	0.39
RIVER-1	Reach-1	127.*	Max WS	701.57	116.71	120.11	120.16	0.002779	2.25	481.56	706.06	0.30
RIVER-1	Reach-1	126	Max WS	701.27	116.42	120.05	120.07	0.001379	2.02	675.23	784.96	0.22
RIVER-1	Reach-1	125.*	Max WS	701.26	116.21	120.02	120.04	0.001259	1.77	704.31	831.24	0.21
RIVER-1	Reach-1	124	Max WS	701.24	116.00	120.00	120.02	0.000924	1.40	787.77	856.27	0.18
RIVER-1	Reach-1	123.*	Max WS	701.14	116.18	119.94	119.96	0.001090	1.62	752.59	896.20	0.19
RIVER-1	Reach-1	122	Max WS	701.01	116.35	119.89	119.90	0.001036	1.60	793.97	980.24	0.19
RIVER-1	Reach-1	121.*	Max WS	779.81	115.68	119.72	119.76	0.001912	2.10	598.33	644.33	0.26
RIVER-1	Reach-1	120	Max WS	779.41	115.00	119.58	119.61	0.001191	2.11	673.30	635.45	0.21
RIVER-1	Reach-1	119.*	Max WS	778.79	114.50	119.45	119.51	0.001826	2.88	576.86	601.15	0.29
RIVER-1	Reach-1	118	Max WS	774.41	114.00	119.15	119.36	0.004193	4.73	392.46	554.53	0.49
RIVER-1	Reach-1	117.*	Max WS	769.95	114.50	119.06	119.17	0.001893	2.91	444.36	531.32	0.33
RIVER-1	Reach-1	116	Max WS	756.61	115.00	118.96	119.03	0.002050	2.42	431.98	405.11	0.32
RIVER-1	Reach-1	115.*	Max WS	734.09	114.50	118.84	118.89	0.001615	1.91	467.12	456.83	0.28
RIVER-1	Reach-1	114	Max WS	561.00	114.00	118.78	118.79	0.000618	1.13	559.04	510.32	0.17
RIVER-1	Reach-1	113.*	Max WS	542.28	113.00	118.73	118.74	0.000401	1.08	561.20	443.35	0.14
RIVER-1	Reach-2	112.05	Max WS	1262.64	112.00	118.73	118.83	0.001538	2.69	639.85	565.99	0.30
RIVER-1	Reach-2	112	Max WS	1262.64	112.00	118.72	118.82	0.001559	2.70	635.11	563.82	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1259.10	113.00	118.61	118.70	0.001850	2.53	630.68	542.65	0.32
RIVER-1	Reach-2	110	Max WS	1218.38	114.00	118.54	118.59	0.001411	2.04	817.58	665.72	0.27
RIVER-1	Reach-2	109.5*	Max WS	1201.33	113.75	118.44	118.50	0.002231	2.35	734.57	655.13	0.33
RIVER-1	Reach-2	109.*	Max WS	1198.63	113.50	118.32	118.40	0.002455	2.83	685.38	581.75	0.36
RIVER-1	Reach-2	108.5*	Max WS	1194.24	113.25	118.20	118.31	0.001838	3.35	697.73	553.91	0.33
RIVER-1	Reach-2	108	Max WS	1192.31	113.00	118.13	118.22	0.001532	3.30	755.59	580.07	0.31
RIVER-1	Reach-2	107.*	Max WS	1189.34	112.00	118.09	118.15	0.001047	2.69	916.40	670.69	0.26
RIVER-1	Reach-2	106	Max WS	1188.27	111.00	118.05	118.10	0.000659	2.45	1102.85	743.22	0.21
RIVER-1	Reach-2	105.*	Max WS	1187.65	110.50	118.01	118.05	0.000819	2.51	1068.24	750.46	0.22
RIVER-1	Reach-2	104	Max WS	1186.38	110.00	117.96	118.01	0.000797	2.87	1064.09	757.67	0.22
RIVER-1	Reach-2	103.75*	Max WS	1185.85	110.00	117.95	118.01	0.000812	2.85	1066.84	756.24	0.22
RIVER-1	Reach-2	103.5*	Max WS	1185.93	110.00	117.95	117.99	0.000893	2.50	1080.50	768.55	0.23
RIVER-1	Reach-2	103.25*	Max WS	1186.01	110.00	117.95	117.98	0.000869	2.26	1106.54	781.94	0.22
RIVER-1	Reach-2	103.*	Max WS	1186.09	110.00	117.94	117.98	0.000790	2.18	1144.75	809.96	0.21

RIVER-1	Reach-2	102.75*	Max WS	1177.47	110.00	117.94		117.97	0.000633	2.15	1218.59	845.79	0.20
RIVER-1	Reach-2	102.5*	Max WS	1150.86	110.00	117.94		117.97	0.000486	2.06	1289.34	839.68	0.18
RIVER-1	Reach-2	102.25*	Max WS	1102.71	110.00	117.94		117.96	0.000376	1.94	1353.40	833.62	0.16
RIVER-1	Reach-2	102	Max WS	1027.84	110.00	117.94		117.96	0.000288	1.79	1409.32	827.70	0.14
RIVER-1	Reach-2	101.*	Max WS	1238.41	110.50	117.91		117.94	0.000428	2.14	1405.81	814.76	0.17
RIVER-1	Reach-2	100	Max WS	1237.56	111.00	117.88		117.91	0.000446	2.15	1388.54	800.94	0.17
RIVER-1	Reach-2	98	Max WS	1238.74	111.00	117.72		117.75	0.000422	2.15	1389.56	803.82	0.17
RIVER-1	Reach-2	96	Max WS	1240.74	110.00	117.63		117.66	0.000406	2.12	1377.83	761.30	0.17
RIVER-1	Reach-2	94	Max WS	1242.51	109.00	117.55		117.58	0.000428	2.23	1321.21	772.23	0.17
RIVER-1	Reach-2	92	Max WS	1245.02	109.00	117.46		117.51	0.000397	2.27	1185.95	591.81	0.17
RIVER-1	Reach-2	90	Max WS	1248.52	108.00	117.40		117.43	0.000329	2.04	1423.41	1175.57	0.15
RIVER-1	Reach-2	88	Max WS	1252.07	109.00	117.34		117.37	0.000301	2.05	1370.01	841.41	0.15
RIVER-1	Reach-2	86	Max WS	1254.89	107.00	117.32		117.33	0.000077	1.23	2423.19	1298.94	0.08
RIVER-1	Reach-2	84	Max WS	1256.30	108.00	117.31		117.32	0.000074	0.99	2882.55	1391.24	0.07
RIVER-1	Reach-2	82	Max WS	1275.60	109.00	117.29		117.31	0.000161	1.38	2169.06	1244.13	0.11
RIVER-1	Reach-2	81.56	Max WS	1275.41	108.22	117.21	113.18	117.32	0.001005	2.79	599.01	1339.14	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1270.09	108.96	116.00		116.43	0.006349	5.26	241.35	70.70	0.50
RIVER-1	Reach-2	81.125*	Max WS	1270.68	108.90	116.04		116.35	0.002290	4.50	282.44	67.91	0.39
RIVER-1	Reach-2	80.95	Max WS	1271.23	108.83	116.07	112.98	116.32	0.001472	3.99	318.34	64.59	0.32
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1270.09	108.67	116.01		116.27	0.001610	4.09	310.88	66.11	0.33
RIVER-1	Reach-2	80.1312*	Max WS	1268.76	108.59	115.94		116.23	0.001742	4.25	298.60	63.42	0.35
RIVER-1	Reach-2	79.8825*	Max WS	1264.75	108.50	115.87		116.18	0.001890	4.42	286.05	60.71	0.36
RIVER-1	Reach-2	79.6337*	Max WS	1256.69	108.42	115.80		116.13	0.002021	4.60	273.24	59.12	0.37
RIVER-1	Reach-2	79.3849*	Max WS	1254.11	108.33	115.76		116.09	0.001977	4.65	359.61	563.38	0.37
RIVER-1	Reach-2	79.1362*	Max WS	1259.17	108.25	115.83		115.99	0.001186	3.73	666.74	582.95	0.29
RIVER-1	Reach-2	78.8875*	Max WS	1260.11	108.17	115.84		115.93	0.000743	3.04	861.87	554.80	0.23
RIVER-1	Reach-2	78.6387*	Max WS	1259.64	108.08	115.83		115.89	0.000584	2.77	916.14	454.26	0.20
RIVER-1	Reach-2	78.39	Max WS	1256.65	108.00	115.80		115.87	0.000605	2.89	818.25	327.24	0.21
RIVER-1	Reach-2	78.1455*	Max WS	1257.17	107.93	115.81		115.85	0.000433	2.44	1016.61	403.69	0.18
RIVER-1	Reach-2	77.9011*	Max WS	1257.16	107.87	115.81		115.84	0.000346	2.18	1186.52	480.14	0.16
RIVER-1	Reach-2	77.6566*	Max WS	1257.16	107.80	115.80		115.83	0.000300	2.03	1327.03	556.58	0.15
RIVER-1	Reach-2	77.4122*	Max WS	1256.64	107.73	115.80		115.82	0.000270	1.92	1446.79	633.03	0.14
RIVER-1	Reach-2	77.1677*	Max WS	1255.56	107.67	115.79		115.82	0.000291	1.99	1462.62	709.49	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1255.01	107.60	115.78		115.81	0.000308	2.04	1478.54	785.94	0.15
RIVER-1	Reach-2	76.6788*	Max WS	1254.45	107.53	115.77		115.81	0.000368	2.22	1408.97	862.38	0.16
RIVER-1	Reach-2	76.4344*	Max WS	1253.31	107.47	115.76		115.81	0.000462	2.48	1291.82	933.13	0.18
RIVER-1	Reach-2	76.19	Max WS	1252.15	107.40	115.74		115.81	0.000568	2.74	1142.14	909.90	0.20
RIVER-1	Reach-2	75.86	Max WS	1237.14	107.22	115.57	112.16	115.77	0.001113	3.84	509.36	438.43	0.28
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1245.28	106.63	115.57		115.75	0.001223	3.61	502.05	398.46	0.29
RIVER-1	Reach-2	75.1666*	Max WS	1248.47	106.69	115.61		115.71	0.000780	2.83	749.79	552.37	0.23
RIVER-1	Reach-2	74.9333*	Max WS	1249.73	106.75	115.62		115.68	0.000580	2.37	954.86	686.22	0.20
RIVER-1	Reach-2	74.7*	Max WS	1249.73	106.82	115.62		115.66	0.000447	2.01	1177.34	828.53	0.17
RIVER-1	Reach-2	74.4666*	Max WS	1249.73	106.88	115.62		115.65	0.000351	1.71	1419.44	972.86	0.15
RIVER-1	Reach-2	74.2333*	Max WS	1249.08	106.94	115.62		115.64	0.000274	1.45	1688.94	1112.47	0.13
RIVER-1	Reach-2	74	Max WS	1249.07	107.00	115.62		115.63	0.000218	1.24	1972.69	1253.22	0.12
RIVER-1	Reach-2	73.5*	Max WS	1248.40	107.21	115.61		115.62	0.000178	1.20	2128.58	1284.31	0.11
RIVER-1	Reach-2	73.*	Max WS	1247.70	107.43	115.60		115.61	0.000149	1.16	2292.60	1315.07	0.10
RIVER-1	Reach-2	72.5*	Max WS	1246.99	107.65	115.60		115.61	0.000128	1.14	2446.18	1345.96	0.09
RIVER-1	Reach-2	72	Max WS	1246.24	107.86	115.59		115.60	0.000113	1.12	2599.06	1376.28	0.09
RIVER-1	Reach-2	71.5*	Max WS	1568.18	107.65	115.55		115.61	0.000588	2.43	1336.49	986.09	0.19
RIVER-1	Reach-2	71.*	Max WS	1568.17	107.44	115.46		115.59	0.000993	3.07	727.44	448.35	0.24
RIVER-1	Reach-2	70.5*	Max WS	1568.08	107.24	115.39		115.53	0.001050	3.08	560.81	185.76	0.24
RIVER-1	Reach-2	70	Max WS	1568.12	107.03	115.36		115.48	0.000949	2.84	553.79	102.36	0.21
RIVER-1	Reach-2	69.*	Max WS	1568.04	107.35	115.22		115.37	0.001268	3.16	496.76	94.25	0.24
RIVER-1	Reach-2	68	Max WS	1568.00	107.68	115.04		115.23	0.001632	3.48	450.40	89.21	0.27
RIVER-1	Reach-2	67.5*	Max WS	1567.99	107.54	114.97		115.15	0.001638	3.57	482.81	112.04	0.28
RIVER-1	Reach-2	67	Max WS	1567.95	107.40	114.86		115.06	0.002018	3.85	464.58	135.09	0.30
RIVER-1	Reach-2	66	Max WS	1567.80	107.40	114.61		114.85	0.002456	4.15	430.93	133.34	0.33
RIVER-1	Reach-2	65.*	Max WS	1567.74	107.20	114.43		114.63	0.001772	3.67	478.17	173.80	0.31
RIVER-1	Reach-2	64	Max WS	1567.69	107.00	114.28		114.47	0.001497	3.47	467.68	187.04	0.31
RIVER-1	Reach-2	63.5*	Max WS	1567.63	106.90	114.21		114.40	0.001529	3.42	476.00	208.50	0.31
RIVER-1	Reach-2	63.*	Max WS	1567.57	106.81	114.14		114.32	0.001562	3.38	483.05	229.06	0.32
RIVER-1	Reach-2	62.5*	Max WS	1567.62	106.71	114.07		114.25	0.001575	3.33	491.45	233.14	0.32
RIVER-1	Reach-2	62.*	Max WS	1567.57	106.62	114.01		114.17	0.001559	3.27	503.70	202.57	0.31
RIVER-1	Reach-2	61.5*	Max WS	1567.51	106.53	113.94		114.09	0.001544	3.21	517.28	208.57	0.31
RIVER-1	Reach-2	61.*	Max WS	1567.46	106.43	113.88		114.02	0.001361	3.11	540.34	211.30	0.29

RIVER-1	Reach-2	60.5*	Max WS	1567.51	106.33	113.83		113.96	0.001200	2.96	574.57	221.35	0.28
RIVER-1	Reach-2	60	Max WS	1567.46	106.24	113.79		113.91	0.001036	2.79	615.63	232.39	0.26
RIVER-1	Reach-2	59.*	Max WS	1567.45	106.07	113.70		113.81	0.000872	2.76	703.97	364.51	0.24
RIVER-1	Reach-2	58	Max WS	1567.43	105.90	113.67		113.74	0.000449	2.38	1054.05	477.94	0.18
RIVER-1	Reach-2	57.2	Max WS	1567.42	107.05	113.60	110.84	113.71	0.000885	3.03	848.73	422.33	0.25
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1567.41	107.05	113.49		113.62	0.001093	3.28	770.65	402.40	0.27
RIVER-1	Reach-2	56	Max WS	1567.40	105.90	113.44		113.53	0.000575	2.54	866.72	385.51	0.20
RIVER-1	Reach-2	54	Max WS	1567.38	105.80	113.38		113.43	0.000405	1.87	1175.29	561.84	0.16
RIVER-1	Reach-2	52	Max WS	1695.14	105.60	113.21		113.26	0.000628	2.14	1024.32	326.08	0.17
RIVER-1	Reach-2	50.*	Max WS	1694.41	105.54	113.05		113.11	0.000826	2.61	926.97	304.98	0.21
RIVER-1	Reach-2	48	Max WS	1693.26	105.47	112.86		112.95	0.000844	3.10	873.24	288.20	0.24
RIVER-1	Reach-2	46.*	Max WS	1693.04	105.88	112.74		112.80	0.000569	2.54	1114.90	357.58	0.20
RIVER-1	Reach-2	44	Max WS	1692.64	106.29	112.66		112.70	0.000371	2.11	1372.22	431.34	0.16
RIVER-1	Reach-2	42.*	Max WS	1692.48	106.31	112.58		112.63	0.000397	2.24	1279.01	422.96	0.17
RIVER-1	Reach-2	40	Max WS	1692.46	106.33	112.49		112.55	0.000420	2.30	1215.91	415.48	0.18
RIVER-1	Reach-2	38.*	Max WS	1692.42	106.01	112.44		112.47	0.000258	1.83	1565.94	494.82	0.14
RIVER-1	Reach-2	36	Max WS	1692.35	105.68	112.40		112.42	0.000228	1.75	1666.07	524.80	0.13
RIVER-1	Reach-2	35.22	Max WS	1692.34	104.52	112.17		112.46	0.001528	4.29	394.59	75.33	0.33
RIVER-1	Reach-2	34.82	Max WS	1692.34	104.52	112.10	108.74	112.39	0.001586	4.35	389.34	74.93	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1692.30	104.30	110.96		111.66	0.005972	6.71	252.11	68.28	0.62
RIVER-1	Reach-2	33.67*	Max WS	1692.23	104.12	110.92		111.35	0.003257	5.30	319.56	79.01	0.46
RIVER-1	Reach-2	33	Max WS	1692.23	103.93	111.01		111.16	0.001064	3.37	806.99	585.00	0.27
RIVER-1	Reach-2	32.*	Max WS	1692.22	103.40	110.90		111.03	0.001062	3.10	843.82	667.32	0.27
RIVER-1	Reach-2	31.*	Max WS	1692.20	102.88	110.75		110.89	0.001480	3.18	795.84	741.06	0.30
RIVER-1	Reach-2	30	Max WS	1692.19	102.35	110.42		110.65	0.003932	4.03	599.65	982.60	0.47
RIVER-1	Reach-2	28.*	Max WS	1692.00	102.33	109.75		109.97	0.003615	4.26	701.71	890.44	0.46
RIVER-1	Reach-2	26	Max WS	1691.76	102.32	109.38		109.45	0.001611	3.22	1205.20	1056.96	0.31
RIVER-1	Reach-2	24.*	Max WS	1691.59	101.66	109.04		109.16	0.002920	3.89	999.84	1213.46	0.41
RIVER-1	Reach-2	22	Max WS	1691.36	101.00	108.72		108.77	0.001920	2.82	1218.83	1112.46	0.32
RIVER-1	Reach-2	20.*	Max WS	1690.95	101.54	108.38		108.44	0.002207	3.06	1133.84	1026.16	0.35
RIVER-1	Reach-2	18	Max WS	1690.42	102.09	108.01		108.07	0.002453	3.24	1095.81	907.44	0.36
RIVER-1	Reach-2	16.*	Max WS	1689.86	101.85	107.73		107.75	0.001286	2.34	1532.32	1240.37	0.26
RIVER-1	Reach-2	14	Max WS	1689.45	101.61	107.60		107.61	0.000447	1.38	2160.10	1249.25	0.15
RIVER-1	Reach-2	12.*	Max WS	1689.34	101.26	107.54		107.55	0.000295	1.15	2452.52	1248.57	0.13
RIVER-1	Reach-2	10	Max WS	1689.25	100.90	107.50		107.51	0.000198	1.03	2751.93	1225.27	0.10
RIVER-1	Reach-2	6	Max WS	1688.80	100.30	107.11		107.19	0.001827	3.68	1258.65	1320.95	0.33
RIVER-1	Reach-2	2	Max WS	1688.30	99.70	106.66		106.69	0.000786	2.59	2089.58	2290.60	0.22
RIVER-1	Reach-2	0	Max WS	1688.21	99.40	106.43	105.82	106.54	0.001501	3.71	1390.80	2024.17	0.31

Appendix P-11: HEC-RAS Results, Anatolia III – Alternative 'C' Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X    X    X    X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X    XXXXX
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PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 2:41:11 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	318.10	158.00	162.26		162.26	0.000028	0.30	1053.95	296.98	0.03
RIVER-2	Reach-1	11850.*	Max WS	317.18	157.71	162.26		162.26	0.000028	0.30	1071.62	314.59	0.03
RIVER-2	Reach-1	11800	Max WS	317.17	157.42	162.26		162.26	0.000011	0.20	1567.27	412.19	0.02
RIVER-2	Reach-1	11750.*	Max WS	316.27	156.96	162.26		162.26	0.000012	0.21	1530.12	400.13	0.02
RIVER-2	Reach-1	11700	Max WS	316.26	156.50	162.26		162.26	0.000010	0.20	1562.08	376.83	0.02
RIVER-2	Reach-1	11650.*	Max WS	316.25	156.25	162.26		162.26	0.000011	0.21	1476.20	351.23	0.02
RIVER-2	Reach-1	11600	Max WS	317.13	156.00	162.26		162.26	0.000012	0.22	1426.17	331.19	0.02
RIVER-2	Reach-1	11550.*	Max WS	316.24	155.05	162.26		162.26	0.000011	0.22	1440.70	337.28	0.02
RIVER-2	Reach-1	11500	Max WS	314.51	154.11	162.26		162.26	0.000011	0.22	1450.46	338.65	0.02
RIVER-2	Reach-1	11450.*	Max WS	315.36	154.05	162.26		162.26	0.000010	0.20	1541.01	374.30	0.02
RIVER-2	Reach-1	11400	Max WS	315.35	154.00	162.26		162.26	0.000009	0.19	1642.67	403.12	0.02
RIVER-2	Reach-1	11350.*	Max WS	314.50	154.00	162.26		162.26	0.000008	0.18	1720.82	407.18	0.02
RIVER-2	Reach-1	11300	Max WS	315.34	154.00	162.26		162.26	0.000007	0.17	1889.63	455.23	0.01
RIVER-2	Reach-1	11250.*	Max WS	313.67	154.00	162.26		162.26	0.000005	0.15	2068.50	462.11	0.01
RIVER-2	Reach-1	11200	Max WS	314.49	154.00	162.25		162.26	0.000004	0.14	2260.05	478.49	0.01
RIVER-2	Reach-1	11150.*	Max WS	314.47	153.00	162.25		162.25	0.000003	0.13	2475.19	498.27	0.01
RIVER-2	Reach-1	11100	Max WS	313.67	152.00	162.25		162.25	0.000003	0.12	2688.48	533.88	0.01
RIVER-2	Reach-1	11050.*	Max WS	312.89	152.00	162.25		162.25	0.000002	0.11	2893.23	545.86	0.01
RIVER-2	Reach-1	11000	Max WS	314.44	152.00	162.25		162.25	0.000002	0.10	3156.66	574.08	0.01
RIVER-2	Reach-1	10887.5*	Max WS	314.41	152.00	162.25		162.25	0.000001	0.09	3544.63	584.15	0.01
RIVER-2	Reach-1	10775.*	Max WS	313.66	152.00	162.25		162.25	0.000001	0.08	4062.98	603.40	0.01
RIVER-2	Reach-1	10662.5*	Max WS	313.64	152.00	162.25		162.25	0.000001	0.07	4656.72	639.10	0.00
RIVER-2	Reach-1	10550	Max WS	315.09	152.00	162.25		162.25	0.000000	0.06	5300.80	681.71	0.00
RIVER-2	Reach-1	10490.*	Max WS	314.32	151.60	162.25		162.25	0.000000	0.05	5881.47	785.23	0.00
RIVER-2	Reach-1	10430.*	Max WS	313.62	151.20	162.25		162.25	0.000000	0.05	6425.27	882.60	0.00
RIVER-2	Reach-1	10370.*	Max WS	314.26	150.80	162.25		162.25	0.000000	0.05	6934.94	981.91	0.00
RIVER-2	Reach-1	10310.*	Max WS	314.84	150.40	162.25		162.25	0.000000	0.04	7425.21	1052.67	0.00
RIVER-2	Reach-1	10250	Max WS	314.21	150.00	162.25		162.25	0.000000	0.04	7920.65	1129.89	0.00
RIVER-2	Reach-1	10200.*	Max WS	313.60	150.00	162.25		162.25	0.000000	0.04	7404.53	965.93	0.00
RIVER-2	Reach-1	10150	Max WS	314.15	150.00	162.25		162.25	0.000000	0.05	6907.02	856.56	0.00
RIVER-2	Reach-1	10100.*	Max WS	314.14	150.00	162.25		162.25	0.000000	0.05	6583.04	847.82	0.00
RIVER-2	Reach-1	10050	Max WS	314.11	150.00	162.25		162.25	0.000000	0.05	6356.18	775.23	0.00
RIVER-2	Reach-1	10000.*	Max WS	314.09	150.00	162.25		162.25	0.000000	0.05	6613.16	795.07	0.00
RIVER-2	Reach-1	9950	Max WS	313.61	150.00	162.25		162.25	0.000000	0.05	6884.85	815.03	0.00

RIVER-2	Reach-1	9900.*	Max WS	313.59	150.00	162.25		162.25	0.000000	0.04	7538.18	1039.59	0.00
RIVER-2	Reach-1	9850	Max WS	313.58	150.00	162.25		162.25	0.000000	0.04	8149.41	1201.12	0.00
RIVER-2	Reach-1	9800.*	Max WS	313.55	150.00	162.25		162.25	0.000000	0.04	7946.07	1391.53	0.00
RIVER-2	Reach-1	9750	Max WS	313.99	150.00	162.25		162.25	0.000000	0.04	8242.18	1456.41	0.00
RIVER-2	Reach-1	9675.*	Max WS	313.95	149.36	162.25		162.25	0.000000	0.04	8938.59	1495.74	0.00
RIVER-2	Reach-1	9600	Max WS	313.54	148.73	162.25		162.25	0.000000	0.03	9722.62	1534.90	0.00
RIVER-2	Reach-1	9550.*	Max WS	313.88	148.36	162.25		162.25	0.000000	0.03	11983.13	1678.72	0.00
RIVER-2	Reach-1	9500	Max WS	313.85	148.00	162.25		162.25	0.000000	0.02	14412.61	1729.97	0.00
RIVER-2	Reach-1	9450.*	Max WS	313.81	147.00	162.25		162.25	0.000000	0.02	15411.87	1761.69	0.00
RIVER-2	Reach-1	9400	Max WS	313.76	146.00	162.25		162.25	0.000000	0.02	16748.33	1776.63	0.00
RIVER-2	Reach-1	9350.*	Max WS	313.99	145.51	162.25		162.25	0.000000	0.02	16193.90	1704.95	0.00
RIVER-2	Reach-1	9300	Max WS	313.73	145.02	162.25		162.25	0.000000	0.02	15520.29	1608.95	0.00
RIVER-2	Reach-1	9200.*	Max WS	313.49	144.51	162.25		162.25	0.000000	0.02	14492.15	1432.17	0.00
RIVER-2	Reach-1	9100	Max WS	313.64	144.00	162.25		162.25	0.000000	0.02	13415.52	1249.52	0.00
RIVER-2	Reach-1	9050.*	Max WS	313.60	144.00	162.25		162.25	0.000000	0.02	13005.73	1127.96	0.00
RIVER-2	Reach-1	9000	Max WS	313.50	144.00	162.25		162.25	0.000000	0.02	12674.67	1022.80	0.00
RIVER-2	Reach-1	8900.*	Max WS	313.63	143.08	162.25		162.25	0.000000	0.02	13031.26	995.69	0.00
RIVER-2	Reach-1	8800	Max WS	313.52	142.16	162.25		162.25	0.000000	0.02	13247.20	950.91	0.00
RIVER-2	Reach-1	8700.*	Max WS	313.50	143.70	162.25		162.25	0.000000	0.03	12461.84	980.52	0.00
RIVER-2	Reach-1	8600	Max WS	313.48	145.24	162.25	145.81	162.25	0.000000	0.03	11936.12	988.38	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	313.47	140.56	152.52		152.64	0.003337	2.76	113.40	29.32	0.25
RIVER-2	Reach-1	8350	Max WS	314.80	140.09	152.13		152.26	0.004218	2.91	108.09	28.78	0.26
RIVER-2	Reach-1	8250.*	Max WS	316.14	139.60	151.72		151.85	0.004237	2.92	108.28	29.01	0.27
RIVER-2	Reach-1	8150.*	Max WS	317.48	139.11	151.30		151.43	0.004281	2.93	108.41	29.28	0.27
RIVER-2	Reach-1	8050.*	Max WS	318.82	138.62	150.87		151.01	0.004343	2.94	108.47	29.56	0.27
RIVER-2	Reach-1	7950.*	Max WS	320.16	138.13	150.44		150.57	0.004417	2.95	108.49	29.87	0.27
RIVER-2	Reach-1	7850.*	Max WS	321.50	137.64	149.99		150.13	0.004520	2.96	108.55	30.43	0.28
RIVER-2	Reach-1	7750.*	Max WS	322.84	137.15	149.54		149.67	0.004678	2.98	108.51	31.29	0.28
RIVER-2	Reach-1	7650.*	Max WS	324.19	136.66	149.06		149.20	0.004847	2.99	108.42	32.15	0.29
RIVER-2	Reach-1	7550.*	Max WS	325.53	136.17	148.58		148.72	0.004919	3.00	108.45	32.38	0.29
RIVER-2	Reach-1	7450.*	Max WS	326.88	135.68	148.08		148.23	0.005002	3.02	108.36	32.52	0.29
RIVER-2	Reach-1	7350.*	Max WS	328.23	135.19	147.58		147.73	0.005081	3.03	108.23	32.57	0.29
RIVER-2	Reach-1	7250.*	Max WS	329.58	134.70	147.07		147.22	0.005139	3.05	108.18	32.54	0.29
RIVER-2	Reach-1	7150.*	Max WS	330.93	134.21	146.56		146.71	0.005236	3.07	107.82	32.39	0.30
RIVER-2	Reach-1	7050.*	Max WS	332.29	133.72	146.03		146.18	0.005332	3.09	107.44	32.20	0.30
RIVER-2	Reach-1	6950.*	Max WS	333.65	133.23	145.50		145.65	0.005487	3.13	106.66	31.90	0.30
RIVER-2	Reach-1	6850.*	Max WS	335.00	132.74	144.95		145.10	0.005696	3.17	105.52	31.49	0.31
RIVER-2	Reach-1	6750.*	Max WS	336.36	132.25	144.36		144.53	0.006077	3.25	103.42	30.92	0.31
RIVER-2	Reach-1	6650.*	Max WS	337.72	131.76	143.72		143.90	0.006820	3.39	99.67	30.15	0.33
RIVER-2	Reach-1	6550	Max WS	339.09	131.27	142.90		143.12	0.008997	3.73	90.97	28.76	0.37
RIVER-2	Reach-1	6466.66*	Max WS	340.22	132.84	142.19		142.40	0.008334	3.72	91.40	31.66	0.39
RIVER-2	Reach-1	6383.33*	Max WS	341.36	134.40	141.67		141.83	0.005420	3.27	104.53	37.17	0.34
RIVER-2	Reach-1	6300	Max WS	342.51	135.97	141.33		141.48	0.003197	3.07	111.41	31.77	0.29
RIVER-2	Reach-1	6250	Max WS	343.19	136.00	141.09		141.28	0.004682	3.56	96.31	29.07	0.34
RIVER-2	Reach-1	6200	Max WS	343.87	135.00	140.74		141.01	0.006320	4.16	82.64	23.37	0.39
RIVER-2	Reach-1	6100.*	Max WS	345.24	134.75	140.27		140.46	0.004703	3.55	97.23	29.22	0.34
RIVER-2	Reach-1	6000.*	Max WS	346.63	134.50	139.88		140.03	0.003937	3.16	109.70	35.22	0.32
RIVER-2	Reach-1	5900.*	Max WS	348.00	134.25	139.53		139.66	0.003593	2.91	119.72	41.26	0.30
RIVER-2	Reach-1	5800.*	Max WS	349.38	134.00	139.18		139.30	0.003571	2.76	126.37	47.15	0.30
RIVER-2	Reach-1	5700.*	Max WS	350.75	133.75	138.82		138.93	0.003928	2.74	128.13	52.40	0.31
RIVER-2	Reach-1	5600.*	Max WS	352.13	133.50	138.36		138.49	0.005032	2.89	121.81	55.43	0.34
RIVER-2	Reach-1	5500.*	Max WS	353.50	133.25	137.65		137.85	0.008141	3.58	98.86	46.61	0.43
RIVER-2	Reach-1	5400	Max WS	354.88	133.00	135.89		136.45	0.020810	6.01	59.03	25.44	0.70
RIVER-2	Reach-1	5304.54*	Max WS	356.19	132.73	134.91		135.08	0.007893	3.33	107.01	56.53	0.43
RIVER-2	Reach-1	5209.09*	Max WS	357.52	132.45	134.38		134.47	0.005273	2.47	144.55	88.83	0.34
RIVER-2	Reach-1	5113.63*	Max WS	358.84	132.18	133.96		134.03	0.004341	2.06	173.94	121.64	0.30
RIVER-2	Reach-1	5018.18*	Max WS	360.16	131.91	133.59		133.64	0.004027	1.83	196.37	155.06	0.29
RIVER-2	Reach-1	4922.72*	Max WS	361.48	131.64	133.25		133.30	0.003900	1.69	214.33	187.59	0.28
RIVER-2	Reach-1	4827.27*	Max WS	362.80	131.36	132.94		132.98	0.003829	1.58	229.92	219.47	0.27
RIVER-2	Reach-1	4731.81*	Max WS	364.11	131.09	132.63		132.67	0.003887	1.50	242.82	253.23	0.27
RIVER-2	Reach-1	4636.36*	Max WS	365.42	130.82	132.33		132.37	0.004181	1.45	252.04	292.14	0.28
RIVER-2	Reach-1	4540.90*	Max WS	366.74	130.55	132.03		132.06	0.004553	1.41	260.22	335.61	0.28
RIVER-2	Reach-1	4445.45*	Max WS	368.05	130.27	131.75		131.78	0.004502	1.31	281.33	402.40	0.28
RIVER-2	Reach-1	4350	Max WS	369.36	130.00	131.20		131.26	0.016999	1.91	193.37	424.78	0.50
RIVER-2	Reach-1	4260.*	Max WS	370.48	129.40	130.58		130.63	0.013867	1.81	205.36	423.44	0.46
RIVER-2	Reach-1	4170.*	Max WS	371.62	128.80	130.01		130.06	0.013212	1.80	206.54	410.67	0.45
RIVER-2	Reach-1	4080.*	Max WS	372.76	128.20	129.62		129.66	0.008512	1.55	241.01	432.28	0.37
RIVER-2	Reach-1	3990.*	Max WS	373.87	127.60	129.38		129.40	0.004535	1.24	302.26	472.87	0.27

RIVER-2	Reach-1	3900	Max WS	375.00	127.00	129.16	129.18	0.003513	1.13	331.89	491.09	0.24
RIVER-2	Reach-1	3800.*	Max WS	376.44	126.70	128.88	128.90	0.003855	1.17	321.47	483.44	0.25
RIVER-2	Reach-1	3700.*	Max WS	377.86	126.40	128.60	128.62	0.004353	1.22	308.52	475.19	0.27
RIVER-2	Reach-1	3600.*	Max WS	379.29	126.10	128.32	128.35	0.004837	1.27	297.57	467.22	0.28
RIVER-2	Reach-1	3500.*	Max WS	380.71	125.80	128.05	128.08	0.004585	1.30	292.22	426.47	0.28
RIVER-2	Reach-1	3400.*	Max WS	382.13	125.50	127.78	127.81	0.004426	1.32	289.05	401.92	0.27
RIVER-2	Reach-1	3300.*	Max WS	383.53	125.20	127.51	127.54	0.004262	1.33	287.59	383.65	0.27
RIVER-2	Reach-1	3200.*	Max WS	384.93	124.90	127.25	127.28	0.004111	1.34	287.48	371.01	0.27
RIVER-2	Reach-1	3100.*	Max WS	386.33	124.60	126.99	127.02	0.003935	1.33	290.69	367.12	0.26
RIVER-2	Reach-1	3000.*	Max WS	387.73	124.30	126.74	126.77	0.003669	1.30	298.41	369.92	0.25
RIVER-2	Reach-1	2900	Max WS	389.13	124.00	126.51	126.54	0.003224	1.22	318.13	391.85	0.24
RIVER-2	Reach-1	2812.5*	Max WS	390.30	123.52	126.31	126.33	0.003332	1.17	333.12	448.60	0.24
RIVER-2	Reach-1	2725.*	Max WS	391.46	123.03	126.03	126.05	0.004187	1.21	322.78	489.88	0.26
RIVER-2	Reach-1	2637.5*	Max WS	392.62	122.55	125.70	125.73	0.005817	1.34	292.53	487.94	0.31
RIVER-2	Reach-1	2550.*	Max WS	393.76	122.07	125.42	125.45	0.006224	1.37	287.40	488.91	0.31
RIVER-2	Reach-1	2462.5*	Max WS	394.89	121.58	125.18	125.21	0.004885	1.29	305.71	473.54	0.28
RIVER-2	Reach-1	2375	Max WS	396.04	121.10	124.91	124.94	0.004155	1.28	309.06	428.86	0.27
RIVER-2	Reach-1	2279.16*	Max WS	397.29	121.07	124.61	124.64	0.005006	1.33	299.82	455.24	0.29
RIVER-2	Reach-1	2183.33*	Max WS	398.54	121.03	124.37	124.39	0.004915	1.26	317.01	513.92	0.28
RIVER-2	Reach-1	2087.5*	Max WS	399.78	121.00	124.15	124.17	0.003778	1.15	347.49	528.34	0.25
RIVER-2	Reach-1	1991.66*	Max WS	401.02	120.97	123.88	123.90	0.003629	1.13	354.15	535.02	0.25
RIVER-2	Reach-1	1895.83*	Max WS	402.26	120.93	123.62	123.63	0.003612	1.13	356.06	537.92	0.24
RIVER-2	Reach-1	1800	Max WS	403.49	120.90	123.43	123.44	0.002533	1.01	400.83	551.79	0.21
RIVER-2	Reach-1	1705.*	Max WS	404.71	120.43	123.26	123.28	0.002350	1.01	402.45	524.45	0.20
RIVER-2	Reach-1	1610.*	Max WS	405.93	119.95	123.06	123.08	0.002493	1.05	387.09	495.07	0.21
RIVER-2	Reach-1	1515.*	Max WS	407.15	119.47	122.80	122.82	0.003159	1.15	355.55	476.71	0.23
RIVER-2	Reach-1	1420	Max WS	408.36	119.00	122.51	122.53	0.003828	1.27	326.31	456.59	0.26
RIVER-2	Reach-1	1324.61*	Max WS	408.34	118.62	122.18	122.20	0.003772	1.26	328.92	461.75	0.26
RIVER-2	Reach-1	1229.23*	Max WS	408.33	118.23	121.85	121.87	0.004002	1.27	324.44	464.55	0.26
RIVER-2	Reach-1	1133.84*	Max WS	408.30	117.85	121.55	121.57	0.004061	1.27	325.47	468.50	0.26
RIVER-2	Reach-1	1038.46*	Max WS	408.28	117.46	121.21	121.24	0.004021	1.35	315.01	480.00	0.27
RIVER-2	Reach-1	943.076*	Max WS	408.26	117.08	120.86	120.89	0.004422	1.44	297.14	432.49	0.28
RIVER-2	Reach-1	847.692*	Max WS	408.24	116.69	120.51	120.54	0.004003	1.51	286.10	362.97	0.27
RIVER-2	Reach-1	752.307*	Max WS	408.22	116.31	120.14	120.17	0.004041	1.62	268.60	311.74	0.28
RIVER-2	Reach-1	656.923*	Max WS	408.21	115.92	119.77	119.81	0.004395	1.72	253.67	283.90	0.29
RIVER-2	Reach-1	561.538*	Max WS	408.19	115.54	119.44	119.48	0.004306	1.77	246.51	258.02	0.29
RIVER-2	Reach-1	466.153*	Max WS	408.19	115.15	119.14	119.18	0.003917	1.80	244.22	234.12	0.28
RIVER-2	Reach-1	370.769*	Max WS	408.16	114.77	118.86	118.91	0.003492	1.82	240.94	206.32	0.27
RIVER-2	Reach-1	275.384*	Max WS	407.75	114.38	118.58	118.63	0.003376	1.93	220.17	152.92	0.27
RIVER-2	Reach-1	180	Max WS	320.38	114.00	118.16	118.22	0.003368	1.97	162.51	98.89	0.27
RIVER-1	Reach-1	326	Max WS	79.09	169.00	170.32	170.41	0.005168	2.45	44.03	111.30	0.46
RIVER-1	Reach-1	325.5*	Max WS	78.92	168.75	170.10	170.17	0.004551	2.31	49.32	123.60	0.43
RIVER-1	Reach-1	325.*	Max WS	87.93	168.50	169.84	169.92	0.005489	2.51	53.00	134.01	0.47
RIVER-1	Reach-1	324.5*	Max WS	90.65	168.25	169.56	169.64	0.006353	2.64	53.29	142.36	0.51
RIVER-1	Reach-1	324	Max WS	90.47	168.00	169.26	169.34	0.006270	2.58	60.39	174.78	0.50
RIVER-1	Reach-1	323.*	Max WS	90.83	167.02	168.68	168.83	0.006611	3.13	33.28	64.10	0.53
RIVER-1	Reach-1	322	Max WS	90.87	166.04	167.84	168.06	0.009481	3.78	24.03	21.97	0.64
RIVER-1	Reach-1	320	Max WS	103.61	166.00	167.37	167.43	0.006042	2.83	86.19	242.38	0.50
RIVER-1	Reach-1	319.*	Max WS	103.65	166.00	167.16	167.19	0.002451	1.45	94.24	345.11	0.31
RIVER-1	Reach-1	318	Max WS	103.72	166.00	166.95	166.97	0.003142	1.30	79.79	161.75	0.33
RIVER-1	Reach-1	317.*	Max WS	104.05	165.50	166.69	166.71	0.002547	1.21	86.18	166.71	0.30
RIVER-1	Reach-1	316	Max WS	104.67	165.00	166.17	166.23	0.007164	1.97	53.05	106.66	0.49
RIVER-1	Reach-1	315.*	Max WS	106.49	164.50	165.52	165.58	0.005966	1.83	58.20	114.25	0.45
RIVER-1	Reach-1	314	Max WS	108.31	164.00	165.10	165.14	0.002541	1.63	73.10	221.23	0.32
RIVER-1	Reach-1	313.*	Max WS	109.37	163.50	164.77	164.84	0.004280	2.15	62.08	206.94	0.42
RIVER-1	Reach-1	312	Max WS	110.61	163.00	164.47	164.50	0.003283	1.85	111.64	339.79	0.36
RIVER-1	Reach-1	311.*	Max WS	111.92	162.50	163.92	164.03	0.009190	2.99	60.95	198.44	0.60
RIVER-1	Reach-1	310	Max WS	113.30	162.00	163.49	163.52	0.002331	1.80	108.23	220.91	0.32
RIVER-1	Reach-1	309.*	Max WS	114.46	161.26	162.91	163.06	0.009488	3.06	37.37	47.83	0.61
RIVER-1	Reach-1	308	Max WS	115.53	160.51	162.52	162.55	0.001351	1.41	110.51	156.64	0.24
RIVER-1	Reach-1	307.*	Max WS	116.12	159.76	162.34	162.40	0.002688	2.01	65.20	93.75	0.34
RIVER-1	Reach-1	306	Max WS	116.73	159.00	161.90	162.02	0.006286	2.81	41.48	43.46	0.51
RIVER-1	Reach-1	305.*	Max WS	117.90	159.00	161.38	161.47	0.005308	2.48	47.59	53.98	0.46
RIVER-1	Reach-1	304	Max WS	118.42	159.00	161.07	161.12	0.002921	1.85	71.86	315.92	0.35
RIVER-1	Reach-1	303.*	Max WS	119.29	158.75	160.89	160.93	0.001723	1.79	89.69	156.64	0.28
RIVER-1	Reach-1	302	Max WS	120.29	158.50	160.76	160.80	0.001359	1.97	107.70	147.04	0.26
RIVER-1	Reach-1	301.*	Max WS	121.24	158.25	160.61	160.67	0.001865	2.24	95.46	168.36	0.30
RIVER-1	Reach-1	300	Max WS	122.18	158.00	160.43	160.50	0.002516	2.43	92.45	215.77	0.35
RIVER-1	Reach-1	299.*	Max WS	122.95	158.31	160.22	160.28	0.003027	2.62	87.94	146.53	0.38

RIVER-1	Reach-1	298	Max WS	123.49	158.62	160.03		160.07	0.002525	2.27	107.48	148.13	0.34
RIVER-1	Reach-1	297.*	Max WS	121.97	158.31	159.82		159.86	0.001977	1.90	121.14	214.99	0.30
RIVER-1	Reach-1	296	Max WS	120.91	158.00	159.73		159.74	0.000412	0.88	255.31	380.84	0.14
RIVER-1	Reach-1	295.*	Max WS	119.92	158.01	159.65		159.67	0.001049	1.35	153.96	340.68	0.22
RIVER-1	Reach-1	294	Max WS	125.48	158.01	159.56		159.57	0.000929	1.22	154.60	248.37	0.20
RIVER-1	Reach-1	293.*	Max WS	125.22	157.51	159.48		159.50	0.000575	1.10	170.85	175.17	0.17
RIVER-1	Reach-1	292	Max WS	124.97	157.00	159.43		159.44	0.000492	1.19	166.13	128.12	0.16
RIVER-1	Reach-1	291.5	Max WS	124.89	157.00	159.31		159.39	0.002512	2.57	63.88	50.34	0.35
RIVER-1	Reach-1	290.62	Max WS	124.83	157.00	159.11	158.01	159.18	0.001867	2.25	55.40	32.63	0.30
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	130.52	157.00	158.53		158.72	0.006292	3.46	37.75	29.21	0.54
RIVER-1	Reach-1	288.66*	Max WS	127.17	156.50	158.07		158.27	0.008427	3.59	35.47	32.64	0.61
RIVER-1	Reach-1	288	Max WS	126.08	156.00	157.89		157.89	0.000367	0.89	248.83	293.44	0.13
RIVER-1	Reach-1	287.*	Max WS	125.62	156.00	157.83		157.84	0.000772	1.30	185.79	289.86	0.19
RIVER-1	Reach-1	286	Max WS	125.49	156.00	157.75		157.76	0.001081	1.53	167.27	275.25	0.23
RIVER-1	Reach-1	285.*	Max WS	125.65	155.50	157.53		157.65	0.004109	2.71	46.46	46.30	0.43
RIVER-1	Reach-1	284	Max WS	125.79	155.00	157.24		157.33	0.002594	2.37	53.13	37.52	0.35
RIVER-1	Reach-1	283.*	Max WS	126.09	154.75	156.91		157.03	0.003666	2.76	45.70	33.19	0.41
RIVER-1	Reach-1	282	Max WS	126.33	154.50	156.61		156.73	0.003465	3.10	61.13	81.99	0.41
RIVER-1	Reach-1	281.*	Max WS	126.63	154.25	156.15		156.34	0.005233	3.53	38.48	60.29	0.50
RIVER-1	Reach-1	280	Max WS	126.97	154.00	155.70		155.88	0.005504	3.45	36.79	25.39	0.51
RIVER-1	Reach-1	279.*	Max WS	127.31	153.25	155.33		155.47	0.003620	2.99	42.61	26.88	0.42
RIVER-1	Reach-1	278	Max WS	127.71	152.50	155.05		155.17	0.002526	2.70	47.24	26.97	0.35
RIVER-1	Reach-1	277.*	Max WS	137.44	152.45	154.69		154.83	0.003787	3.02	45.97	34.12	0.43
RIVER-1	Reach-1	276	Max WS	137.68	152.40	154.25		154.42	0.005144	3.36	45.73	63.45	0.49
RIVER-1	Reach-1	275.*	Max WS	137.91	151.90	153.96		154.02	0.003097	1.84	74.87	74.42	0.32
RIVER-1	Reach-1	274	Max WS	138.08	151.40	153.70		153.73	0.002879	1.50	92.15	100.97	0.28
RIVER-1	Reach-1	273.*	Max WS	137.92	151.30	153.44		153.47	0.002587	1.35	102.27	125.40	0.26
RIVER-1	Reach-1	272	Max WS	138.00	151.20	153.29		153.30	0.001065	0.99	153.00	220.33	0.17
RIVER-1	Reach-1	271.*	Max WS	138.03	150.85	153.10		153.13	0.002525	1.37	101.08	115.46	0.26
RIVER-1	Reach-1	270	Max WS	138.08	150.50	152.63		152.72	0.005979	2.39	57.83	54.36	0.41
RIVER-1	Reach-1	269.*	Max WS	138.41	150.12	152.11		152.19	0.004829	2.26	61.28	53.29	0.37
RIVER-1	Reach-1	268	Max WS	138.39	149.75	151.61		151.72	0.004583	2.70	51.20	32.14	0.38
RIVER-1	Reach-1	267.265*	Max WS	138.38	149.43	151.29		151.41	0.004095	2.80	49.44	31.78	0.40
RIVER-1	Reach-1	266.53	Max WS	138.31	149.10	151.03	150.17	151.15	0.003096	2.76	50.18	31.98	0.39
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	138.38	148.65	150.55		150.67	0.003346	2.84	48.67	31.37	0.40
RIVER-1	Reach-1	264.033*	Max WS	138.37	148.24	150.23		150.35	0.004527	2.78	49.74	37.58	0.43
RIVER-1	Reach-1	263.016*	Max WS	138.24	147.84	149.79		149.91	0.007426	2.85	48.49	44.90	0.48
RIVER-1	Reach-1	262	Max WS	138.15	147.43	149.51		149.54	0.002113	1.55	112.95	158.87	0.25
RIVER-1	Reach-1	261.*	Max WS	138.40	146.71	148.87		149.00	0.008513	2.88	48.77	48.82	0.49
RIVER-1	Reach-1	260	Max WS	138.65	146.00	148.29		148.35	0.004209	2.10	83.40	164.08	0.34
RIVER-1	Reach-1	259.*	Max WS	138.68	146.00	147.78		147.89	0.007107	2.60	55.19	67.88	0.45
RIVER-1	Reach-1	258	Max WS	138.71	146.00	147.46		147.50	0.003369	1.80	99.91	171.80	0.31
RIVER-1	Reach-1	257.*	Max WS	138.82	145.50	147.17		147.22	0.003260	2.02	99.12	176.51	0.31
RIVER-1	Reach-1	256	Max WS	138.97	145.00	146.71		146.81	0.006960	3.04	66.09	104.64	0.46
RIVER-1	Reach-1	255.*	Max WS	146.62	144.50	146.18		146.28	0.007264	3.03	65.18	93.92	0.47
RIVER-1	Reach-1	254	Max WS	146.74	144.00	145.63		145.73	0.007410	2.95	64.00	90.10	0.47
RIVER-1	Reach-1	253.*	Max WS	146.86	143.00	144.81		144.98	0.012367	3.70	51.94	94.11	0.60
RIVER-1	Reach-1	252	Max WS	146.88	142.00	144.31		144.37	0.003847	2.36	89.88	147.06	0.34
RIVER-1	Reach-1	251.*	Max WS	147.09	141.75	143.89		143.94	0.003581	2.15	91.21	139.25	0.33
RIVER-1	Reach-1	250	Max WS	147.20	141.50	143.57		143.62	0.002889	1.93	112.05	295.81	0.29
RIVER-1	Reach-1	249.*	Max WS	147.20	141.25	143.33		143.38	0.003646	2.03	92.00	240.82	0.33
RIVER-1	Reach-1	248	Max WS	147.32	141.00	143.01		143.07	0.003513	1.94	76.19	82.73	0.32
RIVER-1	Reach-1	247.*	Max WS	147.36	140.75	142.62		142.69	0.005140	2.29	94.79	270.07	0.38
RIVER-1	Reach-1	246	Max WS	147.46	140.50	142.35		142.36	0.001201	1.25	175.81	268.28	0.19
RIVER-1	Reach-1	245.*	Max WS	147.57	139.75	142.10		142.19	0.004578	2.72	72.99	99.93	0.38
RIVER-1	Reach-1	244	Max WS	147.67	139.00	141.80		141.88	0.004241	2.84	87.19	143.51	0.36
RIVER-1	Reach-1	243.*	Max WS	147.74	139.50	141.59		141.65	0.003178	2.23	94.59	152.56	0.31
RIVER-1	Reach-1	242	Max WS	147.79	140.00	141.39		141.44	0.003467	1.92	107.14	209.92	0.32
RIVER-1	Reach-1	241.*	Max WS	147.90	139.50	141.05		141.10	0.004883	2.22	95.64	191.11	0.37
RIVER-1	Reach-1	240	Max WS	148.03	139.00	140.76		140.79	0.002702	1.88	111.03	149.59	0.28
RIVER-1	Reach-1	239.*	Max WS	148.18	138.50	140.52		140.55	0.002809	1.64	116.11	191.14	0.28
RIVER-1	Reach-1	238	Max WS	148.17	138.00	140.21		140.24	0.004112	1.74	109.46	234.42	0.33
RIVER-1	Reach-1	237.25*	Max WS	130.71	137.62	140.03		140.05	0.001413	1.21	147.34	256.91	0.20
RIVER-1	Reach-1	236.5	Max WS	148.19	137.25	139.29	139.07	139.48	0.018530	3.54	46.13	167.36	0.69
RIVER-1	Reach-1	235.85	Max WS	148.16	136.60	138.75	137.72	138.86	0.002422	2.60	57.00	32.92	0.35
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	148.16	136.10	138.72		138.78	0.001189	2.03	72.98	35.72	0.25

RIVER-1	Reach-1	234.153*	Max WS	148.15	135.73	138.61		138.69	0.001618	2.28	64.97	29.81	0.27
RIVER-1	Reach-1	233.076*	Max WS	144.44	135.37	138.51		138.62	0.002425	2.64	64.41	176.87	0.30
RIVER-1	Reach-1	232	Max WS	148.21	135.00	138.03	137.18	138.35	0.009843	4.54	34.35	119.58	0.55
RIVER-1	Reach-1	231.*	Max WS	148.04	135.00	137.71		137.83	0.005097	3.13	89.51	408.20	0.40
RIVER-1	Reach-1	230	Max WS	147.91	135.00	137.61		137.62	0.000466	0.98	289.72	489.74	0.12
RIVER-1	Reach-1	229.*	Max WS	156.57	134.50	137.54		137.56	0.000742	1.35	237.50	438.64	0.16
RIVER-1	Reach-1	228	Max WS	156.82	134.00	137.43		137.46	0.001237	1.85	182.36	419.04	0.20
RIVER-1	Reach-1	227.*	Max WS	157.03	133.85	137.32		137.35	0.001307	1.71	171.58	350.54	0.21
RIVER-1	Reach-1	226	Max WS	157.25	133.70	136.99		137.08	0.005877	2.72	92.13	278.00	0.41
RIVER-1	Reach-1	225.*	Max WS	157.37	133.48	136.67		136.77	0.005003	2.86	93.18	273.02	0.39
RIVER-1	Reach-1	224	Max WS	157.49	133.25	136.33		136.46	0.005635	3.33	88.26	260.58	0.42
RIVER-1	Reach-1	223.*	Max WS	157.62	133.12	135.96		136.08	0.006027	3.42	91.16	258.32	0.43
RIVER-1	Reach-1	222	Max WS	157.72	133.00	135.70		135.75	0.003182	2.56	124.72	261.49	0.32
RIVER-1	Reach-1	221.*	Max WS	157.81	132.70	135.49		135.56	0.003663	2.84	115.47	273.60	0.34
RIVER-1	Reach-1	220	Max WS	157.93	132.40	135.17		135.36	0.007451	4.04	75.37	263.25	0.49
RIVER-1	Reach-1	219.*	Max WS	157.91	131.80	134.95		135.08	0.003859	3.17	80.55	149.68	0.36
RIVER-1	Reach-1	218	Max WS	157.90	131.20	134.91		134.93	0.000720	1.54	191.03	258.66	0.16
RIVER-1	Reach-1	217.*	Max WS	158.05	131.98	134.84		134.86	0.000944	1.54	181.27	261.11	0.18
RIVER-1	Reach-1	216	Max WS	158.23	132.75	134.75		134.77	0.001450	1.50	162.86	259.77	0.21
RIVER-1	Reach-1	215.*	Max WS	169.70	132.62	134.54		134.61	0.004057	2.43	94.86	214.04	0.35
RIVER-1	Reach-1	214	Max WS	169.81	132.50	134.19		134.27	0.004456	2.26	93.86	274.88	0.36
RIVER-1	Reach-1	213.*	Max WS	187.75	131.88	133.85		133.94	0.003540	2.59	110.64	192.15	0.37
RIVER-1	Reach-1	212	Max WS	187.33	131.25	133.67		133.71	0.001979	1.87	136.59	161.81	0.27
RIVER-1	Reach-1	209.97	Max WS	187.23	130.22	133.08		133.14	0.000677	2.09	89.71	42.84	0.25
RIVER-1	Reach-1	207.79	Max WS	187.22	130.19	132.91		133.14	0.001571	3.83	48.95	41.75	0.41
RIVER-1	Reach-1	207.78		Culvert									
RIVER-1	Reach-1	205.36	Max WS	187.23	129.75	132.41		132.65	0.001694	3.91	47.85	41.27	0.42
RIVER-1	Reach-1	204.34	Max WS	187.22	129.57	132.24		132.48	0.001669	3.89	48.07	41.36	0.42
RIVER-1	Reach-1	204.33		Culvert									
RIVER-1	Reach-1	202.43	Max WS	135.91	129.22	131.56		131.72	0.001374	3.23	42.04	38.69	0.37
RIVER-1	Reach-1	201.80	Max WS	135.89	129.11	131.60		131.65	0.000604	1.83	74.43	39.89	0.24
RIVER-1	Reach-1	197.50	Max WS	134.79	128.34	131.43		131.46	0.000258	1.35	100.12	44.74	0.16
RIVER-1	Reach-1	191.71	Max WS	133.38	127.30	131.34		131.36	0.000088	0.91	146.28	52.35	0.10
RIVER-1	Reach-1	191.56	Max WS	323.55	127.27	130.90		131.28	0.001798	4.96	65.27	49.01	0.46
RIVER-1	Reach-1	191.55		Culvert									
RIVER-1	Reach-1	190.28	Max WS	313.09	127.04	129.40		130.24	0.007087	7.38	42.41	38.85	0.85
RIVER-1	Reach-1	189.65	Max WS	322.07	126.92	129.70		129.92	0.002204	3.71	86.72	42.28	0.46
RIVER-1	Reach-1	184.5	Max WS	316.34	126.00	129.07		129.09	0.000839	1.81	364.03	366.43	0.21
RIVER-1	Reach-1	184	Max WS	316.00	126.00	129.02		129.05	0.000770	1.88	354.59	361.01	0.21
RIVER-1	Reach-1	183.*	Max WS	320.85	126.00	128.89		128.97	0.002429	3.00	186.96	181.87	0.33
RIVER-1	Reach-1	182	Max WS	320.67	126.00	128.81		128.84	0.001471	2.14	229.33	180.55	0.23
RIVER-1	Reach-1	181.*	Max WS	321.58	126.00	128.63		128.68	0.002082	2.36	205.61	188.95	0.27
RIVER-1	Reach-1	180	Max WS	322.46	126.00	128.39		128.45	0.002914	2.53	204.38	272.25	0.32
RIVER-1	Reach-1	179.*	Max WS	352.25	125.00	128.13		128.19	0.002689	2.65	234.69	329.50	0.31
RIVER-1	Reach-1	178	Max WS	352.71	124.00	128.01		128.02	0.000829	1.58	392.02	422.23	0.17
RIVER-1	Reach-1	177.*	Max WS	353.88	124.00	127.84		127.88	0.001371	2.09	326.87	418.28	0.22
RIVER-1	Reach-1	176	Max WS	355.23	124.00	127.50		127.58	0.003438	3.14	233.37	422.84	0.35
RIVER-1	Reach-1	175.*	Max WS	360.59	123.50	127.24		127.36	0.004307	3.51	208.10	428.78	0.39
RIVER-1	Reach-1	174	Max WS	359.94	123.00	127.00		127.11	0.003737	3.31	229.61	544.19	0.36
RIVER-1	Reach-1	173.*	Max WS	359.27	123.50	126.89		126.92	0.002016	2.32	338.73	609.83	0.26
RIVER-1	Reach-1	172	Max WS	359.29	124.00	126.84		126.85	0.000518	1.13	592.78	736.59	0.13
RIVER-1	Reach-1	171.*	Max WS	359.59	124.00	126.76		126.77	0.000922	1.48	500.00	765.84	0.18
RIVER-1	Reach-1	170	Max WS	359.82	124.00	126.62		126.64	0.001533	1.83	405.59	670.27	0.22
RIVER-1	Reach-1	169.*	Max WS	359.51	123.50	126.50		126.54	0.002669	2.57	306.26	573.16	0.30
RIVER-1	Reach-1	168	Max WS	358.60	123.00	126.36		126.41	0.002470	2.57	303.10	542.75	0.29
RIVER-1	Reach-1	167.*	Max WS	356.41	122.50	126.23		126.27	0.001773	2.36	333.96	567.63	0.25
RIVER-1	Reach-1	166	Max WS	355.43	122.00	126.15		126.17	0.000954	1.83	419.64	628.75	0.18
RIVER-1	Reach-1	165.*	Max WS	354.31	121.00	125.92		125.95	0.001641	2.39	348.16	590.11	0.24
RIVER-1	Reach-1	164	Max WS	354.57	120.00	125.67		125.69	0.001210	1.88	419.22	675.06	0.19
RIVER-1	Reach-1	163.*	Max WS	354.21	120.00	125.51		125.57	0.001940	2.66	331.99	673.79	0.25
RIVER-1	Reach-1	162	Max WS	354.66	120.00	125.09		125.38	0.005865	4.72	121.22	348.54	0.44
RIVER-1	Reach-1	161.*	Max WS	354.28	120.25	124.79		124.92	0.003138	3.30	208.57	579.30	0.34
RIVER-1	Reach-1	160	Max WS	354.44	120.50	124.67		124.69	0.000928	1.72	406.87	630.85	0.18
RIVER-1	Reach-1	159.*	Max WS	354.72	120.25	124.58		124.61	0.000799	1.57	415.31	661.62	0.17
RIVER-1	Reach-1	158	Max WS	355.37	120.00	124.52		124.54	0.000660	1.39	448.86	716.45	0.15
RIVER-1	Reach-1	157.*	Max WS	355.74	119.50	124.45		124.49	0.000989	1.86	373.96	725.13	0.19
RIVER-1	Reach-1	156	Max WS	356.09	119.00	124.24		124.41	0.003633	3.71	193.82	677.50	0.36
RIVER-1	Reach-1	155.*	Max WS	355.57	119.00	123.93		124.03	0.002680	3.17	267.37	641.89	0.30
RIVER-1	Reach-1	154	Max WS	366.76	119.00	123.74		123.76	0.001098	1.99	434.18	685.49	0.19

RIVER-1	Reach-1	153.*	Max WS	375.81	119.00	123.65	123.68	0.001202	2.12	429.32	777.78	0.21
RIVER-1	Reach-1	152	Max WS	375.81	119.00	123.56	123.59	0.001122	1.96	452.04	868.47	0.20
RIVER-1	Reach-1	151.*	Max WS	384.71	119.00	123.42	123.46	0.001637	2.10	403.38	847.82	0.24
RIVER-1	Reach-1	150	Max WS	384.18	119.00	123.18	123.25	0.004312	2.79	278.17	741.19	0.37
RIVER-1	Reach-1	149.*	Max WS	386.58	118.50	122.90	122.97	0.002738	2.72	306.12	717.14	0.31
RIVER-1	Reach-1	148	Max WS	389.15	118.00	122.72	122.76	0.001477	2.26	386.31	651.91	0.23
RIVER-1	Reach-1	147.*	Max WS	391.18	117.92	122.59	122.63	0.002106	2.41	372.74	851.08	0.27
RIVER-1	Reach-1	146	Max WS	393.18	117.83	122.38	122.45	0.004444	2.96	310.31	1004.63	0.37
RIVER-1	Reach-1	145.*	Max WS	395.29	117.92	122.18	122.22	0.001903	1.82	335.20	949.85	0.25
RIVER-1	Reach-1	144	Max WS	396.67	118.00	121.96	122.00	0.003253	1.75	303.36	699.45	0.30
RIVER-1	Reach-1	143.*	Max WS	398.51	117.50	121.79	121.82	0.000889	1.47	438.73	881.78	0.18
RIVER-1	Reach-1	142	Max WS	400.75	117.00	121.71	121.73	0.000997	1.96	520.87	879.51	0.18
RIVER-1	Reach-1	141.*	Max WS	403.13	117.00	121.59	121.63	0.001624	2.47	438.10	911.33	0.24
RIVER-1	Reach-1	140	Max WS	404.49	117.00	121.39	121.48	0.003254	3.41	338.81	1033.68	0.33
RIVER-1	Reach-1	139.*	Max WS	404.23	117.50	121.23	121.28	0.002047	2.50	402.33	922.23	0.27
RIVER-1	Reach-1	138	Max WS	404.93	118.00	121.15	121.17	0.000919	1.58	550.35	947.53	0.18
RIVER-1	Reach-1	137.*	Max WS	406.30	118.00	121.07	121.09	0.001191	1.68	478.14	836.85	0.20
RIVER-1	Reach-1	136	Max WS	407.81	118.00	120.95	120.98	0.001535	1.71	389.58	553.95	0.23
RIVER-1	Reach-1	135.*	Max WS	409.31	117.50	120.84	120.86	0.001084	1.35	461.31	653.81	0.19
RIVER-1	Reach-1	134	Max WS	410.85	117.00	120.77	120.78	0.000758	1.07	546.73	728.30	0.15
RIVER-1	Reach-1	133.*	Max WS	412.96	117.00	120.68	120.70	0.000917	1.16	466.61	640.39	0.17
RIVER-1	Reach-1	132	Max WS	415.10	117.00	120.61	120.62	0.000734	1.03	480.89	574.46	0.15
RIVER-1	Reach-1	131.*	Max WS	416.21	117.00	120.53	120.55	0.000980	1.13	445.22	584.45	0.17
RIVER-1	Reach-1	130	Max WS	417.38	117.00	120.46	120.47	0.000978	1.09	504.95	795.42	0.17
RIVER-1	Reach-1	129.*	Max WS	417.98	117.00	120.37	120.39	0.001442	1.28	436.22	809.01	0.20
RIVER-1	Reach-1	128	Max WS	418.56	117.00	120.10	120.17	0.005392	2.14	223.12	584.13	0.38
RIVER-1	Reach-1	127.*	Max WS	418.36	116.71	119.82	119.88	0.003243	2.15	289.44	643.16	0.32
RIVER-1	Reach-1	126	Max WS	418.24	116.42	119.75	119.77	0.001413	1.89	460.59	688.66	0.22
RIVER-1	Reach-1	125.*	Max WS	418.13	116.21	119.72	119.74	0.001420	1.70	466.45	752.52	0.22
RIVER-1	Reach-1	124	Max WS	418.13	116.00	119.70	119.71	0.001016	1.31	536.28	801.37	0.18
RIVER-1	Reach-1	123.*	Max WS	418.08	116.18	119.63	119.65	0.001307	1.60	484.71	804.98	0.21
RIVER-1	Reach-1	122	Max WS	418.00	116.35	119.54	119.57	0.001687	1.82	468.45	931.26	0.24
RIVER-1	Reach-1	121.*	Max WS	459.00	115.68	119.33	119.38	0.002758	2.50	352.82	595.59	0.31
RIVER-1	Reach-1	120	Max WS	458.59	115.00	119.16	119.20	0.001475	2.21	415.85	582.11	0.23
RIVER-1	Reach-1	119.*	Max WS	458.23	114.50	119.00	119.08	0.002024	2.90	325.92	430.75	0.30
RIVER-1	Reach-1	118	Max WS	457.00	114.00	118.70	118.90	0.003478	4.16	207.22	262.74	0.44
RIVER-1	Reach-1	117.*	Max WS	456.03	114.50	118.63	118.70	0.001326	2.30	281.42	306.08	0.27
RIVER-1	Reach-1	116	Max WS	452.41	115.00	118.50	118.57	0.002364	2.22	261.30	342.49	0.33
RIVER-1	Reach-1	115.*	Max WS	442.48	114.50	118.34	118.39	0.002153	1.87	264.58	347.56	0.31
RIVER-1	Reach-1	114	Max WS	413.24	114.00	118.16	118.20	0.001925	1.53	284.73	385.56	0.28
RIVER-1	Reach-2	112.05	Max WS	733.62	112.00	118.16	118.24	0.001292	2.23	362.11	419.83	0.27
RIVER-1	Reach-2	112	Max WS	733.62	112.00	118.16	118.23	0.001306	2.24	359.21	418.03	0.27
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	733.14	113.00	118.02	118.10	0.001855	2.25	370.92	362.24	0.31
RIVER-1	Reach-2	110	Max WS	732.55	114.00	117.88	117.94	0.002245	2.15	436.39	473.01	0.33
RIVER-1	Reach-2	109.*	Max WS	732.29	113.50	117.59	117.74	0.002675	3.50	341.16	376.57	0.39
RIVER-1	Reach-2	108	Max WS	732.35	113.00	117.35	117.51	0.002295	3.71	369.24	413.15	0.37
RIVER-1	Reach-2	107.*	Max WS	732.66	112.00	117.27	117.39	0.001569	3.18	444.34	471.81	0.31
RIVER-1	Reach-2	106	Max WS	733.17	111.00	117.22	117.31	0.001004	2.81	558.19	566.29	0.25
RIVER-1	Reach-2	105.*	Max WS	733.85	110.50	117.14	117.24	0.001323	3.19	511.93	528.00	0.28
RIVER-1	Reach-2	104	Max WS	734.40	110.00	117.04	117.16	0.001337	3.49	490.36	493.09	0.28
RIVER-1	Reach-2	103.*	Max WS	734.67	110.00	117.01	117.08	0.001551	2.88	531.23	512.60	0.29
RIVER-1	Reach-2	102	Max WS	643.36	110.00	117.00	117.04	0.000427	1.98	754.14	569.13	0.17
RIVER-1	Reach-2	101.*	Max WS	735.93	110.50	116.96	117.00	0.000609	2.32	743.36	566.52	0.20
RIVER-1	Reach-2	100	Max WS	736.85	111.00	116.92	116.96	0.000660	2.36	732.17	560.60	0.20
RIVER-1	Reach-2	99.*	Max WS	740.18	111.00	116.80	116.84	0.000698	2.45	703.66	559.40	0.21
RIVER-1	Reach-2	98	Max WS	743.44	111.00	116.67	116.73	0.000744	2.54	670.81	554.40	0.22
RIVER-1	Reach-2	97.*	Max WS	745.35	110.50	116.59	116.65	0.000716	2.52	671.51	537.27	0.21
RIVER-1	Reach-2	96	Max WS	747.29	110.00	116.52	116.57	0.000705	2.52	670.92	525.77	0.21
RIVER-1	Reach-2	95.*	Max WS	749.01	109.50	116.44	116.51	0.000774	2.68	615.98	513.33	0.22
RIVER-1	Reach-2	94	Max WS	750.73	109.00	116.35	116.44	0.000831	2.83	560.12	490.02	0.23
RIVER-1	Reach-2	93.*	Max WS	752.46	109.00	116.28	116.36	0.000740	2.71	561.14	465.36	0.22
RIVER-1	Reach-2	92	Max WS	754.18	109.00	116.21	116.29	0.000666	2.62	550.45	415.04	0.21
RIVER-1	Reach-2	91.*	Max WS	755.96	108.50	116.15	116.22	0.000681	2.59	554.52	431.98	0.21
RIVER-1	Reach-2	90	Max WS	757.72	108.00	116.08	116.16	0.000692	2.55	559.75	445.16	0.21
RIVER-1	Reach-2	89.*	Max WS	759.39	108.50	116.02	116.09	0.000610	2.49	599.34	429.61	0.20
RIVER-1	Reach-2	88	Max WS	761.13	109.00	115.97	116.03	0.000546	2.43	640.81	415.36	0.19
RIVER-1	Reach-2	87.*	Max WS	762.31	108.00	115.95	115.99	0.000242	1.78	785.19	437.76	0.13
RIVER-1	Reach-2	86	Max WS	763.69	107.00	115.94	115.96	0.000118	1.34	960.14	462.97	0.09

RIVER-1	Reach-2	85.*	Max WS	764.40	107.50	115.94		115.96	0.000155	1.37	1059.56	579.58	0.10
RIVER-1	Reach-2	84	Max WS	764.99	108.00	115.93		115.94	0.000173	1.26	1237.04	705.00	0.11
RIVER-1	Reach-2	83.*	Max WS	782.36	108.50	115.91		115.93	0.000308	1.65	1000.16	737.64	0.14
RIVER-1	Reach-2	82	Max WS	782.36	109.00	115.85		115.91	0.000662	2.28	726.49	781.65	0.21
RIVER-1	Reach-2	81.56	Max WS	662.67	108.22	115.79	112.06	115.85	0.000723	2.01	329.32	79.44	0.17
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	776.71	108.96	115.18		115.45	0.005061	4.18	185.86	64.96	0.44
RIVER-1	Reach-2	80.95	Max WS	776.93	108.83	115.21	112.19	115.34	0.000950	2.94	264.01	61.20	0.25
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	776.71	108.67	115.18		115.32	0.001046	3.02	257.41	62.65	0.26
RIVER-1	Reach-2	79.3849*	Max WS	775.78	108.33	115.01		115.20	0.001347	3.49	222.35	230.32	0.30
RIVER-1	Reach-2	78.39	Max WS	775.96	108.00	115.00		115.06	0.000564	2.53	556.82	327.09	0.20
RIVER-1	Reach-2	77.6566*	Max WS	775.93	107.80	114.99		115.02	0.000285	1.79	941.13	556.23	0.14
RIVER-1	Reach-2	76.9233*	Max WS	775.76	107.60	114.96		115.01	0.000441	2.21	837.03	737.37	0.17
RIVER-1	Reach-2	76.19	Max WS	775.74	107.40	114.89		114.99	0.000758	2.85	515.26	567.09	0.23
RIVER-1	Reach-2	75.86	Max WS	775.73	107.22	114.82	111.26	114.97	0.000868	3.09	251.09	312.47	0.24
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	775.48	106.63	114.60		114.75	0.001189	3.09	250.61	120.54	0.27
RIVER-1	Reach-2	74.7*	Max WS	775.47	106.82	114.59		114.67	0.000948	2.42	410.68	647.11	0.24
RIVER-1	Reach-2	74	Max WS	775.46	107.00	114.56		114.60	0.000847	1.91	729.42	1079.74	0.22
RIVER-1	Reach-2	73.*	Max WS	775.36	107.43	114.50		114.54	0.000491	1.72	931.76	1159.14	0.17
RIVER-1	Reach-2	72	Max WS	775.31	107.86	114.47		114.50	0.000345	1.65	1140.65	1225.96	0.15
RIVER-1	Reach-2	71.*	Max WS	979.51	107.44	114.33		114.45	0.001131	2.81	378.37	185.33	0.24
RIVER-1	Reach-2	70	Max WS	979.50	107.03	114.28		114.35	0.000722	2.19	446.35	96.60	0.18
RIVER-1	Reach-2	69.*	Max WS	979.37	107.35	114.18		114.27	0.000886	2.43	402.97	86.62	0.20
RIVER-1	Reach-2	68	Max WS	979.25	107.68	114.06		114.17	0.001166	2.68	365.61	83.64	0.23
RIVER-1	Reach-2	67	Max WS	979.12	107.40	113.87		114.03	0.001781	3.26	334.88	124.63	0.28
RIVER-1	Reach-2	66	Max WS	978.83	107.40	113.66		113.84	0.002146	3.48	309.05	117.21	0.30
RIVER-1	Reach-2	65.*	Max WS	978.52	107.20	113.51		113.65	0.001601	3.03	332.30	133.65	0.28
RIVER-1	Reach-2	64	Max WS	978.36	107.00	113.39		113.51	0.001170	2.80	349.10	104.36	0.27
RIVER-1	Reach-2	63.*	Max WS	979.84	106.81	113.25		113.38	0.001450	2.82	347.18	121.70	0.29
RIVER-1	Reach-2	62.*	Max WS	981.03	106.62	113.10		113.23	0.001695	2.82	348.42	143.86	0.31
RIVER-1	Reach-2	61.*	Max WS	982.36	106.43	112.96		113.07	0.001454	2.68	371.03	162.05	0.29
RIVER-1	Reach-2	60	Max WS	983.37	106.24	112.85		112.95	0.001126	2.42	419.65	186.42	0.26
RIVER-1	Reach-2	59.*	Max WS	985.99	106.07	112.76		112.85	0.000876	2.38	432.86	186.78	0.23
RIVER-1	Reach-2	58	Max WS	988.85	105.90	112.71		112.78	0.000487	2.21	612.37	447.80	0.18
RIVER-1	Reach-2	57.2	Max WS	990.79	107.05	112.59	110.02	112.73	0.001241	3.11	442.36	393.46	0.28
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	988.59	107.05	112.44		112.62	0.001658	3.46	366.93	369.23	0.32
RIVER-1	Reach-2	56	Max WS	991.33	105.90	112.41		112.50	0.000643	2.33	488.60	343.00	0.21
RIVER-1	Reach-2	55.*	Max WS	993.21	105.85	112.37		112.43	0.000615	2.07	550.39	445.43	0.20
RIVER-1	Reach-2	54	Max WS	995.41	105.80	112.31		112.37	0.000641	1.93	587.08	539.37	0.20
RIVER-1	Reach-2	53.*	Max WS	1001.73	105.70	112.25		112.30	0.000542	1.88	695.67	353.88	0.17
RIVER-1	Reach-2	52	Max WS	1007.78	105.60	112.16		112.20	0.000675	1.96	695.30	300.87	0.17
RIVER-1	Reach-2	51.*	Max WS	1010.50	105.57	112.08		112.13	0.000808	2.19	652.43	287.95	0.20
RIVER-1	Reach-2	50.*	Max WS	1013.21	105.54	111.98		112.04	0.000907	2.39	618.70	274.77	0.22
RIVER-1	Reach-2	49.*	Max WS	1015.88	105.50	111.88		111.95	0.000924	2.56	596.43	261.24	0.23
RIVER-1	Reach-2	48	Max WS	1018.52	105.47	111.79		111.87	0.000822	2.71	586.88	247.67	0.23
RIVER-1	Reach-2	47.*	Max WS	1021.13	105.68	111.71		111.78	0.000836	2.62	630.74	280.99	0.23
RIVER-1	Reach-2	46.*	Max WS	1023.72	105.88	111.64		111.69	0.000755	2.45	695.73	317.03	0.22
RIVER-1	Reach-2	45.*	Max WS	1026.59	106.08	111.58		111.62	0.000601	2.22	787.19	353.50	0.20
RIVER-1	Reach-2	44	Max WS	1029.72	106.29	111.53		111.57	0.000433	1.98	907.18	389.90	0.17
RIVER-1	Reach-2	43.*	Max WS	1032.38	106.30	111.48		111.52	0.000456	2.03	861.39	374.45	0.18
RIVER-1	Reach-2	42.*	Max WS	1035.05	106.31	111.43		111.48	0.000479	2.09	818.72	371.96	0.18
RIVER-1	Reach-2	41.*	Max WS	1037.73	106.32	111.38		111.43	0.000501	2.14	783.95	368.83	0.18
RIVER-1	Reach-2	40	Max WS	1040.42	106.33	111.33		111.38	0.000523	2.18	756.94	365.36	0.19
RIVER-1	Reach-2	39.*	Max WS	1040.40	106.17	111.29		111.33	0.000415	1.95	864.07	393.75	0.17
RIVER-1	Reach-2	38.*	Max WS	1040.35	106.01	111.27		111.29	0.000307	1.70	1018.27	432.20	0.14
RIVER-1	Reach-2	37.*	Max WS	1040.21	105.84	111.25		111.27	0.000207	1.41	1223.37	465.99	0.12
RIVER-1	Reach-2	36	Max WS	1040.20	105.68	111.22		111.24	0.000289	1.68	1071.12	484.43	0.14
RIVER-1	Reach-2	35.22	Max WS	1040.19	104.52	111.07		111.24	0.001087	3.30	314.82	69.01	0.27
RIVER-1	Reach-2	34.82	Max WS	1040.15	104.52	111.02	107.77	111.19	0.001119	3.34	311.54	68.73	0.28
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1039.76	104.30	110.47		110.82	0.003371	4.74	219.41	65.29	0.46
RIVER-1	Reach-2	33.67*	Max WS	1039.76	104.12	110.44		110.65	0.001744	3.68	282.73	75.72	0.34
RIVER-1	Reach-2	33	Max WS	1039.75	103.93	110.46		110.56	0.000748	2.62	520.57	455.96	0.22
RIVER-1	Reach-2	32.*	Max WS	1039.63	103.40	110.39		110.48	0.000755	2.41	541.18	502.01	0.22
RIVER-1	Reach-2	31.*	Max WS	1039.61	102.88	110.28		110.38	0.001109	2.52	492.75	525.92	0.26
RIVER-1	Reach-2	30	Max WS	1039.58	102.35	110.00		110.17	0.003367	3.28	317.08	184.55	0.42

RIVER-1	Reach-2	29.*	Max WS	1039.56	102.34	109.66		109.85	0.003491	3.53	321.62	457.77	0.43
RIVER-1	Reach-2	28.*	Max WS	1039.44	102.33	109.34		109.54	0.003438	3.72	383.62	664.42	0.43
RIVER-1	Reach-2	27.*	Max WS	1039.28	102.33	109.12		109.26	0.002635	3.51	541.48	778.04	0.39
RIVER-1	Reach-2	26	Max WS	1039.20	102.32	108.98		109.05	0.001503	2.86	815.94	908.45	0.30
RIVER-1	Reach-2	25.*	Max WS	1039.01	101.99	108.82		108.92	0.002269	3.32	691.32	943.31	0.36
RIVER-1	Reach-2	24.*	Max WS	1038.88	101.66	108.63		108.73	0.002535	3.27	632.69	736.42	0.37
RIVER-1	Reach-2	23.*	Max WS	1038.73	101.33	108.45		108.54	0.002656	3.12	673.45	844.92	0.37
RIVER-1	Reach-2	22	Max WS	1038.56	101.00	108.29		108.35	0.002274	2.69	771.56	966.76	0.34
RIVER-1	Reach-2	21.*	Max WS	1038.17	101.27	108.11		108.16	0.002368	2.76	739.37	827.99	0.35
RIVER-1	Reach-2	20.*	Max WS	1037.52	101.54	107.92		107.98	0.002346	2.87	734.44	762.27	0.35
RIVER-1	Reach-2	19.*	Max WS	1036.48	101.82	107.74		107.80	0.002215	3.01	739.99	730.63	0.34
RIVER-1	Reach-2	18	Max WS	1034.61	102.09	107.57		107.63	0.002054	3.08	755.34	706.43	0.33
RIVER-1	Reach-2	17.*	Max WS	1031.46	101.97	107.40		107.46	0.001908	3.10	800.54	796.32	0.33
RIVER-1	Reach-2	16.*	Max WS	1026.98	101.85	107.26		107.31	0.001675	2.86	971.02	1182.36	0.30
RIVER-1	Reach-2	15.*	Max WS	1023.79	101.73	107.17		107.19	0.000852	1.94	1251.64	1203.88	0.21
RIVER-1	Reach-2	14	Max WS	1022.40	101.61	107.13		107.14	0.000432	1.30	1583.28	1219.50	0.15
RIVER-1	Reach-2	13.*	Max WS	1021.49	101.43	107.10		107.11	0.000330	1.06	1729.24	1221.81	0.13
RIVER-1	Reach-2	12.*	Max WS	1020.62	101.26	107.08		107.08	0.000246	0.96	1885.41	1213.71	0.11
RIVER-1	Reach-2	11.*	Max WS	1020.23	101.08	107.06		107.07	0.000183	0.90	2050.17	1198.57	0.10
RIVER-1	Reach-2	10	Max WS	1019.87	100.90	107.05		107.06	0.000139	0.82	2210.16	1162.18	0.09
RIVER-1	Reach-2	9.*	Max WS	1019.54	100.75	107.03		107.04	0.000212	1.05	1828.33	1020.42	0.11
RIVER-1	Reach-2	8.*	Max WS	1019.24	100.60	107.00		107.01	0.000383	1.42	1460.42	953.82	0.15
RIVER-1	Reach-2	7.*	Max WS	1018.67	100.45	106.94		106.96	0.000684	2.03	1182.46	1110.91	0.20
RIVER-1	Reach-2	6	Max WS	1017.08	100.30	106.81		106.89	0.001487	3.14	891.50	1208.66	0.30
RIVER-1	Reach-2	5.*	Max WS	1015.74	100.15	106.69		106.76	0.001304	3.02	939.29	1279.04	0.28
RIVER-1	Reach-2	4.*	Max WS	1014.97	100.00	106.58		106.65	0.001107	2.85	1019.17	1403.57	0.26
RIVER-1	Reach-2	3.*	Max WS	1014.04	99.85	106.49		106.54	0.000910	2.63	1165.75	1665.85	0.24
RIVER-1	Reach-2	2	Max WS	1013.84	99.70	106.43		106.46	0.000578	2.14	1572.21	2198.12	0.19
RIVER-1	Reach-2	1.*	Max WS	1013.77	99.55	106.36		106.41	0.000820	2.62	1271.07	2117.11	0.23
RIVER-1	Reach-2	0	Max WS	1013.69	99.40	106.28	103.72	106.34	0.000826	2.69	1088.91	1823.24	0.23

Appendix P-12: HEC-RAS Results, Anatolia III – Alternative 'C' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
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PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 2:37:14 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.41	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	600.15	157.71	163.01		163.02	0.000055	0.46	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.14	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	598.66	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.65	156.50	163.01		163.01	0.000022	0.32	1852.68	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.64	156.25	163.01		163.01	0.000024	0.34	1748.18	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	598.63	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	598.61	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	597.20	154.11	163.01		163.01	0.000025	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	595.77	154.05	163.01		163.01	0.000022	0.33	1827.48	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	597.16	154.00	163.00		163.01	0.000020	0.31	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.76	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	594.38	154.00	163.00		163.00	0.000015	0.27	2239.33	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.74	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	594.37	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.68	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	595.65	152.00	163.00		163.00	0.000006	0.19	3094.64	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.35	152.00	163.00		163.00	0.000005	0.18	3310.40	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	594.34	152.00	163.00		163.00	0.000004	0.17	3599.42	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.32	152.00	163.00		163.00	0.000003	0.15	3990.17	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	594.30	152.00	163.00		163.00	0.000002	0.13	4521.25	625.07	0.01
RIVER-2	Reach-1	10662.5*	Max WS	595.46	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	595.40	152.00	163.00		163.00	0.000001	0.10	5815.46	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.24	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	594.20	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	593.11	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.10	150.40	163.00		163.00	0.000001	0.07	8235.24	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	595.06	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.07	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.05	150.00	163.00		163.00	0.000001	0.08	7553.27	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.88	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	594.03	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	594.01	150.00	163.00		163.00	0.000001	0.08	7215.44	820.24	0.00
RIVER-2	Reach-1	9950	Max WS	593.99	150.00	163.00		163.00	0.000001	0.08	7505.94	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	594.71	150.00	163.00		163.00	0.000001	0.07	8338.53	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.96	150.00	163.00		163.00	0.000000	0.07	9061.08	1241.73	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.92	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	593.22	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	593.85	149.36	163.00		163.00	0.000000	0.06	10071.08	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.81	148.73	163.00		163.00	0.000000	0.05	10885.02	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.23	148.36	163.00		163.00	0.000000	0.04	13250.78	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.70	148.00	163.00		163.00	0.000000	0.04	15722.80	1830.49	0.00
RIVER-2	Reach-1	9450.*	Max WS	594.15	147.00	163.00		163.00	0.000000	0.04	16740.29	1836.06	0.00
RIVER-2	Reach-1	9400	Max WS	593.25	146.00	163.00		163.00	0.000000	0.03	18084.60	1807.33	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.56	145.51	163.00		163.00	0.000000	0.03	17477.69	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.52	145.02	163.00		163.00	0.000000	0.04	16729.35	1633.82	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.81	144.51	163.00		163.00	0.000000	0.04	15569.53	1455.79	0.00
RIVER-2	Reach-1	9100	Max WS	593.69	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.45	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.43	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.39	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.32	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.37	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.32	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.30	140.56	154.39		154.57	0.003543	3.40	174.46	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.95	140.09	153.98		154.18	0.004343	3.55	168.03	35.96	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.59	139.60	153.55		153.74	0.004423	3.56	168.07	36.58	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.25	139.11	153.10		153.30	0.004519	3.58	168.17	37.30	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.89	138.62	152.65		152.85	0.004626	3.59	168.27	38.05	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.55	138.13	152.19		152.39	0.004699	3.60	168.47	38.51	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.20	137.64	151.72		151.93	0.004744	3.61	168.86	38.86	0.31
RIVER-2	Reach-1	7750.*	Max WS	611.86	137.15	151.25		151.45	0.004781	3.61	169.29	39.16	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.51	136.66	150.78		150.98	0.004811	3.62	169.70	39.35	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.30		150.50	0.004812	3.62	170.35	39.47	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.83	135.68	149.82		150.03	0.004804	3.62	171.05	39.53	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.51	135.19	149.35		149.55	0.004786	3.62	171.89	39.60	0.31
RIVER-2	Reach-1	7250.*	Max WS	625.16	134.70	148.86		149.06	0.004807	3.62	172.46	39.79	0.31
RIVER-2	Reach-1	7150.*	Max WS	627.79	134.21	148.34		148.54	0.004957	3.66	171.48	39.82	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.36	133.72	147.77		147.99	0.005562	3.72	169.32	42.52	0.33
RIVER-2	Reach-1	6950.*	Max WS	597.36	133.23	147.17		147.37	0.005592	3.60	166.09	44.61	0.33
RIVER-2	Reach-1	6850.*	Max WS	589.08	132.74	146.61		146.80	0.005909	3.57	164.94	47.26	0.34
RIVER-2	Reach-1	6750.*	Max WS	590.56	132.25	145.99		146.20	0.006501	3.65	161.80	48.37	0.35
RIVER-2	Reach-1	6650.*	Max WS	638.65	131.76	145.30		145.56	0.008642	4.12	155.07	47.50	0.40
RIVER-2	Reach-1	6550	Max WS	641.01	131.27	144.57		144.87	0.010112	4.37	146.71	45.57	0.43
RIVER-2	Reach-1	6466.66*	Max WS	643.10	132.84	143.92		144.15	0.007512	3.84	167.35	57.72	0.40
RIVER-2	Reach-1	6383.33*	Max WS	645.19	134.40	143.48		143.66	0.004361	3.48	185.33	52.71	0.33
RIVER-2	Reach-1	6300	Max WS	647.32	135.97	143.13		143.35	0.003358	3.69	175.26	39.14	0.31
RIVER-2	Reach-1	6250	Max WS	648.56	136.00	142.87		143.15	0.004669	4.20	154.58	36.19	0.36
RIVER-2	Reach-1	6200	Max WS	649.83	135.00	142.44		142.85	0.007157	5.14	126.53	28.34	0.43
RIVER-2	Reach-1	6100.*	Max WS	652.00	134.75	141.96		142.25	0.004960	4.29	152.09	35.58	0.37
RIVER-2	Reach-1	6000.*	Max WS	646.41	134.50	141.59		141.80	0.003698	3.65	177.10	43.49	0.32
RIVER-2	Reach-1	5900.*	Max WS	648.87	134.25	141.24		141.41	0.003095	3.25	199.68	51.96	0.29
RIVER-2	Reach-1	5800.*	Max WS	650.83	134.00	140.87		141.00	0.003596	2.98	218.10	73.60	0.31
RIVER-2	Reach-1	5700.*	Max WS	653.42	133.75	140.42		140.54	0.005511	2.79	234.23	124.53	0.36
RIVER-2	Reach-1	5600.*	Max WS	665.14	133.50	139.88		140.00	0.005894	2.75	242.79	144.98	0.36
RIVER-2	Reach-1	5500.*	Max WS	667.70	133.25	139.23		139.37	0.008287	2.94	228.93	161.28	0.42
RIVER-2	Reach-1	5400	Max WS	670.23	133.00	136.80		137.80	0.027571	8.02	83.60	28.60	0.83
RIVER-2	Reach-1	5304.54*	Max WS	672.68	132.73	135.66		135.97	0.009807	4.45	151.09	60.47	0.50
RIVER-2	Reach-1	5209.09*	Max WS	675.15	132.45	135.04		135.21	0.006349	3.30	204.59	93.59	0.39
RIVER-2	Reach-1	5113.63*	Max WS	677.60	132.18	134.56		134.67	0.005021	2.73	248.47	127.37	0.34
RIVER-2	Reach-1	5018.18*	Max WS	680.07	131.91	134.16		134.25	0.004307	2.37	286.94	162.11	0.31
RIVER-2	Reach-1	4922.72*	Max WS	682.57	131.64	133.80		133.87	0.003897	2.13	320.84	197.97	0.29
RIVER-2	Reach-1	4827.27*	Max WS	685.05	131.36	133.47		133.53	0.003706	1.95	350.73	237.08	0.28
RIVER-2	Reach-1	4731.81*	Max WS	687.54	131.09	133.14		133.20	0.003626	1.82	378.47	280.85	0.28
RIVER-2	Reach-1	4636.36*	Max WS	690.03	130.82	132.82		132.86	0.003702	1.71	402.82	331.78	0.27
RIVER-2	Reach-1	4540.90*	Max WS	692.53	130.55	132.46		132.51	0.004080	1.66	418.41	390.42	0.28
RIVER-2	Reach-1	4445.45*	Max WS	695.03	130.27	132.08		132.13	0.004749	1.65	421.33	442.85	0.30
RIVER-2	Reach-1	4350	Max WS	697.54	130.00	131.47		131.55	0.013881	2.25	309.99	457.35	0.48
RIVER-2	Reach-1	4260.*	Max WS	699.70	129.40	130.87		130.93	0.011247	2.11	333.20	467.92	0.44
RIVER-2	Reach-1	4170.*	Max WS	701.87	128.80	130.39		130.45	0.007657	1.87	376.02	469.94	0.37
RIVER-2	Reach-1	4080.*	Max WS	704.04	128.20	130.03		130.07	0.004991	1.62	433.53	484.27	0.30
RIVER-2	Reach-1	3990.*	Max WS	706.22	127.60	129.74		129.77	0.003745	1.48	477.72	495.48	0.27

RIVER-2	Reach-1	3900	Max WS	708.39	127.00	129.50		129.53	0.003241	1.40	504.87	508.26	0.25
RIVER-2	Reach-1	3800.*	Max WS	711.17	126.70	129.25		129.28	0.003235	1.41	503.73	501.74	0.25
RIVER-2	Reach-1	3700.*	Max WS	713.93	126.40	129.00		129.03	0.003203	1.42	503.96	495.68	0.25
RIVER-2	Reach-1	3600.*	Max WS	716.70	126.10	128.76		128.79	0.003143	1.42	505.77	490.29	0.25
RIVER-2	Reach-1	3500.*	Max WS	719.45	125.80	128.51		128.55	0.003042	1.41	510.21	486.12	0.24
RIVER-2	Reach-1	3400.*	Max WS	722.20	125.50	128.27		128.30	0.002966	1.40	514.12	483.44	0.24
RIVER-2	Reach-1	3300.*	Max WS	724.95	125.20	128.03		128.06	0.002920	1.40	517.16	482.16	0.24
RIVER-2	Reach-1	3200.*	Max WS	727.70	124.90	127.78		127.81	0.002898	1.40	518.77	480.40	0.24
RIVER-2	Reach-1	3100.*	Max WS	730.44	124.60	127.52		127.55	0.002911	1.41	517.77	476.93	0.24
RIVER-2	Reach-1	3000.*	Max WS	733.18	124.30	127.24		127.27	0.003131	1.44	509.35	480.75	0.25
RIVER-2	Reach-1	2900	Max WS	735.93	124.00	126.93		126.96	0.003481	1.46	505.30	507.34	0.26
RIVER-2	Reach-1	2812.5*	Max WS	738.21	123.52	126.64		126.68	0.003864	1.49	495.75	520.81	0.27
RIVER-2	Reach-1	2725.*	Max WS	740.49	123.03	126.37		126.40	0.003920	1.50	493.90	519.10	0.27
RIVER-2	Reach-1	2637.5*	Max WS	742.76	122.55	126.12		126.15	0.003686	1.47	503.95	518.81	0.26
RIVER-2	Reach-1	2550.*	Max WS	745.03	122.07	125.86		125.90	0.003502	1.45	512.40	518.02	0.26
RIVER-2	Reach-1	2462.5*	Max WS	747.30	121.58	125.59		125.62	0.003577	1.47	509.15	515.51	0.26
RIVER-2	Reach-1	2375	Max WS	749.56	121.10	125.33		125.36	0.003468	1.46	514.27	513.90	0.26
RIVER-2	Reach-1	2279.16*	Max WS	752.03	121.07	125.05		125.08	0.003354	1.43	525.06	525.48	0.25
RIVER-2	Reach-1	2183.33*	Max WS	754.49	121.03	124.76		124.79	0.003470	1.44	524.83	535.91	0.26
RIVER-2	Reach-1	2087.5*	Max WS	756.94	121.00	124.49		124.52	0.003401	1.42	533.20	546.61	0.25
RIVER-2	Reach-1	1991.66*	Max WS	759.39	120.97	124.25		124.28	0.003069	1.37	555.78	558.75	0.24
RIVER-2	Reach-1	1895.83*	Max WS	761.81	120.93	124.03		124.06	0.002647	1.30	587.47	571.56	0.23
RIVER-2	Reach-1	1800	Max WS	764.25	120.90	123.83		123.85	0.002156	1.21	630.03	580.88	0.21
RIVER-2	Reach-1	1705.*	Max WS	766.66	120.43	123.63		123.66	0.002357	1.28	601.20	549.76	0.21
RIVER-2	Reach-1	1610.*	Max WS	769.06	119.95	123.42		123.45	0.002658	1.35	569.42	522.68	0.23
RIVER-2	Reach-1	1515.*	Max WS	771.46	119.47	123.17		123.20	0.002995	1.45	534.76	502.74	0.24
RIVER-2	Reach-1	1420	Max WS	773.84	119.00	122.86		122.90	0.003633	1.60	494.37	478.62	0.27
RIVER-2	Reach-1	1324.61*	Max WS	773.81	118.62	122.54		122.58	0.003641	1.60	501.67	574.19	0.27
RIVER-2	Reach-1	1229.23*	Max WS	773.76	118.23	122.22		122.26	0.003512	1.57	517.97	580.51	0.26
RIVER-2	Reach-1	1133.84*	Max WS	773.72	117.85	121.91		121.95	0.003478	1.55	527.74	579.22	0.26
RIVER-2	Reach-1	1038.46*	Max WS	773.66	117.46	121.62		121.65	0.003454	1.52	535.27	575.95	0.26
RIVER-2	Reach-1	943.076*	Max WS	773.57	117.08	121.34		121.37	0.003392	1.49	543.02	572.17	0.26
RIVER-2	Reach-1	847.692*	Max WS	773.41	116.69	121.07		121.10	0.003401	1.47	544.71	564.19	0.26
RIVER-2	Reach-1	752.307*	Max WS	773.37	116.31	120.78		120.81	0.003363	1.51	528.69	517.36	0.26
RIVER-2	Reach-1	656.923*	Max WS	773.33	115.92	120.48		120.51	0.003414	1.58	505.15	466.57	0.26
RIVER-2	Reach-1	561.538*	Max WS	773.30	115.54	120.19		120.23	0.003496	1.65	484.11	426.71	0.27
RIVER-2	Reach-1	466.153*	Max WS	773.27	115.15	119.92		119.96	0.003508	1.68	464.54	383.34	0.27
RIVER-2	Reach-1	370.769*	Max WS	773.14	114.77	119.66		119.71	0.003807	1.78	424.66	325.69	0.28
RIVER-2	Reach-1	275.384*	Max WS	772.72	114.38	119.35		119.43	0.005417	2.14	348.97	260.43	0.33
RIVER-2	Reach-1	180	Max WS	764.49	114.00	118.76		118.95	0.007007	3.43	222.63	101.50	0.41
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005342	2.91	80.02	142.24	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.95	168.75	170.36		170.45	0.004832	2.76	86.23	151.07	0.46
RIVER-1	Reach-1	325.*	Max WS	162.87	168.50	170.09		170.18	0.005799	2.99	88.08	159.29	0.50
RIVER-1	Reach-1	324.5*	Max WS	166.77	168.25	169.78		169.89	0.006560	3.14	90.23	182.42	0.53
RIVER-1	Reach-1	324	Max WS	166.45	168.00	169.55		169.61	0.004407	2.63	113.69	200.56	0.44
RIVER-1	Reach-1	323.*	Max WS	166.97	167.02	169.18		169.31	0.004196	3.23	88.57	192.85	0.45
RIVER-1	Reach-1	322	Max WS	164.38	166.04	168.12	167.94	168.56	0.015052	5.35	32.71	47.57	0.83
RIVER-1	Reach-1	320	Max WS	192.45	166.00	167.55		167.61	0.006541	3.28	130.17	254.13	0.54
RIVER-1	Reach-1	319.*	Max WS	192.67	166.00	167.36		167.40	0.002602	1.76	164.32	370.91	0.33
RIVER-1	Reach-1	318	Max WS	192.65	166.00	167.18		167.21	0.002615	1.49	162.75	505.58	0.32
RIVER-1	Reach-1	317.*	Max WS	193.44	165.50	166.96		166.99	0.002437	1.39	146.64	376.17	0.30
RIVER-1	Reach-1	316	Max WS	194.32	165.00	166.45		166.52	0.007488	2.10	92.64	175.70	0.51
RIVER-1	Reach-1	315.*	Max WS	197.24	164.50	165.81		165.88	0.005619	2.04	96.73	154.35	0.45
RIVER-1	Reach-1	314	Max WS	200.33	164.00	165.37		165.42	0.002638	2.00	133.66	239.46	0.34
RIVER-1	Reach-1	313.*	Max WS	202.17	163.50	164.99		165.08	0.004868	2.69	114.65	273.26	0.46
RIVER-1	Reach-1	312	Max WS	204.08	163.00	164.67		164.70	0.003231	2.13	181.60	355.06	0.37
RIVER-1	Reach-1	311.*	Max WS	206.31	162.50	164.17		164.26	0.007011	3.12	113.86	230.92	0.55
RIVER-1	Reach-1	310	Max WS	208.64	162.00	163.79		163.82	0.002131	2.02	175.81	233.00	0.31
RIVER-1	Reach-1	309.*	Max WS	210.74	161.26	163.21		163.40	0.009166	3.63	83.36	259.99	0.63
RIVER-1	Reach-1	308	Max WS	212.79	160.51	162.83		162.86	0.001670	1.82	159.41	165.98	0.28
RIVER-1	Reach-1	307.*	Max WS	213.08	159.76	162.56		162.68	0.004465	2.86	96.62	299.98	0.45
RIVER-1	Reach-1	306	Max WS	214.86	159.00	162.18		162.36	0.007502	3.52	104.03	575.40	0.57
RIVER-1	Reach-1	305.*	Max WS	215.85	159.00	161.66		161.80	0.006736	3.18	98.47	493.68	0.54
RIVER-1	Reach-1	304	Max WS	214.25	159.00	161.40		161.42	0.001400	1.58	272.75	692.25	0.25
RIVER-1	Reach-1	303.*	Max WS	214.59	158.75	161.28		161.32	0.001393	1.93	244.10	661.96	0.26
RIVER-1	Reach-1	302	Max WS	215.85	158.50	161.14		161.22	0.002241	2.88	202.48	649.43	0.35
RIVER-1	Reach-1	301.*	Max WS	217.14	158.25	160.95		161.03	0.002118	2.70	170.54	271.78	0.34
RIVER-1	Reach-1	300	Max WS	218.31	158.00	160.78		160.84	0.002082	2.54	176.68	260.22	0.33
RIVER-1	Reach-1	299.*	Max WS	217.46	158.31	160.59		160.66	0.002738	2.90	154.53	206.44	0.38

RIVER-1	Reach-1	298	Max WS	215.51	158.62	160.43		160.47	0.002162	2.49	173.13	184.00	0.33
RIVER-1	Reach-1	297.*	Max WS	213.99	158.31	160.28		160.31	0.001123	1.77	258.51	354.34	0.24
RIVER-1	Reach-1	296	Max WS	214.61	158.00	160.23		160.23	0.000249	0.85	465.79	450.54	0.11
RIVER-1	Reach-1	295.*	Max WS	213.45	158.01	160.19		160.20	0.000422	1.10	350.52	386.60	0.15
RIVER-1	Reach-1	294	Max WS	224.44	158.01	160.15		160.16	0.000433	1.11	319.15	322.29	0.15
RIVER-1	Reach-1	293.*	Max WS	224.32	157.51	160.11		160.12	0.000392	1.17	293.33	216.84	0.15
RIVER-1	Reach-1	292	Max WS	224.22	157.00	160.06		160.08	0.000454	1.40	251.77	151.12	0.16
RIVER-1	Reach-1	291.5	Max WS	223.81	157.00	159.93		160.04	0.002447	3.13	98.23	64.34	0.37
RIVER-1	Reach-1	290.62	Max WS	206.44	157.00	159.70	158.38	159.81	0.002077	2.73	75.72	36.17	0.33
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	217.97	157.00	158.99		159.27	0.006913	4.21	51.82	31.97	0.58
RIVER-1	Reach-1	288.66*	Max WS	221.92	156.50	158.49		158.79	0.009841	4.39	50.56	38.57	0.68
RIVER-1	Reach-1	288	Max WS	220.52	156.00	158.31		158.32	0.000360	1.05	408.46	427.28	0.14
RIVER-1	Reach-1	287.*	Max WS	220.20	156.00	158.27		158.28	0.000536	1.29	344.55	387.50	0.17
RIVER-1	Reach-1	286	Max WS	220.14	156.00	158.22		158.23	0.000618	1.40	314.97	333.32	0.18
RIVER-1	Reach-1	285.*	Max WS	220.32	155.50	158.05		158.18	0.003228	3.04	100.06	164.06	0.41
RIVER-1	Reach-1	284	Max WS	220.57	155.00	157.75		157.89	0.003364	2.96	74.40	45.59	0.41
RIVER-1	Reach-1	283.*	Max WS	220.92	154.75	157.39		157.56	0.003870	3.40	77.24	88.65	0.45
RIVER-1	Reach-1	282	Max WS	221.35	154.50	157.12		157.28	0.003524	3.70	107.95	140.55	0.43
RIVER-1	Reach-1	281.*	Max WS	221.84	154.25	156.78		156.95	0.003560	3.65	93.25	111.30	0.43
RIVER-1	Reach-1	280	Max WS	222.36	154.00	156.37		156.58	0.004380	3.86	73.45	103.19	0.48
RIVER-1	Reach-1	279.*	Max WS	222.88	153.25	155.98		156.18	0.003926	3.58	66.97	61.06	0.45
RIVER-1	Reach-1	278	Max WS	223.39	152.50	155.62		155.81	0.003683	3.50	66.51	45.89	0.44
RIVER-1	Reach-1	277.*	Max WS	238.77	152.45	155.12		155.36	0.005280	3.98	66.02	70.31	0.52
RIVER-1	Reach-1	276	Max WS	239.06	152.40	154.64		154.88	0.005814	4.19	77.43	100.71	0.55
RIVER-1	Reach-1	275.*	Max WS	239.43	151.90	154.34		154.41	0.003105	2.25	116.46	142.81	0.34
RIVER-1	Reach-1	274	Max WS	239.58	151.40	154.08		154.13	0.003154	1.76	139.74	235.94	0.30
RIVER-1	Reach-1	273.*	Max WS	239.48	151.30	153.87		153.91	0.001810	1.46	179.93	235.17	0.23
RIVER-1	Reach-1	272	Max WS	239.67	151.20	153.78		153.79	0.000669	1.02	268.44	246.74	0.15
RIVER-1	Reach-1	271.*	Max WS	239.86	150.85	153.68		153.70	0.001474	1.32	192.38	249.13	0.21
RIVER-1	Reach-1	270	Max WS	239.94	150.50	153.27		153.35	0.005994	2.29	104.86	105.46	0.40
RIVER-1	Reach-1	269.*	Max WS	240.39	150.12	152.77		152.86	0.003905	2.29	104.79	75.99	0.34
RIVER-1	Reach-1	268	Max WS	240.38	149.75	152.26		152.43	0.004807	3.29	73.17	35.35	0.40
RIVER-1	Reach-1	267.265*	Max WS	237.37	149.43	151.92		152.09	0.004234	3.36	70.67	35.28	0.42
RIVER-1	Reach-1	266.53	Max WS	237.25	149.10	151.65	150.60	151.82	0.003319	3.33	71.18	35.83	0.42
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	240.35	148.65	151.03		151.25	0.004441	3.72	64.59	34.28	0.48
RIVER-1	Reach-1	264.033*	Max WS	240.26	148.24	150.62		150.83	0.006665	3.69	65.19	43.18	0.53
RIVER-1	Reach-1	263.016*	Max WS	240.08	147.84	150.23		150.37	0.006220	3.11	91.35	121.86	0.46
RIVER-1	Reach-1	262	Max WS	239.98	147.43	150.03		150.05	0.001453	1.59	204.42	227.89	0.22
RIVER-1	Reach-1	261.*	Max WS	240.38	146.71	149.25		149.44	0.010801	3.54	69.69	61.84	0.56
RIVER-1	Reach-1	260	Max WS	240.74	146.00	148.61		148.67	0.003557	2.28	137.51	171.39	0.33
RIVER-1	Reach-1	259.*	Max WS	240.79	146.00	148.05		148.23	0.009498	3.49	75.33	84.88	0.53
RIVER-1	Reach-1	258	Max WS	240.82	146.00	147.74		147.79	0.003267	2.07	149.20	183.00	0.31
RIVER-1	Reach-1	257.*	Max WS	241.05	145.50	147.47		147.52	0.003261	2.31	153.80	210.48	0.32
RIVER-1	Reach-1	256	Max WS	241.28	145.00	147.05		147.15	0.006605	3.44	132.96	276.66	0.46
RIVER-1	Reach-1	255.*	Max WS	251.16	144.50	146.52		146.66	0.008232	3.75	105.73	169.84	0.51
RIVER-1	Reach-1	254	Max WS	251.32	144.00	145.91		146.06	0.008307	3.58	90.87	100.29	0.51
RIVER-1	Reach-1	253.*	Max WS	251.48	143.00	145.10		145.30	0.012380	4.27	80.89	110.99	0.62
RIVER-1	Reach-1	252	Max WS	251.60	142.00	144.64		144.71	0.003613	2.62	145.54	182.68	0.34
RIVER-1	Reach-1	251.*	Max WS	251.91	141.75	144.18		144.26	0.004134	2.59	148.35	266.30	0.36
RIVER-1	Reach-1	250	Max WS	252.23	141.50	143.82		143.86	0.002483	1.94	215.00	425.85	0.28
RIVER-1	Reach-1	249.*	Max WS	252.33	141.25	143.58		143.63	0.003381	2.14	180.81	388.10	0.32
RIVER-1	Reach-1	248	Max WS	252.40	141.00	143.27		143.35	0.004019	2.37	145.99	370.19	0.35
RIVER-1	Reach-1	247.*	Max WS	252.39	140.75	142.91		142.95	0.003517	2.10	176.38	293.27	0.32
RIVER-1	Reach-1	246	Max WS	252.65	140.50	142.68		142.69	0.001006	1.31	265.77	276.40	0.18
RIVER-1	Reach-1	245.*	Max WS	252.78	139.75	142.39		142.51	0.005530	3.35	106.91	131.65	0.43
RIVER-1	Reach-1	244	Max WS	252.94	139.00	142.08		142.18	0.005105	3.41	134.38	204.41	0.41
RIVER-1	Reach-1	243.*	Max WS	253.03	139.50	141.85		141.92	0.003980	2.76	136.70	180.82	0.36
RIVER-1	Reach-1	242	Max WS	253.10	140.00	141.64		141.69	0.003526	2.21	160.65	226.14	0.33
RIVER-1	Reach-1	241.*	Max WS	253.24	139.50	141.32		141.37	0.004228	2.39	150.35	216.95	0.36
RIVER-1	Reach-1	240	Max WS	253.46	139.00	141.03		141.08	0.003078	2.22	152.34	172.24	0.31
RIVER-1	Reach-1	239.*	Max WS	253.65	138.50	140.75		140.79	0.003184	1.99	165.63	227.40	0.31
RIVER-1	Reach-1	238	Max WS	253.63	138.00	140.38		140.44	0.004832	2.14	151.96	242.84	0.37
RIVER-1	Reach-1	237.25*	Max WS	236.94	137.62	140.08		140.12	0.003794	2.03	158.64	260.27	0.33
RIVER-1	Reach-1	236.5	Max WS	253.57	137.25	139.62		139.72	0.008175	2.94	127.26	280.84	0.48
RIVER-1	Reach-1	235.85	Max WS	253.55	136.60	139.12	138.17	139.33	0.004002	3.65	69.51	35.13	0.46
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	253.53	136.10	139.05		139.19	0.002236	2.97	85.23	37.72	0.35

RIVER-1	Reach-1	234.153*	Max WS	253.51	135.73	138.87	139.05	0.003295	3.46	77.00	90.93	0.39
RIVER-1	Reach-1	233.076*	Max WS	253.47	135.37	138.66	138.87	0.004966	3.94	96.81	230.06	0.44
RIVER-1	Reach-1	232	Max WS	253.45	135.00	138.25	138.55	0.010956	5.11	106.58	409.89	0.59
RIVER-1	Reach-1	231.*	Max WS	252.89	135.00	137.94	138.01	0.003600	2.85	190.03	442.53	0.35
RIVER-1	Reach-1	230	Max WS	252.43	135.00	137.85	137.85	0.000502	1.09	405.83	500.51	0.13
RIVER-1	Reach-1	229.*	Max WS	263.62	134.50	137.77	137.78	0.000805	1.50	337.49	450.86	0.17
RIVER-1	Reach-1	228	Max WS	263.69	134.00	137.65	137.68	0.001310	2.01	273.69	428.52	0.21
RIVER-1	Reach-1	227.*	Max WS	263.86	133.85	137.52	137.56	0.001564	1.99	243.40	361.93	0.23
RIVER-1	Reach-1	226	Max WS	264.10	133.70	137.19	137.27	0.005598	2.90	151.28	306.35	0.41
RIVER-1	Reach-1	225.*	Max WS	264.21	133.48	136.86	136.96	0.005509	3.22	145.67	289.24	0.42
RIVER-1	Reach-1	224	Max WS	264.31	133.25	136.54	136.65	0.005569	3.54	144.48	278.65	0.42
RIVER-1	Reach-1	223.*	Max WS	264.42	133.12	136.17	136.27	0.005440	3.49	148.95	273.32	0.42
RIVER-1	Reach-1	222	Max WS	264.16	133.00	135.92	135.97	0.003211	2.75	182.79	273.24	0.32
RIVER-1	Reach-1	221.*	Max WS	262.13	132.70	135.73	135.79	0.003146	2.83	183.70	288.15	0.32
RIVER-1	Reach-1	220	Max WS	259.09	132.40	135.56	135.61	0.002705	2.72	195.80	316.51	0.30
RIVER-1	Reach-1	219.*	Max WS	257.71	131.80	135.50	135.54	0.001512	2.28	225.78	306.29	0.23
RIVER-1	Reach-1	218	Max WS	257.74	131.20	135.49	135.51	0.000357	1.22	384.46	354.53	0.11
RIVER-1	Reach-1	217.*	Max WS	257.53	131.98	135.47	135.47	0.000363	1.12	381.63	335.77	0.12
RIVER-1	Reach-1	216	Max WS	257.68	132.75	135.43	135.44	0.000384	0.98	374.23	316.72	0.12
RIVER-1	Reach-1	215.*	Max WS	273.23	132.62	135.40	135.42	0.000619	1.29	317.17	292.49	0.15
RIVER-1	Reach-1	214	Max WS	273.32	132.50	135.38	135.39	0.000239	0.82	449.06	325.74	0.09
RIVER-1	Reach-1	213.*	Max WS	303.97	131.88	135.36	135.37	0.000222	1.02	452.46	247.08	0.10
RIVER-1	Reach-1	212	Max WS	303.92	131.25	135.35	135.36	0.000171	0.92	444.24	194.16	0.09
RIVER-1	Reach-1	209.97	Max WS	303.76	130.22	135.25	135.28	0.000190	1.51	201.63	60.22	0.15
RIVER-1	Reach-1	207.79	Max WS	303.61	130.19	135.12	135.30	0.000570	3.42	88.66	59.41	0.27
RIVER-1	Reach-1	207.78		Culvert								
RIVER-1	Reach-1	205.36	Max WS	303.45	129.75	134.88	135.05	0.000496	3.28	92.42	61.07	0.26
RIVER-1	Reach-1	204.34	Max WS	303.30	129.57	134.84	135.00	0.000453	3.19	94.94	62.20	0.25
RIVER-1	Reach-1	204.33		Culvert								
RIVER-1	Reach-1	202.43	Max WS	303.13	129.22	134.66	134.81	0.000409	3.10	97.86	63.49	0.23
RIVER-1	Reach-1	201.80	Max WS	303.30	129.11	134.74	134.77	0.000118	1.27	239.52	65.06	0.12
RIVER-1	Reach-1	197.50	Max WS	303.02	128.34	134.71	134.73	0.000070	1.05	289.64	70.95	0.09
RIVER-1	Reach-1	191.71	Max WS	302.93	127.30	134.68	134.69	0.000037	0.83	365.73	79.07	0.07
RIVER-1	Reach-1	191.56	Max WS	407.15	127.27	134.55	134.70	0.000278	3.11	131.12	78.28	0.20
RIVER-1	Reach-1	191.55		Culvert								
RIVER-1	Reach-1	190.28	Max WS	357.47	127.04	129.48	130.51	0.008255	8.15	43.86	39.50	0.92
RIVER-1	Reach-1	189.65	Max WS	407.09	126.92	129.98	130.24	0.002468	4.13	98.45	44.44	0.49
RIVER-1	Reach-1	184.5	Max WS	407.02	126.00	129.28	129.31	0.000800	1.88	443.92	381.65	0.21
RIVER-1	Reach-1	184	Max WS	407.04	126.00	129.24	129.26	0.000745	1.96	434.53	375.16	0.21
RIVER-1	Reach-1	183.*	Max WS	413.63	126.00	129.10	129.19	0.002551	3.24	227.03	200.14	0.34
RIVER-1	Reach-1	182	Max WS	413.55	126.00	129.01	129.05	0.001620	2.36	267.60	193.48	0.25
RIVER-1	Reach-1	181.*	Max WS	414.83	126.00	128.81	128.87	0.002282	2.60	241.77	204.35	0.29
RIVER-1	Reach-1	180	Max WS	416.13	126.00	128.57	128.63	0.002721	2.59	256.08	288.44	0.31
RIVER-1	Reach-1	179.*	Max WS	461.08	125.00	128.31	128.37	0.002618	2.75	294.97	353.93	0.31
RIVER-1	Reach-1	178	Max WS	462.38	124.00	128.17	128.19	0.000886	1.70	462.89	432.23	0.18
RIVER-1	Reach-1	177.*	Max WS	464.40	124.00	128.00	128.04	0.001439	2.22	394.80	438.76	0.23
RIVER-1	Reach-1	176	Max WS	466.68	124.00	127.65	127.72	0.003221	3.16	298.65	437.21	0.34
RIVER-1	Reach-1	175.*	Max WS	474.15	123.50	127.39	127.49	0.003929	3.49	276.98	451.00	0.37
RIVER-1	Reach-1	174	Max WS	475.03	123.00	127.16	127.24	0.003269	3.21	314.40	558.38	0.34
RIVER-1	Reach-1	173.*	Max WS	475.67	123.50	127.04	127.07	0.001799	2.29	434.00	631.54	0.25
RIVER-1	Reach-1	172	Max WS	476.35	124.00	126.99	127.00	0.000522	1.19	707.16	743.05	0.13
RIVER-1	Reach-1	171.*	Max WS	477.93	124.00	126.92	126.93	0.000838	1.48	621.03	778.02	0.17
RIVER-1	Reach-1	170	Max WS	479.45	124.00	126.79	126.81	0.001296	1.77	517.18	682.36	0.21
RIVER-1	Reach-1	169.*	Max WS	480.01	123.50	126.68	126.71	0.002421	2.57	425.28	756.84	0.29
RIVER-1	Reach-1	168	Max WS	480.60	123.00	126.55	126.58	0.002075	2.47	405.37	580.50	0.27
RIVER-1	Reach-1	167.*	Max WS	481.31	122.50	126.43	126.46	0.001543	2.31	454.52	639.60	0.24
RIVER-1	Reach-1	166	Max WS	482.06	122.00	126.35	126.37	0.000963	1.92	562.22	757.74	0.19
RIVER-1	Reach-1	165.*	Max WS	484.51	121.00	126.09	126.13	0.001695	2.51	462.66	737.26	0.24
RIVER-1	Reach-1	164	Max WS	486.88	120.00	125.81	125.83	0.001275	1.99	515.76	690.31	0.20
RIVER-1	Reach-1	163.*	Max WS	457.70	120.00	125.68	125.72	0.001699	2.57	450.67	786.30	0.24
RIVER-1	Reach-1	162	Max WS	489.23	120.00	125.29	125.54	0.005907	4.91	234.64	687.06	0.45
RIVER-1	Reach-1	161.*	Max WS	489.97	120.25	124.97	125.08	0.003033	3.38	317.42	645.81	0.34
RIVER-1	Reach-1	160	Max WS	490.76	120.50	124.83	124.86	0.001021	1.88	514.05	682.60	0.19
RIVER-1	Reach-1	159.*	Max WS	491.68	120.25	124.74	124.76	0.000932	1.76	519.36	707.44	0.19
RIVER-1	Reach-1	158	Max WS	492.66	120.00	124.65	124.68	0.000813	1.60	547.88	748.08	0.17
RIVER-1	Reach-1	157.*	Max WS	493.32	119.50	124.57	124.62	0.001220	2.12	466.55	754.02	0.22
RIVER-1	Reach-1	156	Max WS	493.81	119.00	124.38	124.54	0.003845	3.92	293.48	724.85	0.37
RIVER-1	Reach-1	155.*	Max WS	494.65	119.00	124.10	124.17	0.002547	3.19	375.93	689.38	0.30
RIVER-1	Reach-1	154	Max WS	510.72	119.00	123.92	123.94	0.001075	2.04	558.89	714.93	0.19

RIVER-1	Reach-1	153.*	Max WS	524.08	119.00	123.83	123.86	0.001143	2.14	580.43	859.53	0.21
RIVER-1	Reach-1	152	Max WS	524.82	119.00	123.75	123.77	0.000995	1.93	617.57	905.69	0.19
RIVER-1	Reach-1	151.*	Max WS	538.57	119.00	123.61	123.64	0.001374	2.03	568.12	904.88	0.22
RIVER-1	Reach-1	150	Max WS	538.51	119.00	123.35	123.40	0.003296	2.59	419.82	841.16	0.33
RIVER-1	Reach-1	149.*	Max WS	543.48	118.50	123.07	123.13	0.002463	2.70	433.58	782.42	0.29
RIVER-1	Reach-1	148	Max WS	548.42	118.00	122.88	122.92	0.001586	2.43	499.10	743.83	0.24
RIVER-1	Reach-1	147.*	Max WS	552.14	117.92	122.73	122.77	0.002100	2.49	504.67	963.78	0.27
RIVER-1	Reach-1	146	Max WS	555.79	117.83	122.53	122.58	0.003333	2.69	464.48	1042.87	0.33
RIVER-1	Reach-1	145.*	Max WS	559.39	117.92	122.31	122.36	0.002092	2.01	469.28	1036.91	0.26
RIVER-1	Reach-1	144	Max WS	562.73	118.00	122.12	122.16	0.003058	1.85	429.61	966.39	0.30
RIVER-1	Reach-1	143.*	Max WS	566.61	117.50	121.96	121.99	0.001006	1.65	594.37	972.18	0.19
RIVER-1	Reach-1	142	Max WS	570.67	117.00	121.87	121.90	0.001043	2.06	669.49	934.00	0.19
RIVER-1	Reach-1	141.*	Max WS	574.40	117.00	121.74	121.78	0.001663	2.58	578.10	974.09	0.24
RIVER-1	Reach-1	140	Max WS	577.93	117.00	121.55	121.61	0.002477	3.07	514.09	1051.79	0.29
RIVER-1	Reach-1	139.*	Max WS	580.44	117.50	121.43	121.46	0.001615	2.33	589.02	976.05	0.24
RIVER-1	Reach-1	138	Max WS	583.09	118.00	121.36	121.37	0.000802	1.56	747.63	964.15	0.17
RIVER-1	Reach-1	137.*	Max WS	586.24	118.00	121.28	121.30	0.001052	1.68	679.93	983.76	0.19
RIVER-1	Reach-1	136	Max WS	589.33	118.00	121.17	121.20	0.001788	1.99	567.62	1041.80	0.25
RIVER-1	Reach-1	135.*	Max WS	592.25	117.50	121.06	121.08	0.001195	1.54	612.36	837.78	0.20
RIVER-1	Reach-1	134	Max WS	595.45	117.00	120.98	120.99	0.000791	1.19	700.91	767.07	0.16
RIVER-1	Reach-1	133.*	Max WS	599.28	117.00	120.88	120.90	0.001060	1.36	600.26	739.57	0.19
RIVER-1	Reach-1	132	Max WS	603.12	117.00	120.78	120.80	0.000934	1.26	585.98	615.27	0.17
RIVER-1	Reach-1	131.*	Max WS	605.14	117.00	120.69	120.71	0.001282	1.39	561.24	815.91	0.20
RIVER-1	Reach-1	130	Max WS	607.14	117.00	120.60	120.62	0.001193	1.29	619.10	807.72	0.19
RIVER-1	Reach-1	129.*	Max WS	608.19	117.00	120.50	120.53	0.001742	1.51	544.29	826.56	0.23
RIVER-1	Reach-1	128	Max WS	609.20	117.00	120.25	120.33	0.005585	2.40	336.04	841.09	0.40
RIVER-1	Reach-1	127.*	Max WS	609.15	116.71	120.02	120.08	0.002883	2.21	424.26	690.32	0.30
RIVER-1	Reach-1	126	Max WS	609.13	116.42	119.96	119.98	0.001354	1.96	610.94	747.58	0.21
RIVER-1	Reach-1	125.*	Max WS	609.11	116.21	119.94	119.96	0.001275	1.73	634.64	809.11	0.21
RIVER-1	Reach-1	124	Max WS	609.10	116.00	119.92	119.93	0.000917	1.35	715.50	833.07	0.17
RIVER-1	Reach-1	123.*	Max WS	609.06	116.18	119.86	119.88	0.001100	1.58	676.85	866.77	0.19
RIVER-1	Reach-1	122	Max WS	608.86	116.35	119.80	119.81	0.001094	1.60	708.84	967.66	0.19
RIVER-1	Reach-1	121.*	Max WS	681.05	115.68	119.64	119.67	0.001929	2.11	541.85	633.45	0.26
RIVER-1	Reach-1	120	Max WS	680.96	115.00	119.50	119.52	0.001142	2.04	619.55	624.69	0.21
RIVER-1	Reach-1	119.*	Max WS	680.65	114.50	119.37	119.43	0.001725	2.77	529.97	591.90	0.28
RIVER-1	Reach-1	118	Max WS	664.72	114.00	119.03	119.27	0.004444	4.84	323.40	541.65	0.50
RIVER-1	Reach-1	117.*	Max WS	565.50	114.50	118.95	119.02	0.001133	2.24	392.92	382.04	0.25
RIVER-1	Reach-1	116	Max WS	560.31	115.00	118.89	118.93	0.001318	1.90	404.60	396.71	0.26
RIVER-1	Reach-1	115.*	Max WS	555.01	114.50	118.82	118.85	0.000976	1.48	456.02	449.08	0.22
RIVER-1	Reach-1	114	Max WS	547.12	114.00	118.76	118.78	0.000605	1.11	552.73	507.80	0.17
RIVER-1	Reach-2	112.05	Max WS	1311.61	112.00	118.76	118.87	0.001565	2.73	660.74	575.44	0.30
RIVER-1	Reach-2	112	Max WS	1311.29	112.00	118.76	118.86	0.001586	2.74	655.80	573.22	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1307.36	113.00	118.65	118.74	0.001850	2.57	651.59	560.62	0.32
RIVER-1	Reach-2	110	Max WS	1261.19	114.00	118.58	118.63	0.001395	2.05	844.74	675.72	0.27
RIVER-1	Reach-2	109.*	Max WS	1236.74	113.50	118.38	118.46	0.002374	2.73	723.31	603.17	0.35
RIVER-1	Reach-2	108	Max WS	1231.47	113.00	118.20	118.29	0.001471	3.25	793.93	594.09	0.30
RIVER-1	Reach-2	107.*	Max WS	1230.38	112.00	118.15	118.21	0.001006	2.65	962.52	685.79	0.25
RIVER-1	Reach-2	106	Max WS	1229.24	111.00	118.12	118.17	0.000635	2.42	1155.30	757.39	0.20
RIVER-1	Reach-2	105.*	Max WS	1229.40	110.50	118.08	118.12	0.000785	2.46	1123.31	768.69	0.22
RIVER-1	Reach-2	104	Max WS	1228.55	110.00	118.03	118.08	0.000761	2.82	1121.53	776.72	0.21
RIVER-1	Reach-2	103.*	Max WS	1228.03	110.00	118.02	118.05	0.000781	2.18	1207.70	872.64	0.21
RIVER-1	Reach-2	102	Max WS	1040.82	110.00	118.02	118.04	0.000267	1.73	1473.94	847.48	0.13
RIVER-1	Reach-2	101.*	Max WS	1291.45	110.50	117.99	118.01	0.000425	2.15	1461.30	831.76	0.17
RIVER-1	Reach-2	100	Max WS	1291.52	111.00	117.96	117.98	0.000438	2.15	1451.20	820.31	0.17
RIVER-1	Reach-2	99.*	Max WS	1291.04	111.00	117.88	117.91	0.000425	2.14	1451.52	819.51	0.17
RIVER-1	Reach-2	98	Max WS	1291.75	111.00	117.80	117.83	0.000413	2.14	1454.60	822.20	0.17
RIVER-1	Reach-2	97.*	Max WS	1291.99	110.50	117.76	117.79	0.000404	2.13	1448.58	802.09	0.17
RIVER-1	Reach-2	96	Max WS	1292.30	110.00	117.72	117.74	0.000398	2.12	1441.55	781.56	0.16
RIVER-1	Reach-2	95.*	Max WS	1292.47	109.50	117.68	117.71	0.000407	2.16	1414.96	786.99	0.17
RIVER-1	Reach-2	94	Max WS	1293.46	109.00	117.63	117.67	0.000416	2.21	1387.56	790.81	0.17
RIVER-1	Reach-2	93.*	Max WS	1293.72	109.00	117.59	117.63	0.000394	2.19	1338.72	711.27	0.17
RIVER-1	Reach-2	92	Max WS	1294.04	109.00	117.55	117.59	0.000389	2.26	1238.10	602.79	0.17
RIVER-1	Reach-2	91.*	Max WS	1295.12	108.50	117.52	117.56	0.000364	2.17	1273.82	657.89	0.16
RIVER-1	Reach-2	90	Max WS	1296.24	108.00	117.49	117.52	0.000312	2.01	1529.87	1190.37	0.15
RIVER-1	Reach-2	89.*	Max WS	1297.92	108.50	117.46	117.49	0.000304	2.04	1472.63	1157.08	0.15
RIVER-1	Reach-2	88	Max WS	1299.16	109.00	117.43	117.46	0.000292	2.04	1451.48	921.98	0.14
RIVER-1	Reach-2	87.*	Max WS	1300.42	108.00	117.42	117.44	0.000150	1.61	1944.57	1230.91	0.11
RIVER-1	Reach-2	86	Max WS	1301.66	107.00	117.41	117.43	0.000075	1.23	2548.62	1324.88	0.08

RIVER-1	Reach-2	85.*	Max WS	1302.27	107.50	117.41		117.42	0.000078	1.14	2729.57	1369.96	0.08
RIVER-1	Reach-2	84	Max WS	1302.88	108.00	117.41		117.42	0.000072	0.98	3016.73	1418.90	0.07
RIVER-1	Reach-2	83.*	Max WS	1320.22	108.50	117.40		117.41	0.000105	1.18	2593.57	1327.00	0.09
RIVER-1	Reach-2	82	Max WS	1320.15	109.00	117.39		117.40	0.000151	1.35	2290.38	1257.36	0.10
RIVER-1	Reach-2	81.56	Max WS	1320.13	108.22	117.30	113.24	117.41	0.000945	2.73	727.90	1351.74	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1319.96	108.96	116.03		116.49	0.006670	5.42	243.68	70.93	0.52
RIVER-1	Reach-2	80.95	Max WS	1319.96	108.83	116.07	113.05	116.34	0.001587	4.15	318.37	64.59	0.33
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1319.86	108.67	116.00		116.28	0.001748	4.25	310.29	66.07	0.35
RIVER-1	Reach-2	79.3849*	Max WS	1319.82	108.33	115.91		116.10	0.001325	3.88	654.57	611.27	0.30
RIVER-1	Reach-2	78.39	Max WS	1319.77	108.00	115.84		115.92	0.000641	2.98	831.50	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1319.75	107.80	115.84		115.87	0.000279	1.96	1411.44	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1319.72	107.60	115.82		115.85	0.000326	2.11	1502.33	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1319.69	107.40	115.77		115.84	0.000603	2.83	1170.16	922.18	0.21
RIVER-1	Reach-2	75.86	Max WS	1319.24	107.22	115.58	112.31	115.81	0.001251	4.08	514.05	439.18	0.30
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1319.56	106.63	115.59		115.79	0.001342	3.79	510.25	401.83	0.30
RIVER-1	Reach-2	74.7*	Max WS	1319.67	106.82	115.62		115.67	0.000497	2.12	1179.50	828.83	0.18
RIVER-1	Reach-2	74	Max WS	1319.65	107.00	115.62		115.63	0.000243	1.31	1972.69	1253.22	0.12
RIVER-1	Reach-2	73.*	Max WS	1319.34	107.43	115.60		115.61	0.000167	1.23	2290.10	1314.81	0.11
RIVER-1	Reach-2	72	Max WS	1319.26	107.86	115.59		115.60	0.000128	1.19	2594.66	1375.83	0.09
RIVER-1	Reach-2	71.*	Max WS	1574.27	107.44	115.47		115.60	0.000989	3.07	732.79	450.79	0.24
RIVER-1	Reach-2	70	Max WS	1574.25	107.03	115.37		115.49	0.000949	2.85	555.15	102.43	0.21
RIVER-1	Reach-2	69.*	Max WS	1574.23	107.35	115.23		115.38	0.001270	3.16	498.00	94.35	0.24
RIVER-1	Reach-2	68	Max WS	1574.23	107.68	115.05		115.24	0.001632	3.49	451.56	89.29	0.27
RIVER-1	Reach-2	67	Max WS	1574.23	107.40	114.86		115.07	0.002033	3.87	464.69	135.10	0.30
RIVER-1	Reach-2	66	Max WS	1574.22	107.40	114.61		114.85	0.002480	4.17	430.70	133.33	0.33
RIVER-1	Reach-2	65.*	Max WS	1574.22	107.20	114.43		114.63	0.001793	3.69	477.53	173.72	0.31
RIVER-1	Reach-2	64	Max WS	1574.19	107.00	114.28		114.47	0.001517	3.49	466.58	186.68	0.31
RIVER-1	Reach-2	63.*	Max WS	1576.41	106.81	114.13		114.31	0.001595	3.41	480.85	227.85	0.32
RIVER-1	Reach-2	62.*	Max WS	1578.64	106.62	113.99		114.16	0.001604	3.31	500.70	198.59	0.32
RIVER-1	Reach-2	61.*	Max WS	1580.82	106.43	113.86		114.01	0.001389	3.14	538.91	210.53	0.30
RIVER-1	Reach-2	60	Max WS	1583.05	106.24	113.77		113.89	0.001077	2.84	611.18	231.45	0.26
RIVER-1	Reach-2	59.*	Max WS	1586.99	106.07	113.68		113.80	0.000900	2.80	697.46	361.94	0.25
RIVER-1	Reach-2	58	Max WS	1590.98	105.90	113.65		113.72	0.000474	2.44	1042.20	477.68	0.19
RIVER-1	Reach-2	57.2	Max WS	1594.11	107.05	113.57	110.87	113.68	0.000948	3.13	835.82	421.91	0.26
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1594.02	107.05	113.45		113.59	0.001186	3.40	753.92	400.29	0.28
RIVER-1	Reach-2	56	Max WS	1597.65	105.90	113.40		113.49	0.000624	2.63	849.06	384.10	0.21
RIVER-1	Reach-2	55.*	Max WS	1600.93	105.85	113.37		113.43	0.000512	2.21	1007.56	472.53	0.19
RIVER-1	Reach-2	54	Max WS	1604.30	105.80	113.33		113.38	0.000450	1.95	1146.95	560.60	0.17
RIVER-1	Reach-2	53.*	Max WS	1613.08	105.70	113.26		113.31	0.000485	2.05	1077.48	398.59	0.16
RIVER-1	Reach-2	52	Max WS	1615.94	105.60	113.18		113.22	0.000588	2.06	1014.19	325.33	0.16
RIVER-1	Reach-2	51.*	Max WS	1621.18	105.57	113.11		113.16	0.000693	2.31	962.38	314.67	0.19
RIVER-1	Reach-2	50.*	Max WS	1626.38	105.54	113.02		113.09	0.000778	2.53	919.93	304.31	0.21
RIVER-1	Reach-2	49.*	Max WS	1631.60	105.50	112.94		113.01	0.000822	2.75	888.61	295.12	0.22
RIVER-1	Reach-2	48	Max WS	1636.73	105.47	112.84		112.93	0.000800	3.02	868.32	287.52	0.23
RIVER-1	Reach-2	47.*	Max WS	1641.98	105.68	112.77		112.85	0.000744	2.82	952.60	323.34	0.23
RIVER-1	Reach-2	46.*	Max WS	1647.14	105.88	112.71		112.77	0.000633	2.57	1060.00	357.70	0.21
RIVER-1	Reach-2	45.*	Max WS	1652.27	106.08	112.67		112.71	0.000495	2.32	1195.49	403.38	0.19
RIVER-1	Reach-2	44	Max WS	1657.45	106.29	112.63		112.67	0.000366	2.09	1358.74	430.65	0.16
RIVER-1	Reach-2	43.*	Max WS	1662.22	106.30	112.59		112.63	0.000381	2.17	1308.37	426.30	0.17
RIVER-1	Reach-2	42.*	Max WS	1667.10	106.31	112.55		112.59	0.000397	2.23	1265.70	422.19	0.17
RIVER-1	Reach-2	41.*	Max WS	1671.80	106.32	112.51		112.55	0.000412	2.27	1230.09	418.22	0.17
RIVER-1	Reach-2	40	Max WS	1676.67	106.33	112.46		112.51	0.000425	2.30	1202.34	414.56	0.18
RIVER-1	Reach-2	39.*	Max WS	1676.60	106.17	112.43		112.47	0.000343	2.09	1350.93	457.00	0.16
RIVER-1	Reach-2	38.*	Max WS	1676.62	106.01	112.41		112.44	0.000260	1.83	1549.54	493.24	0.14
RIVER-1	Reach-2	37.*	Max WS	1676.54	105.84	112.40		112.42	0.000185	1.56	1787.40	514.02	0.12
RIVER-1	Reach-2	36	Max WS	1676.56	105.68	112.37		112.40	0.000229	1.75	1651.65	524.23	0.13
RIVER-1	Reach-2	35.22	Max WS	1676.56	104.52	112.15		112.43	0.001521	4.27	392.63	75.18	0.33
RIVER-1	Reach-2	34.82	Max WS	1676.55	104.52	112.08	108.72	112.37	0.001578	4.33	387.42	74.78	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1676.48	104.30	110.96		111.65	0.005886	6.66	251.74	68.25	0.61
RIVER-1	Reach-2	33.67*	Max WS	1676.45	104.12	110.91		111.34	0.003207	5.25	319.19	78.98	0.46
RIVER-1	Reach-2	33	Max WS	1676.47	103.93	111.00		111.15	0.001053	3.35	803.08	583.43	0.27
RIVER-1	Reach-2	32.*	Max WS	1676.44	103.40	110.90		111.03	0.001049	3.08	840.29	666.19	0.27
RIVER-1	Reach-2	31.*	Max WS	1676.43	102.88	110.75		110.89	0.001459	3.15	793.62	740.48	0.30
RIVER-1	Reach-2	30	Max WS	1676.39	102.35	110.43		110.65	0.003779	3.97	609.58	1002.55	0.46

RIVER-1	Reach-2	29.*	Max WS	1676.38	102.34	110.07		110.31	0.003929	4.22	617.54	945.73	0.47
RIVER-1	Reach-2	28.*	Max WS	1676.30	102.33	109.75		109.97	0.003592	4.24	696.82	887.38	0.46
RIVER-1	Reach-2	27.*	Max WS	1676.20	102.33	109.52		109.67	0.002614	3.85	894.40	957.02	0.40
RIVER-1	Reach-2	26	Max WS	1676.14	102.32	109.38		109.46	0.001570	3.19	1208.68	1058.19	0.31
RIVER-1	Reach-2	25.*	Max WS	1676.16	101.99	109.23		109.33	0.002110	3.52	1117.49	1135.60	0.35
RIVER-1	Reach-2	24.*	Max WS	1676.03	101.66	109.04		109.16	0.002800	3.82	1011.04	1219.25	0.40
RIVER-1	Reach-2	23.*	Max WS	1675.92	101.33	108.86		108.95	0.002426	3.34	1073.17	1062.29	0.37
RIVER-1	Reach-2	22	Max WS	1675.86	101.00	108.72		108.77	0.001881	2.79	1219.83	1112.78	0.32
RIVER-1	Reach-2	21.*	Max WS	1675.72	101.27	108.56		108.62	0.001995	2.90	1182.50	1098.84	0.33
RIVER-1	Reach-2	20.*	Max WS	1675.66	101.54	108.39		108.45	0.002121	3.01	1145.08	1035.24	0.34
RIVER-1	Reach-2	19.*	Max WS	1675.49	101.82	108.20		108.26	0.002299	3.11	1112.67	957.68	0.35
RIVER-1	Reach-2	18	Max WS	1675.28	102.09	108.01		108.06	0.002345	3.16	1091.36	875.38	0.35
RIVER-1	Reach-2	17.*	Max WS	1675.07	101.97	107.81		107.86	0.002302	3.11	1246.43	1224.17	0.35
RIVER-1	Reach-2	16.*	Max WS	1674.96	101.85	107.67		107.70	0.001442	2.55	1460.15	1231.34	0.28
RIVER-1	Reach-2	15.*	Max WS	1674.88	101.73	107.58		107.60	0.000837	1.96	1749.20	1237.00	0.21
RIVER-1	Reach-2	14	Max WS	1674.77	101.61	107.53		107.54	0.000494	1.44	2080.78	1245.19	0.16
RIVER-1	Reach-2	13.*	Max WS	1674.74	101.43	107.50		107.51	0.000404	1.23	2222.08	1251.50	0.15
RIVER-1	Reach-2	12.*	Max WS	1674.75	101.26	107.47		107.48	0.000324	1.20	2366.93	1242.86	0.13
RIVER-1	Reach-2	11.*	Max WS	1674.70	101.08	107.45		107.46	0.000261	1.14	2519.34	1232.38	0.12
RIVER-1	Reach-2	10	Max WS	1674.74	100.90	107.43		107.44	0.000215	1.07	2664.50	1217.09	0.11
RIVER-1	Reach-2	9.*	Max WS	1674.72	100.75	107.40		107.41	0.000364	1.40	2236.25	1197.25	0.14
RIVER-1	Reach-2	8.*	Max WS	1674.71	100.60	107.35		107.37	0.000556	1.84	1860.86	1260.08	0.18
RIVER-1	Reach-2	7.*	Max WS	1674.69	100.45	107.28		107.31	0.000875	2.46	1581.35	1254.16	0.23
RIVER-1	Reach-2	6	Max WS	1674.66	100.30	107.14		107.22	0.001645	3.51	1306.32	1342.30	0.32
RIVER-1	Reach-2	5.*	Max WS	1674.61	100.15	106.99		107.07	0.001578	3.51	1346.47	1468.95	0.31
RIVER-1	Reach-2	4.*	Max WS	1674.62	100.00	106.85		106.93	0.001437	3.40	1423.85	1583.93	0.30
RIVER-1	Reach-2	3.*	Max WS	1674.60	99.85	106.73		106.80	0.001367	3.36	1647.41	2167.78	0.30
RIVER-1	Reach-2	2	Max WS	1674.55	99.70	106.65		106.68	0.000802	2.61	2060.30	2285.49	0.23
RIVER-1	Reach-2	1.*	Max WS	1674.55	99.55	106.54		106.61	0.001276	3.36	1659.75	2243.77	0.29
RIVER-1	Reach-2	0	Max WS	1674.53	99.40	106.39	105.80	106.51	0.001670	3.89	1299.09	1963.77	0.33

Appendix P-13: HEC-RAS Results, Anatolia III – Alternative 'D' Model, 10-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X      X    X        X
X     X  X        X    X      X   X     X    X        X
X     X  XXXXXX    XXXX       X    X    X    X   XXXXX
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PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 2:52:36 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	318.10	158.00	162.26		162.26	0.000028	0.30	1053.95	296.98	0.03
RIVER-2	Reach-1	11850.*	Max WS	318.09	157.71	162.26		162.26	0.000028	0.30	1071.62	314.59	0.03
RIVER-2	Reach-1	11800	Max WS	317.18	157.42	162.26		162.26	0.000011	0.20	1567.27	412.19	0.02
RIVER-2	Reach-1	11750.*	Max WS	317.17	156.96	162.26		162.26	0.000012	0.21	1530.12	400.13	0.02
RIVER-2	Reach-1	11700	Max WS	316.27	156.50	162.26		162.26	0.000010	0.20	1562.08	376.83	0.02
RIVER-2	Reach-1	11650.*	Max WS	316.27	156.25	162.26		162.26	0.000011	0.21	1476.20	351.23	0.02
RIVER-2	Reach-1	11600	Max WS	316.26	156.00	162.26		162.26	0.000011	0.22	1426.17	331.19	0.02
RIVER-2	Reach-1	11550.*	Max WS	315.38	155.05	162.26		162.26	0.000011	0.22	1440.70	337.28	0.02
RIVER-2	Reach-1	11500	Max WS	316.24	154.11	162.26		162.26	0.000011	0.22	1450.46	338.65	0.02
RIVER-2	Reach-1	11450.*	Max WS	315.37	154.05	162.26		162.26	0.000010	0.20	1541.01	374.30	0.02
RIVER-2	Reach-1	11400	Max WS	315.36	154.00	162.26		162.26	0.000009	0.19	1642.67	403.12	0.02
RIVER-2	Reach-1	11350.*	Max WS	314.50	154.00	162.26		162.26	0.000008	0.18	1720.82	407.18	0.02
RIVER-2	Reach-1	11300	Max WS	315.33	154.00	162.26		162.26	0.000007	0.17	1889.63	455.23	0.01
RIVER-2	Reach-1	11250.*	Max WS	315.31	154.00	162.26		162.26	0.000005	0.15	2068.50	462.11	0.01
RIVER-2	Reach-1	11200	Max WS	314.49	154.00	162.25		162.26	0.000004	0.14	2260.05	478.49	0.01
RIVER-2	Reach-1	11150.*	Max WS	313.68	153.00	162.25		162.25	0.000003	0.13	2475.19	498.27	0.01
RIVER-2	Reach-1	11100	Max WS	314.46	152.00	162.25		162.25	0.000003	0.12	2688.48	533.88	0.01

RIVER-2	Reach-1	11050.*	Max WS	313.67	152.00	162.25		162.25	0.000002	0.11	2893.23	545.86	0.01
RIVER-2	Reach-1	11000	Max WS	314.44	152.00	162.25		162.25	0.000002	0.10	3156.66	574.08	0.01
RIVER-2	Reach-1	10887.5*	Max WS	314.42	152.00	162.25		162.25	0.000001	0.09	3544.63	584.15	0.01
RIVER-2	Reach-1	10775.*	Max WS	313.67	152.00	162.25		162.25	0.000001	0.08	4062.98	603.40	0.01
RIVER-2	Reach-1	10662.5*	Max WS	313.66	152.00	162.25		162.25	0.000001	0.07	4656.72	639.10	0.00
RIVER-2	Reach-1	10550	Max WS	314.38	152.00	162.25		162.25	0.000000	0.06	5300.80	681.71	0.00
RIVER-2	Reach-1	10490.*	Max WS	314.35	151.60	162.25		162.25	0.000000	0.05	5881.47	785.23	0.00
RIVER-2	Reach-1	10430.*	Max WS	314.31	151.20	162.25		162.25	0.000000	0.05	6425.17	882.60	0.00
RIVER-2	Reach-1	10370.*	Max WS	313.65	150.80	162.25		162.25	0.000000	0.05	6934.94	981.91	0.00
RIVER-2	Reach-1	10310.*	Max WS	314.26	150.40	162.25		162.25	0.000000	0.04	7425.21	1052.67	0.00
RIVER-2	Reach-1	10250	Max WS	313.62	150.00	162.25		162.25	0.000000	0.04	7920.65	1129.89	0.00
RIVER-2	Reach-1	10200.*	Max WS	314.22	150.00	162.25		162.25	0.000000	0.04	7404.53	965.93	0.00
RIVER-2	Reach-1	10150	Max WS	313.60	150.00	162.25		162.25	0.000000	0.05	6907.02	856.56	0.00
RIVER-2	Reach-1	10100.*	Max WS	313.59	150.00	162.25		162.25	0.000000	0.05	6583.04	847.82	0.00
RIVER-2	Reach-1	10050	Max WS	314.17	150.00	162.25		162.25	0.000000	0.05	6356.18	775.23	0.00
RIVER-2	Reach-1	10000.*	Max WS	314.15	150.00	162.25		162.25	0.000000	0.05	6613.16	795.07	0.00
RIVER-2	Reach-1	9950	Max WS	314.12	150.00	162.25		162.25	0.000000	0.05	6884.85	815.03	0.00
RIVER-2	Reach-1	9900.*	Max WS	313.59	150.00	162.25		162.25	0.000000	0.04	7538.18	1039.59	0.00
RIVER-2	Reach-1	9850	Max WS	314.06	150.00	162.25		162.25	0.000000	0.04	8149.41	1201.12	0.00
RIVER-2	Reach-1	9800.*	Max WS	314.03	150.00	162.25		162.25	0.000000	0.04	7946.07	1391.53	0.00
RIVER-2	Reach-1	9750	Max WS	313.98	150.00	162.25		162.25	0.000000	0.04	8242.18	1456.41	0.00
RIVER-2	Reach-1	9675.*	Max WS	313.96	149.36	162.25		162.25	0.000000	0.04	8938.59	1495.74	0.00
RIVER-2	Reach-1	9600	Max WS	313.92	148.73	162.25		162.25	0.000000	0.03	9722.62	1534.90	0.00
RIVER-2	Reach-1	9550.*	Max WS	313.88	148.36	162.25		162.25	0.000000	0.03	11983.13	1678.72	0.00
RIVER-2	Reach-1	9500	Max WS	313.85	148.00	162.25		162.25	0.000000	0.02	14412.61	1729.97	0.00
RIVER-2	Reach-1	9450.*	Max WS	313.83	147.00	162.25		162.25	0.000000	0.02	15411.87	1761.69	0.00
RIVER-2	Reach-1	9400	Max WS	313.78	146.00	162.25		162.25	0.000000	0.02	16748.33	1776.63	0.00
RIVER-2	Reach-1	9350.*	Max WS	313.73	145.51	162.25		162.25	0.000000	0.02	16193.90	1704.95	0.00
RIVER-2	Reach-1	9300	Max WS	313.58	145.02	162.25		162.25	0.000000	0.02	15520.29	1608.95	0.00
RIVER-2	Reach-1	9200.*	Max WS	313.54	144.51	162.25		162.25	0.000000	0.02	14492.15	1432.17	0.00
RIVER-2	Reach-1	9100	Max WS	313.52	144.00	162.25		162.25	0.000000	0.02	13415.52	1249.52	0.00
RIVER-2	Reach-1	9050.*	Max WS	313.61	144.00	162.25		162.25	0.000000	0.02	13005.62	1127.95	0.00
RIVER-2	Reach-1	9000	Max WS	313.59	144.00	162.25		162.25	0.000000	0.02	12674.57	1022.80	0.00
RIVER-2	Reach-1	8900.*	Max WS	313.55	143.08	162.25		162.25	0.000000	0.02	13031.26	995.69	0.00
RIVER-2	Reach-1	8800	Max WS	313.49	142.16	162.25		162.25	0.000000	0.02	13247.20	950.91	0.00
RIVER-2	Reach-1	8700.*	Max WS	313.50	143.70	162.25		162.25	0.000000	0.03	12461.84	980.52	0.00
RIVER-2	Reach-1	8600	Max WS	313.48	145.24	162.25	145.81	162.25	0.000000	0.03	11936.12	988.38	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	313.47	140.56	152.52		152.64	0.003338	2.76	113.40	29.32	0.25
RIVER-2	Reach-1	8350	Max WS	314.80	140.09	152.13		152.26	0.004218	2.91	108.09	28.78	0.26
RIVER-2	Reach-1	8250.*	Max WS	316.14	139.60	151.72		151.85	0.004238	2.92	108.28	29.01	0.27
RIVER-2	Reach-1	8150.*	Max WS	317.47	139.11	151.30		151.43	0.004281	2.93	108.41	29.28	0.27
RIVER-2	Reach-1	8050.*	Max WS	318.82	138.62	150.87		151.01	0.004343	2.94	108.47	29.56	0.27
RIVER-2	Reach-1	7950.*	Max WS	320.16	138.13	150.44		150.57	0.004418	2.95	108.49	29.87	0.27
RIVER-2	Reach-1	7850.*	Max WS	321.50	137.64	149.99		150.13	0.004520	2.96	108.55	30.43	0.28
RIVER-2	Reach-1	7750.*	Max WS	322.84	137.15	149.54		149.67	0.004678	2.98	108.51	31.29	0.28
RIVER-2	Reach-1	7650.*	Max WS	324.19	136.66	149.06		149.20	0.004847	2.99	108.42	32.15	0.29
RIVER-2	Reach-1	7550.*	Max WS	325.53	136.17	148.58		148.72	0.004919	3.00	108.45	32.38	0.29
RIVER-2	Reach-1	7450.*	Max WS	326.88	135.68	148.08		148.23	0.005002	3.02	108.36	32.52	0.29
RIVER-2	Reach-1	7350.*	Max WS	328.23	135.19	147.58		147.73	0.005081	3.03	108.23	32.57	0.29
RIVER-2	Reach-1	7250.*	Max WS	329.58	134.70	147.07		147.22	0.005139	3.05	108.18	32.54	0.29
RIVER-2	Reach-1	7150.*	Max WS	330.94	134.21	146.56		146.71	0.005236	3.07	107.82	32.39	0.30
RIVER-2	Reach-1	7050.*	Max WS	332.29	133.72	146.03		146.18	0.005332	3.09	107.44	32.20	0.30
RIVER-2	Reach-1	6950.*	Max WS	333.65	133.23	145.50		145.65	0.005486	3.13	106.66	31.90	0.30
RIVER-2	Reach-1	6850.*	Max WS	335.00	132.74	144.95		145.10	0.005696	3.17	105.52	31.49	0.31
RIVER-2	Reach-1	6750.*	Max WS	336.36	132.25	144.36		144.53	0.006076	3.25	103.42	30.92	0.31
RIVER-2	Reach-1	6650.*	Max WS	337.73	131.76	143.72		143.90	0.006820	3.39	99.67	30.15	0.33
RIVER-2	Reach-1	6550	Max WS	339.09	131.27	142.90		143.12	0.008996	3.73	90.97	28.76	0.37
RIVER-2	Reach-1	6466.66*	Max WS	340.22	132.84	142.19		142.40	0.008335	3.72	91.40	31.66	0.39
RIVER-2	Reach-1	6383.33*	Max WS	341.36	134.40	141.67		141.83	0.005420	3.27	104.53	37.17	0.34
RIVER-2	Reach-1	6300	Max WS	342.50	135.97	141.33		141.48	0.003197	3.07	111.41	31.77	0.29
RIVER-2	Reach-1	6250	Max WS	343.19	136.00	141.09		141.28	0.004682	3.56	96.31	29.07	0.34
RIVER-2	Reach-1	6200	Max WS	343.87	135.00	140.74		141.01	0.006321	4.16	82.63	23.37	0.39

RIVER-2	Reach-1	6100.*	Max WS	345.24	134.75	140.27	140.46	0.004703	3.55	97.23	29.22	0.34
RIVER-2	Reach-1	6000.*	Max WS	346.62	134.50	139.88	140.03	0.003937	3.16	109.70	35.22	0.32
RIVER-2	Reach-1	5900.*	Max WS	348.00	134.25	139.53	139.66	0.003593	2.91	119.72	41.26	0.30
RIVER-2	Reach-1	5800.*	Max WS	349.37	134.00	139.18	139.30	0.003571	2.76	126.37	47.15	0.30
RIVER-2	Reach-1	5700.*	Max WS	350.75	133.75	138.82	138.93	0.003928	2.74	128.13	52.40	0.31
RIVER-2	Reach-1	5600.*	Max WS	352.13	133.50	138.36	138.49	0.005032	2.89	121.81	55.43	0.34
RIVER-2	Reach-1	5500.*	Max WS	353.50	133.25	137.65	137.85	0.008141	3.58	98.86	46.61	0.43
RIVER-2	Reach-1	5400	Max WS	354.88	133.00	135.89	136.45	0.020810	6.01	59.03	25.44	0.70
RIVER-2	Reach-1	5304.54*	Max WS	356.20	132.73	134.91	135.08	0.007895	3.33	107.01	56.53	0.43
RIVER-2	Reach-1	5209.09*	Max WS	357.51	132.45	134.38	134.47	0.005274	2.47	144.54	88.82	0.34
RIVER-2	Reach-1	5113.63*	Max WS	358.84	132.18	133.96	134.03	0.004341	2.06	173.94	121.64	0.30
RIVER-2	Reach-1	5018.18*	Max WS	360.16	131.91	133.59	133.64	0.004027	1.83	196.37	155.06	0.29
RIVER-2	Reach-1	4922.72*	Max WS	361.48	131.64	133.25	133.30	0.003900	1.69	214.33	187.59	0.28
RIVER-2	Reach-1	4827.27*	Max WS	362.80	131.36	132.94	132.98	0.003829	1.58	229.92	219.47	0.27
RIVER-2	Reach-1	4731.81*	Max WS	364.11	131.09	132.63	132.67	0.003887	1.50	242.82	253.23	0.27
RIVER-2	Reach-1	4636.36*	Max WS	365.42	130.82	132.33	132.37	0.004181	1.45	252.04	292.14	0.28
RIVER-2	Reach-1	4540.90*	Max WS	366.74	130.55	132.03	132.06	0.004553	1.41	260.22	335.61	0.28
RIVER-2	Reach-1	4445.45*	Max WS	368.05	130.27	131.75	131.78	0.004502	1.31	281.33	402.40	0.28
RIVER-2	Reach-1	4350	Max WS	369.36	130.00	131.20	131.26	0.016999	1.91	193.37	424.78	0.50
RIVER-2	Reach-1	4260.*	Max WS	370.49	129.40	130.58	130.63	0.013867	1.81	205.36	423.44	0.46
RIVER-2	Reach-1	4170.*	Max WS	371.63	128.80	130.01	130.06	0.013212	1.80	206.54	410.67	0.45
RIVER-2	Reach-1	4080.*	Max WS	372.76	128.20	129.62	129.66	0.008512	1.55	241.01	432.28	0.37
RIVER-2	Reach-1	3990.*	Max WS	373.88	127.60	129.38	129.40	0.004536	1.24	302.26	472.87	0.27
RIVER-2	Reach-1	3900	Max WS	374.99	127.00	129.16	129.18	0.003513	1.13	331.89	491.09	0.24
RIVER-2	Reach-1	3800.*	Max WS	376.43	126.70	128.88	128.90	0.003855	1.17	321.47	483.44	0.25
RIVER-2	Reach-1	3700.*	Max WS	377.86	126.40	128.60	128.62	0.004353	1.22	308.52	475.19	0.27
RIVER-2	Reach-1	3600.*	Max WS	379.29	126.10	128.32	128.35	0.004837	1.27	297.57	467.22	0.28
RIVER-2	Reach-1	3500.*	Max WS	380.71	125.80	128.05	128.08	0.004585	1.30	292.22	426.47	0.28
RIVER-2	Reach-1	3400.*	Max WS	382.12	125.50	127.78	127.81	0.004426	1.32	289.05	401.92	0.27
RIVER-2	Reach-1	3300.*	Max WS	383.53	125.20	127.51	127.54	0.004262	1.33	287.59	383.65	0.27
RIVER-2	Reach-1	3200.*	Max WS	384.94	124.90	127.25	127.28	0.004111	1.34	287.48	371.01	0.27
RIVER-2	Reach-1	3100.*	Max WS	386.33	124.60	126.99	127.02	0.003935	1.33	290.69	367.12	0.26
RIVER-2	Reach-1	3000.*	Max WS	387.73	124.30	126.74	126.77	0.003669	1.30	298.41	369.92	0.25
RIVER-2	Reach-1	2900	Max WS	389.13	124.00	126.51	126.54	0.003224	1.22	318.13	391.85	0.24
RIVER-2	Reach-1	2812.5*	Max WS	390.29	123.52	126.31	126.33	0.003332	1.17	333.12	448.60	0.24
RIVER-2	Reach-1	2725.*	Max WS	391.46	123.03	126.03	126.05	0.004187	1.21	322.78	489.88	0.26
RIVER-2	Reach-1	2637.5*	Max WS	392.62	122.55	125.70	125.73	0.005817	1.34	292.53	487.94	0.31
RIVER-2	Reach-1	2550.*	Max WS	393.75	122.07	125.42	125.45	0.006224	1.37	287.40	488.91	0.31
RIVER-2	Reach-1	2462.5*	Max WS	394.90	121.58	125.18	125.21	0.004885	1.29	305.71	473.54	0.28
RIVER-2	Reach-1	2375	Max WS	396.04	121.10	124.91	124.94	0.004155	1.28	309.06	428.86	0.27
RIVER-2	Reach-1	2279.16*	Max WS	397.29	121.07	124.61	124.64	0.005006	1.33	299.82	455.24	0.29
RIVER-2	Reach-1	2183.33*	Max WS	398.54	121.03	124.37	124.39	0.004915	1.26	317.01	513.92	0.28
RIVER-2	Reach-1	2087.5*	Max WS	399.78	121.00	124.15	124.17	0.003778	1.15	347.49	528.34	0.25
RIVER-2	Reach-1	1991.66*	Max WS	401.02	120.97	123.88	123.90	0.003628	1.13	354.15	535.02	0.25
RIVER-2	Reach-1	1895.83*	Max WS	402.25	120.93	123.62	123.63	0.003612	1.13	356.06	537.92	0.24
RIVER-2	Reach-1	1800	Max WS	403.49	120.90	123.43	123.44	0.002533	1.01	400.83	551.79	0.21
RIVER-2	Reach-1	1705.*	Max WS	404.70	120.43	123.26	123.28	0.002350	1.01	402.45	524.45	0.20
RIVER-2	Reach-1	1610.*	Max WS	405.93	119.95	123.06	123.08	0.002493	1.05	387.09	495.07	0.21
RIVER-2	Reach-1	1515.*	Max WS	407.14	119.47	122.80	122.82	0.003159	1.15	355.55	476.71	0.23
RIVER-2	Reach-1	1420	Max WS	408.35	119.00	122.51	122.53	0.003828	1.27	326.31	456.59	0.26
RIVER-2	Reach-1	1324.61*	Max WS	408.35	118.62	122.18	122.20	0.003773	1.26	328.92	461.75	0.26
RIVER-2	Reach-1	1229.23*	Max WS	408.32	118.23	121.85	121.87	0.004002	1.27	324.44	464.55	0.26
RIVER-2	Reach-1	1133.84*	Max WS	408.30	117.85	121.55	121.57	0.004060	1.27	325.47	468.50	0.26
RIVER-2	Reach-1	1038.46*	Max WS	408.28	117.46	121.21	121.24	0.004021	1.35	315.01	480.00	0.27
RIVER-2	Reach-1	943.076*	Max WS	408.26	117.08	120.86	120.89	0.004422	1.44	297.14	432.49	0.28
RIVER-2	Reach-1	847.692*	Max WS	408.24	116.69	120.51	120.54	0.004003	1.51	286.10	362.97	0.27
RIVER-2	Reach-1	752.307*	Max WS	408.21	116.31	120.14	120.17	0.004041	1.62	268.60	311.74	0.28
RIVER-2	Reach-1	656.923*	Max WS	408.20	115.92	119.77	119.81	0.004396	1.72	253.64	283.90	0.29
RIVER-2	Reach-1	561.538*	Max WS	408.19	115.54	119.44	119.48	0.004308	1.77	246.49	258.01	0.29
RIVER-2	Reach-1	466.153*	Max WS	408.19	115.15	119.14	119.18	0.003921	1.80	244.15	234.11	0.28
RIVER-2	Reach-1	370.769*	Max WS	408.17	114.77	118.86	118.91	0.003498	1.82	240.82	206.31	0.27
RIVER-2	Reach-1	275.384*	Max WS	407.94	114.38	118.57	118.63	0.003389	1.93	219.99	152.91	0.27
RIVER-2	Reach-1	180	Max WS	317.29	114.00	118.16	118.22	0.003345	1.96	161.87	98.87	0.27

RIVER-1	Reach-1	326	Max WS	79.26	169.00	170.32		170.41	0.005190	2.46	44.03	111.30	0.46
RIVER-1	Reach-1	325.5*	Max WS	78.91	168.75	170.10		170.17	0.004553	2.31	49.30	123.58	0.43
RIVER-1	Reach-1	325.*	Max WS	87.93	168.50	169.84		169.92	0.005493	2.51	52.98	134.01	0.47
RIVER-1	Reach-1	324.5*	Max WS	90.65	168.25	169.56		169.64	0.006349	2.64	53.31	142.38	0.51
RIVER-1	Reach-1	324	Max WS	90.48	168.00	169.26		169.34	0.006271	2.58	60.39	174.78	0.50
RIVER-1	Reach-1	323.*	Max WS	90.84	167.02	168.68		168.83	0.006612	3.13	33.28	64.10	0.53
RIVER-1	Reach-1	322	Max WS	91.01	166.04	167.84		168.06	0.009514	3.79	24.02	21.97	0.64
RIVER-1	Reach-1	320	Max WS	103.62	166.00	167.37		167.43	0.006043	2.83	86.19	242.38	0.50
RIVER-1	Reach-1	319.*	Max WS	103.66	166.00	167.16		167.19	0.002450	1.45	94.28	345.12	0.31
RIVER-1	Reach-1	318	Max WS	103.65	166.00	166.95		166.97	0.003138	1.30	79.79	161.75	0.33
RIVER-1	Reach-1	317.*	Max WS	104.07	165.50	166.69		166.71	0.002548	1.21	86.18	166.71	0.30
RIVER-1	Reach-1	316	Max WS	104.69	165.00	166.17		166.23	0.007163	1.97	53.06	106.68	0.49
RIVER-1	Reach-1	315.*	Max WS	106.50	164.50	165.52		165.58	0.005967	1.83	58.20	114.25	0.45
RIVER-1	Reach-1	314	Max WS	108.31	164.00	165.10		165.14	0.002540	1.63	73.12	221.23	0.32
RIVER-1	Reach-1	313.*	Max WS	109.44	163.50	164.77		164.84	0.004285	2.15	62.08	206.94	0.42
RIVER-1	Reach-1	312	Max WS	110.62	163.00	164.47		164.50	0.003282	1.85	111.68	339.80	0.36
RIVER-1	Reach-1	311.*	Max WS	111.93	162.50	163.92		164.03	0.009185	2.99	60.97	198.45	0.60
RIVER-1	Reach-1	310	Max WS	113.31	162.00	163.49		163.52	0.002331	1.80	108.23	220.91	0.32
RIVER-1	Reach-1	309.*	Max WS	114.46	161.26	162.91		163.06	0.009487	3.06	37.37	47.83	0.61
RIVER-1	Reach-1	308	Max WS	115.54	160.51	162.52		162.55	0.001351	1.41	110.51	156.64	0.24
RIVER-1	Reach-1	307.*	Max WS	116.13	159.76	162.34		162.40	0.002687	2.01	65.21	93.76	0.34
RIVER-1	Reach-1	306	Max WS	116.71	159.00	161.90		162.02	0.006282	2.81	41.48	43.46	0.51
RIVER-1	Reach-1	305.*	Max WS	118.01	159.00	161.38		161.48	0.005316	2.48	47.60	53.99	0.47
RIVER-1	Reach-1	304	Max WS	118.43	159.00	161.07		161.12	0.002921	1.85	71.89	316.24	0.35
RIVER-1	Reach-1	303.*	Max WS	119.32	158.75	160.89		160.93	0.001723	1.79	89.70	156.65	0.28
RIVER-1	Reach-1	302	Max WS	120.32	158.50	160.76		160.80	0.001359	1.97	107.72	147.05	0.26
RIVER-1	Reach-1	301.*	Max WS	121.27	158.25	160.61		160.67	0.001865	2.24	95.49	168.50	0.30
RIVER-1	Reach-1	300	Max WS	122.20	158.00	160.43		160.50	0.002516	2.43	92.47	215.78	0.35
RIVER-1	Reach-1	299.*	Max WS	122.97	158.31	160.22		160.28	0.003026	2.62	87.97	146.56	0.38
RIVER-1	Reach-1	298	Max WS	123.52	158.62	160.03		160.07	0.002525	2.27	107.50	148.14	0.34
RIVER-1	Reach-1	297.*	Max WS	121.99	158.31	159.82		159.86	0.001977	1.90	121.19	215.06	0.30
RIVER-1	Reach-1	296	Max WS	120.93	158.00	159.73		159.74	0.000412	0.88	255.39	380.87	0.14
RIVER-1	Reach-1	295.*	Max WS	119.94	158.01	159.65		159.67	0.001049	1.35	153.99	340.69	0.22
RIVER-1	Reach-1	294	Max WS	125.51	158.01	159.56		159.57	0.000929	1.22	154.62	248.38	0.20
RIVER-1	Reach-1	293.*	Max WS	125.25	157.51	159.48		159.50	0.000575	1.10	170.87	175.17	0.17
RIVER-1	Reach-1	292	Max WS	125.00	157.00	159.43		159.44	0.000492	1.19	166.14	128.12	0.16
RIVER-1	Reach-1	291.5	Max WS	124.92	157.00	159.31		159.39	0.002513	2.57	63.88	50.34	0.35
RIVER-1	Reach-1	290.62	Max WS	124.86	157.00	159.11	158.01	159.18	0.001868	2.25	55.40	32.63	0.30
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	130.54	157.00	158.53		158.72	0.006291	3.46	37.76	29.21	0.54
RIVER-1	Reach-1	288.66*	Max WS	127.19	156.50	158.07		158.27	0.008426	3.59	35.47	32.64	0.61
RIVER-1	Reach-1	288	Max WS	126.10	156.00	157.89		157.89	0.000366	0.89	248.89	293.44	0.13
RIVER-1	Reach-1	287.*	Max WS	125.65	156.00	157.83		157.84	0.000772	1.30	185.85	289.95	0.19
RIVER-1	Reach-1	286	Max WS	125.52	156.00	157.75		157.76	0.001080	1.53	167.33	275.30	0.23
RIVER-1	Reach-1	285.*	Max WS	125.69	155.50	157.53		157.65	0.004107	2.71	46.47	46.38	0.43
RIVER-1	Reach-1	284	Max WS	125.83	155.00	157.24		157.33	0.002594	2.37	53.14	37.52	0.35
RIVER-1	Reach-1	283.*	Max WS	126.11	154.75	156.91		157.03	0.003664	2.76	45.71	33.19	0.41
RIVER-1	Reach-1	282	Max WS	126.35	154.50	156.61		156.73	0.003461	3.10	61.17	82.00	0.41
RIVER-1	Reach-1	281.*	Max WS	126.67	154.25	156.15		156.35	0.005227	3.53	38.53	60.49	0.50
RIVER-1	Reach-1	280	Max WS	127.02	154.00	155.70		155.88	0.005499	3.45	36.81	25.39	0.51
RIVER-1	Reach-1	279.*	Max WS	127.42	153.25	155.34		155.47	0.003622	2.99	42.63	26.88	0.42
RIVER-1	Reach-1	278	Max WS	127.76	152.50	155.05		155.17	0.002525	2.70	47.26	26.99	0.35
RIVER-1	Reach-1	277.*	Max WS	137.54	152.45	154.69		154.84	0.003789	3.02	45.99	34.14	0.43
RIVER-1	Reach-1	276	Max WS	137.80	152.40	154.25		154.42	0.005146	3.36	45.76	63.50	0.49
RIVER-1	Reach-1	275.*	Max WS	138.05	151.90	153.96		154.02	0.003099	1.84	74.91	74.45	0.32
RIVER-1	Reach-1	274	Max WS	138.24	151.40	153.70		153.73	0.002881	1.50	92.21	101.01	0.28
RIVER-1	Reach-1	273.*	Max WS	138.09	151.30	153.44		153.47	0.002588	1.35	102.34	125.50	0.26
RIVER-1	Reach-1	272	Max WS	138.05	151.20	153.29		153.30	0.001063	0.99	153.16	220.37	0.17
RIVER-1	Reach-1	271.*	Max WS	138.11	150.85	153.11		153.13	0.002521	1.36	101.18	115.53	0.26
RIVER-1	Reach-1	270	Max WS	138.22	150.50	152.63		152.72	0.005977	2.39	57.88	54.39	0.41
RIVER-1	Reach-1	269.*	Max WS	138.54	150.12	152.11		152.19	0.004829	2.26	61.33	53.33	0.37
RIVER-1	Reach-1	268	Max WS	138.51	149.75	151.61		151.72	0.004583	2.70	51.23	32.15	0.38
RIVER-1	Reach-1	267.265*	Max WS	138.51	149.43	151.29		151.41	0.004096	2.80	49.46	31.78	0.40

RIVER-1	Reach-1	266.53	Max WS	138.50	149.10	151.03	150.17	151.15	0.003100	2.76	50.21	31.99	0.39
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	138.50	148.65	150.55		150.67	0.003349	2.84	48.69	31.37	0.40
RIVER-1	Reach-1	264.033*	Max WS	138.50	148.24	150.23		150.35	0.004531	2.78	49.75	37.58	0.43
RIVER-1	Reach-1	263.016*	Max WS	138.37	147.84	149.79		149.91	0.007429	2.85	48.52	44.92	0.48
RIVER-1	Reach-1	262	Max WS	138.27	147.43	149.51		149.54	0.002111	1.55	113.08	158.91	0.25
RIVER-1	Reach-1	261.*	Max WS	138.52	146.71	148.87		149.00	0.008518	2.88	48.80	48.84	0.49
RIVER-1	Reach-1	260	Max WS	138.77	146.00	148.29		148.35	0.004209	2.10	83.47	164.09	0.34
RIVER-1	Reach-1	259.*	Max WS	138.80	146.00	147.78		147.89	0.007112	2.61	55.21	67.90	0.45
RIVER-1	Reach-1	258	Max WS	138.83	146.00	147.46		147.50	0.003370	1.80	99.97	171.81	0.31
RIVER-1	Reach-1	257.*	Max WS	138.94	145.50	147.17		147.22	0.003260	2.02	99.19	176.54	0.31
RIVER-1	Reach-1	256	Max WS	139.09	145.00	146.71		146.81	0.006958	3.04	66.14	104.68	0.46
RIVER-1	Reach-1	255.*	Max WS	146.74	144.50	146.18		146.28	0.007265	3.03	65.22	93.94	0.47
RIVER-1	Reach-1	254	Max WS	146.86	144.00	145.63		145.73	0.007408	2.95	64.05	90.11	0.47
RIVER-1	Reach-1	253.*	Max WS	146.98	143.00	144.81		144.99	0.012366	3.70	51.98	94.13	0.60
RIVER-1	Reach-1	252	Max WS	147.00	142.00	144.31		144.37	0.003847	2.36	89.95	147.12	0.34
RIVER-1	Reach-1	251.*	Max WS	147.21	141.75	143.89		143.94	0.003582	2.15	91.27	139.31	0.33
RIVER-1	Reach-1	250	Max WS	147.31	141.50	143.57		143.62	0.002891	1.93	112.14	296.28	0.29
RIVER-1	Reach-1	249.*	Max WS	147.31	141.25	143.33		143.39	0.003645	2.03	92.12	241.54	0.33
RIVER-1	Reach-1	248	Max WS	147.45	141.00	143.01		143.07	0.003515	1.94	76.22	83.32	0.32
RIVER-1	Reach-1	247.*	Max WS	147.47	140.75	142.62		142.69	0.005138	2.29	94.90	270.43	0.38
RIVER-1	Reach-1	246	Max WS	147.57	140.50	142.35		142.36	0.001200	1.25	175.94	268.29	0.19
RIVER-1	Reach-1	245.*	Max WS	147.68	139.75	142.10		142.19	0.004579	2.72	73.03	99.97	0.38
RIVER-1	Reach-1	244	Max WS	147.78	139.00	141.80		141.88	0.004242	2.84	87.25	143.57	0.36
RIVER-1	Reach-1	243.*	Max WS	147.84	139.50	141.59		141.65	0.003178	2.23	94.65	152.60	0.31
RIVER-1	Reach-1	242	Max WS	147.90	140.00	141.39		141.44	0.003467	1.92	107.20	209.94	0.32
RIVER-1	Reach-1	241.*	Max WS	148.01	139.50	141.05		141.10	0.004882	2.22	95.70	191.13	0.37
RIVER-1	Reach-1	240	Max WS	148.14	139.00	140.76		140.79	0.002703	1.88	111.08	149.59	0.28
RIVER-1	Reach-1	239.*	Max WS	148.29	138.50	140.52		140.55	0.002809	1.64	116.17	191.35	0.28
RIVER-1	Reach-1	238	Max WS	148.27	138.00	140.21		140.24	0.004115	1.74	109.48	234.43	0.33
RIVER-1	Reach-1	237.25*	Max WS	130.41	137.62	140.03		140.05	0.001417	1.21	146.93	256.79	0.20
RIVER-1	Reach-1	236.5	Max WS	148.31	137.25	139.29	139.07	139.48	0.018541	3.54	46.17	167.70	0.69
RIVER-1	Reach-1	235.85	Max WS	148.29	136.60	138.75	137.72	138.86	0.002425	2.60	57.01	32.93	0.35
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	148.29	136.10	138.72		138.78	0.001190	2.03	72.99	35.72	0.25
RIVER-1	Reach-1	234.153*	Max WS	148.13	135.73	138.61		138.69	0.001617	2.28	64.98	29.81	0.27
RIVER-1	Reach-1	233.076*	Max WS	144.58	135.37	138.51		138.62	0.002430	2.64	64.42	176.99	0.30
RIVER-1	Reach-1	232	Max WS	148.33	135.00	138.03	137.18	138.35	0.009856	4.54	34.38	120.19	0.55
RIVER-1	Reach-1	231.*	Max WS	148.14	135.00	137.71		137.83	0.005094	3.13	89.63	408.25	0.40
RIVER-1	Reach-1	230	Max WS	148.10	135.00	137.61		137.62	0.000467	0.98	289.87	489.76	0.12
RIVER-1	Reach-1	229.*	Max WS	156.73	134.50	137.54		137.56	0.000743	1.35	237.59	438.65	0.16
RIVER-1	Reach-1	228	Max WS	156.93	134.00	137.43		137.46	0.001237	1.85	182.48	419.05	0.20
RIVER-1	Reach-1	227.*	Max WS	157.15	133.85	137.32		137.35	0.001307	1.71	171.65	350.55	0.21
RIVER-1	Reach-1	226	Max WS	157.36	133.70	136.99		137.09	0.005879	2.72	92.19	278.01	0.41
RIVER-1	Reach-1	225.*	Max WS	157.48	133.48	136.67		136.77	0.005001	2.86	93.26	273.06	0.39
RIVER-1	Reach-1	224	Max WS	157.59	133.25	136.33		136.46	0.005643	3.33	88.26	260.58	0.42
RIVER-1	Reach-1	223.*	Max WS	157.70	133.12	135.96		136.08	0.005992	3.41	91.47	258.40	0.43
RIVER-1	Reach-1	222	Max WS	157.64	133.00	135.71		135.76	0.003104	2.53	125.90	261.74	0.31
RIVER-1	Reach-1	221.*	Max WS	157.32	132.70	135.50		135.57	0.003358	2.74	119.58	274.50	0.33
RIVER-1	Reach-1	220	Max WS	156.85	132.40	135.23		135.36	0.005300	3.47	94.44	302.83	0.41
RIVER-1	Reach-1	219.*	Max WS	154.04	131.80	135.09		135.17	0.002570	2.69	105.39	243.53	0.30
RIVER-1	Reach-1	218	Max WS	153.78	131.20	135.07		135.08	0.000437	1.24	237.11	342.67	0.12
RIVER-1	Reach-1	217.*	Max WS	153.71	131.98	135.04		135.05	0.000457	1.13	240.17	324.02	0.13
RIVER-1	Reach-1	216	Max WS	153.69	132.75	135.00		135.00	0.000512	0.98	237.82	306.68	0.13
RIVER-1	Reach-1	215.*	Max WS	165.24	132.62	134.95		134.97	0.000837	1.30	193.03	257.36	0.17
RIVER-1	Reach-1	214	Max WS	165.27	132.50	134.92		134.93	0.000270	0.76	304.36	304.13	0.10
RIVER-1	Reach-1	213.*	Max WS	181.85	131.88	134.90		134.91	0.000179	0.83	342.06	235.49	0.09
RIVER-1	Reach-1	212	Max WS	181.83	131.00	134.74		134.96	0.001741	3.74	48.66	187.41	0.34
RIVER-1	Reach-1	211.94		Culvert									
RIVER-1	Reach-1	184.5	Max WS	134.72	126.00	129.08		129.25	0.002220	3.36	40.52	366.78	0.36
RIVER-1	Reach-1	184.25*	Max WS	134.68	126.00	129.10		129.10	0.000127	0.75	377.38	368.52	0.08
RIVER-1	Reach-1	184	Max WS	331.56	126.00	129.06		129.09	0.000767	1.90	368.39	363.49	0.21
RIVER-1	Reach-1	183.*	Max WS	335.85	126.00	128.93		129.01	0.002444	3.04	193.89	185.16	0.33

RIVER-1	Reach-1	182	Max WS	335.82	126.00	128.84	128.88	0.001491	2.17	236.18	182.94	0.23
RIVER-1	Reach-1	181.*	Max WS	337.05	126.00	128.66	128.71	0.002102	2.40	212.44	191.96	0.28
RIVER-1	Reach-1	180	Max WS	338.28	126.00	128.42	128.48	0.002835	2.53	214.66	275.55	0.31
RIVER-1	Reach-1	179.*	Max WS	373.49	125.00	128.17	128.23	0.002693	2.68	246.15	334.30	0.31
RIVER-1	Reach-1	178	Max WS	373.70	124.00	128.04	128.06	0.000845	1.61	405.60	424.17	0.17
RIVER-1	Reach-1	177.*	Max WS	375.19	124.00	127.87	127.91	0.001395	2.12	339.74	422.56	0.22
RIVER-1	Reach-1	176	Max WS	376.63	124.00	127.53	127.61	0.003428	3.16	245.38	425.52	0.35
RIVER-1	Reach-1	175.*	Max WS	381.71	123.50	127.26	127.38	0.004273	3.53	220.43	433.06	0.39
RIVER-1	Reach-1	174	Max WS	380.50	123.00	127.03	127.13	0.003676	3.30	244.51	546.71	0.36
RIVER-1	Reach-1	173.*	Max WS	379.04	123.50	126.91	126.95	0.001983	2.32	354.89	614.20	0.26
RIVER-1	Reach-1	172	Max WS	378.81	124.00	126.87	126.87	0.000521	1.14	612.02	737.68	0.13
RIVER-1	Reach-1	171.*	Max WS	378.73	124.00	126.78	126.79	0.000913	1.48	518.93	767.76	0.18
RIVER-1	Reach-1	170	Max WS	378.60	124.00	126.65	126.67	0.001504	1.83	422.10	672.01	0.22
RIVER-1	Reach-1	169.*	Max WS	377.81	123.50	126.53	126.57	0.002694	2.60	320.73	611.27	0.30
RIVER-1	Reach-1	168	Max WS	376.04	123.00	126.39	126.43	0.002437	2.57	316.23	547.75	0.29
RIVER-1	Reach-1	167.*	Max WS	372.13	122.50	126.26	126.30	0.001752	2.36	349.65	585.82	0.25
RIVER-1	Reach-1	166	Max WS	371.25	122.00	126.18	126.20	0.000958	1.85	437.71	653.01	0.19
RIVER-1	Reach-1	165.*	Max WS	369.52	121.00	125.94	125.98	0.001635	2.39	362.75	606.16	0.24
RIVER-1	Reach-1	164	Max WS	368.75	120.00	125.69	125.71	0.001198	1.88	432.81	676.81	0.19
RIVER-1	Reach-1	163.*	Max WS	368.42	120.00	125.54	125.59	0.001859	2.62	353.14	695.13	0.25
RIVER-1	Reach-1	162	Max WS	368.65	120.00	125.11	125.41	0.006033	4.81	130.60	415.57	0.45
RIVER-1	Reach-1	161.*	Max WS	367.59	120.25	124.81	124.94	0.003136	3.32	220.04	586.16	0.34
RIVER-1	Reach-1	160	Max WS	367.69	120.50	124.68	124.71	0.000938	1.74	418.02	636.43	0.18
RIVER-1	Reach-1	159.*	Max WS	368.18	120.25	124.60	124.62	0.000818	1.60	425.40	666.27	0.17
RIVER-1	Reach-1	158	Max WS	368.73	120.00	124.53	124.55	0.000679	1.41	458.20	719.51	0.16
RIVER-1	Reach-1	157.*	Max WS	369.13	119.50	124.46	124.50	0.001021	1.89	382.54	727.84	0.20
RIVER-1	Reach-1	156	Max WS	369.50	119.00	124.26	124.43	0.003719	3.76	202.85	694.57	0.36
RIVER-1	Reach-1	155.*	Max WS	368.72	119.00	123.95	124.04	0.002704	3.19	276.38	645.97	0.31
RIVER-1	Reach-1	154	Max WS	379.14	119.00	123.76	123.78	0.001102	2.00	444.62	688.00	0.19
RIVER-1	Reach-1	153.*	Max WS	388.03	119.00	123.66	123.69	0.001197	2.12	441.81	782.95	0.21
RIVER-1	Reach-1	152	Max WS	387.91	119.00	123.58	123.61	0.001106	1.96	466.84	871.86	0.20
RIVER-1	Reach-1	151.*	Max WS	398.36	119.00	123.44	123.47	0.001614	2.10	418.28	854.82	0.24
RIVER-1	Reach-1	150	Max WS	397.67	119.00	123.19	123.26	0.004256	2.79	292.34	781.87	0.36
RIVER-1	Reach-1	149.*	Max WS	400.23	118.50	122.92	122.99	0.002686	2.71	319.16	724.24	0.30
RIVER-1	Reach-1	148	Max WS	402.97	118.00	122.74	122.77	0.001492	2.28	396.22	660.51	0.23
RIVER-1	Reach-1	147.*	Max WS	405.15	117.92	122.60	122.65	0.002132	2.43	383.24	870.58	0.27
RIVER-1	Reach-1	146	Max WS	407.24	117.83	122.39	122.46	0.004346	2.94	323.39	1007.93	0.37
RIVER-1	Reach-1	145.*	Max WS	409.50	117.92	122.19	122.23	0.001950	1.85	345.15	960.75	0.25
RIVER-1	Reach-1	144	Max WS	411.01	118.00	121.98	122.02	0.003282	1.77	312.98	715.60	0.30
RIVER-1	Reach-1	143.*	Max WS	412.73	117.50	121.81	121.83	0.000899	1.49	453.44	890.72	0.18
RIVER-1	Reach-1	142	Max WS	415.15	117.00	121.73	121.75	0.001003	1.97	534.01	884.47	0.19
RIVER-1	Reach-1	141.*	Max WS	417.69	117.00	121.60	121.64	0.001647	2.50	448.71	916.23	0.24
RIVER-1	Reach-1	140	Max WS	418.65	117.00	121.40	121.49	0.003212	3.39	352.05	1035.06	0.33
RIVER-1	Reach-1	139.*	Max WS	417.95	117.50	121.25	121.29	0.001996	2.48	418.04	925.77	0.27
RIVER-1	Reach-1	138	Max WS	418.94	118.00	121.17	121.19	0.000901	1.57	568.36	949.06	0.18
RIVER-1	Reach-1	137.*	Max WS	420.00	118.00	121.09	121.11	0.001195	1.69	496.28	890.54	0.20
RIVER-1	Reach-1	136	Max WS	421.62	118.00	120.97	121.00	0.001657	1.79	401.57	621.60	0.23
RIVER-1	Reach-1	135.*	Max WS	423.24	117.50	120.86	120.88	0.001086	1.36	473.68	662.52	0.19
RIVER-1	Reach-1	134	Max WS	424.89	117.00	120.79	120.80	0.000758	1.08	560.17	732.99	0.15
RIVER-1	Reach-1	133.*	Max WS	427.16	117.00	120.70	120.72	0.000930	1.18	477.45	650.52	0.17
RIVER-1	Reach-1	132	Max WS	429.49	117.00	120.62	120.64	0.000751	1.05	489.59	578.10	0.15
RIVER-1	Reach-1	131.*	Max WS	430.75	117.00	120.55	120.56	0.001004	1.15	453.08	588.27	0.17
RIVER-1	Reach-1	130	Max WS	431.97	117.00	120.47	120.48	0.000997	1.10	514.58	796.46	0.17
RIVER-1	Reach-1	129.*	Max WS	432.63	117.00	120.38	120.40	0.001476	1.30	444.48	810.28	0.21
RIVER-1	Reach-1	128	Max WS	433.25	117.00	120.11	120.18	0.005464	2.17	230.55	614.44	0.39
RIVER-1	Reach-1	127.*	Max WS	432.99	116.71	119.84	119.90	0.003229	2.16	299.90	648.78	0.32
RIVER-1	Reach-1	126	Max WS	432.85	116.42	119.77	119.79	0.001405	1.89	472.31	690.85	0.22
RIVER-1	Reach-1	125.*	Max WS	432.84	116.21	119.74	119.76	0.001408	1.71	479.66	756.54	0.22
RIVER-1	Reach-1	124	Max WS	432.70	116.00	119.72	119.73	0.001006	1.31	550.81	803.98	0.18
RIVER-1	Reach-1	123.*	Max WS	432.56	116.18	119.65	119.67	0.001282	1.59	500.03	808.16	0.21
RIVER-1	Reach-1	122	Max WS	432.53	116.35	119.57	119.59	0.001604	1.79	488.97	934.38	0.23
RIVER-1	Reach-1	121.*	Max WS	478.12	115.68	119.36	119.40	0.002656	2.45	369.91	599.11	0.30
RIVER-1	Reach-1	120	Max WS	477.69	115.00	119.19	119.22	0.001449	2.20	432.72	585.75	0.23

RIVER-1	Reach-1	119.*	Max WS	477.48	114.50	119.04		119.12	0.002154	3.00	340.47	487.10	0.31
RIVER-1	Reach-1	118	Max WS	477.00	114.00	118.72		118.93	0.003625	4.25	213.02	267.24	0.45
RIVER-1	Reach-1	117.*	Max WS	476.56	114.50	118.65		118.72	0.001398	2.37	287.22	310.81	0.28
RIVER-1	Reach-1	116	Max WS	474.00	115.00	118.51		118.59	0.002506	2.30	265.49	344.42	0.34
RIVER-1	Reach-1	115.*	Max WS	456.96	114.50	118.34		118.39	0.002293	1.93	264.76	347.67	0.32
RIVER-1	Reach-1	114	Max WS	410.40	114.00	118.16		118.19	0.001943	1.53	282.22	384.23	0.28
RIVER-1	Reach-2	112.05	Max WS	727.69	112.00	118.16		118.23	0.001284	2.22	359.38	418.14	0.27
RIVER-1	Reach-2	112	Max WS	727.77	112.00	118.15		118.23	0.001298	2.23	356.50	416.34	0.27
RIVER-1	Reach-2	111.95	Lat Struct										
RIVER-1	Reach-2	111.*	Max WS	727.51	113.00	118.01		118.09	0.001845	2.24	368.86	360.78	0.31
RIVER-1	Reach-2	110	Max WS	726.98	114.00	117.87		117.94	0.002243	2.15	433.56	471.32	0.33
RIVER-1	Reach-2	109.*	Max WS	727.52	113.50	117.58		117.73	0.002668	3.50	339.02	375.27	0.39
RIVER-1	Reach-2	108	Max WS	728.45	113.00	117.35		117.51	0.002294	3.71	367.05	412.01	0.37
RIVER-1	Reach-2	107.*	Max WS	728.76	112.00	117.27		117.38	0.001564	3.18	441.89	469.40	0.31
RIVER-1	Reach-2	106	Max WS	729.29	111.00	117.22		117.30	0.001003	2.81	555.31	565.20	0.25
RIVER-1	Reach-2	105.*	Max WS	729.87	110.50	117.13		117.24	0.001319	3.18	509.45	526.79	0.28
RIVER-1	Reach-2	104	Max WS	730.66	110.00	117.03		117.16	0.001335	3.49	487.95	491.68	0.28
RIVER-1	Reach-2	103.*	Max WS	730.81	110.00	117.00		117.08	0.001550	2.88	528.62	511.09	0.29
RIVER-1	Reach-2	102	Max WS	640.10	110.00	117.00		117.03	0.000426	1.98	751.30	567.77	0.17
RIVER-1	Reach-2	101.*	Max WS	732.13	110.50	116.95		117.00	0.000607	2.31	740.53	565.30	0.20
RIVER-1	Reach-2	100	Max WS	733.17	111.00	116.91		116.95	0.000658	2.36	729.48	559.48	0.20
RIVER-1	Reach-2	99.*	Max WS	736.55	111.00	116.79		116.84	0.000697	2.44	701.21	558.34	0.21
RIVER-1	Reach-2	98	Max WS	740.02	111.00	116.67		116.72	0.000742	2.54	668.59	553.40	0.22
RIVER-1	Reach-2	97.*	Max WS	742.00	110.50	116.59		116.64	0.000714	2.52	669.52	536.54	0.21
RIVER-1	Reach-2	96	Max WS	743.99	110.00	116.51		116.57	0.000703	2.51	669.07	525.19	0.21
RIVER-1	Reach-2	95.*	Max WS	745.79	109.50	116.44		116.51	0.000771	2.68	614.33	512.69	0.22
RIVER-1	Reach-2	94	Max WS	747.59	109.00	116.35		116.44	0.000827	2.82	558.74	489.32	0.23
RIVER-1	Reach-2	93.*	Max WS	749.40	109.00	116.28		116.36	0.000736	2.70	559.98	464.90	0.22
RIVER-1	Reach-2	92	Max WS	751.20	109.00	116.21		116.29	0.000663	2.62	549.58	414.72	0.21
RIVER-1	Reach-2	91.*	Max WS	753.06	108.50	116.14		116.22	0.000677	2.58	553.79	431.74	0.21
RIVER-1	Reach-2	90	Max WS	754.89	108.00	116.08		116.15	0.000688	2.54	559.12	444.98	0.21
RIVER-1	Reach-2	89.*	Max WS	756.70	108.50	116.02		116.09	0.000606	2.48	598.87	429.47	0.20
RIVER-1	Reach-2	88	Max WS	758.48	109.00	115.97		116.03	0.000543	2.42	640.48	415.26	0.19
RIVER-1	Reach-2	87.*	Max WS	759.72	108.00	115.95		115.98	0.000241	1.77	784.92	437.69	0.13
RIVER-1	Reach-2	86	Max WS	761.22	107.00	115.94		115.96	0.000117	1.33	959.82	462.89	0.09
RIVER-1	Reach-2	85.*	Max WS	761.91	107.50	115.94		115.96	0.000154	1.37	1059.15	579.50	0.10
RIVER-1	Reach-2	84	Max WS	762.53	108.00	115.93		115.94	0.000172	1.25	1236.62	704.93	0.11
RIVER-1	Reach-2	83.*	Max WS	780.72	108.50	115.91		115.93	0.000307	1.65	999.79	737.57	0.14
RIVER-1	Reach-2	82	Max WS	780.70	109.00	115.85		115.91	0.000659	2.28	726.26	781.59	0.20
RIVER-1	Reach-2	81.56	Max WS	663.75	108.22	115.79	112.06	115.85	0.000726	2.02	329.23	79.44	0.17
RIVER-1	Reach-2	81.55	Bridge										
RIVER-1	Reach-2	81.30	Max WS	774.45	108.96	115.18		115.45	0.005044	4.17	185.70	64.95	0.43
RIVER-1	Reach-2	80.95	Max WS	774.45	108.83	115.21	112.19	115.34	0.000946	2.94	263.86	61.19	0.25
RIVER-1	Reach-2	80.94	Bridge										
RIVER-1	Reach-2	80.38	Max WS	773.90	108.67	115.18		115.32	0.001040	3.01	257.26	62.64	0.26
RIVER-1	Reach-2	79.3849*	Max WS	773.04	108.33	115.01		115.20	0.001339	3.48	222.29	229.64	0.30
RIVER-1	Reach-2	78.39	Max WS	773.01	108.00	115.00		115.06	0.000561	2.53	556.43	326.92	0.20
RIVER-1	Reach-2	77.6566*	Max WS	772.99	107.80	114.99		115.02	0.000283	1.79	940.47	556.15	0.14
RIVER-1	Reach-2	76.9233*	Max WS	772.79	107.60	114.96		115.01	0.000438	2.20	836.30	737.20	0.17
RIVER-1	Reach-2	76.19	Max WS	772.77	107.40	114.89		114.99	0.000753	2.84	514.92	566.83	0.22
RIVER-1	Reach-2	75.86	Max WS	772.64	107.22	114.82	111.25	114.97	0.000861	3.08	251.09	312.47	0.24
RIVER-1	Reach-2	75.85	Bridge										
RIVER-1	Reach-2	75.40	Max WS	772.24	106.63	114.60		114.75	0.001177	3.08	250.72	121.61	0.27
RIVER-1	Reach-2	74.7*	Max WS	772.23	106.82	114.59		114.67	0.000937	2.41	412.04	647.63	0.24
RIVER-1	Reach-2	74	Max WS	772.22	107.00	114.56		114.60	0.000834	1.89	732.12	1080.21	0.22
RIVER-1	Reach-2	73.*	Max WS	772.14	107.43	114.51		114.54	0.000483	1.71	935.71	1159.78	0.17
RIVER-1	Reach-2	72	Max WS	772.04	107.86	114.48		114.50	0.000339	1.64	1145.55	1226.50	0.15
RIVER-1	Reach-2	71.*	Max WS	980.95	107.44	114.33		114.45	0.001130	2.81	379.11	185.93	0.24
RIVER-1	Reach-2	70	Max WS	980.93	107.03	114.28		114.35	0.000722	2.20	446.74	96.62	0.18
RIVER-1	Reach-2	69.*	Max WS	980.80	107.35	114.18		114.27	0.000887	2.43	403.31	86.65	0.20
RIVER-1	Reach-2	68	Max WS	980.68	107.68	114.06		114.17	0.001166	2.68	365.93	83.66	0.23
RIVER-1	Reach-2	67	Max WS	980.55	107.40	113.87		114.03	0.001780	3.26	335.37	124.77	0.28
RIVER-1	Reach-2	66	Max WS	980.28	107.40	113.66		113.84	0.002144	3.48	309.52	117.35	0.30

RIVER-1	Reach-2	65.*	Max WS	979.97	107.20	113.51		113.65	0.001600	3.03	332.85	133.85	0.28
RIVER-1	Reach-2	64	Max WS	979.80	107.00	113.39		113.51	0.001170	2.80	349.54	104.45	0.27
RIVER-1	Reach-2	63.*	Max WS	981.33	106.81	113.26		113.38	0.001449	2.82	347.69	121.82	0.29
RIVER-1	Reach-2	62.*	Max WS	982.79	106.62	113.11		113.23	0.001692	2.82	349.06	144.14	0.31
RIVER-1	Reach-2	61.*	Max WS	983.95	106.43	112.97		113.08	0.001450	2.68	371.82	162.32	0.29
RIVER-1	Reach-2	60	Max WS	985.28	106.24	112.86		112.95	0.001123	2.42	420.62	186.67	0.26
RIVER-1	Reach-2	59.*	Max WS	988.00	106.07	112.76		112.85	0.000875	2.38	433.87	187.22	0.23
RIVER-1	Reach-2	58	Max WS	990.96	105.90	112.71		112.78	0.000486	2.20	614.83	447.88	0.18
RIVER-1	Reach-2	57.2	Max WS	992.69	107.05	112.60	110.02	112.74	0.001236	3.11	444.80	393.57	0.28
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	990.70	107.05	112.45		112.63	0.001652	3.46	369.22	369.75	0.32
RIVER-1	Reach-2	56	Max WS	993.55	105.90	112.42		112.50	0.000642	2.33	490.66	343.42	0.21
RIVER-1	Reach-2	55.*	Max WS	995.49	105.85	112.37		112.44	0.000613	2.07	553.16	445.61	0.20
RIVER-1	Reach-2	54	Max WS	997.78	105.80	112.32		112.38	0.000639	1.93	590.59	539.49	0.20
RIVER-1	Reach-2	53.*	Max WS	1004.34	105.70	112.25		112.30	0.000541	1.88	698.01	354.17	0.17
RIVER-1	Reach-2	52	Max WS	1010.63	105.60	112.17		112.21	0.000674	1.96	697.32	301.03	0.17
RIVER-1	Reach-2	51.*	Max WS	1013.73	105.57	112.08		112.13	0.000806	2.19	654.44	288.12	0.20
RIVER-1	Reach-2	50.*	Max WS	1016.26	105.54	111.99		112.05	0.000904	2.39	620.66	274.96	0.22
RIVER-1	Reach-2	49.*	Max WS	1019.03	105.50	111.89		111.96	0.000921	2.56	598.34	261.45	0.23
RIVER-1	Reach-2	48	Max WS	1021.77	105.47	111.79		111.87	0.000821	2.71	588.72	247.90	0.23
RIVER-1	Reach-2	47.*	Max WS	1024.47	105.68	111.72		111.79	0.000834	2.62	632.88	281.30	0.23
RIVER-1	Reach-2	46.*	Max WS	1027.46	105.88	111.65		111.70	0.000754	2.45	698.17	317.34	0.22
RIVER-1	Reach-2	45.*	Max WS	1030.43	106.08	111.58		111.63	0.000600	2.22	789.95	353.82	0.20
RIVER-1	Reach-2	44	Max WS	1033.40	106.29	111.54		111.57	0.000433	1.98	910.26	390.20	0.17
RIVER-1	Reach-2	43.*	Max WS	1036.16	106.30	111.49		111.53	0.000455	2.03	864.39	374.73	0.18
RIVER-1	Reach-2	42.*	Max WS	1038.94	106.31	111.44		111.49	0.000478	2.09	821.70	372.43	0.18
RIVER-1	Reach-2	41.*	Max WS	1041.72	106.32	111.39		111.44	0.000501	2.14	786.94	369.29	0.18
RIVER-1	Reach-2	40	Max WS	1044.53	106.33	111.34		111.39	0.000523	2.18	759.94	365.80	0.19
RIVER-1	Reach-2	39.*	Max WS	1044.51	106.17	111.30		111.34	0.000414	1.96	867.30	394.36	0.17
RIVER-1	Reach-2	38.*	Max WS	1044.49	106.01	111.27		111.30	0.000306	1.70	1021.82	432.55	0.14
RIVER-1	Reach-2	37.*	Max WS	1044.45	105.84	111.26		111.27	0.000207	1.41	1227.19	466.32	0.12
RIVER-1	Reach-2	36	Max WS	1044.41	105.68	111.23		111.25	0.000288	1.68	1075.14	484.67	0.14
RIVER-1	Reach-2	35.22	Max WS	1044.36	104.52	111.07		111.24	0.001090	3.31	315.36	69.05	0.27
RIVER-1	Reach-2	34.82	Max WS	1044.35	104.52	111.03	107.78	111.20	0.001123	3.35	312.06	68.78	0.28
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1043.99	104.30	110.48		110.83	0.003384	4.75	219.73	65.32	0.46
RIVER-1	Reach-2	33.67*	Max WS	1043.87	104.12	110.44		110.65	0.001751	3.69	283.10	75.76	0.34
RIVER-1	Reach-2	33	Max WS	1043.87	103.93	110.46		110.57	0.000750	2.63	522.99	457.20	0.22
RIVER-1	Reach-2	32.*	Max WS	1043.84	103.40	110.39		110.48	0.000757	2.42	543.64	503.71	0.22
RIVER-1	Reach-2	31.*	Max WS	1043.79	102.88	110.29		110.38	0.001109	2.52	495.49	526.95	0.26
RIVER-1	Reach-2	30	Max WS	1043.73	102.35	110.01		110.18	0.003370	3.28	317.90	203.94	0.42
RIVER-1	Reach-2	29.*	Max WS	1043.72	102.34	109.66		109.85	0.003500	3.54	322.95	462.27	0.43
RIVER-1	Reach-2	28.*	Max WS	1043.57	102.33	109.35		109.55	0.003441	3.73	385.75	666.12	0.44
RIVER-1	Reach-2	27.*	Max WS	1043.45	102.33	109.12		109.27	0.002637	3.51	543.74	779.32	0.39
RIVER-1	Reach-2	26	Max WS	1043.32	102.32	108.99		109.06	0.001504	2.86	818.49	909.50	0.30
RIVER-1	Reach-2	25.*	Max WS	1043.17	101.99	108.82		108.93	0.002268	3.32	694.34	944.65	0.36
RIVER-1	Reach-2	24.*	Max WS	1043.04	101.66	108.64		108.74	0.002537	3.28	634.90	737.78	0.37
RIVER-1	Reach-2	23.*	Max WS	1042.89	101.33	108.46		108.54	0.002660	3.12	676.16	849.06	0.37
RIVER-1	Reach-2	22	Max WS	1042.54	101.00	108.29		108.35	0.002271	2.69	774.56	967.81	0.34
RIVER-1	Reach-2	21.*	Max WS	1042.33	101.27	108.11		108.17	0.002367	2.76	741.86	830.15	0.35
RIVER-1	Reach-2	20.*	Max WS	1041.55	101.54	107.92		107.98	0.002346	2.87	736.95	763.30	0.35
RIVER-1	Reach-2	19.*	Max WS	1040.47	101.82	107.74		107.80	0.002215	3.00	742.47	731.67	0.34
RIVER-1	Reach-2	18	Max WS	1038.54	102.09	107.57		107.63	0.002054	3.08	757.75	707.45	0.33
RIVER-1	Reach-2	17.*	Max WS	1035.37	101.97	107.41		107.46	0.001908	3.09	803.25	797.59	0.33
RIVER-1	Reach-2	16.*	Max WS	1030.51	101.85	107.27		107.31	0.001667	2.85	975.40	1182.77	0.30
RIVER-1	Reach-2	15.*	Max WS	1027.28	101.73	107.18		107.20	0.000848	1.94	1256.45	1204.20	0.21
RIVER-1	Reach-2	14	Max WS	1025.88	101.61	107.13		107.14	0.000431	1.30	1588.28	1219.76	0.15
RIVER-1	Reach-2	13.*	Max WS	1024.97	101.43	107.10		107.11	0.000329	1.06	1734.38	1222.22	0.13
RIVER-1	Reach-2	12.*	Max WS	1024.52	101.26	107.08		107.09	0.000245	0.97	1890.50	1214.02	0.11
RIVER-1	Reach-2	11.*	Max WS	1023.73	101.08	107.07		107.07	0.000183	0.90	2055.21	1198.91	0.10
RIVER-1	Reach-2	10	Max WS	1023.71	100.90	107.06		107.06	0.000139	0.82	2215.03	1163.30	0.09
RIVER-1	Reach-2	9.*	Max WS	1023.66	100.75	107.04		107.04	0.000212	1.05	1832.52	1020.70	0.11
RIVER-1	Reach-2	8.*	Max WS	1023.04	100.60	107.00		107.01	0.000384	1.42	1464.44	960.90	0.15

RIVER-1	Reach-2	7.*	Max WS	1022.47	100.45	106.94		106.97	0.000682	2.03	1187.14	1112.95	0.20
RIVER-1	Reach-2	6	Max WS	1020.87	100.30	106.82		106.90	0.001478	3.14	896.70	1210.05	0.30
RIVER-1	Reach-2	5.*	Max WS	1019.52	100.15	106.70		106.77	0.001296	3.02	945.17	1280.73	0.28
RIVER-1	Reach-2	4.*	Max WS	1018.49	100.00	106.59		106.65	0.001100	2.84	1025.78	1408.44	0.26
RIVER-1	Reach-2	3.*	Max WS	1017.78	99.85	106.49		106.55	0.000903	2.62	1173.92	1667.97	0.24
RIVER-1	Reach-2	2	Max WS	1017.54	99.70	106.43		106.46	0.000573	2.13	1583.44	2200.23	0.19
RIVER-1	Reach-2	1.*	Max WS	1017.38	99.55	106.36		106.42	0.000812	2.61	1282.09	2122.17	0.23
RIVER-1	Reach-2	0	Max WS	1017.33	99.40	106.28	103.73	106.35	0.000820	2.68	1098.41	1829.83	0.23

Appendix P-14: HEC-RAS Results, Anatolia III – Alternative 'D' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X      X    X        X
X     X  X        X    X      X   X     X    X        X
X     X  XXXXXX    XXXX       X    X    X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/18/2010 12:42:19 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.41	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	598.66	157.71	163.01		163.02	0.000054	0.45	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.15	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	600.14	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	600.12	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.65	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	597.21	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.20	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	597.19	154.11	163.01		163.01	0.000025	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	597.17	154.05	163.01		163.01	0.000022	0.33	1827.48	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	595.77	154.00	163.00		163.01	0.000020	0.30	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.76	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	595.74	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.73	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	595.71	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	594.38	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	594.36	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.35	152.00	163.00		163.00	0.000005	0.18	3310.40	571.83	0.01

RIVER-2	Reach-1	11000	Max WS	594.34	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.31	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	593.09	152.00	163.00		163.00	0.000002	0.13	4521.25	625.07	0.01
RIVER-2	Reach-1	10662.5*	Max WS	594.27	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.25	152.00	163.00		163.00	0.000001	0.10	5815.46	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	593.11	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	594.20	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	594.17	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.13	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	594.07	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.97	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.04	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.02	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	594.00	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	594.80	150.00	163.00		163.00	0.000001	0.08	7215.44	820.24	0.00
RIVER-2	Reach-1	9950	Max WS	593.97	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00
RIVER-2	Reach-1	9900.*	Max WS	593.94	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	594.66	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.21	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	594.51	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	594.42	149.36	163.00		163.00	0.000000	0.06	10071.08	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.85	148.73	163.00		163.00	0.000000	0.05	10885.02	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.22	148.36	163.00		163.00	0.000000	0.04	13250.78	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.77	148.00	163.00		163.00	0.000000	0.04	15722.80	1830.49	0.00
RIVER-2	Reach-1	9450.*	Max WS	593.74	147.00	163.00		163.00	0.000000	0.04	16740.29	1836.06	0.00
RIVER-2	Reach-1	9400	Max WS	593.68	146.00	163.00		163.00	0.000000	0.03	18084.60	1807.33	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.62	145.51	163.00		163.00	0.000000	0.03	17477.69	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.57	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.49	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.32	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.31	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.38	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.48	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.40	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.31	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.31	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.29	140.56	154.39		154.57	0.003543	3.40	174.46	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.94	140.09	153.98		154.18	0.004343	3.55	168.03	35.96	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.59	139.60	153.55		153.74	0.004423	3.56	168.06	36.58	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.23	139.11	153.10		153.30	0.004519	3.58	168.17	37.30	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004626	3.59	168.27	38.05	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.53	138.13	152.19		152.39	0.004699	3.60	168.47	38.51	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.19	137.64	151.72		151.93	0.004744	3.61	168.86	38.86	0.31
RIVER-2	Reach-1	7750.*	Max WS	611.85	137.15	151.25		151.45	0.004781	3.61	169.29	39.16	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.50	136.66	150.78		150.98	0.004811	3.62	169.70	39.35	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.17	136.17	150.30		150.50	0.004812	3.62	170.35	39.47	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.84	135.68	149.82		150.03	0.004805	3.62	171.05	39.53	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.47	135.19	149.35		149.55	0.004785	3.62	171.89	39.60	0.31
RIVER-2	Reach-1	7250.*	Max WS	625.13	134.70	148.86		149.06	0.004806	3.62	172.46	39.79	0.31
RIVER-2	Reach-1	7150.*	Max WS	627.78	134.21	148.34		148.54	0.004957	3.66	171.48	39.82	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.35	133.72	147.77		147.99	0.005562	3.72	169.33	42.53	0.33
RIVER-2	Reach-1	6950.*	Max WS	595.50	133.23	147.17		147.37	0.005554	3.58	166.18	44.66	0.33
RIVER-2	Reach-1	6850.*	Max WS	591.24	132.74	146.61		146.81	0.005945	3.58	165.08	47.34	0.34
RIVER-2	Reach-1	6750.*	Max WS	590.56	132.25	145.99		146.20	0.006501	3.65	161.80	48.37	0.35
RIVER-2	Reach-1	6650.*	Max WS	638.64	131.76	145.30		145.56	0.008642	4.12	155.06	47.50	0.40
RIVER-2	Reach-1	6550	Max WS	641.01	131.27	144.57		144.87	0.010112	4.37	146.71	45.57	0.43
RIVER-2	Reach-1	6466.66*	Max WS	643.10	132.84	143.92		144.15	0.007512	3.84	167.35	57.72	0.40
RIVER-2	Reach-1	6383.33*	Max WS	645.19	134.40	143.48		143.66	0.004361	3.48	185.33	52.71	0.33
RIVER-2	Reach-1	6300	Max WS	647.29	135.97	143.13		143.35	0.003358	3.69	175.26	39.14	0.31
RIVER-2	Reach-1	6250	Max WS	648.54	136.00	142.87		143.15	0.004669	4.20	154.58	36.19	0.36
RIVER-2	Reach-1	6200	Max WS	649.77	135.00	142.44		142.85	0.007155	5.14	126.53	28.34	0.43
RIVER-2	Reach-1	6100.*	Max WS	652.03	134.75	141.96		142.25	0.004960	4.29	152.09	35.58	0.37
RIVER-2	Reach-1	6000.*	Max WS	645.95	134.50	141.59		141.80	0.003693	3.65	177.09	43.49	0.32

RIVER-2	Reach-1	5900.*	Max WS	648.90	134.25	141.24	141.41	0.003095	3.25	199.67	51.95	0.29
RIVER-2	Reach-1	5800.*	Max WS	650.83	134.00	140.87	141.00	0.003596	2.98	218.10	73.60	0.31
RIVER-2	Reach-1	5700.*	Max WS	653.43	133.75	140.42	140.54	0.005511	2.79	234.23	124.53	0.36
RIVER-2	Reach-1	5600.*	Max WS	665.15	133.50	139.88	140.00	0.005894	2.75	242.79	144.98	0.36
RIVER-2	Reach-1	5500.*	Max WS	667.70	133.25	139.23	139.37	0.008287	2.94	228.93	161.28	0.42
RIVER-2	Reach-1	5400	Max WS	670.24	133.00	136.80	137.80	0.027575	8.02	83.59	28.60	0.83
RIVER-2	Reach-1	5304.54*	Max WS	672.67	132.73	135.66	135.97	0.009808	4.45	151.08	60.47	0.50
RIVER-2	Reach-1	5209.09*	Max WS	675.13	132.45	135.04	135.21	0.006350	3.30	204.58	93.59	0.39
RIVER-2	Reach-1	5113.63*	Max WS	677.59	132.18	134.56	134.67	0.005021	2.73	248.47	127.37	0.34
RIVER-2	Reach-1	5018.18*	Max WS	680.04	131.91	134.16	134.25	0.004306	2.37	286.94	162.11	0.31
RIVER-2	Reach-1	4922.72*	Max WS	682.52	131.64	133.80	133.87	0.003897	2.13	320.84	197.97	0.29
RIVER-2	Reach-1	4827.27*	Max WS	685.03	131.36	133.47	133.53	0.003706	1.95	350.73	237.08	0.28
RIVER-2	Reach-1	4731.81*	Max WS	687.51	131.09	133.14	133.20	0.003626	1.82	378.47	280.85	0.28
RIVER-2	Reach-1	4636.36*	Max WS	690.03	130.82	132.82	132.86	0.003702	1.71	402.82	331.78	0.27
RIVER-2	Reach-1	4540.90*	Max WS	692.52	130.55	132.46	132.51	0.004080	1.66	418.41	390.42	0.28
RIVER-2	Reach-1	4445.45*	Max WS	695.02	130.27	132.08	132.13	0.004748	1.65	421.33	442.85	0.30
RIVER-2	Reach-1	4350	Max WS	697.54	130.00	131.47	131.55	0.013881	2.25	309.99	457.35	0.48
RIVER-2	Reach-1	4260.*	Max WS	699.70	129.40	130.87	130.93	0.011247	2.11	333.20	467.92	0.44
RIVER-2	Reach-1	4170.*	Max WS	701.88	128.80	130.39	130.45	0.007654	1.87	376.07	469.95	0.37
RIVER-2	Reach-1	4080.*	Max WS	704.05	128.20	130.03	130.07	0.004991	1.62	433.53	484.27	0.30
RIVER-2	Reach-1	3990.*	Max WS	706.24	127.60	129.74	129.77	0.003745	1.48	477.72	495.48	0.27
RIVER-2	Reach-1	3900	Max WS	708.42	127.00	129.50	129.53	0.003241	1.40	504.92	508.27	0.25
RIVER-2	Reach-1	3800.*	Max WS	711.19	126.70	129.25	129.28	0.003234	1.41	503.78	501.74	0.25
RIVER-2	Reach-1	3700.*	Max WS	713.96	126.40	129.00	129.03	0.003203	1.42	503.96	495.68	0.25
RIVER-2	Reach-1	3600.*	Max WS	716.72	126.10	128.76	128.79	0.003142	1.42	505.82	490.30	0.25
RIVER-2	Reach-1	3500.*	Max WS	719.47	125.80	128.51	128.55	0.003042	1.41	510.21	486.12	0.24
RIVER-2	Reach-1	3400.*	Max WS	722.22	125.50	128.27	128.30	0.002966	1.40	514.12	483.44	0.24
RIVER-2	Reach-1	3300.*	Max WS	724.97	125.20	128.03	128.06	0.002920	1.40	517.16	482.16	0.24
RIVER-2	Reach-1	3200.*	Max WS	727.72	124.90	127.78	127.81	0.002897	1.40	518.82	480.41	0.24
RIVER-2	Reach-1	3100.*	Max WS	730.46	124.60	127.52	127.55	0.002910	1.41	517.82	476.93	0.24
RIVER-2	Reach-1	3000.*	Max WS	733.21	124.30	127.24	127.27	0.003131	1.44	509.35	480.75	0.25
RIVER-2	Reach-1	2900	Max WS	735.95	124.00	126.93	126.96	0.003481	1.46	505.30	507.34	0.26
RIVER-2	Reach-1	2812.5*	Max WS	738.23	123.52	126.64	126.68	0.003865	1.49	495.75	520.81	0.27
RIVER-2	Reach-1	2725.*	Max WS	740.51	123.03	126.37	126.40	0.003919	1.50	493.95	519.11	0.27
RIVER-2	Reach-1	2637.5*	Max WS	742.78	122.55	126.12	126.15	0.003686	1.47	503.95	518.81	0.26
RIVER-2	Reach-1	2550.*	Max WS	745.05	122.07	125.86	125.90	0.003503	1.45	512.40	518.02	0.26
RIVER-2	Reach-1	2462.5*	Max WS	747.33	121.58	125.59	125.62	0.003578	1.47	509.15	515.51	0.26
RIVER-2	Reach-1	2375	Max WS	749.59	121.10	125.33	125.36	0.003469	1.46	514.27	513.90	0.26
RIVER-2	Reach-1	2279.16*	Max WS	752.05	121.07	125.05	125.08	0.003354	1.43	525.06	525.48	0.25
RIVER-2	Reach-1	2183.33*	Max WS	754.51	121.03	124.76	124.79	0.003470	1.44	524.83	535.91	0.26
RIVER-2	Reach-1	2087.5*	Max WS	756.97	121.00	124.49	124.52	0.003401	1.42	533.20	546.61	0.25
RIVER-2	Reach-1	1991.66*	Max WS	759.41	120.97	124.25	124.28	0.003070	1.37	555.78	558.75	0.24
RIVER-2	Reach-1	1895.83*	Max WS	761.85	120.93	124.03	124.06	0.002647	1.30	587.47	571.56	0.23
RIVER-2	Reach-1	1800	Max WS	764.28	120.90	123.83	123.85	0.002155	1.21	630.08	580.89	0.21
RIVER-2	Reach-1	1705.*	Max WS	766.68	120.43	123.63	123.66	0.002357	1.28	601.20	549.76	0.21
RIVER-2	Reach-1	1610.*	Max WS	769.08	119.95	123.42	123.45	0.002658	1.35	569.42	522.68	0.23
RIVER-2	Reach-1	1515.*	Max WS	771.49	119.47	123.17	123.20	0.002995	1.45	534.76	502.74	0.24
RIVER-2	Reach-1	1420	Max WS	773.88	119.00	122.87	122.90	0.003632	1.60	494.42	478.63	0.27
RIVER-2	Reach-1	1324.61*	Max WS	773.85	118.62	122.54	122.58	0.003641	1.60	501.67	574.19	0.27
RIVER-2	Reach-1	1229.23*	Max WS	773.79	118.23	122.22	122.26	0.003512	1.57	517.97	580.51	0.26
RIVER-2	Reach-1	1133.84*	Max WS	773.76	117.85	121.91	121.95	0.003478	1.55	527.74	579.22	0.26
RIVER-2	Reach-1	1038.46*	Max WS	773.69	117.46	121.62	121.65	0.003455	1.52	535.21	575.94	0.26
RIVER-2	Reach-1	943.076*	Max WS	773.56	117.08	121.34	121.37	0.003395	1.49	542.85	572.14	0.26
RIVER-2	Reach-1	847.692*	Max WS	773.48	116.69	121.07	121.10	0.003409	1.47	544.26	563.86	0.26
RIVER-2	Reach-1	752.307*	Max WS	773.41	116.31	120.78	120.81	0.003376	1.51	527.76	516.63	0.26
RIVER-2	Reach-1	656.923*	Max WS	773.34	115.92	120.47	120.51	0.003434	1.58	503.70	465.34	0.26
RIVER-2	Reach-1	561.538*	Max WS	773.34	115.54	120.19	120.23	0.003533	1.65	481.98	425.42	0.27
RIVER-2	Reach-1	466.153*	Max WS	773.33	115.15	119.91	119.96	0.003564	1.70	461.59	381.81	0.27
RIVER-2	Reach-1	370.769*	Max WS	773.25	114.77	119.65	119.70	0.003887	1.80	421.00	323.53	0.28
RIVER-2	Reach-1	275.384*	Max WS	772.80	114.38	119.34	119.42	0.005565	2.17	344.51	257.17	0.34
RIVER-2	Reach-1	180	Max WS	749.12	114.00	118.73	118.91	0.007121	3.43	218.70	101.33	0.41
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61	170.71	0.005342	2.91	80.02	142.24	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.95	168.75	170.36	170.45	0.004832	2.76	86.23	151.07	0.46
RIVER-1	Reach-1	325.*	Max WS	162.88	168.50	170.09	170.18	0.005800	2.99	88.08	159.29	0.50

RIVER-1	Reach-1	324.5*	Max WS	166.76	168.25	169.78		169.89	0.006560	3.14	90.23	182.42	0.53
RIVER-1	Reach-1	324	Max WS	166.45	168.00	169.55		169.61	0.004407	2.63	113.69	200.56	0.44
RIVER-1	Reach-1	323.*	Max WS	166.98	167.02	169.18		169.31	0.004196	3.23	88.57	192.85	0.45
RIVER-1	Reach-1	322	Max WS	164.40	166.04	168.12	167.94	168.56	0.015051	5.35	32.71	47.58	0.83
RIVER-1	Reach-1	320	Max WS	192.47	166.00	167.55		167.61	0.006538	3.28	130.19	254.14	0.54
RIVER-1	Reach-1	319.*	Max WS	192.69	166.00	167.36		167.40	0.002602	1.76	164.36	370.92	0.33
RIVER-1	Reach-1	318	Max WS	192.68	166.00	167.18		167.21	0.002614	1.49	162.79	505.59	0.31
RIVER-1	Reach-1	317.*	Max WS	193.48	165.50	166.96		166.99	0.002437	1.39	146.68	376.32	0.30
RIVER-1	Reach-1	316	Max WS	194.35	165.00	166.45		166.52	0.007487	2.10	92.66	175.73	0.51
RIVER-1	Reach-1	315.*	Max WS	197.26	164.50	165.81		165.88	0.005618	2.04	96.75	154.36	0.45
RIVER-1	Reach-1	314	Max WS	200.36	164.00	165.37		165.42	0.002637	2.00	133.69	239.47	0.34
RIVER-1	Reach-1	313.*	Max WS	202.20	163.50	164.99		165.08	0.004867	2.69	114.68	273.30	0.46
RIVER-1	Reach-1	312	Max WS	204.11	163.00	164.67		164.70	0.003232	2.13	181.60	355.06	0.37
RIVER-1	Reach-1	311.*	Max WS	206.34	162.50	164.17		164.26	0.007009	3.12	113.89	230.94	0.55
RIVER-1	Reach-1	310	Max WS	208.22	162.00	163.79		163.82	0.002121	2.02	175.85	233.00	0.31
RIVER-1	Reach-1	309.*	Max WS	210.78	161.26	163.21		163.40	0.009165	3.63	83.38	260.01	0.63
RIVER-1	Reach-1	308	Max WS	212.83	160.51	162.83		162.86	0.001669	1.82	159.44	165.99	0.28
RIVER-1	Reach-1	307.*	Max WS	212.72	159.76	162.56		162.68	0.004449	2.85	96.62	299.98	0.45
RIVER-1	Reach-1	306	Max WS	214.93	159.00	162.18		162.36	0.007499	3.52	104.15	575.97	0.57
RIVER-1	Reach-1	305.*	Max WS	215.92	159.00	161.66		161.80	0.006730	3.18	98.62	494.50	0.54
RIVER-1	Reach-1	304	Max WS	214.93	159.00	161.40		161.42	0.001406	1.58	273.02	692.28	0.25
RIVER-1	Reach-1	303.*	Max WS	214.67	158.75	161.28		161.32	0.001390	1.93	244.43	662.06	0.26
RIVER-1	Reach-1	302	Max WS	215.96	158.50	161.14		161.22	0.002240	2.88	202.81	651.16	0.35
RIVER-1	Reach-1	301.*	Max WS	217.26	158.25	160.96		161.03	0.002123	2.70	170.71	273.57	0.34
RIVER-1	Reach-1	300	Max WS	218.42	158.00	160.78		160.84	0.002079	2.54	176.86	260.30	0.33
RIVER-1	Reach-1	299.*	Max WS	217.57	158.31	160.59		160.66	0.002734	2.90	154.72	206.60	0.38
RIVER-1	Reach-1	298	Max WS	216.24	158.62	160.43		160.47	0.002169	2.50	173.36	184.12	0.33
RIVER-1	Reach-1	297.*	Max WS	213.99	158.31	160.29		160.31	0.001114	1.76	259.40	354.75	0.24
RIVER-1	Reach-1	296	Max WS	214.79	158.00	160.23		160.24	0.000247	0.85	467.09	450.80	0.11
RIVER-1	Reach-1	295.*	Max WS	214.20	158.01	160.20		160.21	0.000421	1.10	351.69	386.90	0.15
RIVER-1	Reach-1	294	Max WS	224.82	158.01	160.15		160.17	0.000431	1.10	320.18	322.75	0.15
RIVER-1	Reach-1	293.*	Max WS	224.79	157.51	160.11		160.12	0.000391	1.17	294.05	217.05	0.15
RIVER-1	Reach-1	292	Max WS	224.59	157.00	160.06		160.08	0.000453	1.40	252.29	151.35	0.16
RIVER-1	Reach-1	291.5	Max WS	218.38	157.00	159.93		160.04	0.002302	3.05	98.71	65.02	0.36
RIVER-1	Reach-1	290.62	Max WS	208.04	157.00	159.70	158.39	159.82	0.002093	2.74	75.92	36.21	0.33
RIVER-1	Reach-1	290.61		Bridge									
RIVER-1	Reach-1	289.32	Max WS	218.59	157.00	159.00		159.27	0.006934	4.21	51.87	31.98	0.58
RIVER-1	Reach-1	288.66*	Max WS	222.31	156.50	158.49		158.79	0.009852	4.39	50.60	38.59	0.68
RIVER-1	Reach-1	288	Max WS	220.87	156.00	158.31		158.32	0.000359	1.05	409.02	427.29	0.14
RIVER-1	Reach-1	287.*	Max WS	220.56	156.00	158.27		158.28	0.000535	1.29	345.09	387.56	0.17
RIVER-1	Reach-1	286	Max WS	220.50	156.00	158.22		158.23	0.000617	1.40	315.43	333.42	0.18
RIVER-1	Reach-1	285.*	Max WS	220.68	155.50	158.05		158.18	0.003227	3.04	100.29	164.52	0.41
RIVER-1	Reach-1	284	Max WS	220.92	155.00	157.75		157.89	0.003367	2.97	74.47	45.62	0.41
RIVER-1	Reach-1	283.*	Max WS	221.27	154.75	157.39		157.56	0.003869	3.40	77.36	88.68	0.45
RIVER-1	Reach-1	282	Max WS	221.70	154.50	157.12		157.28	0.003522	3.70	108.14	140.63	0.43
RIVER-1	Reach-1	281.*	Max WS	222.19	154.25	156.78		156.95	0.003560	3.65	93.41	111.42	0.43
RIVER-1	Reach-1	280	Max WS	222.71	154.00	156.37		156.59	0.004378	3.86	73.61	103.26	0.48
RIVER-1	Reach-1	279.*	Max WS	223.22	153.25	155.98		156.18	0.003928	3.58	67.07	61.23	0.45
RIVER-1	Reach-1	278	Max WS	223.73	152.50	155.62		155.81	0.003689	3.51	66.57	45.97	0.44
RIVER-1	Reach-1	277.*	Max WS	239.11	152.45	155.12		155.36	0.005284	3.98	66.09	70.41	0.52
RIVER-1	Reach-1	276	Max WS	239.40	152.40	154.64		154.89	0.005816	4.19	77.53	100.82	0.55
RIVER-1	Reach-1	275.*	Max WS	239.76	151.90	154.34		154.42	0.003106	2.25	116.59	142.96	0.34
RIVER-1	Reach-1	274	Max WS	239.91	151.40	154.08		154.13	0.003153	1.76	139.95	237.21	0.30
RIVER-1	Reach-1	273.*	Max WS	239.80	151.30	153.88		153.91	0.001809	1.46	180.14	235.40	0.23
RIVER-1	Reach-1	272	Max WS	240.10	151.20	153.78		153.80	0.000670	1.02	268.66	246.79	0.15
RIVER-1	Reach-1	271.*	Max WS	240.19	150.85	153.68		153.70	0.001474	1.32	192.61	249.22	0.21
RIVER-1	Reach-1	270	Max WS	240.26	150.50	153.27		153.35	0.005990	2.29	105.01	105.56	0.40
RIVER-1	Reach-1	269.*	Max WS	240.70	150.12	152.78		152.86	0.003902	2.29	104.93	76.05	0.34
RIVER-1	Reach-1	268	Max WS	240.68	149.75	152.26		152.43	0.004807	3.29	73.23	35.36	0.40
RIVER-1	Reach-1	267.265*	Max WS	237.14	149.43	151.92		152.09	0.004234	3.36	70.62	35.28	0.42
RIVER-1	Reach-1	266.53	Max WS	236.30	149.10	151.65	150.60	151.82	0.003299	3.32	71.13	35.82	0.42
RIVER-1	Reach-1	266.52		Bridge									
RIVER-1	Reach-1	265.05	Max WS	240.66	148.65	151.03		151.25	0.004443	3.72	64.64	34.29	0.48
RIVER-1	Reach-1	264.033*	Max WS	240.57	148.24	150.62		150.83	0.006668	3.69	65.24	43.20	0.53

RIVER-1	Reach-1	263.016*	Max WS	240.39	147.84	150.23		150.37	0.006213	3.11	91.50	121.94	0.46
RIVER-1	Reach-1	262	Max WS	240.28	147.43	150.03		150.05	0.001456	1.59	204.72	229.01	0.22
RIVER-1	Reach-1	261.*	Max WS	240.68	146.71	149.25		149.44	0.010807	3.54	69.75	61.87	0.56
RIVER-1	Reach-1	260	Max WS	241.04	146.00	148.61		148.67	0.003557	2.28	137.65	171.41	0.33
RIVER-1	Reach-1	259.*	Max WS	241.09	146.00	148.05		148.23	0.009503	3.49	75.39	84.92	0.53
RIVER-1	Reach-1	258	Max WS	241.12	146.00	147.74		147.79	0.003266	2.07	149.32	183.02	0.31
RIVER-1	Reach-1	257.*	Max WS	241.35	145.50	147.47		147.52	0.003267	2.31	153.89	210.73	0.32
RIVER-1	Reach-1	256	Max WS	241.57	145.00	147.06		147.15	0.006607	3.44	133.07	276.68	0.46
RIVER-1	Reach-1	255.*	Max WS	251.45	144.50	146.52		146.66	0.008233	3.75	105.83	169.92	0.51
RIVER-1	Reach-1	254	Max WS	251.61	144.00	145.91		146.06	0.008309	3.58	90.94	100.32	0.51
RIVER-1	Reach-1	253.*	Max WS	251.77	143.00	145.10		145.30	0.012381	4.27	80.97	111.06	0.62
RIVER-1	Reach-1	252	Max WS	251.90	142.00	144.65		144.71	0.003613	2.62	145.69	182.76	0.34
RIVER-1	Reach-1	251.*	Max WS	252.21	141.75	144.18		144.26	0.004136	2.59	148.51	266.59	0.36
RIVER-1	Reach-1	250	Max WS	252.53	141.50	143.82		143.86	0.002485	1.94	215.17	425.86	0.28
RIVER-1	Reach-1	249.*	Max WS	252.58	141.25	143.58		143.63	0.003378	2.14	181.04	388.18	0.32
RIVER-1	Reach-1	248	Max WS	252.71	141.00	143.28		143.35	0.004017	2.37	146.25	370.23	0.35
RIVER-1	Reach-1	247.*	Max WS	252.71	140.75	142.91		142.95	0.003515	2.10	176.58	293.31	0.32
RIVER-1	Reach-1	246	Max WS	252.97	140.50	142.68		142.69	0.001006	1.31	265.99	276.42	0.18
RIVER-1	Reach-1	245.*	Max WS	253.10	139.75	142.39		142.52	0.005532	3.35	107.01	131.73	0.43
RIVER-1	Reach-1	244	Max WS	253.23	139.00	142.08		142.18	0.005103	3.41	134.53	204.45	0.41
RIVER-1	Reach-1	243.*	Max WS	253.34	139.50	141.85		141.93	0.003982	2.76	136.81	180.89	0.36
RIVER-1	Reach-1	242	Max WS	253.42	140.00	141.64		141.69	0.003527	2.21	160.78	226.18	0.33
RIVER-1	Reach-1	241.*	Max WS	253.55	139.50	141.32		141.37	0.004227	2.39	150.50	217.04	0.36
RIVER-1	Reach-1	240	Max WS	253.74	139.00	141.03		141.08	0.003079	2.23	152.45	172.63	0.31
RIVER-1	Reach-1	239.*	Max WS	253.96	138.50	140.75		140.79	0.003185	1.99	165.77	227.43	0.31
RIVER-1	Reach-1	238	Max WS	253.93	138.00	140.38		140.44	0.004833	2.14	152.08	242.86	0.37
RIVER-1	Reach-1	237.25*	Max WS	237.20	137.62	140.08		140.12	0.003794	2.03	158.77	260.31	0.33
RIVER-1	Reach-1	236.5	Max WS	253.88	137.25	139.62		139.72	0.008160	2.94	127.49	280.97	0.48
RIVER-1	Reach-1	235.85	Max WS	253.84	136.60	139.12	138.17	139.33	0.004006	3.65	69.55	35.14	0.46
RIVER-1	Reach-1	235.84		Bridge									
RIVER-1	Reach-1	235.23	Max WS	253.84	136.10	139.05		139.19	0.002239	2.98	85.27	37.73	0.35
RIVER-1	Reach-1	234.153*	Max WS	253.82	135.73	138.87		139.05	0.003298	3.47	77.09	91.33	0.39
RIVER-1	Reach-1	233.076*	Max WS	253.78	135.37	138.66		138.87	0.004967	3.94	96.97	230.12	0.44
RIVER-1	Reach-1	232	Max WS	253.76	135.00	138.25		138.55	0.010956	5.11	106.75	409.93	0.59
RIVER-1	Reach-1	231.*	Max WS	253.21	135.00	137.94		138.01	0.003599	2.85	190.26	442.57	0.35
RIVER-1	Reach-1	230	Max WS	252.93	135.00	137.85		137.85	0.000503	1.09	406.13	500.54	0.13
RIVER-1	Reach-1	229.*	Max WS	263.91	134.50	137.77		137.79	0.000805	1.50	337.72	450.89	0.17
RIVER-1	Reach-1	228	Max WS	263.97	134.00	137.65		137.68	0.001310	2.01	273.95	428.55	0.21
RIVER-1	Reach-1	227.*	Max WS	264.19	133.85	137.52		137.56	0.001564	1.99	243.62	361.96	0.23
RIVER-1	Reach-1	226	Max WS	264.40	133.70	137.19		137.27	0.005599	2.90	151.40	306.36	0.41
RIVER-1	Reach-1	225.*	Max WS	264.50	133.48	136.86		136.96	0.005511	3.22	145.79	289.28	0.42
RIVER-1	Reach-1	224	Max WS	260.64	133.25	136.54		136.65	0.005321	3.46	145.53	278.98	0.41
RIVER-1	Reach-1	223.*	Max WS	251.00	133.12	136.32		136.37	0.002608	2.52	189.05	283.27	0.29
RIVER-1	Reach-1	222	Max WS	248.32	133.00	136.23		136.24	0.000925	1.61	268.92	285.63	0.18
RIVER-1	Reach-1	221.*	Max WS	247.42	132.70	136.19		136.20	0.000570	1.36	321.68	311.79	0.14
RIVER-1	Reach-1	220	Max WS	247.55	132.40	136.16		136.17	0.000329	1.10	394.97	340.59	0.11
RIVER-1	Reach-1	219.*	Max WS	247.57	131.80	136.16		136.16	0.000229	1.01	438.16	343.24	0.09
RIVER-1	Reach-1	218	Max WS	247.58	131.20	136.16		136.16	0.000081	0.65	625.28	373.11	0.06
RIVER-1	Reach-1	217.*	Max WS	247.69	131.98	136.15		136.15	0.000080	0.60	617.38	352.94	0.06
RIVER-1	Reach-1	216	Max WS	247.79	132.75	136.14		136.15	0.000082	0.55	604.45	332.99	0.06
RIVER-1	Reach-1	215.*	Max WS	263.61	132.62	136.14		136.14	0.000123	0.69	552.05	343.54	0.07
RIVER-1	Reach-1	214	Max WS	263.66	132.50	136.13		136.13	0.000057	0.48	703.62	349.56	0.05
RIVER-1	Reach-1	213.*	Max WS	292.35	131.88	136.13		136.13	0.000071	0.67	648.95	266.71	0.06
RIVER-1	Reach-1	212	Max WS	292.35	131.00	135.96		136.28	0.001762	4.53	64.47	200.99	0.36
RIVER-1	Reach-1	211.94		Culvert									
RIVER-1	Reach-1	184.5	Max WS	202.69	126.00	129.49		129.78	0.003159	4.40	46.67	396.00	0.43
RIVER-1	Reach-1	184.25*	Max WS	203.42	126.00	129.52		129.52	0.000109	0.78	538.87	397.16	0.08
RIVER-1	Reach-1	184	Max WS	535.64	126.00	129.47		129.50	0.000770	2.10	525.04	390.57	0.22
RIVER-1	Reach-1	183.*	Max WS	541.27	126.00	129.32		129.43	0.002774	3.56	274.02	219.22	0.36
RIVER-1	Reach-1	182	Max WS	541.21	126.00	129.22		129.28	0.001862	2.65	309.96	205.64	0.27
RIVER-1	Reach-1	181.*	Max WS	543.07	126.00	128.99		129.07	0.002646	2.93	280.16	217.53	0.32
RIVER-1	Reach-1	180	Max WS	544.19	126.00	128.73		128.80	0.002971	2.84	303.17	302.37	0.33
RIVER-1	Reach-1	179.*	Max WS	584.98	125.00	128.47		128.54	0.002628	2.87	354.44	375.27	0.31
RIVER-1	Reach-1	178	Max WS	586.27	124.00	128.33		128.36	0.000941	1.82	533.70	442.00	0.19

RIVER-1	Reach-1	177.*	Max WS	589.04	124.00	128.15	128.18	0.001534	2.37	458.63	453.04	0.24
RIVER-1	Reach-1	176	Max WS	591.92	124.00	127.77	127.85	0.003358	3.32	352.20	448.66	0.35
RIVER-1	Reach-1	175.*	Max WS	599.68	123.50	127.50	127.61	0.004169	3.69	326.66	461.37	0.39
RIVER-1	Reach-1	174	Max WS	597.20	123.00	127.26	127.35	0.003333	3.33	375.59	568.39	0.34
RIVER-1	Reach-1	173.*	Max WS	595.77	123.50	127.15	127.19	0.001835	2.37	505.36	646.16	0.25
RIVER-1	Reach-1	172	Max WS	595.39	124.00	127.11	127.12	0.000572	1.28	790.91	748.59	0.14
RIVER-1	Reach-1	171.*	Max WS	594.01	124.00	127.02	127.04	0.000871	1.55	705.75	786.43	0.17
RIVER-1	Reach-1	170	Max WS	593.08	124.00	126.89	126.91	0.001330	1.85	588.61	690.03	0.21
RIVER-1	Reach-1	169.*	Max WS	591.94	123.50	126.79	126.83	0.002207	2.54	516.98	796.39	0.28
RIVER-1	Reach-1	168	Max WS	591.86	123.00	126.68	126.71	0.001952	2.47	483.67	607.81	0.26
RIVER-1	Reach-1	167.*	Max WS	591.35	122.50	126.56	126.60	0.001516	2.36	545.06	696.32	0.24
RIVER-1	Reach-1	166	Max WS	591.78	122.00	126.49	126.51	0.000982	2.00	675.03	853.09	0.19
RIVER-1	Reach-1	165.*	Max WS	591.57	121.00	126.21	126.25	0.001945	2.75	567.34	993.42	0.26
RIVER-1	Reach-1	164	Max WS	592.58	120.00	125.90	125.92	0.001510	2.21	578.62	766.39	0.22
RIVER-1	Reach-1	163.*	Max WS	593.71	120.00	125.74	125.79	0.002209	2.97	504.35	833.29	0.27
RIVER-1	Reach-1	162	Max WS	594.61	120.00	125.39	125.60	0.005589	4.87	309.62	738.42	0.44
RIVER-1	Reach-1	161.*	Max WS	592.06	120.25	125.08	125.18	0.002899	3.38	392.38	689.26	0.33
RIVER-1	Reach-1	160	Max WS	590.99	120.50	124.94	124.96	0.001056	1.96	589.40	716.74	0.20
RIVER-1	Reach-1	159.*	Max WS	591.55	120.25	124.84	124.87	0.000981	1.85	594.42	739.83	0.19
RIVER-1	Reach-1	158	Max WS	591.63	120.00	124.75	124.78	0.000868	1.69	621.55	769.33	0.18
RIVER-1	Reach-1	157.*	Max WS	592.03	119.50	124.67	124.71	0.001283	2.22	537.89	776.24	0.22
RIVER-1	Reach-1	156	Max WS	591.57	119.00	124.48	124.61	0.003621	3.87	366.47	748.34	0.36
RIVER-1	Reach-1	155.*	Max WS	590.60	119.00	124.19	124.27	0.002569	3.26	448.70	785.79	0.30
RIVER-1	Reach-1	154	Max WS	605.99	119.00	124.01	124.04	0.001195	2.18	625.52	783.27	0.20
RIVER-1	Reach-1	153.*	Max WS	618.99	119.00	123.92	123.94	0.001164	2.20	655.70	886.76	0.21
RIVER-1	Reach-1	152	Max WS	619.63	119.00	123.83	123.85	0.001023	1.99	691.96	921.92	0.20
RIVER-1	Reach-1	151.*	Max WS	637.82	119.00	123.69	123.72	0.001389	2.08	643.29	928.72	0.22
RIVER-1	Reach-1	150	Max WS	636.77	119.00	123.43	123.47	0.003150	2.60	485.92	864.73	0.32
RIVER-1	Reach-1	149.*	Max WS	641.30	118.50	123.15	123.20	0.002498	2.77	493.55	810.29	0.30
RIVER-1	Reach-1	148	Max WS	645.77	118.00	122.95	122.99	0.001724	2.57	551.21	782.20	0.25
RIVER-1	Reach-1	147.*	Max WS	649.28	117.92	122.80	122.84	0.002107	2.54	574.13	995.40	0.27
RIVER-1	Reach-1	146	Max WS	652.80	117.83	122.60	122.64	0.003137	2.67	536.09	1060.16	0.32
RIVER-1	Reach-1	145.*	Max WS	655.43	117.92	122.38	122.43	0.002105	2.06	543.67	1058.51	0.26
RIVER-1	Reach-1	144	Max WS	657.62	118.00	122.20	122.23	0.002858	1.86	511.24	1116.05	0.29
RIVER-1	Reach-1	143.*	Max WS	660.78	117.50	122.03	122.06	0.001064	1.73	668.29	1004.70	0.20
RIVER-1	Reach-1	142	Max WS	664.44	117.00	121.94	121.96	0.001105	2.15	733.48	956.51	0.20
RIVER-1	Reach-1	141.*	Max WS	667.59	117.00	121.81	121.85	0.001655	2.61	649.32	997.85	0.24
RIVER-1	Reach-1	140	Max WS	669.16	117.00	121.63	121.68	0.002213	2.95	598.79	1060.43	0.28
RIVER-1	Reach-1	139.*	Max WS	670.56	117.50	121.51	121.54	0.001525	2.30	669.59	998.58	0.24
RIVER-1	Reach-1	138	Max WS	672.60	118.00	121.44	121.45	0.000801	1.59	824.24	970.53	0.17
RIVER-1	Reach-1	137.*	Max WS	675.27	118.00	121.36	121.38	0.001050	1.71	753.54	997.37	0.20
RIVER-1	Reach-1	136	Max WS	677.29	118.00	121.25	121.28	0.001695	1.99	653.36	1111.13	0.24
RIVER-1	Reach-1	135.*	Max WS	680.00	117.50	121.14	121.16	0.001229	1.61	688.38	957.50	0.20
RIVER-1	Reach-1	134	Max WS	683.30	117.00	121.06	121.08	0.000871	1.29	769.52	890.03	0.17
RIVER-1	Reach-1	133.*	Max WS	687.35	117.00	120.96	120.98	0.001102	1.43	661.10	776.14	0.19
RIVER-1	Reach-1	132	Max WS	691.52	117.00	120.85	120.88	0.001014	1.35	630.45	630.53	0.18
RIVER-1	Reach-1	131.*	Max WS	693.62	117.00	120.76	120.79	0.001349	1.47	617.75	833.92	0.21
RIVER-1	Reach-1	130	Max WS	695.76	117.00	120.67	120.69	0.001245	1.36	671.87	813.35	0.20
RIVER-1	Reach-1	129.*	Max WS	696.95	117.00	120.57	120.60	0.001793	1.58	596.49	835.52	0.23
RIVER-1	Reach-1	128	Max WS	697.92	117.00	120.32	120.39	0.005325	2.43	391.74	860.75	0.39
RIVER-1	Reach-1	127.*	Max WS	697.51	116.71	120.10	120.16	0.002775	2.24	479.66	705.51	0.30
RIVER-1	Reach-1	126	Max WS	697.47	116.42	120.04	120.06	0.001375	2.01	673.26	783.83	0.22
RIVER-1	Reach-1	125.*	Max WS	697.24	116.21	120.02	120.04	0.001255	1.76	702.15	830.60	0.21
RIVER-1	Reach-1	124	Max WS	697.24	116.00	120.00	120.01	0.000910	1.38	785.65	846.96	0.17
RIVER-1	Reach-1	123.*	Max WS	697.20	116.18	119.94	119.96	0.001086	1.62	750.52	895.32	0.19
RIVER-1	Reach-1	122	Max WS	697.16	116.35	119.88	119.90	0.001032	1.60	792.01	979.95	0.19
RIVER-1	Reach-1	121.*	Max WS	778.65	115.68	119.72	119.76	0.001920	2.11	596.78	644.03	0.26
RIVER-1	Reach-1	120	Max WS	778.40	115.00	119.58	119.61	0.001197	2.11	671.33	635.05	0.21
RIVER-1	Reach-1	119.*	Max WS	778.37	114.50	119.44	119.50	0.001845	2.89	574.16	600.61	0.29
RIVER-1	Reach-1	118	Max WS	773.38	114.00	119.11	119.35	0.004680	4.99	370.63	550.49	0.52
RIVER-1	Reach-1	117.*	Max WS	769.81	114.50	119.01	119.13	0.002059	3.03	419.13	505.08	0.34
RIVER-1	Reach-1	116	Max WS	752.51	115.00	118.89	118.97	0.002356	2.55	406.18	397.20	0.35
RIVER-1	Reach-1	115.*	Max WS	538.45	114.50	118.78	118.81	0.001004	1.48	438.62	436.64	0.22
RIVER-1	Reach-1	114	Max WS	509.88	114.00	118.73	118.74	0.000577	1.07	533.18	499.89	0.16

RIVER-1	Reach-2	112.05	Max WS	1259.00	112.00	118.73		118.82	0.001535	2.68	638.60	565.42	0.30
RIVER-1	Reach-2	112	Max WS	1258.76	112.00	118.72		118.82	0.001555	2.70	633.86	563.25	0.30
RIVER-1	Reach-2	111.95		Lat Struct									
RIVER-1	Reach-2	111.*	Max WS	1256.39	113.00	118.61		118.70	0.001850	2.53	629.54	541.65	0.32
RIVER-1	Reach-2	110	Max WS	1216.28	114.00	118.54		118.59	0.001413	2.04	816.11	665.18	0.27
RIVER-1	Reach-2	109.*	Max WS	1197.87	113.50	118.34		118.41	0.002389	2.77	695.91	587.88	0.35
RIVER-1	Reach-2	108	Max WS	1193.81	113.00	118.15		118.24	0.001494	3.26	765.65	583.79	0.31
RIVER-1	Reach-2	107.*	Max WS	1192.23	112.00	118.10		118.16	0.001021	2.66	928.98	674.84	0.25
RIVER-1	Reach-2	106	Max WS	1191.75	111.00	118.07		118.12	0.000643	2.43	1117.53	747.22	0.21
RIVER-1	Reach-2	105.*	Max WS	1191.69	110.50	118.03		118.07	0.000798	2.48	1084.13	755.77	0.22
RIVER-1	Reach-2	104	Max WS	1190.41	110.00	117.98		118.03	0.000775	2.83	1081.21	764.16	0.21
RIVER-1	Reach-2	103.*	Max WS	1190.10	110.00	117.97		118.00	0.000766	2.15	1163.80	817.99	0.21
RIVER-1	Reach-2	102	Max WS	1010.17	110.00	117.97		117.99	0.000270	1.73	1429.69	834.46	0.14
RIVER-1	Reach-2	101.*	Max WS	1243.11	110.50	117.93		117.96	0.000423	2.13	1418.10	820.18	0.17
RIVER-1	Reach-2	100	Max WS	1242.91	111.00	117.91		117.93	0.000435	2.13	1408.80	807.25	0.17
RIVER-1	Reach-2	99.*	Max WS	1243.90	111.00	117.83		117.86	0.000423	2.12	1409.88	807.24	0.17
RIVER-1	Reach-2	98	Max WS	1244.24	111.00	117.75		117.78	0.000409	2.12	1413.37	810.60	0.17
RIVER-1	Reach-2	97.*	Max WS	1244.44	110.50	117.71		117.74	0.000399	2.11	1408.77	790.28	0.16
RIVER-1	Reach-2	96	Max WS	1245.27	110.00	117.67		117.69	0.000393	2.09	1403.09	769.40	0.16
RIVER-1	Reach-2	95.*	Max WS	1245.92	109.50	117.63		117.66	0.000403	2.14	1376.52	775.62	0.17
RIVER-1	Reach-2	94	Max WS	1246.61	109.00	117.59		117.62	0.000411	2.19	1349.38	780.18	0.17
RIVER-1	Reach-2	93.*	Max WS	1247.86	109.00	117.55		117.58	0.000388	2.17	1304.92	703.08	0.16
RIVER-1	Reach-2	92	Max WS	1248.63	109.00	117.50		117.55	0.000381	2.23	1209.97	596.89	0.16
RIVER-1	Reach-2	91.*	Max WS	1249.98	108.50	117.47		117.51	0.000358	2.14	1245.27	603.94	0.16
RIVER-1	Reach-2	90	Max WS	1251.40	108.00	117.44		117.47	0.000311	2.00	1474.70	1182.72	0.15
RIVER-1	Reach-2	89.*	Max WS	1253.16	108.50	117.41		117.44	0.000300	2.02	1420.58	1096.43	0.15
RIVER-1	Reach-2	88	Max WS	1254.68	109.00	117.39		117.41	0.000287	2.01	1410.25	882.13	0.14
RIVER-1	Reach-2	87.*	Max WS	1256.20	108.00	117.37		117.39	0.000147	1.59	1888.83	1214.29	0.11
RIVER-1	Reach-2	86	Max WS	1257.47	107.00	117.37		117.38	0.000074	1.21	2488.74	1312.56	0.08
RIVER-1	Reach-2	85.*	Max WS	1258.03	107.50	117.37		117.38	0.000076	1.13	2667.68	1356.63	0.08
RIVER-1	Reach-2	84	Max WS	1258.73	108.00	117.36		117.37	0.000071	0.97	2952.60	1405.75	0.07
RIVER-1	Reach-2	83.*	Max WS	1276.72	108.50	117.36		117.36	0.000104	1.17	2533.68	1317.19	0.09
RIVER-1	Reach-2	82	Max WS	1276.69	109.00	117.35		117.36	0.000150	1.34	2233.68	1251.19	0.10
RIVER-1	Reach-2	81.56	Max WS	1276.68	108.22	117.26	113.18	117.37	0.000938	2.71	671.92	1346.28	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1270.66	108.96	115.99		116.42	0.006381	5.27	240.99	70.66	0.50
RIVER-1	Reach-2	80.95	Max WS	1271.52	108.83	116.03	112.98	116.28	0.001508	4.03	315.80	64.43	0.32
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1269.39	108.67	115.97		116.23	0.001650	4.12	308.11	65.93	0.34
RIVER-1	Reach-2	79.3849*	Max WS	1264.40	108.33	115.88		116.06	0.001278	3.80	634.20	608.30	0.30
RIVER-1	Reach-2	78.39	Max WS	1255.88	108.00	115.81		115.88	0.000596	2.87	822.64	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1255.88	107.80	115.81		115.84	0.000261	1.89	1396.20	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1248.03	107.60	115.79		115.82	0.000303	2.02	1481.82	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1239.76	107.40	115.75		115.81	0.000550	2.70	1149.88	913.31	0.20
RIVER-1	Reach-2	75.86	Max WS	1228.98	107.22	115.58	112.15	115.78	0.001084	3.80	514.67	439.28	0.28
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1234.76	106.63	115.58		115.76	0.001190	3.57	505.88	400.04	0.28
RIVER-1	Reach-2	74.7*	Max WS	1236.67	106.82	115.61		115.65	0.000446	2.00	1167.24	827.13	0.17
RIVER-1	Reach-2	74	Max WS	1236.02	107.00	115.60		115.61	0.000218	1.23	1954.78	1251.23	0.12
RIVER-1	Reach-2	73.*	Max WS	1234.60	107.43	115.59		115.60	0.000149	1.16	2273.55	1313.08	0.10
RIVER-1	Reach-2	72	Max WS	1233.83	107.86	115.58		115.59	0.000114	1.12	2578.85	1374.29	0.09
RIVER-1	Reach-2	71.*	Max WS	1563.93	107.44	115.46		115.59	0.000988	3.06	727.12	448.21	0.24
RIVER-1	Reach-2	70	Max WS	1563.88	107.03	115.36		115.48	0.000943	2.83	554.00	102.37	0.21
RIVER-1	Reach-2	69.*	Max WS	1563.83	107.35	115.22		115.37	0.001259	3.15	497.05	94.27	0.24
RIVER-1	Reach-2	68	Max WS	1563.78	107.68	115.04		115.23	0.001619	3.47	450.79	89.24	0.27
RIVER-1	Reach-2	67	Max WS	1563.68	107.40	114.85		115.06	0.002017	3.85	463.73	135.05	0.30
RIVER-1	Reach-2	66	Max WS	1563.51	107.40	114.60		114.84	0.002455	4.15	430.09	133.30	0.33
RIVER-1	Reach-2	65.*	Max WS	1563.39	107.20	114.43		114.63	0.001772	3.67	477.09	173.67	0.31
RIVER-1	Reach-2	64	Max WS	1563.32	107.00	114.28		114.46	0.001496	3.46	466.54	186.67	0.31
RIVER-1	Reach-2	63.*	Max WS	1566.27	106.81	114.14		114.31	0.001572	3.39	481.24	228.06	0.32
RIVER-1	Reach-2	62.*	Max WS	1569.12	106.62	114.00		114.16	0.001578	3.28	501.48	198.83	0.32
RIVER-1	Reach-2	61.*	Max WS	1571.84	106.43	113.87		114.02	0.001366	3.12	540.16	210.85	0.30
RIVER-1	Reach-2	60	Max WS	1574.53	106.24	113.78		113.90	0.001058	2.81	612.92	231.82	0.26
RIVER-1	Reach-2	59.*	Max WS	1579.70	106.07	113.69		113.80	0.000883	2.78	700.75	362.57	0.24

RIVER-1	Reach-2	58	Max WS	1585.04	105.90	113.66		113.73	0.000466	2.42	1046.74	477.78	0.18
RIVER-1	Reach-2	57.2	Max WS	1588.94	107.05	113.58	110.87	113.69	0.000930	3.10	840.46	422.07	0.25
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1588.76	107.05	113.46		113.60	0.001159	3.37	759.69	401.02	0.28
RIVER-1	Reach-2	56	Max WS	1593.33	105.90	113.41		113.50	0.000612	2.61	854.87	384.56	0.21
RIVER-1	Reach-2	55.*	Max WS	1597.77	105.85	113.38		113.44	0.000501	2.20	1014.98	473.00	0.19
RIVER-1	Reach-2	54	Max WS	1602.01	105.80	113.35		113.40	0.000440	1.94	1156.20	561.01	0.17
RIVER-1	Reach-2	53.*	Max WS	1613.28	105.70	113.28		113.33	0.000477	2.04	1084.38	399.37	0.16
RIVER-1	Reach-2	52	Max WS	1624.62	105.60	113.20		113.24	0.000584	2.06	1020.02	325.76	0.16
RIVER-1	Reach-2	51.*	Max WS	1630.04	105.57	113.12		113.18	0.000689	2.31	968.14	315.15	0.19
RIVER-1	Reach-2	50.*	Max WS	1635.65	105.54	113.04		113.10	0.000773	2.53	925.63	304.85	0.21
RIVER-1	Reach-2	49.*	Max WS	1641.01	105.50	112.95		113.03	0.000818	2.75	894.28	295.76	0.22
RIVER-1	Reach-2	48	Max WS	1646.47	105.47	112.86		112.95	0.000797	3.01	873.94	288.30	0.23
RIVER-1	Reach-2	47.*	Max WS	1651.92	105.68	112.79		112.87	0.000739	2.82	959.04	324.11	0.23
RIVER-1	Reach-2	46.*	Max WS	1657.36	105.88	112.74		112.79	0.000629	2.57	1067.30	358.29	0.21
RIVER-1	Reach-2	45.*	Max WS	1662.78	106.08	112.69		112.73	0.000492	2.32	1203.84	403.88	0.19
RIVER-1	Reach-2	44	Max WS	1668.44	106.29	112.65		112.69	0.000364	2.09	1367.74	431.11	0.16
RIVER-1	Reach-2	43.*	Max WS	1673.48	106.30	112.61		112.65	0.000379	2.17	1317.37	426.79	0.17
RIVER-1	Reach-2	42.*	Max WS	1678.63	106.31	112.57		112.61	0.000394	2.23	1274.74	422.71	0.17
RIVER-1	Reach-2	41.*	Max WS	1683.68	106.32	112.53		112.58	0.000409	2.27	1239.13	418.79	0.17
RIVER-1	Reach-2	40	Max WS	1688.82	106.33	112.48		112.54	0.000422	2.30	1211.38	415.17	0.18
RIVER-1	Reach-2	39.*	Max WS	1688.72	106.17	112.45		112.50	0.000342	2.09	1361.00	458.27	0.16
RIVER-1	Reach-2	38.*	Max WS	1688.77	106.01	112.43		112.46	0.000259	1.83	1560.45	494.29	0.14
RIVER-1	Reach-2	37.*	Max WS	1688.71	105.84	112.42		112.44	0.000184	1.56	1798.77	514.68	0.12
RIVER-1	Reach-2	36	Max WS	1688.72	105.68	112.39		112.42	0.000228	1.75	1663.34	524.69	0.13
RIVER-1	Reach-2	35.22	Max WS	1688.70	104.52	112.17		112.45	0.001525	4.28	394.23	75.30	0.33
RIVER-1	Reach-2	34.82	Max WS	1688.70	104.52	112.10	108.73	112.39	0.001583	4.34	389.00	74.90	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1688.59	104.30	110.96		111.66	0.005937	6.69	252.24	68.29	0.61
RIVER-1	Reach-2	33.67*	Max WS	1688.55	104.12	110.92		111.35	0.003237	5.28	319.75	79.03	0.46
RIVER-1	Reach-2	33	Max WS	1688.55	103.93	111.01		111.16	0.001057	3.36	808.16	585.47	0.27
RIVER-1	Reach-2	32.*	Max WS	1688.56	103.40	110.91		111.03	0.001054	3.09	845.69	667.92	0.27
RIVER-1	Reach-2	31.*	Max WS	1688.53	102.88	110.76		110.90	0.001464	3.16	798.96	741.88	0.30
RIVER-1	Reach-2	30	Max WS	1688.49	102.35	110.43		110.66	0.003780	3.97	616.44	1016.12	0.46
RIVER-1	Reach-2	29.*	Max WS	1688.44	102.34	110.07		110.32	0.003935	4.23	622.84	947.93	0.47
RIVER-1	Reach-2	28.*	Max WS	1688.34	102.33	109.75		109.97	0.003589	4.25	702.78	891.11	0.46
RIVER-1	Reach-2	27.*	Max WS	1688.25	102.33	109.53		109.68	0.002612	3.86	900.82	959.97	0.40
RIVER-1	Reach-2	26	Max WS	1688.08	102.32	109.39		109.46	0.001571	3.19	1215.78	1060.71	0.31
RIVER-1	Reach-2	25.*	Max WS	1688.11	101.99	109.24		109.33	0.002109	3.52	1125.00	1139.98	0.35
RIVER-1	Reach-2	24.*	Max WS	1687.93	101.66	109.05		109.17	0.002794	3.82	1018.85	1223.27	0.40
RIVER-1	Reach-2	23.*	Max WS	1687.83	101.33	108.87		108.96	0.002423	3.35	1080.30	1065.41	0.37
RIVER-1	Reach-2	22	Max WS	1687.71	101.00	108.73		108.78	0.001877	2.79	1227.63	1115.28	0.32
RIVER-1	Reach-2	21.*	Max WS	1687.54	101.27	108.57		108.62	0.001991	2.91	1190.31	1101.90	0.33
RIVER-1	Reach-2	20.*	Max WS	1687.35	101.54	108.40		108.45	0.002121	3.01	1152.55	1041.23	0.34
RIVER-1	Reach-2	19.*	Max WS	1687.23	101.82	108.20		108.26	0.002309	3.12	1119.01	965.74	0.35
RIVER-1	Reach-2	18	Max WS	1687.01	102.09	108.01		108.07	0.002453	3.24	1096.54	912.58	0.36
RIVER-1	Reach-2	17.*	Max WS	1686.51	101.97	107.82		107.87	0.002300	3.10	1253.16	1225.45	0.35
RIVER-1	Reach-2	16.*	Max WS	1686.10	101.85	107.67		107.71	0.001443	2.54	1467.05	1232.20	0.28
RIVER-1	Reach-2	15.*	Max WS	1685.66	101.73	107.59		107.61	0.000838	1.96	1756.13	1237.58	0.21
RIVER-1	Reach-2	14	Max WS	1685.43	101.61	107.54		107.55	0.000496	1.44	2087.63	1245.54	0.16
RIVER-1	Reach-2	13.*	Max WS	1685.52	101.43	107.50		107.51	0.000405	1.23	2228.72	1251.87	0.15
RIVER-1	Reach-2	12.*	Max WS	1685.31	101.26	107.48		107.49	0.000325	1.20	2373.52	1243.30	0.13
RIVER-1	Reach-2	11.*	Max WS	1685.21	101.08	107.45		107.46	0.000262	1.14	2525.76	1232.85	0.12
RIVER-1	Reach-2	10	Max WS	1685.28	100.90	107.44		107.44	0.000216	1.07	2670.71	1217.64	0.11
RIVER-1	Reach-2	9.*	Max WS	1685.25	100.75	107.41		107.42	0.000366	1.40	2242.12	1197.98	0.14
RIVER-1	Reach-2	8.*	Max WS	1685.06	100.60	107.36		107.38	0.000558	1.85	1866.92	1263.40	0.18
RIVER-1	Reach-2	7.*	Max WS	1685.09	100.45	107.28		107.31	0.000878	2.47	1586.88	1255.87	0.23
RIVER-1	Reach-2	6	Max WS	1684.97	100.30	107.15		107.22	0.001648	3.52	1311.96	1344.80	0.32
RIVER-1	Reach-2	5.*	Max WS	1684.84	100.15	106.99		107.07	0.001582	3.51	1352.05	1470.94	0.31
RIVER-1	Reach-2	4.*	Max WS	1684.75	100.00	106.86		106.93	0.001442	3.41	1429.24	1585.54	0.30
RIVER-1	Reach-2	3.*	Max WS	1684.57	99.85	106.73		106.80	0.001369	3.36	1654.57	2169.29	0.30
RIVER-1	Reach-2	2	Max WS	1684.58	99.70	106.65		106.69	0.000804	2.61	2067.61	2286.77	0.23
RIVER-1	Reach-2	1.*	Max WS	1684.53	99.55	106.54		106.62	0.001279	3.37	1667.15	2246.09	0.29
RIVER-1	Reach-2	0	Max WS	1684.50	99.40	106.39	105.82	106.51	0.001675	3.90	1305.58	1967.96	0.33

Appendix P-15: HEC-RAS Results, Modified Hydro-modification Basin – Alternative 'A' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X     X
X     X  X        X           X   X     X   X    X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X     X    X        X
X     X  XXXXXX    XXXX        X    X    X    X   XXXXX
```

PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 4:03:52 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.41	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	601.65	157.71	163.01		163.02	0.000055	0.46	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	601.63	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	598.65	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.65	156.50	163.01		163.01	0.000022	0.32	1852.64	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	597.20	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	598.63	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.19	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	595.77	154.11	163.01		163.01	0.000024	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	597.17	154.05	163.01		163.01	0.000022	0.33	1827.48	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	595.76	154.00	163.00		163.01	0.000020	0.30	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	594.39	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	594.38	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	595.73	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	594.39	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	594.37	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	594.36	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	595.64	152.00	163.00		163.00	0.000005	0.18	3310.35	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	595.61	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	593.11	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	593.10	152.00	163.00		163.00	0.000002	0.13	4521.19	625.06	0.01
RIVER-2	Reach-1	10662.5*	Max WS	594.29	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	594.27	152.00	163.00		163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.24	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	593.15	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	594.20	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.15	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	593.20	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	593.19	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.04	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	593.18	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	594.01	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	593.19	150.00	163.00		163.00	0.000001	0.08	7215.44	820.24	0.00
RIVER-2	Reach-1	9950	Max WS	594.77	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	593.95	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.18	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.15	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	594.52	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	593.84	149.36	163.00		163.00	0.000000	0.06	10071.08	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	593.80	148.73	163.00		163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	593.78	148.36	163.00		163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.73	148.00	163.00		163.00	0.000000	0.04	15722.64	1830.39	0.00
RIVER-2	Reach-1	9450.*	Max WS	594.12	147.00	163.00		163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.68	146.00	163.00		163.00	0.000000	0.03	18084.44	1807.32	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.63	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.56	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.28	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.47	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.44	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.40	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.37	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.30	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.33	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.28	140.56	154.39		154.57	0.003543	3.40	174.45	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004343	3.55	168.03	35.96	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.57	139.60	153.55		153.74	0.004423	3.56	168.06	36.58	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.22	139.11	153.10		153.30	0.004519	3.58	168.17	37.30	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004626	3.59	168.27	38.04	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.52	138.13	152.19		152.39	0.004699	3.60	168.47	38.51	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.18	137.64	151.72		151.93	0.004744	3.61	168.86	38.86	0.31
RIVER-2	Reach-1	7750.*	Max WS	611.84	137.15	151.25		151.45	0.004781	3.61	169.29	39.16	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.49	136.66	150.78		150.98	0.004811	3.62	169.70	39.35	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.30		150.50	0.004812	3.62	170.35	39.47	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.81	135.68	149.82		150.03	0.004804	3.62	171.05	39.53	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.47	135.19	149.35		149.55	0.004785	3.62	171.89	39.60	0.31
RIVER-2	Reach-1	7250.*	Max WS	625.12	134.70	148.86		149.06	0.004806	3.62	172.46	39.79	0.31
RIVER-2	Reach-1	7150.*	Max WS	627.78	134.21	148.34		148.54	0.004956	3.66	171.48	39.82	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.29	133.72	147.77		147.99	0.005560	3.72	169.33	42.53	0.33
RIVER-2	Reach-1	6950.*	Max WS	597.49	133.23	147.17		147.37	0.005593	3.60	166.14	44.64	0.33
RIVER-2	Reach-1	6850.*	Max WS	589.94	132.74	146.61		146.80	0.005924	3.58	164.98	47.28	0.34
RIVER-2	Reach-1	6750.*	Max WS	590.56	132.25	145.99		146.20	0.006501	3.65	161.80	48.37	0.35
RIVER-2	Reach-1	6650.*	Max WS	638.64	131.76	145.30		145.56	0.008642	4.12	155.07	47.50	0.40
RIVER-2	Reach-1	6550	Max WS	641.03	131.27	144.57		144.87	0.010113	4.37	146.71	45.57	0.43
RIVER-2	Reach-1	6466.66*	Max WS	643.14	132.84	143.92		144.15	0.007513	3.84	167.35	57.72	0.40
RIVER-2	Reach-1	6383.33*	Max WS	645.22	134.40	143.48		143.66	0.004362	3.48	185.33	52.71	0.33
RIVER-2	Reach-1	6300	Max WS	647.28	135.97	143.13		143.35	0.003358	3.69	175.26	39.14	0.31
RIVER-2	Reach-1	6250	Max WS	648.53	136.00	142.87		143.15	0.004669	4.20	154.57	36.19	0.36
RIVER-2	Reach-1	6200	Max WS	649.75	135.00	142.44		142.85	0.007155	5.14	126.53	28.34	0.43
RIVER-2	Reach-1	6100.*	Max WS	652.28	134.75	141.96		142.25	0.004964	4.29	152.09	35.58	0.37
RIVER-2	Reach-1	6000.*	Max WS	646.41	134.50	141.59		141.80	0.003698	3.65	177.09	43.49	0.32
RIVER-2	Reach-1	5900.*	Max WS	648.87	134.25	141.24		141.41	0.003095	3.25	199.68	51.96	0.29
RIVER-2	Reach-1	5800.*	Max WS	650.82	134.00	140.87		141.00	0.003596	2.98	218.10	73.60	0.31
RIVER-2	Reach-1	5700.*	Max WS	653.42	133.75	140.42		140.54	0.005511	2.79	234.23	124.53	0.36
RIVER-2	Reach-1	5600.*	Max WS	665.07	133.50	139.88		140.00	0.005892	2.75	242.79	144.98	0.36
RIVER-2	Reach-1	5500.*	Max WS	667.62	133.25	139.23		139.36	0.008290	2.94	228.88	161.27	0.42
RIVER-2	Reach-1	5400	Max WS	670.16	133.00	136.80		137.80	0.027573	8.02	83.59	28.59	0.83
RIVER-2	Reach-1	5304.54*	Max WS	672.59	132.73	135.66		135.97	0.009807	4.45	151.08	60.47	0.50
RIVER-2	Reach-1	5209.09*	Max WS	675.04	132.45	135.04		135.21	0.006349	3.30	204.57	93.59	0.39
RIVER-2	Reach-1	5113.63*	Max WS	677.49	132.18	134.56		134.67	0.005020	2.73	248.46	127.37	0.34
RIVER-2	Reach-1	5018.18*	Max WS	679.94	131.91	134.16		134.25	0.004307	2.37	286.90	162.10	0.31
RIVER-2	Reach-1	4922.72*	Max WS	682.43	131.64	133.80		133.87	0.003896	2.13	320.82	197.97	0.29
RIVER-2	Reach-1	4827.27*	Max WS	684.94	131.36	133.47		133.53	0.003706	1.95	350.70	237.07	0.28
RIVER-2	Reach-1	4731.81*	Max WS	687.45	131.09	133.14		133.20	0.003625	1.82	378.47	280.85	0.28
RIVER-2	Reach-1	4636.36*	Max WS	689.94	130.82	132.82		132.86	0.003702	1.71	402.79	331.77	0.27
RIVER-2	Reach-1	4540.90*	Max WS	692.47	130.55	132.46		132.51	0.004081	1.66	418.36	390.42	0.28
RIVER-2	Reach-1	4445.45*	Max WS	694.98	130.27	132.08		132.13	0.004749	1.65	421.29	442.84	0.30
RIVER-2	Reach-1	4350	Max WS	697.50	130.00	131.47		131.55	0.013879	2.25	309.99	457.35	0.48
RIVER-2	Reach-1	4260.*	Max WS	699.67	129.40	130.87		130.93	0.011246	2.11	333.20	467.92	0.44
RIVER-2	Reach-1	4170.*	Max WS	701.87	128.80	130.39		130.45	0.007654	1.87	376.07	469.95	0.37
RIVER-2	Reach-1	4080.*	Max WS	704.05	128.20	130.03		130.07	0.004991	1.62	433.53	484.27	0.30
RIVER-2	Reach-1	3990.*	Max WS	706.24	127.60	129.74		129.77	0.003745	1.48	477.72	495.48	0.27

RIVER-2	Reach-1	3900	Max WS	708.43	127.00	129.50		129.53	0.003241	1.40	504.92	508.27	0.25
RIVER-2	Reach-1	3800.*	Max WS	711.21	126.70	129.25		129.28	0.003234	1.41	503.78	501.74	0.25
RIVER-2	Reach-1	3700.*	Max WS	713.99	126.40	129.00		129.03	0.003204	1.42	503.96	495.68	0.25
RIVER-2	Reach-1	3600.*	Max WS	716.75	126.10	128.76		128.79	0.003143	1.42	505.82	490.30	0.25
RIVER-2	Reach-1	3500.*	Max WS	719.52	125.80	128.51		128.55	0.003041	1.41	510.26	486.12	0.24
RIVER-2	Reach-1	3400.*	Max WS	722.27	125.50	128.27		128.30	0.002966	1.40	514.17	483.45	0.24
RIVER-2	Reach-1	3300.*	Max WS	725.02	125.20	128.03		128.06	0.002920	1.40	517.21	482.16	0.24
RIVER-2	Reach-1	3200.*	Max WS	727.76	124.90	127.78		127.81	0.002898	1.40	518.82	480.41	0.24
RIVER-2	Reach-1	3100.*	Max WS	730.51	124.60	127.52		127.55	0.002911	1.41	517.82	476.93	0.24
RIVER-2	Reach-1	3000.*	Max WS	733.25	124.30	127.24		127.27	0.003131	1.44	509.40	480.75	0.25
RIVER-2	Reach-1	2900	Max WS	735.99	124.00	126.93		126.96	0.003480	1.46	505.35	507.36	0.26
RIVER-2	Reach-1	2812.5*	Max WS	738.28	123.52	126.64		126.68	0.003865	1.49	495.75	520.81	0.27
RIVER-2	Reach-1	2725.*	Max WS	740.55	123.03	126.37		126.40	0.003920	1.50	493.95	519.11	0.27
RIVER-2	Reach-1	2637.5*	Max WS	742.83	122.55	126.12		126.15	0.003687	1.47	503.95	518.81	0.26
RIVER-2	Reach-1	2550.*	Max WS	745.10	122.07	125.86		125.90	0.003503	1.45	512.40	518.02	0.26
RIVER-2	Reach-1	2462.5*	Max WS	747.36	121.58	125.59		125.62	0.003578	1.47	509.15	515.51	0.26
RIVER-2	Reach-1	2375	Max WS	749.63	121.10	125.33		125.36	0.003468	1.46	514.32	513.90	0.26
RIVER-2	Reach-1	2279.16*	Max WS	752.09	121.07	125.05		125.08	0.003355	1.43	525.06	525.48	0.25
RIVER-2	Reach-1	2183.33*	Max WS	754.55	121.03	124.76		124.79	0.003471	1.44	524.83	535.91	0.26
RIVER-2	Reach-1	2087.5*	Max WS	757.01	121.00	124.49		124.52	0.003401	1.42	533.20	546.61	0.25
RIVER-2	Reach-1	1991.66*	Max WS	759.43	120.97	124.25		124.28	0.003070	1.37	555.78	558.75	0.24
RIVER-2	Reach-1	1895.83*	Max WS	761.89	120.93	124.03		124.06	0.002647	1.30	587.47	571.56	0.23
RIVER-2	Reach-1	1800	Max WS	764.31	120.90	123.83		123.85	0.002156	1.21	630.08	580.89	0.21
RIVER-2	Reach-1	1705.*	Max WS	766.72	120.43	123.63		123.66	0.002357	1.28	601.25	549.77	0.21
RIVER-2	Reach-1	1610.*	Max WS	769.12	119.95	123.42		123.45	0.002657	1.35	569.47	522.68	0.23
RIVER-2	Reach-1	1515.*	Max WS	771.51	119.47	123.17		123.20	0.002995	1.45	534.76	502.74	0.24
RIVER-2	Reach-1	1420	Max WS	773.88	119.00	122.87		122.90	0.003632	1.60	494.42	478.63	0.27
RIVER-2	Reach-1	1324.61*	Max WS	773.87	118.62	122.54		122.58	0.003641	1.60	501.72	574.35	0.27
RIVER-2	Reach-1	1229.23*	Max WS	773.80	118.23	122.22		122.26	0.003512	1.57	517.97	580.51	0.26
RIVER-2	Reach-1	1133.84*	Max WS	773.78	117.85	121.91		121.95	0.003478	1.55	527.74	579.22	0.26
RIVER-2	Reach-1	1038.46*	Max WS	773.69	117.46	121.62		121.65	0.003455	1.52	535.21	575.94	0.26
RIVER-2	Reach-1	943.076*	Max WS	773.63	117.08	121.34		121.37	0.003395	1.49	542.91	572.15	0.26
RIVER-2	Reach-1	847.692*	Max WS	773.50	116.69	121.07		121.10	0.003407	1.47	544.37	563.95	0.26
RIVER-2	Reach-1	752.307*	Max WS	773.41	116.31	120.78		120.81	0.003372	1.51	528.02	516.83	0.26
RIVER-2	Reach-1	656.923*	Max WS	773.33	115.92	120.48		120.51	0.003427	1.58	504.17	465.74	0.26
RIVER-2	Reach-1	561.538*	Max WS	773.27	115.54	120.19		120.23	0.003521	1.65	482.66	425.83	0.27
RIVER-2	Reach-1	466.153*	Max WS	773.25	115.15	119.92		119.96	0.003544	1.69	462.58	382.32	0.27
RIVER-2	Reach-1	370.769*	Max WS	773.24	114.77	119.65		119.70	0.003860	1.79	422.23	324.26	0.28
RIVER-2	Reach-1	275.384*	Max WS	773.10	114.38	119.34		119.42	0.005520	2.16	346.01	258.27	0.34
RIVER-2	Reach-1	180	Max WS	764.58	114.00	118.73		118.92	0.007361	3.49	219.22	101.35	0.42
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005302	2.90	80.29	142.45	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.94	168.75	170.38		170.46	0.004623	2.71	87.88	152.20	0.45
RIVER-1	Reach-1	325.*	Max WS	166.61	168.50	170.10		170.19	0.005795	3.01	89.79	160.98	0.50
RIVER-1	Reach-1	324.5*	Max WS	170.89	168.25	169.79		169.90	0.006539	3.16	92.26	183.87	0.53
RIVER-1	Reach-1	324	Max WS	170.39	168.00	169.56		169.62	0.004309	2.62	116.62	201.31	0.44
RIVER-1	Reach-1	323.*	Max WS	171.11	167.02	169.20		169.33	0.004098	3.22	92.52	197.90	0.45
RIVER-1	Reach-1	322	Max WS	168.51	166.04	168.13	168.00	168.58	0.015327	5.43	33.25	48.30	0.84
RIVER-1	Reach-1	320	Max WS	197.23	166.00	167.56		167.62	0.006598	3.31	132.00	254.63	0.54
RIVER-1	Reach-1	319.*	Max WS	197.46	166.00	167.36		167.40	0.002635	1.78	166.84	371.56	0.33
RIVER-1	Reach-1	318	Max WS	197.45	166.00	167.19		167.22	0.002601	1.50	167.15	506.68	0.31
RIVER-1	Reach-1	317.*	Max WS	198.13	165.50	166.97		167.00	0.002422	1.40	150.80	394.00	0.30
RIVER-1	Reach-1	316	Max WS	199.00	165.00	166.46		166.53	0.007436	2.10	94.86	178.93	0.51
RIVER-1	Reach-1	315.*	Max WS	202.02	164.50	165.82		165.89	0.005609	2.05	98.61	156.02	0.45
RIVER-1	Reach-1	314	Max WS	205.11	164.00	165.38		165.43	0.002660	2.02	135.94	240.12	0.34
RIVER-1	Reach-1	313.*	Max WS	206.94	163.50	165.00		165.09	0.004898	2.72	117.10	276.84	0.46
RIVER-1	Reach-1	312	Max WS	208.86	163.00	164.68		164.71	0.003233	2.14	184.65	355.70	0.37
RIVER-1	Reach-1	311.*	Max WS	211.07	162.50	164.18		164.27	0.007033	3.14	115.77	232.36	0.55
RIVER-1	Reach-1	310	Max WS	213.33	162.00	163.79		163.83	0.002181	2.05	177.16	233.25	0.32
RIVER-1	Reach-1	309.*	Max WS	215.47	161.26	163.22		163.41	0.009181	3.65	85.57	261.35	0.63
RIVER-1	Reach-1	308	Max WS	217.55	160.51	162.84		162.88	0.001697	1.84	161.02	166.30	0.28
RIVER-1	Reach-1	307.*	Max WS	218.48	159.76	162.57		162.69	0.004614	2.91	98.09	311.16	0.46
RIVER-1	Reach-1	306	Max WS	219.63	159.00	162.19		162.36	0.007584	3.56	107.53	592.37	0.58
RIVER-1	Reach-1	305.*	Max WS	220.77	159.00	161.66		161.81	0.006733	3.20	103.08	518.18	0.54
RIVER-1	Reach-1	304	Max WS	218.33	159.00	161.41		161.43	0.001352	1.56	281.68	693.22	0.25
RIVER-1	Reach-1	303.*	Max WS	218.12	158.75	161.30		161.34	0.001298	1.88	258.11	666.23	0.26
RIVER-1	Reach-1	302	Max WS	219.30	158.50	161.17		161.24	0.002064	2.78	219.27	684.10	0.33
RIVER-1	Reach-1	301.*	Max WS	217.19	158.25	160.99		161.06	0.002170	2.76	181.38	373.20	0.34
RIVER-1	Reach-1	300	Max WS	203.79	158.00	160.85		160.89	0.001447	2.17	194.80	268.78	0.27
RIVER-1	Reach-1	299.*	Max WS	196.00	158.31	160.74		160.78	0.001550	2.29	186.67	246.51	0.29

RIVER-1	Reach-1	298	Max WS	191.95	158.62	160.65		160.67	0.001056	1.89	219.11	229.53	0.24
RIVER-1	Reach-1	297.*	Max WS	181.45	158.31	160.60		160.61	0.000303	1.03	379.65	415.39	0.13
RIVER-1	Reach-1	296	Max WS	181.32	158.00	160.59		160.59	0.000074	0.53	632.20	482.31	0.06
RIVER-1	Reach-1	295.*	Max WS	180.67	158.01	160.58		160.58	0.000108	0.64	501.84	400.35	0.08
RIVER-1	Reach-1	294	Max WS	213.43	158.01	160.56		160.57	0.000146	0.74	454.93	332.58	0.09
RIVER-1	Reach-1	293.*	Max WS	213.42	157.51	160.55		160.55	0.000157	0.84	394.86	243.82	0.09
RIVER-1	Reach-1	292	Max WS	213.41	157.00	160.52		160.53	0.000200	1.05	329.06	181.78	0.11
RIVER-1	Reach-1	291.5	Max WS	213.40	157.00	160.47		160.52	0.000947	2.25	143.82	102.07	0.24
RIVER-1	Reach-1	290.62	Max WS	213.39	157.00	159.97		160.38	0.004449	5.12	41.64	37.85	0.52
RIVER-1	Reach-1	290.61		Culvert									
RIVER-1	Reach-1	289.32	Max WS	213.39	157.00	158.77	158.93	159.92	0.025127	8.61	24.77	30.62	1.14
RIVER-1	Reach-1	288.66*	Max WS	213.19	156.50	158.46		158.75	0.009559	4.30	49.60	38.22	0.66
RIVER-1	Reach-1	288	Max WS	212.88	156.00	158.28		158.29	0.000367	1.05	396.11	427.03	0.14
RIVER-1	Reach-1	287.*	Max WS	212.86	156.00	158.24		158.25	0.000553	1.30	332.82	386.32	0.17
RIVER-1	Reach-1	286	Max WS	212.81	156.00	158.18		158.20	0.000639	1.41	304.24	331.05	0.18
RIVER-1	Reach-1	285.*	Max WS	212.97	155.50	158.02		158.15	0.003295	3.03	94.61	151.81	0.41
RIVER-1	Reach-1	284	Max WS	213.15	155.00	157.72		157.85	0.003305	2.92	72.95	45.08	0.40
RIVER-1	Reach-1	283.*	Max WS	213.40	154.75	157.36		157.52	0.003866	3.36	74.60	88.07	0.44
RIVER-1	Reach-1	282	Max WS	213.47	154.50	157.09		157.25	0.003478	3.65	104.39	136.43	0.43
RIVER-1	Reach-1	281.*	Max WS	211.76	154.25	156.77		156.93	0.003293	3.50	92.51	110.73	0.42
RIVER-1	Reach-1	280	Max WS	205.79	154.00	156.46		156.62	0.003022	3.30	83.66	107.46	0.40
RIVER-1	Reach-1	279.*	Max WS	198.34	153.25	156.25		156.36	0.001889	2.70	87.26	85.98	0.32
RIVER-1	Reach-1	278	Max WS	190.90	152.50	156.12		156.20	0.001321	2.25	100.43	113.68	0.27
RIVER-1	Reach-1	277.*	Max WS	234.37	152.45	156.04		156.09	0.000813	2.05	190.13	195.13	0.22
RIVER-1	Reach-1	276	Max WS	233.64	152.40	156.02		156.03	0.000254	1.27	368.85	276.14	0.13
RIVER-1	Reach-1	275.*	Max WS	233.84	151.90	156.01		156.01	0.000068	0.57	617.33	371.17	0.06
RIVER-1	Reach-1	274	Max WS	233.68	151.40	156.01		156.01	0.000028	0.33	924.04	498.01	0.03
RIVER-1	Reach-1	273.*	Max WS	233.82	151.30	156.00		156.00	0.000021	0.30	990.54	480.28	0.03
RIVER-1	Reach-1	272	Max WS	234.18	151.20	156.00		156.00	0.000012	0.25	1145.06	442.60	0.02
RIVER-1	Reach-1	271.*	Max WS	234.23	150.85	156.00		156.00	0.000013	0.25	1163.00	484.22	0.02
RIVER-1	Reach-1	270	Max WS	234.27	150.50	156.00		156.00	0.000015	0.25	1144.18	523.80	0.02
RIVER-1	Reach-1	269.*	Max WS	234.36	150.12	156.00		156.00	0.000010	0.25	1264.02	516.39	0.02
RIVER-1	Reach-1	268	Max WS	146.18	149.75	155.49		155.98	0.003535	5.66	25.82	447.85	0.42
RIVER-1	Reach-1	267.68		Culvert									
RIVER-1	Reach-1	267.265*	Max WS	234.35	149.43	152.11	153.50	156.86	0.075351	17.49	13.40	36.34	1.88
RIVER-1	Reach-1	266.53	Max WS	234.34	149.10	152.26		152.70	0.004365	5.29	44.30	51.60	0.52
RIVER-1	Reach-1	266.52		Culvert									
RIVER-1	Reach-1	265.05	Max WS	234.34	148.65	150.84		151.75	0.014967	7.66	30.61	33.12	0.91
RIVER-1	Reach-1	264.033*	Max WS	234.32	148.24	150.59		150.80	0.006602	3.65	64.19	42.83	0.53
RIVER-1	Reach-1	263.016*	Max WS	234.27	147.84	150.21		150.35	0.006368	3.12	88.32	120.32	0.47
RIVER-1	Reach-1	262	Max WS	234.22	147.43	150.00		150.03	0.001386	1.54	198.83	206.06	0.21
RIVER-1	Reach-1	261.*	Max WS	234.47	146.71	149.23		149.42	0.010696	3.51	68.57	61.22	0.56
RIVER-1	Reach-1	260	Max WS	234.71	146.00	148.59		148.66	0.003573	2.27	134.79	171.03	0.33
RIVER-1	Reach-1	259.*	Max WS	234.75	146.00	148.03		148.21	0.009399	3.45	74.14	84.00	0.53
RIVER-1	Reach-1	258	Max WS	234.77	146.00	147.72		147.77	0.003303	2.06	146.04	182.30	0.32
RIVER-1	Reach-1	257.*	Max WS	234.88	145.50	147.45		147.50	0.003193	2.26	149.58	197.40	0.32
RIVER-1	Reach-1	256	Max WS	234.89	145.00	147.06		147.15	0.005978	3.28	135.36	277.15	0.44
RIVER-1	Reach-1	255.*	Max WS	260.30	144.50	146.54		146.68	0.008183	3.77	109.27	172.52	0.51
RIVER-1	Reach-1	254	Max WS	260.42	144.00	145.94		146.08	0.008310	3.61	93.22	101.14	0.51
RIVER-1	Reach-1	253.*	Max WS	260.53	143.00	145.12		145.33	0.012349	4.31	83.41	113.03	0.62
RIVER-1	Reach-1	252	Max WS	260.30	142.00	144.67		144.73	0.003584	2.64	150.07	185.17	0.34
RIVER-1	Reach-1	251.*	Max WS	201.86	141.75	144.38		144.40	0.001328	1.59	207.37	328.89	0.21
RIVER-1	Reach-1	250	Max WS	194.20	141.50	144.30		144.30	0.000218	0.67	435.19	500.60	0.09
RIVER-1	Reach-1	249.*	Max WS	193.76	141.25	144.28		144.29	0.000143	0.58	484.68	471.22	0.07
RIVER-1	Reach-1	248	Max WS	193.33	141.00	144.28		144.28	0.000087	0.50	565.44	539.32	0.06
RIVER-1	Reach-1	247.*	Max WS	192.99	140.75	144.27		144.27	0.000047	0.39	644.42	404.33	0.04
RIVER-1	Reach-1	246	Max WS	193.07	140.50	144.27		144.27	0.000024	0.31	751.99	345.39	0.03
RIVER-1	Reach-1	245.*	Max WS	192.81	139.75	144.26		144.26	0.000057	0.54	559.65	318.54	0.05
RIVER-1	Reach-1	244	Max WS	192.85	139.00	144.26		144.26	0.000029	0.41	680.09	309.58	0.03
RIVER-1	Reach-1	243.*	Max WS	193.12	139.50	144.26		144.26	0.000021	0.35	832.84	411.93	0.03
RIVER-1	Reach-1	242	Max WS	192.90	140.00	144.26		144.26	0.000011	0.24	1130.58	507.06	0.02
RIVER-1	Reach-1	241.*	Max WS	192.95	139.50	144.26		144.26	0.000010	0.25	1134.86	499.29	0.02
RIVER-1	Reach-1	240	Max WS	192.99	139.00	144.26		144.26	0.000009	0.26	1164.21	495.21	0.02
RIVER-1	Reach-1	239.*	Max WS	193.04	138.50	144.26		144.26	0.000005	0.19	1453.11	551.96	0.02
RIVER-1	Reach-1	238	Max WS	193.01	138.00	144.04		144.58	0.003703	5.87	32.88	603.16	0.42
RIVER-1	Reach-1	237		Culvert									
RIVER-1	Reach-1	236.5	Max WS	193.01	137.25	139.80	140.73	143.04	0.075643	14.46	13.34	309.17	1.64
RIVER-1	Reach-1	235.85	Max WS	193.00	136.60	139.38		139.76	0.004558	4.96	38.92	36.68	0.52
RIVER-1	Reach-1	235.84		Culvert									

RIVER-1	Reach-1	235.23	Max WS	193.00	136.10	138.71		139.14	0.005642	5.29	36.51	35.65	0.58
RIVER-1	Reach-1	234.153*	Max WS	193.00	135.73	138.70		138.83	0.002439	2.85	67.75	30.28	0.34
RIVER-1	Reach-1	233.076*	Max WS	192.98	135.37	138.55		138.72	0.003979	3.42	71.77	217.86	0.39
RIVER-1	Reach-1	232	Max WS	193.00	135.00	138.14	137.52	138.53	0.012152	5.20	60.25	370.61	0.61
RIVER-1	Reach-1	231.*	Max WS	193.05	135.00	137.82		137.91	0.004218	2.97	137.95	427.92	0.37
RIVER-1	Reach-1	230	Max WS	193.12	135.00	137.72		137.73	0.000479	1.03	344.62	494.86	0.13
RIVER-1	Reach-1	229.*	Max WS	205.83	134.50	137.65		137.66	0.000798	1.44	283.59	444.34	0.17
RIVER-1	Reach-1	228	Max WS	205.95	134.00	137.53		137.56	0.001330	1.97	223.83	423.10	0.21
RIVER-1	Reach-1	227.*	Max WS	206.04	133.85	137.41		137.44	0.001517	1.89	202.72	355.52	0.22
RIVER-1	Reach-1	226	Max WS	206.14	133.70	137.10		137.18	0.005577	2.78	123.00	302.56	0.40
RIVER-1	Reach-1	225.*	Max WS	206.19	133.48	136.76		136.86	0.005397	3.07	117.97	281.35	0.41
RIVER-1	Reach-1	224	Max WS	206.24	133.25	136.43		136.55	0.005835	3.50	113.86	268.96	0.43
RIVER-1	Reach-1	223.*	Max WS	206.31	133.12	136.07		136.17	0.005682	3.44	119.64	265.82	0.43
RIVER-1	Reach-1	222	Max WS	206.38	133.00	135.82		135.87	0.003060	2.60	155.47	267.78	0.31
RIVER-1	Reach-1	221.*	Max WS	206.45	132.70	135.63		135.69	0.003001	2.69	156.09	282.35	0.31
RIVER-1	Reach-1	220	Max WS	206.51	132.40	135.31		135.44	0.005717	3.70	119.78	306.30	0.43
RIVER-1	Reach-1	219.*	Max WS	206.53	131.80	135.09		135.24	0.004618	3.60	105.42	243.67	0.40
RIVER-1	Reach-1	218	Max WS	206.55	131.20	135.06		135.08	0.000832	1.71	231.52	342.21	0.17
RIVER-1	Reach-1	217.*	Max WS	206.11	131.98	134.98		135.00	0.000990	1.63	222.78	322.43	0.18
RIVER-1	Reach-1	216	Max WS	204.46	132.75	134.89		134.91	0.001369	1.54	204.08	304.14	0.21
RIVER-1	Reach-1	215.*	Max WS	227.58	132.62	134.65		134.74	0.004756	2.76	119.29	227.46	0.39
RIVER-1	Reach-1	214	Max WS	227.45	132.50	134.32		134.40	0.004468	2.42	129.73	280.03	0.37
RIVER-1	Reach-1	213.*	Max WS	246.07	131.88	133.99		134.08	0.003766	2.82	137.38	204.90	0.39
RIVER-1	Reach-1	212	Max WS	246.05	131.25	133.75		133.84	0.003121	3.34	150.36	165.75	0.41
RIVER-1	Reach-1	211.065*	Max WS	246.05	130.32	132.84		133.22	0.012839	4.98	49.39	26.57	0.64
RIVER-1	Reach-1	210.13	Max WS	246.05	129.39	132.36		132.58	0.000936	3.76	65.43	36.49	0.38
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	246.05	128.67	132.27		132.39	0.000372	2.69	91.34	61.94	0.25
RIVER-1	Reach-1	205.91	Max WS	246.04	129.85	132.00		132.28	0.002563	4.25	57.90	33.86	0.57
RIVER-1	Reach-1	205.49	Max WS	246.04	129.75	131.89		132.17	0.002583	4.25	57.87	34.00	0.57
RIVER-1	Reach-1	204.965*	Max WS	246.04	129.62	131.76		132.04	0.002577	4.24	58.03	34.21	0.57
RIVER-1	Reach-1	204.44	Max WS	246.04	129.49	131.63		131.91	0.002570	4.23	58.22	34.42	0.57
RIVER-1	Reach-1	203.626*	Max WS	246.03	129.29	131.42		131.70	0.002577	4.22	58.30	34.64	0.57
RIVER-1	Reach-1	202.813*	Max WS	246.03	129.08	131.23		131.50	0.002500	4.17	59.07	35.00	0.57
RIVER-1	Reach-1	202	Max WS	246.02	128.88	131.04		131.30	0.002453	4.13	59.62	35.33	0.56
RIVER-1	Reach-1	201.36	Max WS	246.02	128.72	130.88		131.14	0.002474	4.15	59.25	34.99	0.56
RIVER-1	Reach-1	200.405*	Max WS	246.02	128.48	130.64		130.91	0.002443	4.14	59.45	34.94	0.56
RIVER-1	Reach-1	199.451*	Max WS	246.02	128.24	130.42		130.68	0.002390	4.11	59.85	34.95	0.55
RIVER-1	Reach-1	198.497*	Max WS	246.01	128.00	130.20		130.46	0.002300	4.06	60.59	35.01	0.54
RIVER-1	Reach-1	197.542*	Max WS	200.59	127.76	130.03		130.19	0.001377	3.19	62.79	35.36	0.42
RIVER-1	Reach-1	196.588*	Max WS	200.58	127.52	129.94		130.07	0.001095	2.95	67.95	36.25	0.38
RIVER-1	Reach-1	195.634*	Max WS	200.57	127.28	129.87		129.98	0.000853	2.71	74.10	37.30	0.34
RIVER-1	Reach-1	194.68*	Max WS	200.56	127.04	129.81		129.91	0.000660	2.48	80.99	38.42	0.30
RIVER-1	Reach-1	193.725*	Max WS	200.56	126.81	129.77		129.85	0.000517	2.27	88.23	39.56	0.27
RIVER-1	Reach-1	192.771*	Max WS	200.55	126.57	129.74		129.81	0.000400	2.08	96.50	40.84	0.24
RIVER-1	Reach-1	191.817*	Max WS	200.51	126.33	129.72		129.78	0.000313	1.91	105.25	42.11	0.21
RIVER-1	Reach-1	190.862*	Max WS	200.48	126.09	129.70		129.75	0.000246	1.75	114.52	43.42	0.19
RIVER-1	Reach-1	189.908*	Max WS	200.46	125.85	129.69		129.73	0.000196	1.61	124.19	44.72	0.17
RIVER-1	Reach-1	188.954*	Max WS	200.44	125.61	129.68		129.71	0.000157	1.49	134.32	46.05	0.15
RIVER-1	Reach-1	188	Max WS	200.42	125.37	129.67		129.70	0.000127	1.38	144.74	47.35	0.14
RIVER-1	Reach-1	187.7	Max WS	200.42	125.29	129.67		129.69	0.000089	1.25	160.94	46.28	0.12
RIVER-1	Reach-1	187.68		Lat Struct									
RIVER-1	Reach-1	187.65	Max WS	204.11	125.27	129.67		129.69	0.000069	1.13	182.64	52.24	0.11
RIVER-1	Reach-1	187.2	Max WS	452.40	125.15	129.56		129.62	0.000200	2.00	228.76	62.39	0.18
RIVER-1	Reach-1	187.15	Max WS	458.43	125.13	129.56		129.62	0.000216	2.04	224.99	61.26	0.19
RIVER-1	Reach-1	187	Max WS	458.42	125.09	129.57		129.62	0.000173	1.84	249.73	67.71	0.17
RIVER-1	Reach-1	186.81	Max WS	458.17	123.29	129.43		129.63	0.000325	3.59	127.59	71.34	0.26
RIVER-1	Reach-1	186.80		Culvert									
RIVER-1	Reach-1	185.39	Max WS	457.85	122.78	129.33		129.48	0.000234	3.18	144.04	48.38	0.22
RIVER-1	Reach-1	184.5	Max WS	457.84	126.00	129.39		129.42	0.000784	1.92	486.03	389.43	0.21
RIVER-1	Reach-1	184	Max WS	457.81	126.00	129.35		129.37	0.000736	2.00	475.97	382.29	0.21
RIVER-1	Reach-1	183.*	Max WS	467.76	126.00	129.20		129.30	0.002648	3.38	247.71	208.94	0.35
RIVER-1	Reach-1	182	Max WS	467.75	126.00	129.11		129.15	0.001726	2.49	286.26	198.93	0.26
RIVER-1	Reach-1	181.*	Max WS	469.40	126.00	128.89		128.96	0.002453	2.75	258.42	210.48	0.30
RIVER-1	Reach-1	180	Max WS	470.79	126.00	128.64		128.70	0.002841	2.71	276.60	294.61	0.32
RIVER-1	Reach-1	179.*	Max WS	513.88	125.00	128.38		128.45	0.002617	2.80	321.57	365.21	0.31
RIVER-1	Reach-1	178	Max WS	515.24	124.00	128.25		128.27	0.000903	1.75	495.44	436.75	0.18
RIVER-1	Reach-1	177.*	Max WS	517.69	124.00	128.07		128.11	0.001457	2.27	425.54	445.91	0.23
RIVER-1	Reach-1	176	Max WS	520.21	124.00	127.71		127.79	0.003188	3.19	325.89	443.07	0.34

RIVER-1	Reach-1	175.*	Max WS	527.39	123.50	127.45	127.55	0.003953	3.55	301.34	456.11	0.37
RIVER-1	Reach-1	174	Max WS	527.11	123.00	127.20	127.29	0.003305	3.27	341.08	562.77	0.34
RIVER-1	Reach-1	173.*	Max WS	526.53	123.50	127.09	127.12	0.001825	2.33	464.21	637.77	0.25
RIVER-1	Reach-1	172	Max WS	526.78	124.00	127.04	127.05	0.000546	1.23	742.81	745.39	0.14
RIVER-1	Reach-1	171.*	Max WS	527.50	124.00	126.96	126.97	0.000858	1.51	656.90	781.59	0.17
RIVER-1	Reach-1	170	Max WS	525.92	124.00	126.83	126.85	0.001307	1.80	547.61	685.64	0.21
RIVER-1	Reach-1	169.*	Max WS	524.85	123.50	126.73	126.76	0.002306	2.55	466.84	783.92	0.28
RIVER-1	Reach-1	168	Max WS	524.46	123.00	126.61	126.65	0.001931	2.42	444.31	594.24	0.26
RIVER-1	Reach-1	167.*	Max WS	518.43	122.50	126.51	126.53	0.001401	2.23	504.37	670.17	0.23
RIVER-1	Reach-1	166	Max WS	496.01	122.00	126.44	126.46	0.000821	1.81	632.99	838.90	0.17
RIVER-1	Reach-1	165.*	Max WS	473.16	121.00	126.30	126.32	0.000834	1.84	660.26	1028.78	0.17
RIVER-1	Reach-1	164	Max WS	471.25	120.00	126.19	126.20	0.000380	1.18	840.56	1019.08	0.11
RIVER-1	Reach-1	163.*	Max WS	471.96	120.00	126.16	126.17	0.000314	1.20	903.78	1048.84	0.10
RIVER-1	Reach-1	162	Max WS	472.32	120.12	125.93	126.25	0.002208	4.51	104.62	963.79	0.33
RIVER-1	Reach-1	161.37		Culvert								
RIVER-1	Reach-1	161.*	Max WS	472.02	120.12	125.73	125.90	0.001187	3.23	145.95	883.91	0.24
RIVER-1	Reach-1	160.5	Max WS	472.48	120.38	125.77	125.77	0.000127	0.80	1120.79	893.08	0.07
RIVER-1	Reach-1	160.1	Max WS	472.77	120.50	125.65	125.88	0.001863	3.83	123.60	882.55	0.30
RIVER-1	Reach-1	160.09		Culvert								
RIVER-1	Reach-1	160	Max WS	472.68	120.50	124.89	125.40	0.007279	5.73	82.43	702.98	0.55
RIVER-1	Reach-1	159.*	Max WS	473.43	120.25	124.72	124.74	0.000920	1.74	505.42	701.48	0.19
RIVER-1	Reach-1	158	Max WS	474.24	120.00	124.64	124.66	0.000798	1.57	534.38	744.06	0.17
RIVER-1	Reach-1	157.*	Max WS	474.78	119.50	124.56	124.60	0.001198	2.09	453.76	749.94	0.21
RIVER-1	Reach-1	156	Max WS	475.32	119.00	124.37	124.52	0.003829	3.90	281.41	720.89	0.37
RIVER-1	Reach-1	155.*	Max WS	475.88	119.00	124.09	124.16	0.002431	3.11	370.84	687.23	0.29
RIVER-1	Reach-1	154	Max WS	504.30	119.00	123.92	123.94	0.001058	2.02	557.03	714.50	0.19
RIVER-1	Reach-1	153.*	Max WS	522.58	119.00	123.83	123.85	0.001147	2.14	578.28	858.74	0.21
RIVER-1	Reach-1	152	Max WS	523.30	119.00	123.74	123.77	0.000999	1.93	615.12	905.15	0.19
RIVER-1	Reach-1	151.*	Max WS	535.51	119.00	123.61	123.63	0.001376	2.03	565.23	903.96	0.22
RIVER-1	Reach-1	150	Max WS	535.47	119.00	123.35	123.40	0.003310	2.59	417.30	840.25	0.33
RIVER-1	Reach-1	149.*	Max WS	540.06	118.50	123.07	123.12	0.002464	2.70	431.24	781.31	0.29
RIVER-1	Reach-1	148	Max WS	544.61	118.00	122.88	122.92	0.001581	2.42	496.94	742.20	0.24
RIVER-1	Reach-1	147.*	Max WS	548.03	117.92	122.73	122.77	0.002099	2.49	501.68	962.39	0.27
RIVER-1	Reach-1	146	Max WS	551.44	117.83	122.52	122.57	0.003341	2.69	461.25	1042.08	0.33
RIVER-1	Reach-1	145.*	Max WS	554.82	117.92	122.31	122.35	0.002090	2.00	465.76	1035.88	0.26
RIVER-1	Reach-1	144	Max WS	558.10	118.00	122.11	122.15	0.003067	1.85	425.76	958.76	0.30
RIVER-1	Reach-1	143.*	Max WS	561.96	117.50	121.96	121.98	0.001003	1.64	590.48	970.03	0.19
RIVER-1	Reach-1	142	Max WS	565.72	117.00	121.87	121.89	0.001038	2.06	666.13	932.81	0.19
RIVER-1	Reach-1	141.*	Max WS	569.45	117.00	121.74	121.77	0.001663	2.57	574.30	972.44	0.24
RIVER-1	Reach-1	140	Max WS	572.95	117.00	121.55	121.61	0.002493	3.08	509.36	1051.30	0.29
RIVER-1	Reach-1	139.*	Max WS	575.46	117.50	121.43	121.46	0.001620	2.33	584.44	974.50	0.24
RIVER-1	Reach-1	138	Max WS	578.16	118.00	121.35	121.37	0.000803	1.56	743.19	963.78	0.17
RIVER-1	Reach-1	137.*	Max WS	581.21	118.00	121.28	121.30	0.001052	1.68	675.70	983.19	0.19
RIVER-1	Reach-1	136	Max WS	584.22	118.00	121.16	121.19	0.001788	1.99	562.75	1032.63	0.25
RIVER-1	Reach-1	135.*	Max WS	587.20	117.50	121.05	121.07	0.001190	1.53	608.03	827.20	0.20
RIVER-1	Reach-1	134	Max WS	590.28	117.00	120.97	120.98	0.000791	1.19	696.77	766.39	0.16
RIVER-1	Reach-1	133.*	Max WS	593.94	117.00	120.87	120.89	0.001057	1.35	596.49	736.95	0.18
RIVER-1	Reach-1	132	Max WS	597.61	117.00	120.78	120.80	0.000929	1.25	583.15	614.29	0.17
RIVER-1	Reach-1	131.*	Max WS	599.52	117.00	120.69	120.71	0.001277	1.39	557.57	814.72	0.20
RIVER-1	Reach-1	130	Max WS	601.45	117.00	120.60	120.61	0.001189	1.28	615.62	807.35	0.19
RIVER-1	Reach-1	129.*	Max WS	602.46	117.00	120.50	120.53	0.001738	1.50	540.90	825.97	0.23
RIVER-1	Reach-1	128	Max WS	603.45	117.00	120.25	120.32	0.005601	2.39	332.34	839.85	0.40
RIVER-1	Reach-1	127.*	Max WS	603.43	116.71	120.02	120.07	0.002899	2.22	420.05	689.21	0.31
RIVER-1	Reach-1	126	Max WS	603.41	116.42	119.96	119.97	0.001358	1.96	606.02	744.68	0.21
RIVER-1	Reach-1	125.*	Max WS	603.41	116.21	119.93	119.95	0.001281	1.73	629.14	806.81	0.21
RIVER-1	Reach-1	124	Max WS	603.40	116.00	119.91	119.92	0.000922	1.35	709.84	832.08	0.17
RIVER-1	Reach-1	123.*	Max WS	603.28	116.18	119.85	119.87	0.001108	1.59	670.62	864.60	0.19
RIVER-1	Reach-1	122	Max WS	603.05	116.35	119.79	119.81	0.001107	1.61	701.30	966.54	0.20
RIVER-1	Reach-1	121.*	Max WS	672.35	115.68	119.63	119.66	0.001932	2.11	536.66	632.44	0.26
RIVER-1	Reach-1	120	Max WS	672.27	115.00	119.49	119.52	0.001139	2.03	614.43	623.65	0.21
RIVER-1	Reach-1	119.*	Max WS	672.05	114.50	119.36	119.42	0.001715	2.77	525.72	591.08	0.28
RIVER-1	Reach-1	118	Max WS	651.94	114.00	119.02	119.26	0.004287	4.76	322.86	541.54	0.49
RIVER-1	Reach-1	117.*	Max WS	641.52	114.50	118.95	119.03	0.001465	2.55	391.06	377.59	0.29
RIVER-1	Reach-1	116	Max WS	618.87	115.00	118.86	118.92	0.001718	2.15	393.73	393.33	0.29
RIVER-1	Reach-1	115.*	Max WS	518.64	114.50	118.78	118.81	0.000927	1.42	439.49	437.27	0.21
RIVER-1	Reach-1	114	Max WS	502.10	114.00	118.73	118.75	0.000552	1.05	535.79	500.95	0.16
RIVER-1	Reach-2	112.05	Max WS	1266.68	112.00	118.73	118.83	0.001540	2.69	641.55	566.76	0.30
RIVER-1	Reach-2	112	Max WS	1266.68	112.00	118.72	118.82	0.001562	2.70	636.74	564.57	0.30
RIVER-1	Reach-2	111.95		Lat Struct								

RIVER-1	Reach-2	111.*	Max WS	1264.35	113.00	118.61		118.70	0.001854	2.54	632.31	544.07	0.32
RIVER-1	Reach-2	110	Max WS	1223.45	114.00	118.54		118.59	0.001415	2.05	819.58	666.46	0.27
RIVER-1	Reach-2	109.*	Max WS	1204.47	113.50	118.34		118.42	0.002400	2.78	698.50	589.37	0.36
RIVER-1	Reach-2	108	Max WS	1198.97	113.00	118.15		118.24	0.001498	3.27	767.70	584.54	0.31
RIVER-1	Reach-2	107.*	Max WS	1198.09	112.00	118.11		118.17	0.001026	2.66	931.28	675.60	0.25
RIVER-1	Reach-2	106	Max WS	1197.20	111.00	118.08		118.12	0.000646	2.43	1120.00	747.88	0.21
RIVER-1	Reach-2	105.*	Max WS	1196.12	110.50	118.03		118.08	0.000800	2.48	1086.55	756.57	0.22
RIVER-1	Reach-2	104	Max WS	1195.62	110.00	117.98		118.04	0.000779	2.84	1083.50	765.02	0.22
RIVER-1	Reach-2	103.*	Max WS	1195.38	110.00	117.97		118.00	0.000770	2.16	1166.17	818.99	0.21
RIVER-1	Reach-2	102	Max WS	1014.06	110.00	117.97		117.99	0.000271	1.73	1432.11	835.26	0.14
RIVER-1	Reach-2	101.*	Max WS	1249.76	110.50	117.94		117.96	0.000426	2.14	1420.32	820.78	0.17
RIVER-1	Reach-2	100	Max WS	1249.67	111.00	117.91		117.93	0.000438	2.14	1410.82	807.88	0.17
RIVER-1	Reach-2	99.*	Max WS	1250.19	111.00	117.83		117.86	0.000426	2.13	1411.41	807.69	0.17
RIVER-1	Reach-2	98	Max WS	1251.43	111.00	117.76		117.78	0.000414	2.13	1414.35	810.87	0.17
RIVER-1	Reach-2	97.*	Max WS	1252.36	110.50	117.71		117.74	0.000404	2.12	1409.32	790.45	0.17
RIVER-1	Reach-2	96	Max WS	1253.35	110.00	117.67		117.70	0.000398	2.11	1403.16	769.42	0.16
RIVER-1	Reach-2	95.*	Max WS	1254.59	109.50	117.63		117.66	0.000409	2.16	1376.21	775.52	0.17
RIVER-1	Reach-2	94	Max WS	1255.85	109.00	117.58		117.62	0.000418	2.21	1348.60	779.96	0.17
RIVER-1	Reach-2	93.*	Max WS	1256.79	109.00	117.54		117.58	0.000395	2.18	1303.73	702.79	0.16
RIVER-1	Reach-2	92	Max WS	1258.41	109.00	117.50		117.54	0.000388	2.25	1208.53	596.59	0.17
RIVER-1	Reach-2	91.*	Max WS	1259.78	108.50	117.47		117.51	0.000364	2.16	1243.40	603.58	0.16
RIVER-1	Reach-2	90	Max WS	1261.17	108.00	117.44		117.47	0.000317	2.02	1470.33	1182.11	0.15
RIVER-1	Reach-2	89.*	Max WS	1262.75	108.50	117.41		117.44	0.000307	2.04	1415.88	1090.78	0.15
RIVER-1	Reach-2	88	Max WS	1264.33	109.00	117.38		117.41	0.000293	2.03	1406.03	877.94	0.14
RIVER-1	Reach-2	87.*	Max WS	1265.50	108.00	117.37		117.39	0.000150	1.60	1882.52	1212.50	0.11
RIVER-1	Reach-2	86	Max WS	1266.67	107.00	117.36		117.38	0.000075	1.22	2481.79	1311.12	0.08
RIVER-1	Reach-2	85.*	Max WS	1267.36	107.50	117.36		117.37	0.000078	1.14	2660.49	1355.07	0.08
RIVER-1	Reach-2	84	Max WS	1267.85	108.00	117.36		117.36	0.000072	0.98	2945.03	1404.19	0.07
RIVER-1	Reach-2	83.*	Max WS	1284.36	108.50	117.35		117.36	0.000106	1.18	2526.44	1316.00	0.09
RIVER-1	Reach-2	82	Max WS	1284.32	109.00	117.34		117.35	0.000153	1.35	2226.56	1250.42	0.10
RIVER-1	Reach-2	81.56	Max WS	1284.08	108.22	117.25	113.19	117.37	0.000958	2.74	662.50	1345.36	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1280.41	108.96	115.98		116.42	0.006543	5.33	240.18	70.58	0.51
RIVER-1	Reach-2	80.95	Max WS	1282.28	108.83	116.02	113.00	116.28	0.001543	4.07	315.14	64.39	0.32
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1268.85	108.67	115.95		116.22	0.001661	4.13	307.35	65.89	0.34
RIVER-1	Reach-2	79.3849*	Max WS	1263.49	108.33	115.86		116.05	0.001305	3.83	625.09	606.96	0.30
RIVER-1	Reach-2	78.39	Max WS	1257.41	108.00	115.80		115.87	0.000607	2.89	817.76	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1256.94	107.80	115.80		115.82	0.000266	1.91	1387.90	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1254.55	107.60	115.78		115.81	0.000313	2.05	1469.63	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1248.42	107.40	115.73		115.80	0.000572	2.74	1134.05	906.32	0.20
RIVER-1	Reach-2	75.86	Max WS	1228.81	107.22	115.56	112.15	115.77	0.001107	3.83	506.11	437.90	0.28
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1237.27	106.63	115.56		115.75	0.001219	3.60	498.63	397.05	0.29
RIVER-1	Reach-2	74.7*	Max WS	1239.18	106.82	115.59		115.63	0.000460	2.03	1152.62	825.09	0.18
RIVER-1	Reach-2	74	Max WS	1239.17	107.00	115.58		115.60	0.000226	1.25	1932.41	1248.73	0.12
RIVER-1	Reach-2	73.*	Max WS	1237.16	107.43	115.57		115.58	0.000154	1.17	2249.28	1310.54	0.10
RIVER-1	Reach-2	72	Max WS	1235.74	107.86	115.56		115.57	0.000117	1.14	2553.18	1371.79	0.09
RIVER-1	Reach-2	71.*	Max WS	1552.98	107.44	115.44		115.57	0.000994	3.06	718.42	444.21	0.24
RIVER-1	Reach-2	70	Max WS	1552.97	107.03	115.34		115.46	0.000939	2.82	552.15	102.27	0.21
RIVER-1	Reach-2	69.*	Max WS	1552.93	107.35	115.20		115.35	0.001253	3.13	495.41	94.14	0.24
RIVER-1	Reach-2	68	Max WS	1552.82	107.68	115.03		115.21	0.001611	3.46	449.33	89.14	0.27
RIVER-1	Reach-2	67	Max WS	1552.73	107.40	114.84		115.04	0.002015	3.84	461.49	134.93	0.30
RIVER-1	Reach-2	66	Max WS	1552.64	107.40	114.58		114.82	0.002453	4.14	427.89	133.19	0.33
RIVER-1	Reach-2	65.*	Max WS	1552.64	107.20	114.41		114.61	0.001772	3.66	474.25	173.31	0.31
RIVER-1	Reach-2	64	Max WS	1552.47	107.00	114.26		114.45	0.001497	3.45	463.51	185.66	0.31
RIVER-1	Reach-2	63.*	Max WS	1555.30	106.81	114.12		114.30	0.001575	3.38	477.47	225.98	0.32
RIVER-1	Reach-2	62.*	Max WS	1558.12	106.62	113.98		114.14	0.001584	3.28	498.01	197.75	0.32
RIVER-1	Reach-2	61.*	Max WS	1560.86	106.43	113.85		114.00	0.001371	3.11	536.37	209.88	0.30
RIVER-1	Reach-2	60	Max WS	1563.52	106.24	113.76		113.88	0.001062	2.81	608.64	230.91	0.26
RIVER-1	Reach-2	59.*	Max WS	1568.51	106.07	113.67		113.78	0.000888	2.78	693.77	361.22	0.24
RIVER-1	Reach-2	58	Max WS	1573.55	105.90	113.64		113.71	0.000469	2.42	1037.47	477.57	0.18
RIVER-1	Reach-2	57.2	Max WS	1577.50	107.05	113.56	110.85	113.67	0.000938	3.11	831.94	421.34	0.25
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1577.27	107.05	113.44		113.58	0.001171	3.38	750.96	399.92	0.28
RIVER-1	Reach-2	56	Max WS	1581.77	105.90	113.39		113.48	0.000616	2.61	846.49	383.89	0.21
RIVER-1	Reach-2	55.*	Max WS	1585.94	105.85	113.36		113.42	0.000506	2.20	1004.53	472.34	0.19
RIVER-1	Reach-2	54	Max WS	1590.03	105.80	113.33		113.38	0.000445	1.94	1143.53	560.45	0.17
RIVER-1	Reach-2	53.*	Max WS	1600.95	105.70	113.26		113.31	0.000480	2.04	1075.29	398.34	0.16

RIVER-1	Reach-2	52	Max WS	1611.77	105.60	113.17		113.22	0.000587	2.06	1012.50	325.21	0.16
RIVER-1	Reach-2	51.*	Max WS	1617.09	105.57	113.10		113.15	0.000693	2.31	960.77	314.54	0.19
RIVER-1	Reach-2	50.*	Max WS	1622.39	105.54	113.02		113.08	0.000778	2.53	918.38	304.16	0.21
RIVER-1	Reach-2	49.*	Max WS	1627.76	105.50	112.93		113.00	0.000822	2.75	887.10	294.95	0.22
RIVER-1	Reach-2	48	Max WS	1632.92	105.47	112.84		112.93	0.000800	3.01	866.89	287.32	0.23
RIVER-1	Reach-2	47.*	Max WS	1638.17	105.68	112.77		112.84	0.000744	2.82	950.96	323.14	0.23
RIVER-1	Reach-2	46.*	Max WS	1643.40	105.88	112.71		112.77	0.000633	2.57	1058.18	357.55	0.21
RIVER-1	Reach-2	45.*	Max WS	1648.85	106.08	112.66		112.71	0.000496	2.32	1193.43	403.26	0.19
RIVER-1	Reach-2	44	Max WS	1654.06	106.29	112.62		112.66	0.000366	2.09	1356.50	430.53	0.16
RIVER-1	Reach-2	43.*	Max WS	1659.02	106.30	112.58		112.62	0.000381	2.17	1306.15	426.17	0.17
RIVER-1	Reach-2	42.*	Max WS	1663.88	106.31	112.54		112.59	0.000397	2.23	1263.51	422.06	0.17
RIVER-1	Reach-2	41.*	Max WS	1668.72	106.32	112.50		112.55	0.000412	2.27	1227.87	418.08	0.17
RIVER-1	Reach-2	40	Max WS	1673.66	106.33	112.46		112.51	0.000425	2.30	1200.14	414.41	0.18
RIVER-1	Reach-2	39.*	Max WS	1673.65	106.17	112.43		112.47	0.000344	2.09	1348.47	456.68	0.16
RIVER-1	Reach-2	38.*	Max WS	1673.63	106.01	112.41		112.44	0.000261	1.83	1546.87	492.98	0.14
RIVER-1	Reach-2	37.*	Max WS	1673.57	105.84	112.39		112.41	0.000185	1.56	1784.63	513.86	0.12
RIVER-1	Reach-2	36	Max WS	1673.60	105.68	112.37		112.39	0.000230	1.75	1648.77	524.11	0.13
RIVER-1	Reach-2	35.22	Max WS	1673.59	104.52	112.14		112.42	0.001520	4.27	392.24	75.15	0.33
RIVER-1	Reach-2	34.82	Max WS	1673.58	104.52	112.07	108.71	112.36	0.001577	4.32	387.04	74.75	0.33
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1673.45	104.30	110.96		111.64	0.005873	6.65	251.62	68.24	0.61
RIVER-1	Reach-2	33.67*	Max WS	1673.45	104.12	110.91		111.34	0.003200	5.25	319.05	78.97	0.46
RIVER-1	Reach-2	33	Max WS	1673.48	103.93	111.00		111.15	0.001052	3.35	801.79	582.91	0.27
RIVER-1	Reach-2	32.*	Max WS	1673.45	103.40	110.90		111.02	0.001048	3.08	838.96	665.76	0.27
RIVER-1	Reach-2	31.*	Max WS	1673.37	102.88	110.75		110.89	0.001458	3.15	792.29	740.12	0.30
RIVER-1	Reach-2	30	Max WS	1673.38	102.35	110.42		110.65	0.003780	3.96	607.77	998.95	0.46
RIVER-1	Reach-2	29.*	Max WS	1673.35	102.34	110.07		110.31	0.003927	4.22	616.21	945.18	0.47
RIVER-1	Reach-2	28.*	Max WS	1673.21	102.33	109.74		109.97	0.003592	4.24	695.31	886.44	0.46
RIVER-1	Reach-2	27.*	Max WS	1673.16	102.33	109.52		109.67	0.002615	3.85	892.68	956.23	0.40
RIVER-1	Reach-2	26	Max WS	1673.07	102.32	109.38		109.45	0.001571	3.18	1206.78	1057.52	0.31
RIVER-1	Reach-2	25.*	Max WS	1672.99	101.99	109.23		109.32	0.002110	3.52	1115.45	1134.41	0.35
RIVER-1	Reach-2	24.*	Max WS	1672.85	101.66	109.04		109.16	0.002802	3.82	1008.84	1218.11	0.40
RIVER-1	Reach-2	23.*	Max WS	1672.75	101.33	108.86		108.95	0.002429	3.34	1071.05	1061.36	0.37
RIVER-1	Reach-2	22	Max WS	1672.63	101.00	108.72		108.77	0.001883	2.79	1217.50	1112.03	0.32
RIVER-1	Reach-2	21.*	Max WS	1672.52	101.27	108.56		108.61	0.001997	2.90	1180.19	1097.94	0.33
RIVER-1	Reach-2	20.*	Max WS	1672.29	101.54	108.39		108.44	0.002122	3.01	1142.70	1033.32	0.34
RIVER-1	Reach-2	19.*	Max WS	1672.17	101.82	108.19		108.25	0.002297	3.11	1110.56	954.99	0.35
RIVER-1	Reach-2	18	Max WS	1671.88	102.09	108.00		108.06	0.002307	3.14	1089.54	861.91	0.35
RIVER-1	Reach-2	17.*	Max WS	1671.37	101.97	107.81		107.86	0.002306	3.11	1243.62	1223.63	0.35
RIVER-1	Reach-2	16.*	Max WS	1670.95	101.85	107.67		107.70	0.001443	2.55	1457.07	1230.95	0.28
RIVER-1	Reach-2	15.*	Max WS	1670.83	101.73	107.58		107.60	0.000837	1.96	1746.10	1236.75	0.21
RIVER-1	Reach-2	14	Max WS	1670.50	101.61	107.53		107.54	0.000494	1.44	2077.66	1245.03	0.16
RIVER-1	Reach-2	13.*	Max WS	1670.47	101.43	107.50		107.51	0.000404	1.23	2218.96	1251.33	0.15
RIVER-1	Reach-2	12.*	Max WS	1670.28	101.26	107.47		107.48	0.000323	1.19	2363.95	1242.66	0.13
RIVER-1	Reach-2	11.*	Max WS	1670.19	101.08	107.45		107.45	0.000260	1.14	2516.38	1232.17	0.12
RIVER-1	Reach-2	10	Max WS	1670.25	100.90	107.43		107.44	0.000214	1.07	2661.58	1216.83	0.11
RIVER-1	Reach-2	9.*	Max WS	1670.11	100.75	107.40		107.41	0.000364	1.40	2233.49	1196.91	0.14
RIVER-1	Reach-2	8.*	Max WS	1670.13	100.60	107.35		107.37	0.000555	1.84	1858.09	1258.56	0.18
RIVER-1	Reach-2	7.*	Max WS	1670.00	100.45	107.27		107.31	0.000874	2.46	1578.72	1253.35	0.23
RIVER-1	Reach-2	6	Max WS	1669.91	100.30	107.14		107.22	0.001643	3.51	1303.64	1341.11	0.32
RIVER-1	Reach-2	5.*	Max WS	1669.86	100.15	106.99		107.07	0.001576	3.51	1343.83	1467.58	0.31
RIVER-1	Reach-2	4.*	Max WS	1669.74	100.00	106.85		106.92	0.001435	3.40	1421.15	1583.13	0.30
RIVER-1	Reach-2	3.*	Max WS	1669.68	99.85	106.73		106.80	0.001366	3.36	1643.93	2166.69	0.30
RIVER-1	Reach-2	2	Max WS	1669.61	99.70	106.64		106.68	0.000801	2.61	2056.41	2284.81	0.23
RIVER-1	Reach-2	1.*	Max WS	1669.54	99.55	106.54		106.61	0.001275	3.36	1656.16	2242.65	0.29
RIVER-1	Reach-2	0	Max WS	1669.49	99.40	106.39	105.80	106.51	0.001667	3.88	1295.96	1961.75	0.33

Appendix P-16: HEC-RAS Results, Modified Hydro-modification Basin – Alternative 'B' Model, 100-Year, 24-Hour Storm

HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
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PROJECT DATA
Project Title: Kite Creek
Project File : KiteCreek.prj
Run Date and Time: 9/13/2010 3:54:35 PM

Project in English units

Project Description:
SunCreek - Kite Creek and Laguna Creek tributary

Profile Output Table - Standard Table 1

River	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)	Froude # Chl
RIVER-2	Reach-1	11900	Max WS	601.67	158.00	163.02		163.02	0.000053	0.47	1281.41	305.82	0.04
RIVER-2	Reach-1	11850.*	Max WS	600.16	157.71	163.01		163.02	0.000055	0.46	1316.06	334.38	0.04
RIVER-2	Reach-1	11800	Max WS	600.15	157.42	163.01		163.02	0.000023	0.32	1882.95	425.14	0.03
RIVER-2	Reach-1	11750.*	Max WS	598.67	156.96	163.01		163.01	0.000024	0.33	1837.49	416.35	0.03
RIVER-2	Reach-1	11700	Max WS	598.66	156.50	163.01		163.01	0.000022	0.32	1852.68	395.46	0.03
RIVER-2	Reach-1	11650.*	Max WS	598.65	156.25	163.01		163.01	0.000024	0.34	1748.14	371.65	0.03
RIVER-2	Reach-1	11600	Max WS	597.21	156.00	163.01		163.01	0.000025	0.36	1680.65	347.09	0.03
RIVER-2	Reach-1	11550.*	Max WS	597.21	155.05	163.01		163.01	0.000025	0.35	1698.91	351.33	0.03
RIVER-2	Reach-1	11500	Max WS	595.78	154.11	163.01		163.01	0.000024	0.35	1710.54	355.65	0.03
RIVER-2	Reach-1	11450.*	Max WS	595.78	154.05	163.01		163.01	0.000022	0.33	1827.48	390.87	0.03
RIVER-2	Reach-1	11400	Max WS	594.39	154.00	163.00		163.01	0.000020	0.30	1956.21	434.93	0.03
RIVER-2	Reach-1	11350.*	Max WS	595.76	154.00	163.00		163.00	0.000018	0.29	2034.90	434.94	0.02
RIVER-2	Reach-1	11300	Max WS	595.75	154.00	163.00		163.00	0.000015	0.27	2239.28	479.62	0.02
RIVER-2	Reach-1	11250.*	Max WS	594.38	154.00	163.00		163.00	0.000012	0.25	2422.30	485.57	0.02
RIVER-2	Reach-1	11200	Max WS	595.71	154.00	163.00		163.00	0.000009	0.23	2626.45	502.64	0.02
RIVER-2	Reach-1	11150.*	Max WS	595.68	153.00	163.00		163.00	0.000007	0.21	2857.07	524.52	0.02
RIVER-2	Reach-1	11100	Max WS	595.63	152.00	163.00		163.00	0.000006	0.19	3094.58	554.28	0.01
RIVER-2	Reach-1	11050.*	Max WS	594.37	152.00	163.00		163.00	0.000005	0.18	3310.40	571.83	0.01
RIVER-2	Reach-1	11000	Max WS	594.35	152.00	163.00		163.00	0.000004	0.17	3599.35	612.54	0.01
RIVER-2	Reach-1	10887.5*	Max WS	594.33	152.00	163.00		163.00	0.000003	0.15	3990.10	609.73	0.01
RIVER-2	Reach-1	10775.*	Max WS	594.29	152.00	163.00		163.00	0.000002	0.13	4521.25	625.07	0.01
RIVER-2	Reach-1	10662.5*	Max WS	593.09	152.00	163.00		163.00	0.000001	0.12	5140.64	657.83	0.01
RIVER-2	Reach-1	10550	Max WS	595.43	152.00	163.00		163.00	0.000001	0.10	5815.38	698.07	0.01
RIVER-2	Reach-1	10490.*	Max WS	594.23	151.60	163.00		163.00	0.000001	0.09	6475.89	807.77	0.01
RIVER-2	Reach-1	10430.*	Max WS	594.20	151.20	163.00		163.00	0.000001	0.08	7093.18	908.62	0.01
RIVER-2	Reach-1	10370.*	Max WS	594.18	150.80	163.00		163.00	0.000001	0.08	7676.10	1006.05	0.00
RIVER-2	Reach-1	10310.*	Max WS	594.13	150.40	163.00		163.00	0.000001	0.07	8235.14	1108.23	0.00
RIVER-2	Reach-1	10250	Max WS	594.08	150.00	163.00		163.00	0.000001	0.07	8779.71	1174.51	0.00
RIVER-2	Reach-1	10200.*	Max WS	594.05	150.00	163.00		163.00	0.000001	0.07	8156.17	1042.81	0.00
RIVER-2	Reach-1	10150	Max WS	594.01	150.00	163.00		163.00	0.000001	0.08	7553.17	876.21	0.00
RIVER-2	Reach-1	10100.*	Max WS	594.88	150.00	163.00		163.00	0.000001	0.08	7228.41	882.04	0.01
RIVER-2	Reach-1	10050	Max WS	593.98	150.00	163.00		163.00	0.000001	0.09	6944.77	803.18	0.01
RIVER-2	Reach-1	10000.*	Max WS	593.97	150.00	163.00		163.00	0.000001	0.08	7215.44	820.24	0.00
RIVER-2	Reach-1	9950	Max WS	593.20	150.00	163.00		163.00	0.000001	0.08	7505.85	842.71	0.00

RIVER-2	Reach-1	9900.*	Max WS	593.92	150.00	163.00		163.00	0.000001	0.07	8338.41	1101.11	0.00
RIVER-2	Reach-1	9850	Max WS	593.88	150.00	163.00		163.00	0.000000	0.07	9060.95	1241.72	0.00
RIVER-2	Reach-1	9800.*	Max WS	593.22	150.00	163.00		163.00	0.000001	0.07	9017.36	1485.00	0.00
RIVER-2	Reach-1	9750	Max WS	593.84	150.00	163.00		163.00	0.000001	0.06	9346.52	1505.48	0.00
RIVER-2	Reach-1	9675.*	Max WS	593.81	149.36	163.00		163.00	0.000000	0.06	10071.08	1538.83	0.00
RIVER-2	Reach-1	9600	Max WS	594.39	148.73	163.00		163.00	0.000000	0.05	10884.88	1582.71	0.00
RIVER-2	Reach-1	9550.*	Max WS	594.31	148.36	163.00		163.00	0.000000	0.04	13250.62	1718.54	0.00
RIVER-2	Reach-1	9500	Max WS	593.24	148.00	163.00		163.00	0.000000	0.04	15722.80	1830.49	0.00
RIVER-2	Reach-1	9450.*	Max WS	594.10	147.00	163.00		163.00	0.000000	0.04	16740.12	1835.90	0.00
RIVER-2	Reach-1	9400	Max WS	593.70	146.00	163.00		163.00	0.000000	0.03	18084.60	1807.33	0.00
RIVER-2	Reach-1	9350.*	Max WS	593.93	145.51	163.00		163.00	0.000000	0.03	17477.53	1738.24	0.00
RIVER-2	Reach-1	9300	Max WS	593.65	145.02	163.00		163.00	0.000000	0.04	16729.20	1633.81	0.00
RIVER-2	Reach-1	9200.*	Max WS	593.26	144.51	163.00		163.00	0.000000	0.04	15569.40	1455.78	0.00
RIVER-2	Reach-1	9100	Max WS	593.50	144.00	163.00		163.00	0.000000	0.04	14359.69	1279.93	0.00
RIVER-2	Reach-1	9050.*	Max WS	593.46	144.00	163.00		163.00	0.000000	0.04	13866.98	1178.12	0.00
RIVER-2	Reach-1	9000	Max WS	593.43	144.00	163.00		163.00	0.000000	0.04	13450.48	1058.23	0.00
RIVER-2	Reach-1	8900.*	Max WS	593.37	143.08	163.00		163.00	0.000000	0.04	13784.44	1025.35	0.00
RIVER-2	Reach-1	8800	Max WS	593.33	142.16	163.00		163.00	0.000000	0.04	13966.46	978.18	0.00
RIVER-2	Reach-1	8700.*	Max WS	593.35	143.70	163.00		163.00	0.000000	0.04	13199.07	996.42	0.00
RIVER-2	Reach-1	8600	Max WS	593.30	145.24	163.00	145.98	163.00	0.000000	0.05	12677.05	998.84	0.00
RIVER-2	Reach-1	8500	Inl Struct										
RIVER-2	Reach-1	8450	Max WS	593.29	140.56	154.39		154.57	0.003543	3.40	174.46	35.86	0.27
RIVER-2	Reach-1	8350	Max WS	595.93	140.09	153.98		154.18	0.004343	3.55	168.03	35.96	0.29
RIVER-2	Reach-1	8250.*	Max WS	598.59	139.60	153.55		153.74	0.004423	3.56	168.06	36.58	0.29
RIVER-2	Reach-1	8150.*	Max WS	601.22	139.11	153.10		153.30	0.004519	3.58	168.17	37.30	0.30
RIVER-2	Reach-1	8050.*	Max WS	603.88	138.62	152.65		152.85	0.004626	3.59	168.27	38.04	0.30
RIVER-2	Reach-1	7950.*	Max WS	606.52	138.13	152.19		152.39	0.004699	3.60	168.47	38.51	0.30
RIVER-2	Reach-1	7850.*	Max WS	609.18	137.64	151.72		151.93	0.004744	3.61	168.86	38.86	0.31
RIVER-2	Reach-1	7750.*	Max WS	611.83	137.15	151.25		151.45	0.004781	3.61	169.29	39.16	0.31
RIVER-2	Reach-1	7650.*	Max WS	614.51	136.66	150.78		150.98	0.004811	3.62	169.70	39.35	0.31
RIVER-2	Reach-1	7550.*	Max WS	617.16	136.17	150.30		150.50	0.004812	3.62	170.35	39.47	0.31
RIVER-2	Reach-1	7450.*	Max WS	619.82	135.68	149.82		150.03	0.004804	3.62	171.05	39.53	0.31
RIVER-2	Reach-1	7350.*	Max WS	622.47	135.19	149.35		149.55	0.004785	3.62	171.89	39.60	0.31
RIVER-2	Reach-1	7250.*	Max WS	625.13	134.70	148.86		149.06	0.004806	3.62	172.46	39.79	0.31
RIVER-2	Reach-1	7150.*	Max WS	627.79	134.21	148.34		148.54	0.004957	3.66	171.48	39.82	0.31
RIVER-2	Reach-1	7050.*	Max WS	630.29	133.72	147.77		147.99	0.005561	3.72	169.33	42.53	0.33
RIVER-2	Reach-1	6950.*	Max WS	597.49	133.23	147.17		147.37	0.005593	3.60	166.14	44.63	0.33
RIVER-2	Reach-1	6850.*	Max WS	590.00	132.74	146.61		146.80	0.005926	3.58	164.97	47.28	0.34
RIVER-2	Reach-1	6750.*	Max WS	590.56	132.25	145.99		146.20	0.006501	3.65	161.80	48.37	0.35
RIVER-2	Reach-1	6650.*	Max WS	638.64	131.76	145.30		145.56	0.008642	4.12	155.07	47.50	0.40
RIVER-2	Reach-1	6550	Max WS	641.04	131.27	144.57		144.87	0.010113	4.37	146.71	45.57	0.43
RIVER-2	Reach-1	6466.66*	Max WS	643.12	132.84	143.92		144.15	0.007513	3.84	167.35	57.72	0.40
RIVER-2	Reach-1	6383.33*	Max WS	645.22	134.40	143.48		143.66	0.004362	3.48	185.33	52.71	0.33
RIVER-2	Reach-1	6300	Max WS	647.28	135.97	143.13		143.35	0.003358	3.69	175.26	39.14	0.31
RIVER-2	Reach-1	6250	Max WS	648.51	136.00	142.87		143.15	0.004668	4.20	154.57	36.19	0.36
RIVER-2	Reach-1	6200	Max WS	649.78	135.00	142.44		142.85	0.007156	5.14	126.53	28.34	0.43
RIVER-2	Reach-1	6100.*	Max WS	652.31	134.75	141.96		142.25	0.004964	4.29	152.09	35.58	0.37
RIVER-2	Reach-1	6000.*	Max WS	645.95	134.50	141.59		141.80	0.003693	3.65	177.09	43.49	0.32
RIVER-2	Reach-1	5900.*	Max WS	648.90	134.25	141.24		141.41	0.003095	3.25	199.67	51.95	0.29
RIVER-2	Reach-1	5800.*	Max WS	650.83	134.00	140.87		141.00	0.003596	2.98	218.10	73.60	0.31
RIVER-2	Reach-1	5700.*	Max WS	653.42	133.75	140.42		140.54	0.005511	2.79	234.23	124.53	0.36
RIVER-2	Reach-1	5600.*	Max WS	665.07	133.50	139.88		140.00	0.005893	2.75	242.79	144.98	0.36
RIVER-2	Reach-1	5500.*	Max WS	667.62	133.25	139.23		139.36	0.008290	2.94	228.88	161.27	0.42
RIVER-2	Reach-1	5400	Max WS	670.13	133.00	136.80		137.80	0.027570	8.02	83.59	28.59	0.83
RIVER-2	Reach-1	5304.54*	Max WS	672.57	132.73	135.66		135.97	0.009807	4.45	151.08	60.47	0.50
RIVER-2	Reach-1	5209.09*	Max WS	675.04	132.45	135.04		135.21	0.006349	3.30	204.57	93.59	0.39
RIVER-2	Reach-1	5113.63*	Max WS	677.49	132.18	134.56		134.67	0.005020	2.73	248.46	127.37	0.34
RIVER-2	Reach-1	5018.18*	Max WS	679.94	131.91	134.16		134.25	0.004307	2.37	286.90	162.10	0.31
RIVER-2	Reach-1	4922.72*	Max WS	682.44	131.64	133.80		133.87	0.003896	2.13	320.82	197.97	0.29
RIVER-2	Reach-1	4827.27*	Max WS	684.94	131.36	133.47		133.53	0.003706	1.95	350.70	237.07	0.28
RIVER-2	Reach-1	4731.81*	Max WS	687.44	131.09	133.14		133.20	0.003625	1.82	378.47	280.85	0.28
RIVER-2	Reach-1	4636.36*	Max WS	689.97	130.82	132.82		132.86	0.003702	1.71	402.82	331.78	0.27
RIVER-2	Reach-1	4540.90*	Max WS	692.47	130.55	132.46		132.51	0.004081	1.66	418.36	390.42	0.28
RIVER-2	Reach-1	4445.45*	Max WS	694.99	130.27	132.08		132.13	0.004750	1.65	421.29	442.84	0.30
RIVER-2	Reach-1	4350	Max WS	697.50	130.00	131.47		131.55	0.013879	2.25	309.99	457.35	0.48
RIVER-2	Reach-1	4260.*	Max WS	699.69	129.40	130.87		130.93	0.011246	2.11	333.20	467.92	0.44
RIVER-2	Reach-1	4170.*	Max WS	701.87	128.80	130.39		130.45	0.007654	1.87	376.07	469.95	0.37
RIVER-2	Reach-1	4080.*	Max WS	704.06	128.20	130.03		130.07	0.004990	1.62	433.57	484.27	0.30
RIVER-2	Reach-1	3990.*	Max WS	706.24	127.60	129.74		129.77	0.003745	1.48	477.72	495.48	0.27

RIVER-2	Reach-1	3900	Max WS	708.44	127.00	129.50		129.53	0.003241	1.40	504.92	508.27	0.25
RIVER-2	Reach-1	3800.*	Max WS	711.22	126.70	129.25		129.28	0.003235	1.41	503.78	501.74	0.25
RIVER-2	Reach-1	3700.*	Max WS	713.99	126.40	129.00		129.03	0.003203	1.42	504.01	495.69	0.25
RIVER-2	Reach-1	3600.*	Max WS	716.77	126.10	128.76		128.79	0.003143	1.42	505.82	490.30	0.25
RIVER-2	Reach-1	3500.*	Max WS	719.51	125.80	128.51		128.55	0.003041	1.41	510.26	486.12	0.24
RIVER-2	Reach-1	3400.*	Max WS	722.26	125.50	128.27		128.30	0.002966	1.40	514.17	483.45	0.24
RIVER-2	Reach-1	3300.*	Max WS	725.02	125.20	128.03		128.06	0.002920	1.40	517.21	482.16	0.24
RIVER-2	Reach-1	3200.*	Max WS	727.77	124.90	127.78		127.81	0.002898	1.40	518.82	480.41	0.24
RIVER-2	Reach-1	3100.*	Max WS	730.51	124.60	127.52		127.55	0.002911	1.41	517.82	476.93	0.24
RIVER-2	Reach-1	3000.*	Max WS	733.26	124.30	127.24		127.27	0.003131	1.44	509.40	480.75	0.25
RIVER-2	Reach-1	2900	Max WS	736.00	124.00	126.93		126.96	0.003480	1.46	505.35	507.36	0.26
RIVER-2	Reach-1	2812.5*	Max WS	738.28	123.52	126.64		126.68	0.003865	1.49	495.75	520.81	0.27
RIVER-2	Reach-1	2725.*	Max WS	740.56	123.03	126.37		126.40	0.003920	1.50	493.95	519.11	0.27
RIVER-2	Reach-1	2637.5*	Max WS	742.84	122.55	126.12		126.15	0.003687	1.47	503.95	518.81	0.26
RIVER-2	Reach-1	2550.*	Max WS	745.11	122.07	125.86		125.90	0.003503	1.45	512.40	518.02	0.26
RIVER-2	Reach-1	2462.5*	Max WS	747.37	121.58	125.59		125.62	0.003578	1.47	509.15	515.51	0.26
RIVER-2	Reach-1	2375	Max WS	749.63	121.10	125.33		125.36	0.003468	1.46	514.32	513.90	0.26
RIVER-2	Reach-1	2279.16*	Max WS	752.10	121.07	125.05		125.08	0.003354	1.43	525.11	525.48	0.25
RIVER-2	Reach-1	2183.33*	Max WS	754.56	121.03	124.76		124.79	0.003471	1.44	524.83	535.91	0.26
RIVER-2	Reach-1	2087.5*	Max WS	757.02	121.00	124.49		124.52	0.003402	1.42	533.20	546.61	0.25
RIVER-2	Reach-1	1991.66*	Max WS	759.46	120.97	124.25		124.28	0.003070	1.37	555.78	558.75	0.24
RIVER-2	Reach-1	1895.83*	Max WS	761.90	120.93	124.03		124.06	0.002646	1.30	587.53	571.56	0.23
RIVER-2	Reach-1	1800	Max WS	764.32	120.90	123.83		123.85	0.002156	1.21	630.08	580.89	0.21
RIVER-2	Reach-1	1705.*	Max WS	766.72	120.43	123.63		123.66	0.002357	1.28	601.25	549.77	0.21
RIVER-2	Reach-1	1610.*	Max WS	769.13	119.95	123.42		123.45	0.002657	1.35	569.47	522.68	0.23
RIVER-2	Reach-1	1515.*	Max WS	771.53	119.47	123.17		123.20	0.002995	1.45	534.76	502.74	0.24
RIVER-2	Reach-1	1420	Max WS	773.91	119.00	122.87		122.90	0.003632	1.60	494.42	478.63	0.27
RIVER-2	Reach-1	1324.61*	Max WS	773.87	118.62	122.54		122.58	0.003641	1.60	501.72	574.35	0.27
RIVER-2	Reach-1	1229.23*	Max WS	773.83	118.23	122.22		122.26	0.003512	1.57	517.97	580.51	0.26
RIVER-2	Reach-1	1133.84*	Max WS	773.80	117.85	121.91		121.95	0.003478	1.55	527.74	579.22	0.26
RIVER-2	Reach-1	1038.46*	Max WS	773.73	117.46	121.62		121.65	0.003456	1.52	535.21	575.94	0.26
RIVER-2	Reach-1	943.076*	Max WS	773.60	117.08	121.34		121.37	0.003394	1.49	542.91	572.15	0.26
RIVER-2	Reach-1	847.692*	Max WS	773.47	116.69	121.07		121.10	0.003406	1.47	544.43	563.99	0.26
RIVER-2	Reach-1	752.307*	Max WS	773.38	116.31	120.78		120.81	0.003371	1.51	528.07	516.87	0.26
RIVER-2	Reach-1	656.923*	Max WS	773.30	115.92	120.48		120.51	0.003426	1.58	504.26	465.82	0.26
RIVER-2	Reach-1	561.538*	Max WS	773.27	115.54	120.19		120.23	0.003518	1.65	482.83	425.94	0.27
RIVER-2	Reach-1	466.153*	Max WS	773.25	115.15	119.92		119.96	0.003540	1.69	462.77	382.42	0.27
RIVER-2	Reach-1	370.769*	Max WS	773.24	114.77	119.65		119.70	0.003855	1.79	422.49	324.41	0.28
RIVER-2	Reach-1	275.384*	Max WS	773.14	114.38	119.34		119.42	0.005510	2.16	346.32	258.50	0.34
RIVER-2	Reach-1	180	Max WS	766.99	114.00	118.73		118.92	0.007383	3.49	219.46	101.36	0.42
RIVER-1	Reach-1	326	Max WS	150.61	169.00	170.61		170.71	0.005302	2.90	80.29	142.45	0.48
RIVER-1	Reach-1	325.5*	Max WS	149.94	168.75	170.38		170.46	0.004623	2.71	87.88	152.20	0.45
RIVER-1	Reach-1	325.*	Max WS	166.61	168.50	170.10		170.19	0.005795	3.01	89.79	160.98	0.50
RIVER-1	Reach-1	324.5*	Max WS	170.89	168.25	169.79		169.90	0.006539	3.16	92.26	183.87	0.53
RIVER-1	Reach-1	324	Max WS	170.39	168.00	169.56		169.62	0.004309	2.62	116.62	201.31	0.44
RIVER-1	Reach-1	323.*	Max WS	171.11	167.02	169.20		169.33	0.004098	3.22	92.52	197.90	0.45
RIVER-1	Reach-1	322	Max WS	168.51	166.04	168.13	168.00	168.58	0.015327	5.43	33.25	48.30	0.84
RIVER-1	Reach-1	320	Max WS	197.23	166.00	167.56		167.62	0.006598	3.31	132.00	254.63	0.54
RIVER-1	Reach-1	319.*	Max WS	197.46	166.00	167.36		167.40	0.002635	1.78	166.84	371.56	0.33
RIVER-1	Reach-1	318	Max WS	197.46	166.00	167.19		167.22	0.002601	1.50	167.15	506.68	0.31
RIVER-1	Reach-1	317.*	Max WS	198.13	165.50	166.97		167.00	0.002422	1.40	150.80	394.00	0.30
RIVER-1	Reach-1	316	Max WS	199.09	165.00	166.46		166.53	0.007443	2.10	94.86	178.93	0.51
RIVER-1	Reach-1	315.*	Max WS	202.02	164.50	165.82		165.89	0.005609	2.05	98.61	156.02	0.45
RIVER-1	Reach-1	314	Max WS	205.11	164.00	165.38		165.43	0.002660	2.02	135.94	240.12	0.34
RIVER-1	Reach-1	313.*	Max WS	206.94	163.50	165.00		165.09	0.004898	2.72	117.10	276.84	0.46
RIVER-1	Reach-1	312	Max WS	208.86	163.00	164.68		164.71	0.003233	2.14	184.65	355.70	0.37
RIVER-1	Reach-1	311.*	Max WS	211.07	162.50	164.18		164.27	0.007033	3.14	115.77	232.36	0.55
RIVER-1	Reach-1	310	Max WS	213.47	162.00	163.79		163.83	0.002183	2.05	177.16	233.25	0.32
RIVER-1	Reach-1	309.*	Max WS	215.47	161.26	163.22		163.41	0.009181	3.65	85.57	261.35	0.63
RIVER-1	Reach-1	308	Max WS	217.58	160.51	162.84		162.88	0.001698	1.84	161.00	166.29	0.28
RIVER-1	Reach-1	307.*	Max WS	218.48	159.76	162.57		162.69	0.004614	2.91	98.09	311.16	0.46
RIVER-1	Reach-1	306	Max WS	219.63	159.00	162.19		162.36	0.007584	3.56	107.53	592.37	0.58
RIVER-1	Reach-1	305.*	Max WS	220.77	159.00	161.66		161.81	0.006733	3.20	103.08	518.18	0.54
RIVER-1	Reach-1	304	Max WS	218.33	159.00	161.41		161.43	0.001352	1.56	281.68	693.22	0.25
RIVER-1	Reach-1	303.*	Max WS	218.12	158.75	161.30		161.34	0.001298	1.88	258.11	666.23	0.26
RIVER-1	Reach-1	302	Max WS	219.30	158.50	161.17		161.24	0.002064	2.78	219.27	684.10	0.33
RIVER-1	Reach-1	301.*	Max WS	217.19	158.25	160.99		161.06	0.002170	2.76	181.38	373.20	0.34
RIVER-1	Reach-1	300	Max WS	203.79	158.00	160.85		160.89	0.001447	2.17	194.80	268.78	0.27
RIVER-1	Reach-1	299.*	Max WS	196.00	158.31	160.74		160.78	0.001550	2.29	186.67	246.51	0.29

RIVER-1	Reach-1	298	Max WS	191.96	158.62	160.65		160.67	0.001056	1.89	219.11	229.53	0.24
RIVER-1	Reach-1	297.*	Max WS	181.45	158.31	160.60		160.61	0.000303	1.03	379.65	415.39	0.13
RIVER-1	Reach-1	296	Max WS	181.32	158.00	160.59		160.59	0.000074	0.53	632.20	482.31	0.06
RIVER-1	Reach-1	295.*	Max WS	180.66	158.01	160.58		160.58	0.000108	0.64	501.88	400.35	0.08
RIVER-1	Reach-1	294	Max WS	213.57	158.01	160.56		160.57	0.000146	0.74	454.93	332.58	0.09
RIVER-1	Reach-1	293.*	Max WS	213.42	157.51	160.55		160.55	0.000157	0.84	394.86	243.82	0.09
RIVER-1	Reach-1	292	Max WS	213.41	157.00	160.52		160.53	0.000200	1.05	329.06	181.78	0.11
RIVER-1	Reach-1	291.5	Max WS	213.40	157.00	160.47		160.52	0.000947	2.25	143.82	102.07	0.24
RIVER-1	Reach-1	290.62	Max WS	213.39	157.00	159.97		160.38	0.004449	5.12	41.64	37.85	0.52
RIVER-1	Reach-1	290.61		Culvert									
RIVER-1	Reach-1	289.32	Max WS	213.38	157.00	158.77	158.93	159.92	0.025124	8.61	24.77	30.62	1.14
RIVER-1	Reach-1	288.66*	Max WS	213.19	156.50	158.46		158.75	0.009559	4.30	49.60	38.22	0.66
RIVER-1	Reach-1	288	Max WS	212.88	156.00	158.28		158.29	0.000367	1.05	396.11	427.03	0.14
RIVER-1	Reach-1	287.*	Max WS	212.86	156.00	158.24		158.25	0.000553	1.30	332.82	386.32	0.17
RIVER-1	Reach-1	286	Max WS	212.82	156.00	158.18		158.20	0.000639	1.41	304.24	331.05	0.18
RIVER-1	Reach-1	285.*	Max WS	212.99	155.50	158.02		158.15	0.003295	3.03	94.61	151.81	0.41
RIVER-1	Reach-1	284	Max WS	213.16	155.00	157.72		157.85	0.003306	2.92	72.94	45.08	0.40
RIVER-1	Reach-1	283.*	Max WS	213.40	154.75	157.36		157.52	0.003867	3.36	74.59	88.07	0.44
RIVER-1	Reach-1	282	Max WS	213.53	154.50	157.09		157.25	0.003480	3.65	104.39	136.43	0.43
RIVER-1	Reach-1	281.*	Max WS	211.77	154.25	156.77		156.93	0.003293	3.50	92.51	110.73	0.42
RIVER-1	Reach-1	280	Max WS	205.79	154.00	156.46		156.62	0.003022	3.30	83.66	107.46	0.40
RIVER-1	Reach-1	279.*	Max WS	198.34	153.25	156.25		156.36	0.001889	2.70	87.26	85.98	0.32
RIVER-1	Reach-1	278	Max WS	190.90	152.50	156.12		156.20	0.001321	2.25	100.43	113.68	0.27
RIVER-1	Reach-1	277.*	Max WS	234.37	152.45	156.03		156.09	0.000813	2.05	190.11	195.12	0.22
RIVER-1	Reach-1	276	Max WS	233.63	152.40	156.02		156.03	0.000254	1.27	368.85	276.14	0.13
RIVER-1	Reach-1	275.*	Max WS	233.45	151.90	156.01		156.01	0.000067	0.57	617.30	371.17	0.06
RIVER-1	Reach-1	274	Max WS	233.68	151.40	156.01		156.01	0.000028	0.33	924.04	498.01	0.03
RIVER-1	Reach-1	273.*	Max WS	233.82	151.30	156.00		156.00	0.000021	0.30	990.54	480.28	0.03
RIVER-1	Reach-1	272	Max WS	233.96	151.20	156.00		156.00	0.000012	0.25	1145.02	442.60	0.02
RIVER-1	Reach-1	271.*	Max WS	234.22	150.85	156.00		156.00	0.000013	0.25	1163.00	484.22	0.02
RIVER-1	Reach-1	270	Max WS	234.14	150.50	156.00		156.00	0.000015	0.25	1144.18	523.80	0.02
RIVER-1	Reach-1	269.*	Max WS	234.34	150.12	156.00		156.00	0.000010	0.25	1263.97	516.39	0.02
RIVER-1	Reach-1	268	Max WS	147.67	149.75	155.48		155.99	0.003617	5.72	25.80	447.65	0.42
RIVER-1	Reach-1	267.68		Culvert									
RIVER-1	Reach-1	267.265*	Max WS	234.34	149.43	152.11	153.50	156.86	0.075344	17.49	13.40	36.34	1.88
RIVER-1	Reach-1	266.53	Max WS	234.33	149.10	152.26		152.70	0.004365	5.29	44.30	51.59	0.52
RIVER-1	Reach-1	266.52		Culvert									
RIVER-1	Reach-1	265.05	Max WS	234.33	148.65	150.84		151.75	0.014968	7.66	30.61	33.12	0.91
RIVER-1	Reach-1	264.033*	Max WS	234.31	148.24	150.59		150.80	0.006602	3.65	64.19	42.83	0.53
RIVER-1	Reach-1	263.016*	Max WS	234.25	147.84	150.21		150.35	0.006367	3.12	88.32	120.32	0.47
RIVER-1	Reach-1	262	Max WS	234.21	147.43	150.00		150.03	0.001386	1.54	198.83	206.06	0.21
RIVER-1	Reach-1	261.*	Max WS	234.46	146.71	149.23		149.42	0.010695	3.51	68.57	61.22	0.56
RIVER-1	Reach-1	260	Max WS	234.70	146.00	148.59		148.66	0.003573	2.27	134.79	171.03	0.33
RIVER-1	Reach-1	259.*	Max WS	234.74	146.00	148.03		148.21	0.009399	3.45	74.14	84.00	0.53
RIVER-1	Reach-1	258	Max WS	234.76	146.00	147.72		147.77	0.003302	2.06	146.04	182.30	0.32
RIVER-1	Reach-1	257.*	Max WS	234.87	145.50	147.45		147.50	0.003193	2.26	149.58	197.40	0.32
RIVER-1	Reach-1	256	Max WS	234.81	145.00	147.06		147.15	0.005974	3.28	135.36	277.15	0.44
RIVER-1	Reach-1	255.*	Max WS	260.29	144.50	146.54		146.68	0.008182	3.77	109.27	172.52	0.51
RIVER-1	Reach-1	254	Max WS	260.41	144.00	145.94		146.08	0.008312	3.62	93.22	101.14	0.51
RIVER-1	Reach-1	253.*	Max WS	260.52	143.00	145.12		145.33	0.012348	4.31	83.41	113.03	0.62
RIVER-1	Reach-1	252	Max WS	260.37	142.00	144.67		144.73	0.003585	2.64	150.07	185.17	0.34
RIVER-1	Reach-1	251.*	Max WS	202.43	141.75	144.38		144.40	0.001336	1.59	207.37	328.89	0.21
RIVER-1	Reach-1	250	Max WS	194.71	141.50	144.30		144.30	0.000219	0.68	435.19	500.60	0.09
RIVER-1	Reach-1	249.*	Max WS	193.75	141.25	144.28		144.29	0.000143	0.58	484.64	471.21	0.07
RIVER-1	Reach-1	248	Max WS	193.32	141.00	144.28		144.28	0.000087	0.50	565.44	539.32	0.06
RIVER-1	Reach-1	247.*	Max WS	192.99	140.75	144.27		144.27	0.000047	0.39	644.42	404.33	0.04
RIVER-1	Reach-1	246	Max WS	193.07	140.50	144.27		144.27	0.000024	0.31	751.99	345.39	0.03
RIVER-1	Reach-1	245.*	Max WS	192.81	139.75	144.26		144.26	0.000057	0.54	559.65	318.54	0.05
RIVER-1	Reach-1	244	Max WS	192.85	139.00	144.26		144.26	0.000029	0.41	680.09	309.58	0.03
RIVER-1	Reach-1	243.*	Max WS	193.12	139.50	144.26		144.26	0.000021	0.35	832.80	411.93	0.03
RIVER-1	Reach-1	242	Max WS	192.91	140.00	144.26		144.26	0.000011	0.24	1130.58	507.06	0.02
RIVER-1	Reach-1	241.*	Max WS	192.96	139.50	144.26		144.26	0.000010	0.25	1134.86	499.29	0.02
RIVER-1	Reach-1	240	Max WS	193.01	139.00	144.26		144.26	0.000009	0.26	1164.21	495.21	0.02
RIVER-1	Reach-1	239.*	Max WS	193.05	138.50	144.26		144.26	0.000005	0.19	1453.05	551.96	0.02
RIVER-1	Reach-1	238	Max WS	193.01	138.00	144.04		144.58	0.003703	5.87	32.88	603.16	0.42
RIVER-1	Reach-1	237		Culvert									
RIVER-1	Reach-1	236.5	Max WS	193.01	137.25	139.80	140.73	143.04	0.075642	14.46	13.34	309.17	1.64
RIVER-1	Reach-1	235.85	Max WS	193.01	136.60	139.38		139.76	0.004558	4.96	38.92	36.68	0.52
RIVER-1	Reach-1	235.84		Culvert									

RIVER-1	Reach-1	235.23	Max WS	193.00	136.10	138.71		139.14	0.005642	5.29	36.51	35.65	0.58
RIVER-1	Reach-1	234.153*	Max WS	193.00	135.73	138.70		138.83	0.002439	2.85	67.75	30.28	0.34
RIVER-1	Reach-1	233.076*	Max WS	192.98	135.37	138.55		138.72	0.003979	3.42	71.77	217.86	0.39
RIVER-1	Reach-1	232	Max WS	193.00	135.00	138.14	137.52	138.53	0.012152	5.20	60.25	370.61	0.61
RIVER-1	Reach-1	231.*	Max WS	193.06	135.00	137.82		137.91	0.004218	2.97	137.95	427.92	0.37
RIVER-1	Reach-1	230	Max WS	193.11	135.00	137.72		137.73	0.000479	1.03	344.62	494.86	0.13
RIVER-1	Reach-1	229.*	Max WS	205.83	134.50	137.65		137.66	0.000798	1.44	283.59	444.34	0.17
RIVER-1	Reach-1	228	Max WS	205.95	134.00	137.53		137.56	0.001330	1.97	223.83	423.10	0.21
RIVER-1	Reach-1	227.*	Max WS	206.04	133.85	137.41		137.44	0.001517	1.89	202.72	355.52	0.22
RIVER-1	Reach-1	226	Max WS	206.14	133.70	137.10		137.18	0.005577	2.78	123.00	302.56	0.40
RIVER-1	Reach-1	225.*	Max WS	206.19	133.48	136.76		136.86	0.005397	3.07	117.97	281.35	0.41
RIVER-1	Reach-1	224	Max WS	206.24	133.25	136.43		136.55	0.005835	3.50	113.86	268.96	0.43
RIVER-1	Reach-1	223.*	Max WS	206.31	133.12	136.07		136.17	0.005682	3.44	119.64	265.82	0.43
RIVER-1	Reach-1	222	Max WS	206.38	133.00	135.82		135.87	0.003060	2.60	155.47	267.78	0.31
RIVER-1	Reach-1	221.*	Max WS	206.44	132.70	135.63		135.69	0.003001	2.69	156.09	282.35	0.31
RIVER-1	Reach-1	220	Max WS	206.51	132.40	135.31		135.44	0.005717	3.70	119.78	306.30	0.43
RIVER-1	Reach-1	219.*	Max WS	206.53	131.80	135.09		135.24	0.004618	3.60	105.42	243.67	0.40
RIVER-1	Reach-1	218	Max WS	206.55	131.20	135.06		135.08	0.000832	1.71	231.52	342.21	0.17
RIVER-1	Reach-1	217.*	Max WS	206.15	131.98	134.98		135.00	0.000990	1.63	222.78	322.43	0.18
RIVER-1	Reach-1	216	Max WS	204.36	132.75	134.89		134.91	0.001367	1.54	204.08	304.14	0.21
RIVER-1	Reach-1	215.*	Max WS	227.58	132.62	134.65		134.74	0.004756	2.76	119.29	227.46	0.39
RIVER-1	Reach-1	214	Max WS	227.45	132.50	134.32		134.40	0.004468	2.42	129.73	280.03	0.37
RIVER-1	Reach-1	213.*	Max WS	246.08	131.88	133.99		134.08	0.003767	2.82	137.38	204.90	0.39
RIVER-1	Reach-1	212	Max WS	246.05	131.25	133.75		133.84	0.003122	3.34	150.35	165.75	0.41
RIVER-1	Reach-1	211.065*	Max WS	246.05	130.32	132.84		133.22	0.012839	4.98	49.39	26.57	0.64
RIVER-1	Reach-1	210.13	Max WS	246.04	129.39	132.36		132.58	0.000936	3.76	65.43	36.49	0.38
RIVER-1	Reach-1	209.23		Culvert									
RIVER-1	Reach-1	208.43	Max WS	246.04	128.67	132.27		132.39	0.000372	2.69	91.34	61.94	0.25
RIVER-1	Reach-1	205.91	Max WS	246.04	129.85	132.00		132.28	0.002563	4.25	57.90	33.86	0.57
RIVER-1	Reach-1	205.49	Max WS	246.04	129.75	131.89		132.17	0.002582	4.25	57.87	34.00	0.57
RIVER-1	Reach-1	204.965*	Max WS	246.04	129.62	131.76		132.04	0.002577	4.24	58.03	34.21	0.57
RIVER-1	Reach-1	204.44	Max WS	246.03	129.49	131.63		131.91	0.002569	4.23	58.22	34.42	0.57
RIVER-1	Reach-1	203.626*	Max WS	246.03	129.29	131.42		131.70	0.002577	4.22	58.30	34.64	0.57
RIVER-1	Reach-1	202.813*	Max WS	246.03	129.08	131.23		131.50	0.002500	4.16	59.07	35.00	0.56
RIVER-1	Reach-1	202	Max WS	246.02	128.88	131.04		131.30	0.002452	4.13	59.63	35.33	0.56
RIVER-1	Reach-1	201.36	Max WS	246.02	128.72	130.88		131.14	0.002472	4.15	59.26	34.99	0.56
RIVER-1	Reach-1	200.405*	Max WS	246.02	128.48	130.64		130.91	0.002440	4.14	59.47	34.95	0.56
RIVER-1	Reach-1	199.451*	Max WS	201.92	128.24	130.43		130.60	0.001585	3.36	60.18	35.02	0.45
RIVER-1	Reach-1	198.497*	Max WS	201.73	128.00	130.32		130.47	0.001287	3.12	64.60	35.79	0.41
RIVER-1	Reach-1	197.542*	Max WS	201.46	127.76	130.23		130.36	0.001013	2.87	70.11	36.74	0.37
RIVER-1	Reach-1	196.588*	Max WS	201.43	127.52	130.17		130.27	0.000788	2.63	76.48	37.80	0.33
RIVER-1	Reach-1	195.634*	Max WS	201.04	127.28	130.12		130.21	0.000607	2.40	83.68	38.98	0.29
RIVER-1	Reach-1	194.68*	Max WS	201.01	127.04	130.08		130.16	0.000469	2.20	91.54	40.20	0.26
RIVER-1	Reach-1	193.725*	Max WS	200.44	126.81	130.05		130.12	0.000367	2.01	99.59	41.42	0.23
RIVER-1	Reach-1	192.771*	Max WS	200.38	126.57	130.03		130.08	0.000287	1.85	108.58	42.73	0.20
RIVER-1	Reach-1	191.817*	Max WS	200.36	126.33	130.01		130.06	0.000227	1.70	117.98	44.04	0.18
RIVER-1	Reach-1	190.862*	Max WS	199.46	126.09	130.00		130.04	0.000179	1.56	127.84	45.37	0.16
RIVER-1	Reach-1	189.908*	Max WS	199.38	125.85	129.99		130.02	0.000144	1.44	138.04	46.67	0.15
RIVER-1	Reach-1	188.954*	Max WS	199.32	125.61	129.98		130.01	0.000117	1.34	148.68	48.01	0.13
RIVER-1	Reach-1	188	Max WS	199.29	125.37	129.98		130.00	0.000096	1.25	159.59	49.31	0.12
RIVER-1	Reach-1	187.7	Max WS	531.10	125.29	129.67		129.84	0.000620	3.30	161.08	46.29	0.31
RIVER-1	Reach-1	187.65	Max WS	531.10	125.27	129.71		129.84	0.000452	2.92	184.33	52.34	0.27
RIVER-1	Reach-1	187.2	Max WS	531.03	125.15	129.73		129.81	0.000240	2.24	239.54	62.86	0.20
RIVER-1	Reach-1	187.15	Max WS	531.02	125.13	129.73		129.81	0.000252	2.25	235.80	62.08	0.20
RIVER-1	Reach-1	187	Max WS	531.01	125.09	129.74		129.81	0.000202	2.03	261.83	68.66	0.18
RIVER-1	Reach-1	186.81	Max WS	530.38	123.29	129.57		129.82	0.000405	4.07	130.45	72.11	0.29
RIVER-1	Reach-1	186.80		Culvert									
RIVER-1	Reach-1	185.39	Max WS	528.45	122.78	129.43		129.63	0.000295	3.61	146.28	48.79	0.25
RIVER-1	Reach-1	184.5	Max WS	529.50	126.00	129.52		129.54	0.000798	2.00	535.34	398.35	0.21
RIVER-1	Reach-1	184	Max WS	529.34	126.00	129.47		129.50	0.000758	2.08	523.44	390.30	0.21
RIVER-1	Reach-1	183.*	Max WS	538.49	126.00	129.32		129.42	0.002768	3.55	273.10	218.87	0.36
RIVER-1	Reach-1	182	Max WS	538.43	126.00	129.22		129.27	0.001856	2.65	309.16	205.41	0.27
RIVER-1	Reach-1	181.*	Max WS	540.38	126.00	128.99		129.06	0.002638	2.93	279.44	217.30	0.32
RIVER-1	Reach-1	180	Max WS	541.67	126.00	128.73		128.80	0.002963	2.83	302.41	302.16	0.33
RIVER-1	Reach-1	179.*	Max WS	582.89	125.00	128.47		128.53	0.002625	2.87	353.62	375.02	0.31
RIVER-1	Reach-1	178	Max WS	584.30	124.00	128.33		128.36	0.000939	1.82	532.82	441.88	0.19
RIVER-1	Reach-1	177.*	Max WS	587.23	124.00	128.14		128.18	0.001532	2.36	457.86	452.87	0.24
RIVER-1	Reach-1	176	Max WS	590.38	124.00	127.77		127.85	0.003358	3.32	351.48	448.51	0.35
RIVER-1	Reach-1	175.*	Max WS	597.70	123.50	127.50		127.60	0.004159	3.69	326.11	461.26	0.39

RIVER-1	Reach-1	174	Max WS	596.35	123.00	127.26	127.35	0.003331	3.33	375.24	568.34	0.34
RIVER-1	Reach-1	173.*	Max WS	593.97	123.50	127.15	127.19	0.001826	2.37	505.23	646.13	0.25
RIVER-1	Reach-1	172	Max WS	593.67	124.00	127.11	127.12	0.000569	1.28	790.99	748.60	0.14
RIVER-1	Reach-1	171.*	Max WS	593.74	124.00	127.02	127.04	0.000869	1.55	705.98	786.45	0.17
RIVER-1	Reach-1	170	Max WS	594.28	124.00	126.89	126.91	0.001334	1.85	588.75	690.04	0.21
RIVER-1	Reach-1	169.*	Max WS	593.35	123.50	126.79	126.83	0.002220	2.54	516.75	796.37	0.28
RIVER-1	Reach-1	168	Max WS	570.90	123.00	126.68	126.71	0.001808	2.38	484.47	608.08	0.25
RIVER-1	Reach-1	167.*	Max WS	495.56	122.50	126.59	126.61	0.000984	1.91	565.52	714.43	0.19
RIVER-1	Reach-1	166	Max WS	483.54	122.00	126.55	126.56	0.000539	1.50	725.25	869.75	0.14
RIVER-1	Reach-1	165.*	Max WS	472.48	121.00	126.46	126.47	0.000439	1.37	835.25	1092.28	0.13
RIVER-1	Reach-1	164	Max WS	472.65	120.00	126.41	126.41	0.000196	0.88	1076.58	1126.09	0.08
RIVER-1	Reach-1	163.*	Max WS	473.02	120.00	126.39	126.40	0.000157	0.88	1154.60	1102.95	0.07
RIVER-1	Reach-1	162	Max WS	473.89	120.12	126.29	126.43	0.000873	2.95	160.44	1028.42	0.21
RIVER-1	Reach-1	161.37		Culvert								
RIVER-1	Reach-1	161.*	Max WS	473.35	120.12	125.74	125.90	0.001190	3.24	146.11	884.94	0.24
RIVER-1	Reach-1	160.5	Max WS	473.87	120.38	125.77	125.78	0.000126	0.80	1126.32	893.78	0.07
RIVER-1	Reach-1	160.1	Max WS	474.20	120.50	125.66	125.88	0.001867	3.83	123.74	883.20	0.30
RIVER-1	Reach-1	160.09		Culvert								
RIVER-1	Reach-1	160	Max WS	474.11	120.50	124.90	125.41	0.007304	5.75	82.50	703.84	0.55
RIVER-1	Reach-1	159.*	Max WS	474.99	120.25	124.72	124.75	0.000920	1.74	506.96	702.14	0.19
RIVER-1	Reach-1	158	Max WS	475.91	120.00	124.64	124.66	0.000798	1.57	536.02	744.58	0.17
RIVER-1	Reach-1	157.*	Max WS	476.56	119.50	124.56	124.60	0.001198	2.10	455.49	750.47	0.21
RIVER-1	Reach-1	156	Max WS	477.20	119.00	124.37	124.52	0.003790	3.88	284.43	721.88	0.37
RIVER-1	Reach-1	155.*	Max WS	477.81	119.00	124.10	124.17	0.002348	3.06	378.00	690.53	0.29
RIVER-1	Reach-1	154	Max WS	512.40	119.00	123.93	123.95	0.001040	2.01	567.12	716.83	0.19
RIVER-1	Reach-1	153.*	Max WS	535.15	119.00	123.84	123.87	0.001140	2.14	590.52	863.23	0.21
RIVER-1	Reach-1	152	Max WS	535.95	119.00	123.76	123.78	0.000994	1.93	627.73	907.92	0.19
RIVER-1	Reach-1	151.*	Max WS	550.76	119.00	123.62	123.65	0.001365	2.03	579.37	908.44	0.22
RIVER-1	Reach-1	150	Max WS	550.67	119.00	123.36	123.41	0.003259	2.59	429.09	844.51	0.32
RIVER-1	Reach-1	149.*	Max WS	555.85	118.50	123.08	123.14	0.002469	2.71	441.27	786.05	0.29
RIVER-1	Reach-1	148	Max WS	560.98	118.00	122.89	122.93	0.001607	2.45	505.74	748.83	0.24
RIVER-1	Reach-1	147.*	Max WS	564.87	117.92	122.74	122.78	0.002103	2.50	513.85	968.01	0.27
RIVER-1	Reach-1	146	Max WS	568.67	117.83	122.54	122.58	0.003309	2.69	473.98	1045.18	0.33
RIVER-1	Reach-1	145.*	Max WS	572.41	117.92	122.32	122.37	0.002097	2.02	479.46	1039.90	0.26
RIVER-1	Reach-1	144	Max WS	575.96	118.00	122.13	122.17	0.003030	1.85	440.65	987.96	0.30
RIVER-1	Reach-1	143.*	Max WS	580.13	117.50	121.97	122.00	0.001016	1.66	605.09	978.11	0.19
RIVER-1	Reach-1	142	Max WS	584.24	117.00	121.88	121.91	0.001053	2.08	678.75	937.29	0.19
RIVER-1	Reach-1	141.*	Max WS	588.23	117.00	121.75	121.79	0.001666	2.58	588.64	978.65	0.24
RIVER-1	Reach-1	140	Max WS	591.84	117.00	121.57	121.62	0.002431	3.05	527.36	1053.14	0.29
RIVER-1	Reach-1	139.*	Max WS	594.39	117.50	121.44	121.47	0.001599	2.32	601.73	979.64	0.24
RIVER-1	Reach-1	138	Max WS	597.09	118.00	121.37	121.38	0.000802	1.57	759.88	965.17	0.17
RIVER-1	Reach-1	137.*	Max WS	600.33	118.00	121.29	121.31	0.001051	1.69	691.74	985.36	0.19
RIVER-1	Reach-1	136	Max WS	603.30	118.00	121.18	121.21	0.001784	2.00	581.23	1066.97	0.25
RIVER-1	Reach-1	135.*	Max WS	606.46	117.50	121.07	121.09	0.001210	1.56	624.29	866.26	0.20
RIVER-1	Reach-1	134	Max WS	609.82	117.00	120.99	121.00	0.000793	1.20	711.89	768.87	0.16
RIVER-1	Reach-1	133.*	Max WS	613.83	117.00	120.89	120.91	0.001068	1.37	610.36	746.54	0.19
RIVER-1	Reach-1	132	Max WS	617.87	117.00	120.79	120.82	0.000948	1.27	593.50	617.88	0.17
RIVER-1	Reach-1	131.*	Max WS	619.96	117.00	120.70	120.73	0.001295	1.41	570.80	818.98	0.20
RIVER-1	Reach-1	130	Max WS	622.10	117.00	120.61	120.63	0.001203	1.30	628.07	808.68	0.19
RIVER-1	Reach-1	129.*	Max WS	623.20	117.00	120.51	120.54	0.001753	1.52	553.14	828.11	0.23
RIVER-1	Reach-1	128	Max WS	624.30	117.00	120.26	120.34	0.005543	2.40	345.65	844.29	0.40
RIVER-1	Reach-1	127.*	Max WS	624.26	116.71	120.04	120.09	0.002850	2.22	434.71	693.07	0.30
RIVER-1	Reach-1	126	Max WS	624.24	116.42	119.98	120.00	0.001352	1.96	622.89	754.58	0.21
RIVER-1	Reach-1	125.*	Max WS	624.23	116.21	119.95	119.97	0.001266	1.74	647.62	814.21	0.21
RIVER-1	Reach-1	124	Max WS	624.22	116.00	119.93	119.95	0.000910	1.35	729.17	835.44	0.17
RIVER-1	Reach-1	123.*	Max WS	624.19	116.18	119.88	119.89	0.001089	1.58	691.45	871.84	0.19
RIVER-1	Reach-1	122	Max WS	623.74	116.35	119.82	119.83	0.001070	1.59	725.99	970.21	0.19
RIVER-1	Reach-1	121.*	Max WS	701.03	115.68	119.65	119.69	0.001924	2.10	553.65	635.74	0.26
RIVER-1	Reach-1	120	Max WS	700.90	115.00	119.51	119.54	0.001151	2.05	630.94	626.98	0.21
RIVER-1	Reach-1	119.*	Max WS	700.81	114.50	119.39	119.44	0.001751	2.80	539.22	593.68	0.28
RIVER-1	Reach-1	118	Max WS	691.07	114.00	119.04	119.29	0.004629	4.95	330.23	542.93	0.51
RIVER-1	Reach-1	117.*	Max WS	677.08	114.50	118.95	119.04	0.001626	2.69	392.54	380.98	0.30
RIVER-1	Reach-1	116	Max WS	625.23	115.00	118.86	118.92	0.001762	2.18	392.95	393.08	0.30
RIVER-1	Reach-1	115.*	Max WS	513.01	114.50	118.78	118.81	0.000904	1.41	440.15	437.75	0.21
RIVER-1	Reach-1	114	Max WS	500.57	114.00	118.73	118.75	0.000546	1.04	536.94	501.42	0.16
RIVER-1	Reach-2	112.05	Max WS	1267.57	112.00	118.73	118.83	0.001537	2.69	642.85	567.36	0.30
RIVER-1	Reach-2	112	Max WS	1267.79	112.00	118.72	118.82	0.001558	2.70	638.10	565.19	0.30
RIVER-1	Reach-2	111.95		Lat Struct								
RIVER-1	Reach-2	111.*	Max WS	1265.41	113.00	118.61	118.70	0.001847	2.54	633.89	545.45	0.32

RIVER-1	Reach-2	110	Max WS	1223.96	114.00	118.55		118.60	0.001406	2.04	821.91	667.33	0.27
RIVER-1	Reach-2	109.*	Max WS	1205.04	113.50	118.35		118.42	0.002386	2.76	701.28	590.98	0.35
RIVER-1	Reach-2	108	Max WS	1200.05	113.00	118.16		118.25	0.001486	3.26	771.15	585.80	0.31
RIVER-1	Reach-2	107.*	Max WS	1199.17	112.00	118.11		118.17	0.001017	2.65	935.60	677.02	0.25
RIVER-1	Reach-2	106	Max WS	1198.29	111.00	118.08		118.13	0.000641	2.42	1125.02	749.24	0.20
RIVER-1	Reach-2	105.*	Max WS	1197.75	110.50	118.04		118.08	0.000794	2.47	1091.93	758.36	0.22
RIVER-1	Reach-2	104	Max WS	1197.24	110.00	117.99		118.04	0.000772	2.83	1089.32	767.22	0.21
RIVER-1	Reach-2	103.*	Max WS	1197.50	110.00	117.98		118.01	0.000763	2.15	1172.49	821.63	0.21
RIVER-1	Reach-2	102	Max WS	1015.20	110.00	117.98		118.00	0.000269	1.73	1438.55	837.38	0.14
RIVER-1	Reach-2	101.*	Max WS	1252.41	110.50	117.94		117.97	0.000423	2.13	1426.81	822.53	0.17
RIVER-1	Reach-2	100	Max WS	1252.33	111.00	117.92		117.94	0.000435	2.13	1417.37	809.91	0.17
RIVER-1	Reach-2	99.*	Max WS	1253.43	111.00	117.84		117.87	0.000423	2.13	1418.28	809.73	0.17
RIVER-1	Reach-2	98	Max WS	1254.17	111.00	117.76		117.79	0.000410	2.12	1421.65	812.94	0.17
RIVER-1	Reach-2	97.*	Max WS	1255.58	110.50	117.72		117.75	0.000401	2.12	1416.76	792.67	0.17
RIVER-1	Reach-2	96	Max WS	1256.12	110.00	117.68		117.70	0.000395	2.10	1410.64	771.80	0.16
RIVER-1	Reach-2	95.*	Max WS	1257.76	109.50	117.64		117.67	0.000405	2.15	1383.98	777.84	0.17
RIVER-1	Reach-2	94	Max WS	1258.64	109.00	117.59		117.63	0.000414	2.20	1356.65	782.21	0.17
RIVER-1	Reach-2	93.*	Max WS	1259.92	109.00	117.55		117.59	0.000392	2.18	1311.18	704.60	0.16
RIVER-1	Reach-2	92	Max WS	1260.92	109.00	117.51		117.55	0.000385	2.25	1215.04	597.96	0.16
RIVER-1	Reach-2	91.*	Max WS	1262.59	108.50	117.48		117.52	0.000362	2.15	1250.16	604.87	0.16
RIVER-1	Reach-2	90	Max WS	1264.22	108.00	117.45		117.48	0.000313	2.01	1484.05	1184.02	0.15
RIVER-1	Reach-2	89.*	Max WS	1265.79	108.50	117.42		117.45	0.000304	2.03	1428.95	1106.41	0.15
RIVER-1	Reach-2	88	Max WS	1267.26	109.00	117.39		117.42	0.000290	2.02	1416.72	888.50	0.14
RIVER-1	Reach-2	87.*	Max WS	1268.49	108.00	117.38		117.40	0.000149	1.60	1897.58	1216.78	0.11
RIVER-1	Reach-2	86	Max WS	1269.68	107.00	117.37		117.39	0.000074	1.22	2498.07	1314.49	0.08
RIVER-1	Reach-2	85.*	Max WS	1270.28	107.50	117.37		117.38	0.000077	1.14	2677.32	1358.72	0.08
RIVER-1	Reach-2	84	Max WS	1270.76	108.00	117.37		117.38	0.000071	0.98	2962.60	1407.81	0.07
RIVER-1	Reach-2	83.*	Max WS	1287.34	108.50	117.36		117.37	0.000105	1.17	2542.90	1318.71	0.09
RIVER-1	Reach-2	82	Max WS	1287.14	109.00	117.35		117.36	0.000151	1.34	2242.33	1252.13	0.10
RIVER-1	Reach-2	81.56	Max WS	1286.90	108.22	117.27	113.20	117.38	0.000945	2.72	679.87	1347.06	0.21
RIVER-1	Reach-2	81.55		Bridge									
RIVER-1	Reach-2	81.30	Max WS	1283.37	108.96	115.98		116.43	0.006555	5.34	240.41	70.61	0.51
RIVER-1	Reach-2	80.95	Max WS	1285.15	108.83	116.03	113.00	116.28	0.001547	4.08	315.36	64.40	0.32
RIVER-1	Reach-2	80.94		Bridge									
RIVER-1	Reach-2	80.38	Max WS	1269.67	108.67	115.96		116.22	0.001661	4.13	307.50	65.90	0.34
RIVER-1	Reach-2	79.3849*	Max WS	1263.31	108.33	115.86		116.05	0.001298	3.82	626.97	607.24	0.30
RIVER-1	Reach-2	78.39	Max WS	1256.05	108.00	115.80		115.87	0.000604	2.88	818.77	327.24	0.21
RIVER-1	Reach-2	77.6566*	Max WS	1255.56	107.80	115.80		115.83	0.000264	1.90	1389.63	556.58	0.14
RIVER-1	Reach-2	76.9233*	Max WS	1255.05	107.60	115.78		115.81	0.000311	2.05	1472.23	785.94	0.15
RIVER-1	Reach-2	76.19	Max WS	1242.10	107.40	115.73		115.80	0.000563	2.72	1137.59	907.89	0.20
RIVER-1	Reach-2	75.86	Max WS	1227.32	107.22	115.57	112.15	115.77	0.001098	3.82	508.31	438.26	0.28
RIVER-1	Reach-2	75.85		Bridge									
RIVER-1	Reach-2	75.40	Max WS	1234.60	106.63	115.57		115.75	0.001208	3.59	500.46	397.80	0.29
RIVER-1	Reach-2	74.7*	Max WS	1236.51	106.82	115.59		115.64	0.000455	2.02	1156.25	825.60	0.17
RIVER-1	Reach-2	74	Max WS	1236.48	107.00	115.59		115.60	0.000224	1.25	1937.90	1249.34	0.12
RIVER-1	Reach-2	73.*	Max WS	1234.41	107.43	115.57		115.58	0.000152	1.17	2255.44	1311.19	0.10
RIVER-1	Reach-2	72	Max WS	1234.39	107.86	115.56		115.57	0.000116	1.13	2559.76	1372.43	0.09
RIVER-1	Reach-2	71.*	Max WS	1555.62	107.44	115.45		115.57	0.000992	3.06	720.60	445.21	0.24
RIVER-1	Reach-2	70	Max WS	1555.53	107.03	115.34		115.47	0.000940	2.82	552.62	102.30	0.21
RIVER-1	Reach-2	69.*	Max WS	1555.57	107.35	115.21		115.36	0.001255	3.14	495.82	94.18	0.24
RIVER-1	Reach-2	68	Max WS	1555.53	107.68	115.03		115.22	0.001613	3.46	449.70	89.17	0.27
RIVER-1	Reach-2	67	Max WS	1555.41	107.40	114.84		115.04	0.002015	3.84	462.07	134.96	0.30
RIVER-1	Reach-2	66	Max WS	1555.27	107.40	114.59		114.83	0.002453	4.14	428.48	133.22	0.33
RIVER-1	Reach-2	65.*	Max WS	1555.22	107.20	114.42		114.62	0.001771	3.66	475.03	173.41	0.31
RIVER-1	Reach-2	64	Max WS	1555.17	107.00	114.27		114.45	0.001497	3.46	464.34	185.94	0.31
RIVER-1	Reach-2	63.*	Max WS	1558.05	106.81	114.12		114.30	0.001574	3.38	478.51	226.56	0.32
RIVER-1	Reach-2	62.*	Max WS	1560.79	106.62	113.98		114.15	0.001581	3.28	498.98	198.05	0.32
RIVER-1	Reach-2	61.*	Max WS	1563.62	106.43	113.85		114.00	0.001369	3.11	537.46	210.16	0.30
RIVER-1	Reach-2	60	Max WS	1566.37	106.24	113.77		113.88	0.001060	2.81	609.86	231.17	0.26
RIVER-1	Reach-2	59.*	Max WS	1571.37	106.07	113.68		113.79	0.000886	2.78	695.79	361.61	0.24
RIVER-1	Reach-2	58	Max WS	1576.51	105.90	113.65		113.72	0.000468	2.42	1040.14	477.63	0.18
RIVER-1	Reach-2	57.2	Max WS	1580.61	107.05	113.57	110.86	113.68	0.000935	3.11	834.42	421.70	0.25
RIVER-1	Reach-2	57.19		Bridge									
RIVER-1	Reach-2	56.9	Max WS	1580.26	107.05	113.45		113.58	0.001167	3.37	753.56	400.25	0.28
RIVER-1	Reach-2	56	Max WS	1584.83	105.90	113.40		113.49	0.000614	2.61	848.95	384.09	0.21
RIVER-1	Reach-2	55.*	Max WS	1589.00	105.85	113.37		113.43	0.000504	2.20	1007.60	472.54	0.19
RIVER-1	Reach-2	54	Max WS	1593.23	105.80	113.33		113.38	0.000443	1.94	1147.29	560.62	0.17
RIVER-1	Reach-2	53.*	Max WS	1604.27	105.70	113.26		113.31	0.000479	2.04	1077.99	398.65	0.16
RIVER-1	Reach-2	52	Max WS	1615.36	105.60	113.18		113.22	0.000586	2.06	1014.74	325.37	0.16

RIVER-1	Reach-2	51.*	Max WS	1620.76	105.57	113.11		113.16	0.000691	2.31	962.98	314.72	0.19
RIVER-1	Reach-2	50.*	Max WS	1626.15	105.54	113.03		113.09	0.000776	2.53	920.57	304.37	0.21
RIVER-1	Reach-2	49.*	Max WS	1631.52	105.50	112.94		113.01	0.000821	2.75	889.25	295.19	0.22
RIVER-1	Reach-2	48	Max WS	1636.87	105.47	112.84		112.93	0.000799	3.01	869.01	287.62	0.23
RIVER-1	Reach-2	47.*	Max WS	1642.21	105.68	112.78		112.85	0.000742	2.82	953.41	323.44	0.23
RIVER-1	Reach-2	46.*	Max WS	1647.53	105.88	112.72		112.78	0.000632	2.57	1060.97	357.78	0.21
RIVER-1	Reach-2	45.*	Max WS	1652.84	106.08	112.67		112.71	0.000494	2.32	1196.58	403.45	0.19
RIVER-1	Reach-2	44	Max WS	1658.38	106.29	112.63		112.67	0.000365	2.09	1359.90	430.71	0.16
RIVER-1	Reach-2	43.*	Max WS	1663.31	106.30	112.59		112.63	0.000380	2.17	1309.57	426.36	0.17
RIVER-1	Reach-2	42.*	Max WS	1668.25	106.31	112.55		112.60	0.000396	2.23	1266.93	422.26	0.17
RIVER-1	Reach-2	41.*	Max WS	1673.28	106.32	112.51		112.56	0.000411	2.27	1231.30	418.29	0.17
RIVER-1	Reach-2	40	Max WS	1678.21	106.33	112.46		112.52	0.000424	2.30	1203.54	414.64	0.18
RIVER-1	Reach-2	39.*	Max WS	1678.29	106.17	112.44		112.48	0.000343	2.09	1352.26	457.17	0.16
RIVER-1	Reach-2	38.*	Max WS	1678.20	106.01	112.41		112.44	0.000260	1.83	1550.97	493.37	0.14
RIVER-1	Reach-2	37.*	Max WS	1678.19	105.84	112.40		112.42	0.000185	1.56	1788.95	514.11	0.12
RIVER-1	Reach-2	36	Max WS	1678.18	105.68	112.37		112.40	0.000229	1.75	1653.22	524.29	0.13
RIVER-1	Reach-2	35.22	Max WS	1678.17	104.52	112.15		112.43	0.001521	4.27	392.85	75.20	0.33
RIVER-1	Reach-2	34.82	Max WS	1678.16	104.52	112.08	108.72	112.37	0.001579	4.33	387.63	74.80	0.34
RIVER-1	Reach-2	34.81		Bridge									
RIVER-1	Reach-2	34.34	Max WS	1678.08	104.30	110.96		111.65	0.005893	6.66	251.81	68.25	0.61
RIVER-1	Reach-2	33.67*	Max WS	1678.03	104.12	110.91		111.34	0.003211	5.26	319.26	78.98	0.46
RIVER-1	Reach-2	33	Max WS	1678.07	103.93	111.00		111.15	0.001053	3.35	803.72	583.69	0.27
RIVER-1	Reach-2	32.*	Max WS	1678.05	103.40	110.90		111.03	0.001050	3.08	841.02	666.42	0.27
RIVER-1	Reach-2	31.*	Max WS	1678.01	102.88	110.75		110.89	0.001459	3.15	794.36	740.67	0.30
RIVER-1	Reach-2	30	Max WS	1677.97	102.35	110.43		110.65	0.003780	3.97	610.38	1004.14	0.46
RIVER-1	Reach-2	29.*	Max WS	1677.95	102.34	110.07		110.31	0.003930	4.22	618.19	946.01	0.47
RIVER-1	Reach-2	28.*	Max WS	1677.83	102.33	109.75		109.97	0.003592	4.24	697.53	887.82	0.46
RIVER-1	Reach-2	27.*	Max WS	1677.74	102.33	109.52		109.67	0.002614	3.86	895.16	957.37	0.40
RIVER-1	Reach-2	26	Max WS	1677.64	102.32	109.38		109.46	0.001571	3.19	1209.53	1058.49	0.31
RIVER-1	Reach-2	25.*	Max WS	1677.60	101.99	109.23		109.33	0.002110	3.52	1118.40	1136.13	0.35
RIVER-1	Reach-2	24.*	Max WS	1677.42	101.66	109.05		109.17	0.002800	3.82	1011.89	1219.69	0.40
RIVER-1	Reach-2	23.*	Max WS	1677.31	101.33	108.87		108.95	0.002427	3.34	1073.81	1062.57	0.37
RIVER-1	Reach-2	22	Max WS	1677.20	101.00	108.72		108.77	0.001881	2.79	1220.61	1113.03	0.32
RIVER-1	Reach-2	21.*	Max WS	1677.08	101.27	108.56		108.62	0.001995	2.90	1183.27	1099.15	0.33
RIVER-1	Reach-2	20.*	Max WS	1676.95	101.54	108.39		108.45	0.002122	3.01	1145.70	1035.73	0.34
RIVER-1	Reach-2	19.*	Max WS	1676.73	101.82	108.20		108.26	0.002301	3.11	1113.15	958.29	0.35
RIVER-1	Reach-2	18	Max WS	1676.43	102.09	108.01		108.06	0.002352	3.17	1091.62	877.29	0.35
RIVER-1	Reach-2	17.*	Max WS	1676.09	101.97	107.81		107.86	0.002305	3.11	1246.55	1224.19	0.35
RIVER-1	Reach-2	16.*	Max WS	1675.48	101.85	107.67		107.70	0.001443	2.55	1460.15	1231.34	0.28
RIVER-1	Reach-2	15.*	Max WS	1675.15	101.73	107.58		107.60	0.000837	1.96	1749.08	1236.99	0.21
RIVER-1	Reach-2	14	Max WS	1675.14	101.61	107.53		107.54	0.000495	1.44	2080.65	1245.19	0.16
RIVER-1	Reach-2	13.*	Max WS	1674.92	101.43	107.50		107.51	0.000404	1.23	2221.96	1251.49	0.15
RIVER-1	Reach-2	12.*	Max WS	1674.83	101.26	107.47		107.48	0.000324	1.20	2366.81	1242.86	0.13
RIVER-1	Reach-2	11.*	Max WS	1674.73	101.08	107.45		107.46	0.000261	1.14	2519.22	1232.37	0.12
RIVER-1	Reach-2	10	Max WS	1674.80	100.90	107.43		107.44	0.000215	1.07	2664.38	1217.08	0.11
RIVER-1	Reach-2	9.*	Max WS	1674.77	100.75	107.40		107.41	0.000364	1.40	2236.13	1197.24	0.14
RIVER-1	Reach-2	8.*	Max WS	1674.71	100.60	107.35		107.37	0.000556	1.84	1860.74	1260.01	0.18
RIVER-1	Reach-2	7.*	Max WS	1674.56	100.45	107.28		107.31	0.000876	2.46	1581.23	1254.13	0.23
RIVER-1	Reach-2	6	Max WS	1674.52	100.30	107.14		107.22	0.001645	3.51	1306.18	1342.24	0.32
RIVER-1	Reach-2	5.*	Max WS	1674.46	100.15	106.99		107.07	0.001578	3.51	1346.32	1468.88	0.31
RIVER-1	Reach-2	4.*	Max WS	1674.36	100.00	106.85		106.93	0.001437	3.40	1423.53	1583.84	0.30
RIVER-1	Reach-2	3.*	Max WS	1674.23	99.85	106.73		106.80	0.001367	3.36	1647.19	2167.74	0.30
RIVER-1	Reach-2	2	Max WS	1674.12	99.70	106.65		106.68	0.000802	2.61	2059.83	2285.41	0.23
RIVER-1	Reach-2	1.*	Max WS	1674.09	99.55	106.54		106.61	0.001276	3.36	1659.31	2243.63	0.29
RIVER-1	Reach-2	0	Max WS	1674.07	99.40	106.39	105.80	106.51	0.001669	3.89	1298.89	1963.65	0.33