Appendix I

Placer Ranch Specific Plan
Storm Drainage Master Plan

PR PLACER RANCH
SPECIFIC PLAN

Storm Drainage Master Plan

May 19, 2017

FINAL

DATUM NGVD29

Prepared for

Placer County
Community Development Resource Agency
3091 County Center Drive
Auburn, California 95603

Prepared by

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road
Roseville, California 95661

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HEC-RAS Model Files
XPStorm Model Files
Storm Water Quality Template Spreadsheets
Report Files

1. Executive Summary

Placer Ranch is a master-planned community that proposes to develop approximately 2,213 acres consisting of a mix of residential, commercial—employment and public use, recreational amenities including parks and significant open space, and a university campus. Placer Ranch (Plan Area) is located within the unincorporated area of Placer County within the Sunset Industrial Area. The Plan Area is adjacent to the City of Roseville's northern boundary, east of Industrial Avenue, and is bounded on the north by Sunset Boulevard West and on the west by Amoruso Ranch. Refer to Figure 1: Project Location Map to see the location of the proposed project.

The purpose of the Storm Drainage Master Plan (SDMP) is to analyze, identify, and document the Plan Area's existing hydrologic characteristics and determine the required on-site and off-site drainage facilities that are necessary such that the downstream drainage facilities remain unchanged. Flows generated by development of the site will be mitigated to 90% or less of the existing conditions. Downstream volumetric increases for the 100-year 8-day event will be tabulated herein and could be used for future retention facility design.

The Plan Area is within the Pleasant Grove watershed and the Orchard Creek watershed which are both a part of the larger Natomas Cross Canal watershed of northwestern Placer County and southeastern Sutter County (see Exhibit 7 in Appendix A). The Plan Area is dominated by a gentle grass covered undulating topography that rises from approximately 85-feet in the southwest to 145-feet in the northeast and is bisected diagonally by University Creek, a tributary of Pleasant Grove Creek. See Exhibit 1 in Appendix A to see the Plan Area in its pre-developed condition.

Based on the results of this SDMP, the Plan Area can develop as proposed by constructing storm drainage infrastructure consisting of pipelines, culvert crossings of University Creek and its tributaries, detention basins, and Low Impact Development features. This infrastructure will function to mitigate the increased storm runoff that will result from the development of the Plan Area.

The storm runoff impacts on local creeks due to pollutants and hydromodification will be mitigated by proposed Low Impact Development (LID) features including source controls, trees, disconnected impervious areas, swales, and if necessary, soil amendments. These LID measures not only treat runoff through natural physical and biological treatment processes but also reduce the amount of runoff through infiltration and evapotranspiration. This will keep developed flows from degrading the creek system due to erosion; while, at the same time, capture and remove urban pollutants from runoff flows from the developed areas prior to discharging the treated flows to the creek system. Water quality treatment will be treated for the 85th percentile, 24-hour design event and the hydromodification will be mitigated to the 2-year 24-hour design event.

Flows for the 2-year 24-hour, 10-year 24-hour, 100-year 24-hour events will be attenuated within the University Creek corridor in the over bank flow areas. These areas will coincide with planned culvert crossings of the creek and will utilize these crossings to detain flows as needed for flood control. Although the 200-year 24-hour event will not be attenuated, these crossings have also been sized to allow this event to be conveyed without overtopping the roadways or flood the adjacent developable areas within the Plan Area. Areas that drain to Orchard Creek and the North Branch Placer tributary are proposed to have detention basins to attenuate the flows larger than the 2-year event.

Drainage improvements on-site are designed to the 10-year 24-hour hydraulic grade line requirements and with the allowable street inundation in the 100-year 24-hour event standards in mind. For arterial streets, all travel lanes are to remain clear. For collectors, the center 12-feet of the road remains free of storm water. In both cases, the overland flows are to remain within the County's rights-of-ways. Positive overland flow routes have been created through grading and are shown on Exhibit 6 located in Appendix A.

Due to potential flooding in the lower portion of Natomas Cross Canal watershed, retention in excess of the existing runoff volume is required for the 100-year 8-day event for all upstream development. To determine the mitigation needed for the Plan Area's volumetric impacts, equations developed in the 2017 Pleasant Grove/Curry Creek Watershed Mitigation Fee report were used to calculate the volumetric impacts of the Plan Area. Retention will occur at an off-site location. The retention site is undetermined at this time; however, it will be within the Natomas Cross Canal watershed (see Exhibit 7 in Appendix A).

As the Plan Area lies in the most upstream area of both Pleasant Grove Creek and Orchard Creek watersheds, the Urban Level of Flood Protection (ULOP) does not apply. ULOP requires that several location criteria all be met in order to require the ULOP regulations. The Plan Area has less than the required watershed of 10 square miles (6400 acres) contributing to University Creek and tributaries of Orchard Creek and Pleasant Grove Creek. Since the Plan Area does not meet the criteria of ULOP, the 100-year inundation standards will continue to apply.

Portions of University Creek in the Plan Area are in a FEMA unnumbered Zone A area which means that no base flood elevations have been established. The North Branch Placer Tributary is in Zone AE and has established base flood elevations. The results of this study will be used as a basis for mapping the limits of inundation for University Creek within the Plan Area.

This SDMP demonstrates that the Plan Area can develop without exceeding the pre-development peak flow conditions, without adversely affecting the existing water quality of the receiving waters of the local creeks, and without impact to, or by mitigating for, loss of natural stormwater storage by means of planned stormwater retention areas. In this manner, University Creek and Orchard Creek and their tributaries as well as the downstream watercourses will be protected from the impacts of developing the lands within the Plan Area by constructing the drainage infrastructure discussed and identified in this study.

2. Introduction

2.1 Overview

The Plan Area is a proposed 2213± acre development project located in unincorporated Placer County. The proposed project consists of a mix of residential neighborhoods of diversified densities, commercial, schools, parks, open space areas along University Creek and its tributaries, a town center, and a centrally located campus for California State University Sacramento and Sierra College. The project site is in south Placer County, immediately north of the City of Roseville, south of the City of Lincoln, and west of the City of Rocklin. Refer to Figure 1: Project Location Map for the project's location. At full buildout, the Plan Area will support 5,827 dwelling units, 74 acres of commercial; 396 acres of Campus Park (mixed use); 301 acres of university campus; 38 acres of public facilities; and 324 acres of parks, recreation, and open space.

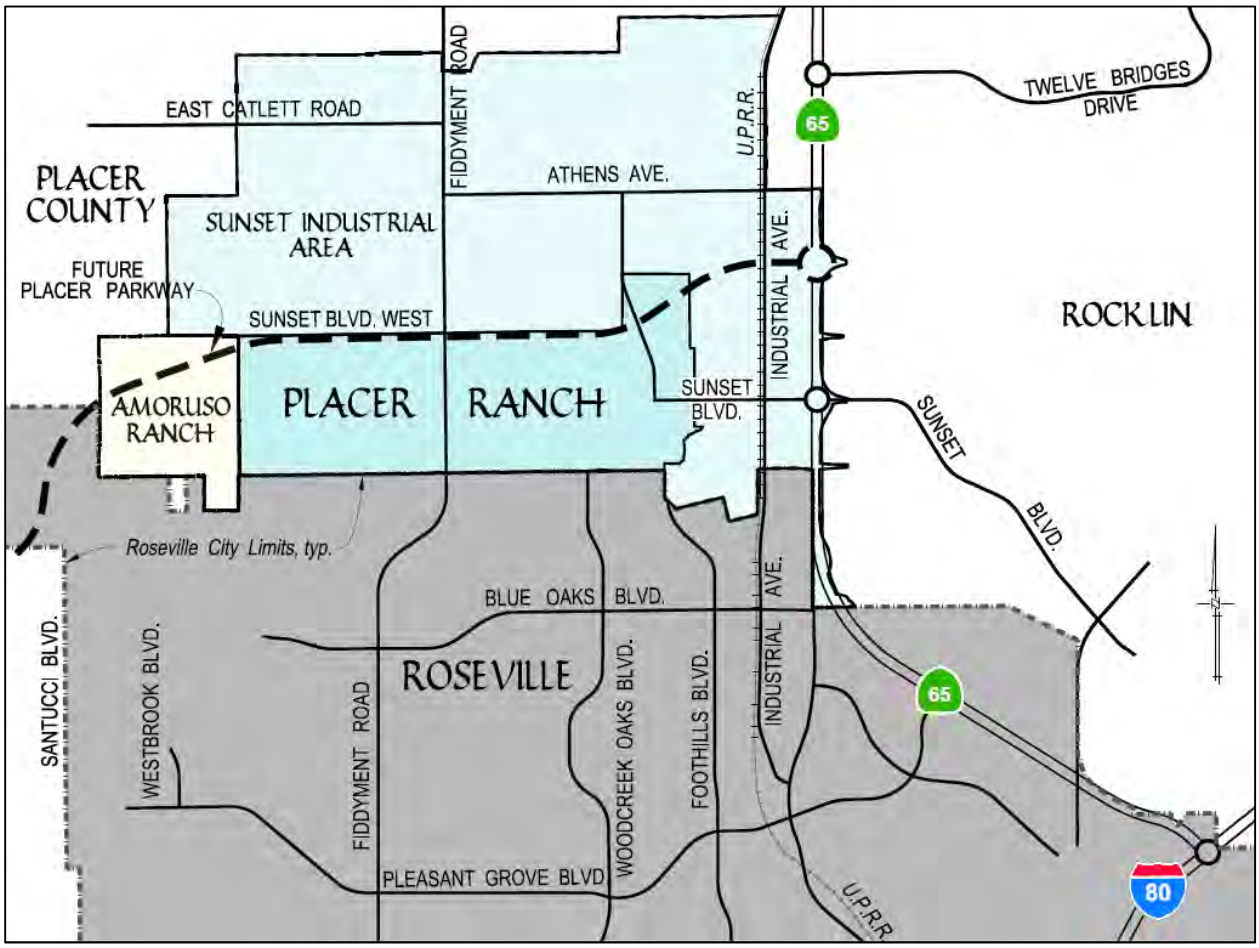


Figure 1: Project Location Map

The Plan Area is primarily undeveloped land with grassed covered flat to gently undulating terrain that rises from approximately 85-feet in the southwest to 145-feet above sea level in the northeast. Portions of the site were previously used for agriculture including cattle grazing as well as hay, wheat, and rice farming.

The Plan Area is predominately within the Pleasant Grove watershed with a smaller portion within the Orchard Creek watershed (Figure 2). Both of which are a part of the larger Natomas Cross Canal watershed of northwestern Placer County and southeastern Sutter County. University Creek, a tributary to Pleasant Grove Creek, bisects the Plan Area. The portion of the site that contributes to Orchard Creek is in the northeast corner. See Exhibit 1: Existing Conditions Aerial Photo in Appendix A.

University Creek is a tributary to Pleasant Grove Creek which drains to the Pleasant Grove Canal then on to the Natomas Cross Canal before entering the Sacramento River. Orchard Creek is a tributary to Auburn Ravine which drains to the East Side Canal then to Natomas Cross Canal before also entering the Sacramento River. Refer to Figure 2: Watershed Map and Exhibit 7 in Appendix A for an overall view of the watershed.

The study area for the Placer Ranch Drainage Master Plan (Plan Area SDMP) analyzes a watershed of approximately 3200 acres which drain in to, out of, or through the project. This study area includes not only on-site sheds but contributing off-site sheds as well.

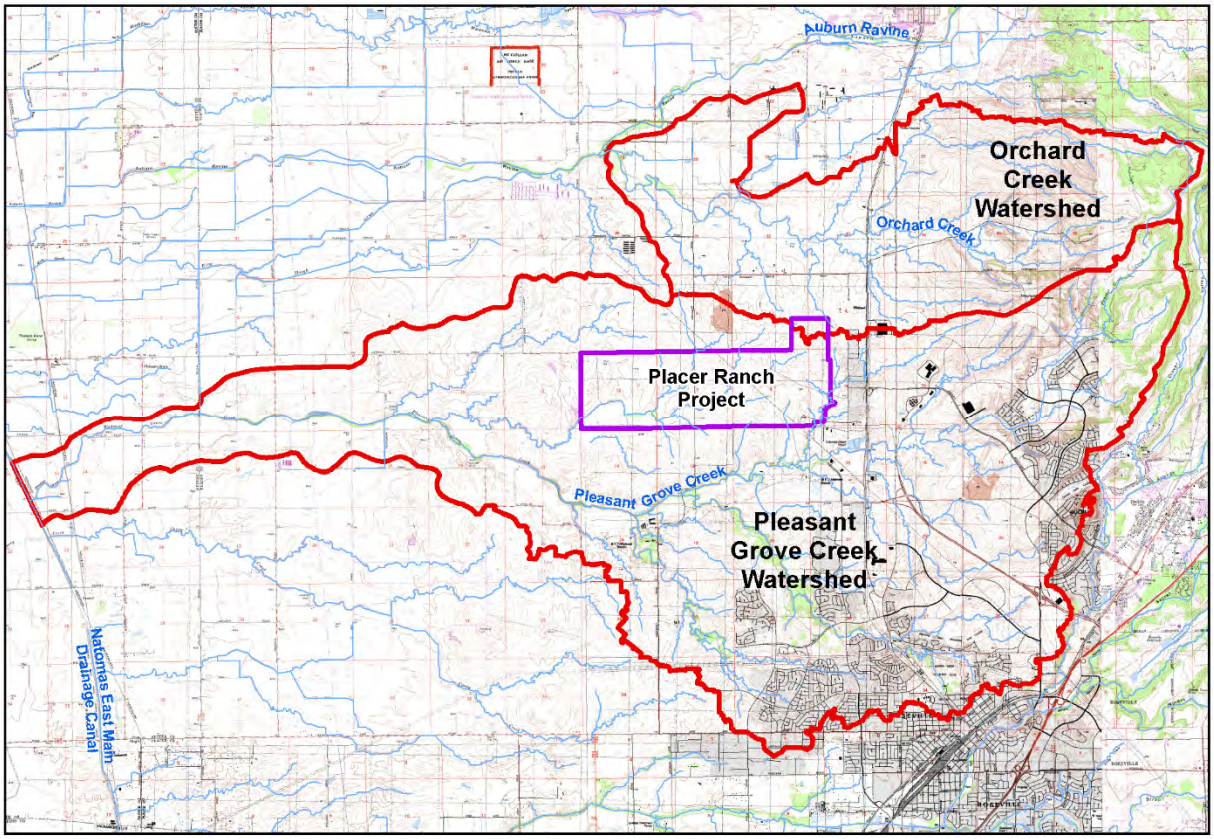


Figure 2: Watershed Map

2.2 Purpose

The purpose of the Plan Area SDMP is to analyze and document the existing pre-developed watershed characteristics and determine the drainage facilities that are necessary to maintain the receiving watercourses as close as practicable to the current pre-developed receiving watercourse characteristics. The Plan Area SDMP will confirm that the post-developed drainage characteristics will match the pre-developed drainage characteristics of the receiving watercourses in conformance with established design standards, and that the Plan Area develops in a safe and responsible manner. In addition, the Plan Area SDMP will determine the volumetric impacts of the 100-year 8-day event as the Natomas Cross Canal is subject to volumetric impact analysis.

The Plan Area SDMP investigates several detailed hydrologic and hydraulic modeling scenarios for the entire drainage study area. The electronic data files utilized with this analysis have been provided to Placer County so they will be able to update them as development occurs adjacent to or within the Plan Area. Therefore, as the Plan Area develops, the County will have a comprehensive understanding of the drainage facilities necessary to meet the goals of maintaining downstream impacts to 90% below existing conditions.

2.3 Previous Studies

There is one previous report that was used in the preparation of this analysis. This study is summarized as follows:

Amoruso Ranch Specific Plan Area Drainage Master Plan, Kimley-Horn, February 2016 Amoruso Ranch is the proposed development that is adjacent to the Plan Area on the western boundary. The site, which is anticipated to annex to the City of Roseville, lies entirely within the Pleasant Grove watershed, and is immediately downstream of the Plan Area. The Amoruso Ranch Specific Plan Area Drainage Master Plan describes and evaluates the drainage system that ultimately outfalls to University Creek. The HEC-RAS and HEC-HMS models presented in the Amoruso Ranch study are the basis for the analyses outlined in this report.

2.4 Topography

This study has utilized topography flown in December 2013 and is based on the National Geodetic Vertical Datum of 1929 (NVGD29) and references the City of Roseville's benchmark 115 located on the bridge at Fiddyment Road where it crosses Pleasant Grove Creek. All data presented in this study refers to the NGVD29.

2.5 Existing Conditions

The Plan Area is primarily within the Pleasant Grove watershed with a small portion in the Orchard Creek watershed which are both a part of the larger Natomas Cross Canal watershed of northwestern Placer County and southeastern Sutter County (see Exhibit 7 in Appendix A). The region is dominated by a gentle grass covered undulating topography that was formerly used for agricultural practices such as wheat, hay, and rice production as well as cattle grazing. Currently, site vegetation is dominated by non-native grasses; trees and brush are sparse.

The Plan Area can be characterized as rolling terrain with elevations above mean sea level ranging from 85-feet at the southwestern quadrant to 145-feet at the headwaters of University Creek. The majority of the Plan Area, via various tributaries and overland routes, contributes to University Creek which drains

from the east to the southwest. The portion of the Plan Area in the southeast corner drains to the North Branch Placer tributary of Pleasant Grove Creek which flows from the north alongside the eastern property line before discharging into the north main branch of Pleasant Grove Creek. The northeast quadrant of the Plan Area is located within the Orchard Creek watershed which drains to the north before joining the main branch of Orchard Creek before discharging to Auburn Ravine Creek.

As can be seen in Exhibit 1: Existing Conditions Aerial Photo in Appendix A, the majority of the Plan Area is currently undeveloped. Existing on-site development includes a City of Roseville power peaking facility in the southeast quadrant along the southern boundary that occasionally operates to provide power for peak hour demands. In addition, there are several existing roads that will be improved upon or relocated with the project as well as a couple of overhead power lines that traverse the project.

2.6 FEMA Information

The Federal Emergency Management Agency's (FEMA) Flood Insurance Study (FIS) Flood Insurance Rate Map (FIRM) encompassing the project area is FIRM Panel ID# 06061C0394F, effective June 8, 1998 and the preliminary map FIRM Panels ID# 06061C0929H and ID# 06061C0930H both dated December 28, 2015. The North Branch Placer Tributary is identified as Zone AE on the preliminary map which means that it has established base flood elevations. Both the effective map and preliminary map identify parts of University Creek as being an Area of Special Flood Hazard for the 100-year event. The portion of University Creek identified is classified as unnumbered Zone A which means no base flood elevations have been determined but is a general idea of where flooding has the potential to occur. Thus, the results of this master plan will be used as the basis for mapping the existing floodplain within the project. A Letter of Map Revision for the existing conditions floodplain is not required at this time, however, it will be required at or before improvement plan level.

2.7 Soils Information

The soil type classification for each drainage subshed was determined by using the soils survey of California, Placer County. Image files from the US Department of Agriculture were downloaded from their web site and referenced in to the drainage exhibits for both pre- and post-development conditions. The soils classification is identified as either Type A, B, B/D, C, D, or water. The classifications B/D and water were modeled as D type soil. These classifications are used in the HEC-1 model for deriving the hydrology. The overall shed is predominately Type D soil, however, in some areas within the Plan Area the soils classifications vary, as seen in Exhibit 2: Existing Conditions Shed Area Soils and Exhibit 4: Proposed Shed Area Soils in Appendix A.

2.8 Storm Water Quality

The State Water Resources Control Board has found that with the urbanization of an area proportionately higher volume, velocity, peak flow rate, and duration from the pre-development area results. As such, the State Water Board developed the Small Municipal Separate Storm Sewer Systems (MS4) Order No. 2013-0001-DWQ effective July 1, 2013 as a means to manage storm water as a resource and as an asset. Per this order, the Plan Area is considered a Regulated Project. Regulated Projects are projects that create and/or replace 5,000 square feet or more of impervious surface. These projects shall implement, within the second year of the effective date of the permit, Low Impact Development (LID) measures. In reference to hydromodification management, Regulated Projects are projects that create and/or replace 1 acre or more of impervious surface and are required to implement hydromodification management within the

third year of the effective date of the permit. To execute this Order, Placer County developed the West Placer Storm Water Quality Design Manual (April 2016).

The Plan Area proposes to implement LID measures outlined in the West Placer Storm Water Quality Design Manual such as tree planting, impervious area disconnection, vegetated swales, and if necessary, soil amendments. These measures will mitigate to the 85th percentile 24-hour event as required by the Order and defined in the West Placer Storm Water Quality Design Manual. Hydromodification management will be mitigated to the 2-year 24-hour peak flow rate.

2.9 Urban Level of Flood Protection

In 2007, the State of California enacted six bills to improve flood management. One of which pertains to the Sacramento and San Joaquin river basins. Senate Bill 5 (SB5) is intended to bolster the relationship between local land use planning decisions and flood management practices. The requirement of SB5 is that an Urban Level of Flood Protection (ULOP) be given in specific areas of the Sacramento and San Joaquin river basins. ULOP is defined as the level of protection necessary to withstand a 1-in-200 chance of flooding in any given year. There are five location criteria that all must be met in order for the ULOP to apply. In order to determine whether or not the Plan Area is subject to SB5, the following table was developed.

Table 1: ULOP Applicability

ULOP Criteria	Response
It is located in the Sacramento San Joaquin Valley.	Yes. Essentially all areas west of the Sierra Nevada crest meet this criterion.
It is located within an urban area that is a developed area with 10,000 residents or more, or an urbanizing area that is a developed area or an area outside a developed area that is planned or anticipated to have 10,000 residents or more within the next ten years.	Yes. It is anticipated that the Plan Area will house approximately 13,677 residents at full build-out.
It is located within a flood hazard zone that is mapped as either a special hazard area or an area of moderate hazard on FEMA's official Flood Insurance Rate Map (FIRM) for the NFIP.	Yes. North Branch Placer Tributary and portions of University Creek are in a special flood hazard zone.
It is located within an area with a potential flood depth above 3-feet from sources of flooding other than localized conditions that may occur anywhere in a community, such as localized rainfall, water from storm water and drainage problems, and water from temporary water and wastewater distribution system failure.	Yes. With the floodplain analysis, it is shown that there are depths three feet or deeper in University Creek.
It is located within a watershed with a contributing area of more than 10 square miles.	No. The Plan Area is located at the upper most end of two watersheds and does not accumulate more than 3.5 square miles altogether.

Per the above matrix, the Plan Area is not subject to SB5 legislation due to not meeting the criterion of having a watershed with a contributing area of 10 or more square miles.

2.10 100-Year Floodplain Impacts

Portions of the existing 100-year floodplain will be impacted with the proposed development. Fill is proposed alongside the main channels of the University Creek system and three small tributaries to University Creek are proposed to be routed within storm drainage infrastructure which is sized to carry the 100-year 24-hour event. Proposed in-line detention facilities will attenuate the increase in flow from development and replace lost detention due to the changes to the three abovementioned tributaries.

3. Creek Analysis - Hydrologic and Hydraulic Modeling

In general, the Placer County Flood Control and Water Conservation District Stormwater Management Manual (SWMM) was referenced for the development and use of these models. The following report subsections provide an overview of the model selections, data, and parameters used.

Several hydrologic and hydraulic models were utilized to evaluate the impacts of the proposed development. For the creek analysis, this drainage study utilizes a two-step modeling process:

1. **Hydrology**. The hydrology for each subshed was derived using the US Army Corps of Engineer's (USACE) Hydrologic Engineering Center HEC-1 Flood Hydrograph Package and the County's pre-processor PDP2 software for generating design event precipitation and computing storm centering factors.

2. **Hydraulics**. The hydrographs generated in HEC-1 were then incorporated into a US Army Corps of Engineers' (USACE) Hydraulic Engineering Center (HEC) River Analysis System (RAS) software package (HEC-RAS program version 4.1.0). An unsteady state analysis was used to determine the peak flow and hydraulic grade line using the geometry of the existing creek and tributaries. The results of this step were the output tables with peak flow rates and water surface profiles for the creeks and tributaries.

These two steps were utilized in a comprehensive, iterative approach for both flood control and hydromodification analyses. First, the existing conditions hydrology was prepared. See Appendix B for the hydrologic modeling parameters and data. Then existing conditions hydraulic analysis was prepared to evaluate the existing conditions floodplain information—the baseline for existing flooding conditions. In parallel, the existing conditions hydrology was utilized to determine the hydromodification baseline information.

Next, the proposed conditions hydrology was established. This information was then used to verify that hydromodification requirements of matching or being below existing peak flows for the 2-year 24-hour event was met. Once the hydromodification was proven, the proposed conditions 100-year floodplain mapping was prepared.

For the areas that drain to Orchard Creek, the flood control features were modeled in XPStorm.

For the on-site storm drainage infrastructure, the XPStorm Stormwater Management Model (XPStorm 2014 version 12.0) program was used to evaluate post-development hydrologic and hydraulic conditions for the subject site. The Placer County methodology was used and the cumulative precipitation depths for the pipe analyses were created by the US Army Corps of Engineer's HEC-1 program utilizing the County's PDP2 software.

To evaluate the storm water quality provisions and hydromodification management for the development, the West Placer Storm Water Quality Design Manual, was referenced and used in this analysis. While the storm water quality calculations follow the calculation procedures outlined within that manual by utilizing the provided templates, hydromodification compliance was proven by comparing the pre-development to the post-development peak flows at the project boundary as determined in the HEC-RAS model for the 2-year 24-event.

Modeling Parameters

Parameters for the different hydrologic and hydraulic models prepared for this analysis were selected from information derived from the Placer County Flood Control and Water Conservation District Stormwater Management Manual, West Placer Storm Water Quality Design Manual, and the Placer Ranch Land Use Plan.

The percent imperviousness used for the hydrologic modeling is based on the 2010 Dry Creek Watershed Update and the Pleasant Grove watershed studies with the exception of High Density Residential and Commercial land uses which were increased from 60% and 70% respectively to 65% and 80%. The lower values for these two land uses used in the abovementioned studies did not reflect the same characteristics as the land uses in the Plan Area and thus were increased to better reflect the proposed land use herein.

Table 2 below shows the percent imperviousness for each land use type for both on-site and off-site sheds.

Table 2: Percent Imperviousness by Land Use Type

Land Use Designation	Percent Imperviousness
On-Site Land Use:	
Low Density Residential (LDR)	40%
Low Density Residential - Age Restricted (LDR-A)	40%
Medium Density Residential (MDR)	50%
High Density Residential (HDR)	65%
General Commercial (GC)	80%
Commercial Mixed Use (CMU)	80%
Campus Park (CP)	70%
University Campus (UZ)	50%
Public Facilities - Schools (PF)	50%
Public Facilities - County Facilities (PF)	50%
Parks and Recreation (PR)	5%
Open Space Preserves (OS)	5%
Placer Parkway (Parkway)	85%
Major Roads (Roadway)	85%
Existing Conditions and Off-Site Land Use:	
Existing Roadway	85%
Industrial	80%
Off-Site Parkway	85%
Park	5%
Residential	50%
Open Space (Pervious)	5%

For the creek analyses in both the existing and proposed conditions, Manning's roughness coefficients ('n' values) for the natural stream channels located within the Plan Area vary from 0.045 in vegetated bottom channels to 0.06 in the overbank areas with light brush. These values are consistent with the values found in Table 3-1 of the HEC-RAS Hydraulic Reference Manual Version 4.1 (January 2010). Due to the relatively uniform vegetation over the site, there are limited variances in the 'n' values.

Pipe outfall invert elevations, HEC-RAS cross-sections, and swale locations were based on the topographic data mentioned previously in Section 2.4 Topography.

3.1 Existing Conditions Model

In order to determine the hydrologic impacts resulting from development of the Plan Area, an analysis was performed for the existing conditions of the creek systems within the study area. This existing conditions model provides a baseline for comparison with the proposed conditions models prepared as a subsequent part of this analysis. Existing conditions is defined by the current land uses within the Plan Area.

Soil type information and impervious coverage for the various existing conditions subsheds within the study area were then developed, see Exhibits 2 and 3, respectively in Appendix A. Additionally, water course lengths and centroids of each existing conditions subshed were determined and can be seen on Plate 1 which is in the rear pocket of this report. This data was then used to create an existing conditions HEC-1 model and resultant existing conditions hydrology was determined. For off-site drainage sheds, the impervious and pervious land cover areas were determined in accordance with the County's drainage standards assuming actual impervious land areas. These same values were used in the proposed conditions model.

Off-site upstream drainage sheds have been assumed to maintain their level of discharge onto the project area in perpetuity at or below existing levels. If these off-site lands develop in the future, the peak developed flows from those upstream areas will need to be mitigated with peak flow attenuation such that the resultant flows comply with the Sunset Industrial Area Plan Goal 3.E.7 of mitigating post-development peak flows to 90% of existing peak flows.

The existing conditions hydraulic model is based on the Amoruso Ranch Specific Plan Area Drainage Master Plan HEC-RAS model. To make the Plan Area's model more manageable, the portion of University Creek within the Plan Area was removed from the Amoruso Ranch model and made to be a standalone model. The resultant flow hydrographs from the Plan Area's University Creek model was then placed into the Amoruso Model at the upstream connecting cross-section. This separation of the models allows for increased focus on the Plan Area without compromising the Amoruso Ranch model of Pleasant Grove Creek.

Storm centering is not necessary for the 100-year 24-hour and the 200-year 24-hour events since the Plan Area is under 4-square miles. Per Table 5-1 in the Placer County Flood Control and Water Conservation District Stormwater Management Manual, areas 5-square miles and less for the 100-year event and larger do not require storm centering. Although storm centering would affect the 2-year 24-hour and 10-year 24-hour events, these events are for comparison purposes only and there is no risk in removing the storm centering aspect of the hydrology.

A small section of the North Branch Placer tributary of Pleasant Grove Creek runs through the southeast portion of the Plan Area. Since this branch is small, it was not removed from the Amoruso Ranch model and is analyzed within that model.

Refer to Plate 1: Existing Conditions Drainage Subsheds to review the map used as the basis for developing the existing conditions model. Plate 7 shows the key compliance points that were used to compare existing and proposed conditions peak flow rates to be assured that post-development flows are equal or less than existing peak flow rates.

3.1.1 Existing Conditions Peak Flow Rates

Existing flows and hydraulic conditions were analyzed to establish a base line for the proposed conditions and to determine necessary drainage improvements. As explained above, a hydrologic model of the project area watershed was created using HEC-1 and the County's PDP2 software. Table 3 below provides the peak flows for the design events modeled in the existing conditions for each of the compliance points. Refer to Plate 7 for the compliance point locations.

The shed areas, detailed input parameters, and output results from the HEC-1 hydrologic models are included in Appendix C.

Table 3: Existing Conditions Peak Flows

Compliance Point No.	Creek Name	2-Year 24-Hour (cfs)	10-Year 24-Hour (cfs)	100-Year 24-Hour (cfs)	200-Year 24-Hour (cfs)
CP#1	University Creek	275.9	501.7	895.9	1003.0
CP#2	North Branch Placer	83.3	185.9	443.5	n/a
CP#3[1]	Orchard Creek	16.4	37.0	91.3	109.6
CP#4	Amoruso Ranch	305.2	563.6	1027.1	n/a
CP#5	North Branch Placer at Pleasant Grove	610.4	1121.6	2317.5	n/a
CP#6	University Creek at Pleasant Grove	1299.0	2698.7	5431.4	n/a

1. The compliance point for Orchard Creek is at the downstream end of existing shed PRE901 and proposed shed PROFF008. Hydrographs developed in XPStorm from the contributing sheds were added together in MS Excel to provide the above data.

3.1.2 Existing Conditions Limits of Inundation

Existing flows and hydraulic conditions were mapped to show the existing 100-year 24-hour limits of inundation for University Creek and Pleasant Grove Creek as shown in Plate 2: Existing 100-Year Floodplain. The existing conditions HEC-RAS analysis is presented in Appendix D and the model files are included on the disc in the back of this report.

A hybrid analysis of on-site existing and off-site unmitigated developed SIA was not performed after a comparison of the hydrographs of the existing, developed mitigated, and developed unmitigated subsheds for the contributing off-site subsheds demonstrated little difference in peak flows. This is due to a low infiltration rate for the soil type in those subsheds. With such small increases in peak flows, the differences from existing conditions floodplain are negligible when mapped.

3.2 Proposed Conditions Model

The proposed conditions model is based on a fully developed Placer Ranch Plan Area. This model utilized the existing conditions model as a starting point then replaced the existing conditions with the proposed conditions. Soil type information and impervious coverage for the various proposed conditions subsheds within the study area were developed, see Exhibits 4 and 5, respectively. Additionally, water course lengths and the centroids of each proposed conditions subshed were determined. This data was then used to create a proposed conditions HEC-1 model and resultant proposed conditions hydrology was determined. The 2-year 24-hour event scenario incorporates the LID features proposed by way of using the reduced percent imperviousness discussed in Section 5.0 of this report. The 10-year 24-hour, 100-year 24-hour, and the 200-year 24-hour events utilize the percent imperviousness rates in Table 2. There is no 200-year event run for the main Pleasant Grove Creek model and therefore 200-year results are not provided for compliance points 2, 4, 5, and 6. University Creek 200-year results have a downstream condition of the 100-year results of the Pleasant Grove Creek model.

It should be noted that the resultant flows from the HEC-1 differ from those created in XPStorm for the on-site pipe analysis. The resultant higher peak flows in the XPStorm pipe model are due to the effects of collecting and routing the subshed flows through the trunk storm drainage pipes. It is expected that these higher peak flows found in XPStorm will be reduced when the entire pipe and street system is added to the model during improvement plan level analysis. Additionally, to assist in closing the gap between the two models, the watercourse lengths used within the HEC-1 model are 90% of measured length to better represent the on-site peak flow timing.

Although in the developed conditions swales are proposed, the additional volume that they may contribute is not included in the hydraulic analysis for the creek systems. Not including the additional volume assures that the volume is not available for peak flow attenuation during major storm events. This is a conservative approach and the modeling shows that there is no adverse effect on the results contained in this study.

The HEC-RAS models for the proposed conditions are divided the same way as the existing HEC-RAS models. The portion of University Creek within the Plan Area is a standalone model. The resultant flow hydrographs from the Plan Area's University Creek model was then placed into the Amoruso Model at the upstream connecting cross-section. This separation of the models allows for increased focus on the Plan Area without compromising the Amoruso Ranch model of Pleasant Grove Creek. The North Branch Placer tributary remains a part of the Amoruso Ranch model. The storm centering and Manning's 'n' values are also consistent with the existing conditions HEC-RAS model for Placer Ranch University Creek.

The changes to the HEC-RAS models for University Creek and North Branch Placer tributary for the developed conditions include new cross section information, new roadway crossings on the University Creek tributary, and the inclusion of detention basins on the North Branch Placer tributary.

Refer to Plate 3: Proposed Conditions Drainage Subsheds to review the map used as the basis for developing the proposed conditions model. Plate 7 shows the locations of the compliance points that are used to compare the existing and proposed conditions peak flow rates. The hydrograph comparisons can be found in Appendix I.

3.2.1 In-Stream Detention and Proposed Detention Basins

In order to attenuate the proposed conditions peak flow rates to be less than existing conditions peak flow rates, detention for the 2-year 24-hour, 10-year 24-hour, and 100-year 24-hour events is needed. The peak flow attenuation needed for University Creek will occur in University Creek itself, which has significant naturally occurring in-stream and over-bank storage capacity. These storage areas will coincide with planned culvert crossings of the creek and will utilize these crossings to detain flows as needed for flood control. These crossings have also been sized to allow the 200-year 24-hour event to be conveyed without overtopping the roadways or flood the adjacent developable areas within the Plan Area

The subsheds that drain to Orchard Creek and the North Branch Placer tributary are proposed to have detention basins to attenuate the developed peak flows. The outfall pipes of both the in-stream detention and the detention basins will be sized to control the release of the flow for the 2-year 24-hour, 10-year 24-hour, and 100-year 24-hour design events.

The 100-year 24-hour event volumes to be detained, duration of detention, and basic design parameters are shown below (Table 4). Additionally, in Appendix G, are detailed design parameters including outlet structure schedules and hydrographs of each basins discharge.

At this level of analysis, it is assumed that the detention basins have a flat bottom and that the basin is considered empty when the modeled depth of the water is 3-inches or less. At the improvement plan level of analysis, a sloping basin bottom and a low flow channel will be designed which will efficiently handle the lower flows of smaller events as well as the residual flow of larger events. For the in-stream detention basins, the drawdown time is the length of time it takes for the water surface elevation to reach the soffit of the upstream end of the culvert. For facilities that exceed 72-hours in drawdown time for the 100-year 24-hour event, an additional manually operated outlet will be needed to ensure full drawdown within that time.

Table 4: Basin Attributes and Performance

Basin	Location	Bottom Elevation (ft)	Roadway/ Top Elevation (ft)	100-Year Max Water Surface Elevation (ft)	100-year Storage Volume[1] (ac-ft)	Drawdown Time (hrs)
Basin#1	University Creek	84.4	93	90.8	90.0	23
Basin#2	University Creek	92.3	101	99.7	108.1	40[2]
Basin#3	University Creek	104.1	107	106.7	3.7	14
Basin#4	University Creek	99.9	108	107.1	33.2	15
Basin#5	University Creek	92.4	101	98.9	35.3	29[2]
Basin#6	University Creek	94.4	103	101.2	46.6	27[2]
Basin#7	University Creek	96.9	108	104.2	93.5	29[2]
Basin#8	University Creek	108.9	115	113.4	19.2	16
Basin#9	University Creek	111.9	119	115.9	9.5	15
Basin#10	University Creek	113.2	120	118.2	9.7	19
Basin#11	North Branch Placer Tributary	112.0	117	114.4	3.4	33[2]
Basin#12	North Branch Placer Tributary	107.0	113	110.6	5.2	33[2]
Basin#13	North Branch Placer Tributary	115.0	122	119.3	13.3	49[2]
Basin#14	North Branch Placer Tributary	123.0	131	128.2	16.9	81[2]
Basin#15	Orchard Creek	126.5	133	131.5	6.4	46

1. The storage volume listed here is the entire volume occupied by the 100-year event at the max water surface elevation.
2. These basins are analyzed in the HEC-RAS model which is a 24-hour model. These are extrapolated values based upon the slope of the stage hydrograph of the last 2 hours of the model run.

To ensure the safety of proposed residential, commercial, and public buildings; the proposed pads will be designed to be at least 2-feet higher than the maximum water surface elevation of the 100-year 24-hour design event within the creek system.

3.2.2 Proposed Conditions Mitigated Peak Flow Rates (Attenuated)

The proposed conditions attenuated peak flows are summarized below in Table 5. The results of the proposed conditions model confirm that a fully developed Plan Area will generate peak flow rates that are 90% of existing conditions peak flow rates as required by Goal 3.E.7 in the Sunset Industrial Area Plan and is achieved for the compliance points at the project boundary (CP#1, CP#2, and CP#3). Compliance points 4, 5, and 6 are further downstream from the project boundary and include additional contributing area that cannot nor will not be attenuated by the proposed project.

Table 5: Proposed Conditions Peak Flows - Mitigated

Compliance Point No.	Creek Name	2-Year 24-Hour (cfs)	10-Year 24-Hour (cfs)	100-Year 24-Hour (cfs)	200-Year 24-Hour (cfs)
CP#1	University Creek	248.3	435.2	612.9	657.9
CP#2	North Branch Placer	72.4	159.9	374.0	n/a
CP#3[1]	Orchard Creek	13.7	30.6	72.0	86.0
CP#4	Amoruso Ranch	281.4	554.9	968.7	n/a
CP#5	North Branch Placer at Pleasant Grove	599.8	1090.4	2226.4	n/a
CP#6	University Creek at Pleasant Grove	1276.8	2659.4	5251.4	n/a

1. The compliance point for Orchard Creek is at the downstream end of PROFF008 and includes PRD904, PRD903, PROFF009, and PROFF008. Hydrographs developed in XPStorm from the contributing sheds (Link326, OFF008, OFF009) were added together in MS Excel to provide the above data.

3.2.3 Proposed Conditions Limits of Inundation

Proposed conditions flows and hydraulic conditions were mapped to show the 100-year 24-hour design event for the Plan Area's creek systems. Post-development water surface elevations are at or below existing conditions at the project boundary. Refer to Plate 4: Proposed 100-Year Floodplain to see the mapped limits of inundation. The proposed conditions HEC-RAS analysis is presented in Appendix D and the model files are included on the disc in the back of this report.

3.2.4 Proposed Conditions Unmitigated Peak Flow Rates (Unattenuated)

In addition to the mitigated scenario, a fully developed unmitigated scenario for the 100-year 24-hour event was analyzed. The unmitigated model is based upon the mitigated model, however, with all detention facilities removed. The off-site contributing areas for the Sunset Industrial Area (SIA) were assumed fully developed and without detention. The fully developed hydrology for the SIA assumes a percent impervious of 80% based upon the draft land use plan dated October 20, 2016. Plate 5 in the back pocket of this report shows the unmitigated floodplain delineation.

Table 6: Proposed Conditions Peak Flows - Unmitigated

Compliance Point No.	Creek Name	100-Year 24-Hour (cfs)
CP#1	University Creek	998.7
CP#2	North Branch Placer	446.6
CP#3[1]	Orchard Creek	410.4
CP#4	Amoruso Ranch	1136.5
CP#5	North Branch Placer at Pleasant Grove	2317.6
CP#6	University Creek at Pleasant Grove	5581.3

1. The compliance point for Orchard Creek is at the downstream end of proposed shed PROFF008 and includes PRD904, PRD903, PROFF009, and PROFF008. Hydrographs developed in XPStorm from the contributing sheds (Link298, OFF008, OFF009) were added together in MS Excel to provide the above data.

4. Backbone Storm Water Infrastructure

The conceptual backbone storm water infrastructure system for the Plan Area was developed from preliminary drainage calculations based on the proposed conditions. The analysis was performed using XPStorm which routes hydrographs through the proposed pipes to develop hydraulic grade lines.

The precipitation data was developed using the Placer County methodology of utilizing HEC-1 and the PDP2 software and can be found in the models provided on the disc in the rear pocket and in Appendix C. Figure 3 and Figure 4 show the resulting rainfall intensity for both the 10-year and 100-year design events. The proposed conditions subshed data such as percent imperviousness, area, shed width, and slope were input into the XPStorm model at each subshed node. For infiltration, the initial loss was set to zero and a continuing loss for urban landscapes on D soils of 0.12 inches per hour was used.

The trunk drainage pipes were analyzed for both the 10-year 24-hour and 100-year 24-hour design events. The following criteria from the Placer County Flood Control and Water Conservation District Stormwater Management Manual were used in the pipe analysis:

- The design tailwater shall be the water level in the receiving major drainage way for computing the hydraulic grade line for the specific design event.
- The minimum flowing full or half full velocity shall be no less than two and one-half (2.5) feet per second using an 'n' value of 0.015.
- The 10-year 24-hour design event hydraulic grade line shall maintain, at a minimum, one-half foot (0.5') of freeboard below the elevation of all manhole rims and inlet grates.
- The design hydraulic grade line should be at least six (6) inches below the gutter grade at the inlet to allow the inlet to function properly.
- Closed conduit sections shall be designed as flowing full whenever possible.

A fixed backwater was obtained from the respective creek analysis HEC-RAS models and was used at each of the pipe outfalls. Although manhole and drop inlets are not analyzed in this study, it is recognized that this preliminary analysis will be the foundation upon which the future detailed analysis will be based. Therefore, 1-foot to 1.5-feet of freeboard, road section dependent, below the elevation of the manhole rims is maintained in this study. The following are the freeboard parameters used for the different street sections: 1.5-feet for arterial streets, 1.2-feet for collector streets, and 1-foot for residential streets. For this level of analysis, the pipe slope requirement of being less than 70% of critical slope or more than 130% of critical slope at design flow was not included.

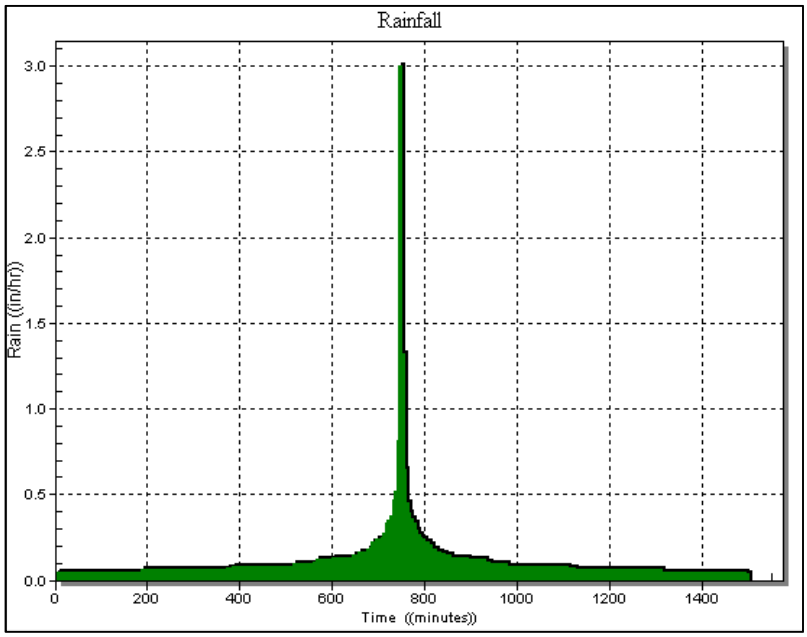


Figure 3: 10-Year Rainfall Hyetograph

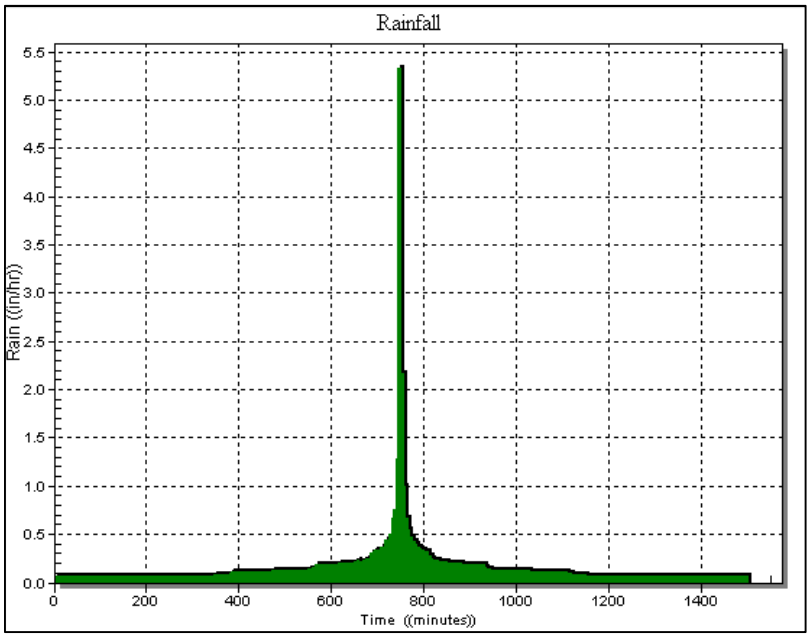


Figure 4: 100-Year Rainfall Hyetograph

Project specific drainage calculations for this conceptual system will be performed on a project-by-project basis as each of the various areas within the Plan Area are proposed for development. The conceptual backbone storm water infrastructure system for the Plan Area is shown on Plate 6: Conceptual Backbone Storm Water Infrastructure located in the back pocket of this report and the modeling data and results can be found in Appendix E.

4.1 Overland Release Considerations

Piped storm drain systems are not required to be designed to convey peak flows from infrequent high intensity storm events, such as the 100-year storm event. However, due to street inundation standards and a few existing channels being filled in, a portion of the pipes have been designed to convey the 100-year event. The 100-year event allowable street inundation standards, Placer County Flood Control and Water Conservation District Stormwater Management Manual Table 6-1 Allowable Street Encroachments (Addendum October 1997), are considered in the evaluation of overland release and for the previously discussed pipe system. Future design phases will include identified overland release points.

The overland release will discharge at the same locations as the underground facilities and if the pipes and inlets become clogged or overwhelmed, proposed grading will provide positive overland release. The overland flow routes are shown on Exhibit 6: Overland Release Routes in Appendix A.

5. Storm Water Quality

Storm water is a valuable resource and it is the intention of the Plan Area to maintain storm water quality using source control and Low Impact Development measures. These measures, through structures and operations, infiltration, evapotranspiration, and biotreatment can keep clean water clean and recharge groundwater supplies, protect and enhance natural habitat and biodiversity, and add value to new development.

A multi-layered approach was taken to ensure that the storm water quality including baseline hydromodification requirements were met per the West Placer Storm Water Quality Design Manual. Each land use type was analyzed as a whole using the West Placer Storm Water Quality Design Manual's SWQP Template to determine what LID measures are most effective for that particular land use. This analysis also provided the resultant modified percent imperviousness due to the addition of LID measures discussed in Section 5.2. Once the quantity of each measure was known for each land use, each drainage shed contributing to an outfall with its composite land use was evaluated. Two scenarios for each outfall were evaluated and a result for each was obtained. The results for both scenarios were directly from the SWQP Template's Form 3-4 and Form 3-5 (Appendix F). One was the storm water quality flow that discharges to the swale at the outfall and is shown on the SWQP Template Form 3-5 Item 6. This flow is based on calculating storm water quality credits using the on-site measures of tree planting and disconnected impervious areas. The resulting flow was used for the design of the swales. The other result obtained was the confirmation that storm water quality and baseline hydromodification criteria were met and is based on the use of on-site LID measures plus the swale. Compliance is demonstrated by having zero water quality volume and zero water quality flow on Form 3-5, Items 5 and 6 respectively. Plate 6: Conceptual Backbone Storm Water Infrastructure shows each outfall location and Appendix F contains the SWQP Template's Form 3-4 and Form 3-5 for each land use and for each outfall.

5.1 Source Control Measures

The first line of defense in maintaining storm water quality is to keep polluted water from commingling with clean water. This can be done using structural and operational measures at the pollutant source. At this level of analysis, source control measures are not proposed however, measures may be specified at the improvement plan level of design.

Potential structural measures may include covering of trash receptacles, using efficient irrigation to reduce overspray, and connecting industrial floor drains to the sanitary sewer system instead of the storm drainage system. Operational measures may include using good housekeeping measures to minimize the generation of pollutants, make stormwater pollution prevention BMPs a part of standard operating procedures, and employee training programs.

5.2 Low Impact Development Measures

Several Low Impact Development strategies are proposed to reduce the post-development flows. These strategies remove pollutants from runoff, attenuate peak flows, and reduce runoff volume. The proposed LID measures include impervious area disconnection, tree planting, vegetated swales, and if needed, soil amendments.

All proposed measures were designed to the specifications outlined in the West Placer Storm Water Quality Design Manual and implemented to mitigate the 85th percentile, 24-hour storm event. Although off-site contributing areas are factored into each drainage area, no LID measures are proposed for off-site contributing areas.

5.2.1 Tree Planting and Preservation

Planting trees throughout the site is proposed. Evergreen trees can be more beneficial to water quality because they retain their foliage year-round. However, both are beneficial and diversity provides additional benefits so therefore half of the trees are proposed to be evergreen and the other half deciduous.

Trees, at a minimum, have the following merits:

- decrease storm water runoff volume,
- reduce amount of pollutants to reach downstream,
- aesthetically pleasing,
- have a cooling effect through shade and evapotranspiration, and
- provide habitat for birds and insects.

Placement and care the proposed trees are an important part of the design considerations for this LID measure. All trees will require irrigation to become established and most may need irrigation to maintain. It is recommended to select trees appropriate to the site and soil characteristics for the best results.

Table 7 below shows the number of trees proposed by land use type.

Table 7: Proposed Tree Planting Rates

Land Use Designation	Number of Trees
Low Density Residential (LDR)	1 per lot
Low Density Residential - Age Restricted (LDR-A)	1 per lot
Medium Density Residential (MDR)	1 per lot
High Density Residential (HDR)	5 per pervious acre[1]
General Commercial (GC)	5 per pervious acre
Commercial Mixed Use (CMU)	5 per pervious acre
Campus Park (CP)	5 per pervious acre
University Campus (UZ)	5 per pervious acre
Public Facilities - Schools (PF)	5 per pervious acre
Public Facilities - County Facilities (PF)	5 per pervious acre
Parks and Recreation (PR)	10 per acre
Open Space Preserves (OS)	None
Placer Parkway (Parkway)	None
Major Roads (Roadway)	3-5 per 30 linear feet of road[2]

1. Pervious acreage is calculated with the following equation: (1-%Imperviousness)*Total Area
2. The number of trees per 30 linear feet of road is dependent upon the available landscape area for each type of road section.

5.2.2 Disconnected Impervious Areas

Disconnected impervious areas are rooftops or other hard surfaces such as streets or sidewalks that drain directly to pervious areas such as landscape. The rooftop disconnection is achieved through disconnected roof drains that route the rooftop flows into pervious area within the proposed lots. The design parameter of twice the area of rooftop to pervious area was used. Due to this design constraint, each size of lot was analyzed for probable pervious area. Once this pervious area was determined, the amount of rooftop draining to the pervious area was calculated per each lot. The impervious area disconnection is comprised of the separated sidewalks found throughout the proposed development and the impervious area of Placer Parkway as it sheet flows to roadside pervious area. Similar to the disconnected rooftops, a two-to-one ratio of impervious to pervious ratio was adhered to for the impervious area disconnection.

Disconnected impervious areas have the following benefits:

- decrease runoff volume,
- reduce peak flow rates, and
- encourage groundwater recharge.

The following table shows the disconnected impervious area used per acre of land use type.

Table 8: Disconnected Imperviousness Area Rates

Land Use Designation	Disconnected Impervious Area per Acre
Low Density Residential (LDR)	0.30 ac/ac
Low Density Residential - Age Restricted (LDR-A)	0.28 ac/ac
Medium Density Residential (MDR)	0.30 ac/ac
High Density Residential (HDR)	0.38 ac/ac
General Commercial (GC)	0.40 ac/ac
Commercial Mixed Use (CMU)	0.40 ac/ac
Campus Park (CP)	0.29 ac/ac
University Campus (UZ)	0.24 ac/ac
Public Facilities - Schools (PF)	0.25 ac/ac
Public Facilities - County Facilities (PF)	0.25 ac/ac
Parks and Recreation (PR)	0.05 ac/ac
Open Space Preserves (OS)	None
Placer Parkway (Parkway)	0.64 ac/ac
Major Roads (Roadway)	0.18 ac/ac

5.2.3 Vegetated Swales

As a final measure to improve storm water quality, vegetated swales are proposed at each drainage outfall. Swales are known to:

- reduce peak flows,
- decrease total runoff volume, and
- trap, filter, and infiltrate particulates and associated pollutants.

Swales for the Plan Area were designed with the following parameters:

- sufficient length to provide a 10-minute contact time with a minimum length of 100-feet,
- depth of 2/3 the grass height or 4-inches—whichever is less,
- maximum bottom width of 10-feet or have dividing berms,
- longitudinal slope between 0.5% and 2.5%,
- Manning's 'n' value of 0.25, and
- maximum velocity of 1 fps.

The flows used to design the swales were obtained from Item 6 on Form 3-6 of the SWQP Template as described previously. All areas on-site and off-site that drain to a swale are included in determining the flow with the exception of the area for the landfill. This off-site landfill area is reduced in contributing area for swale design due to the smaller design events not leaving the landfill site.

Swales with bottom widths 10-feet or less are proposed to be trapezoidal as shown in Figure 5. Those determined to have a bottom width greater than 10-feet are proposed to have dividing berms. A typical swale with dividing berms is shown in Figure 6. Calculations and results for the swales are in Appendix F. Proposed locations of the swales can be seen on Plate 6: Conceptual Backbone Storm Water Infrastructure.

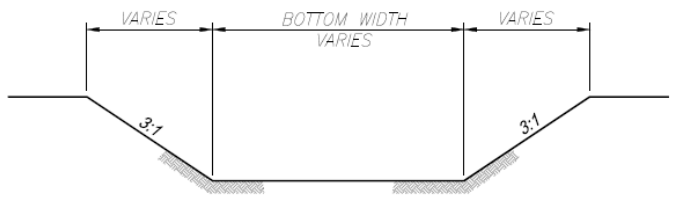


Figure 5: Typical Swale Layout

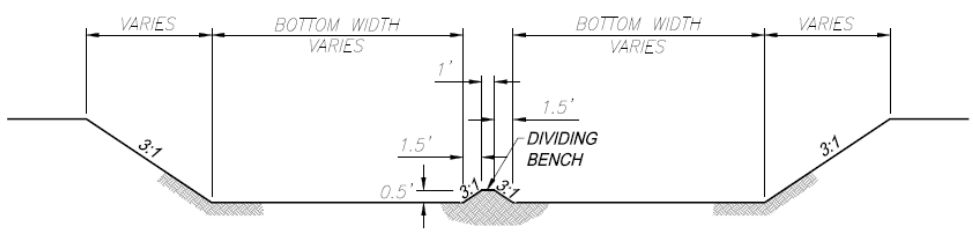


Figure 6: Typical Swale Layout with Dividing Berm

5.3 LID % Imperviousness Reductions

The table below shows the resultant percent imperviousness after implementing the above listed LID measures. Two scenarios are shown: one with only trees and disconnected impervious areas implemented and the other with trees, disconnected imperious areas, and swales. Soil amendments were not included in this analysis but will be available, if needed, during the design phase. The modified percent imperviousness without swales was calculated to aid in the design of the swales as previously described. The modified percent imperviousness with the swales is the ratio that is used to develop the hydrology for the mitigated 2-year 24-hour event HEC-RAS model. The resultant percent impervious values were calculated using the West Placer Storm Water Quality Design Manual's SWQP Template. Specifically, Form 3-5; Item 4—Composite DMA Runoff Coefficient shows the reduced percent imperviousness by land use, and can be found in Appendix F.

Table 9: Percent Imperviousness by Land Use Type

Land Use Designation	% Imperviousness	% Imperviousness[1] w/LID w/o Swale	% Imperviousness[2] w/LID and w/ Swale
On-Site Land Use:			
Low Density Residential (LDR)	40%	16%	0%
Low Density Residential - Age Restricted (LDR-A)	40%	17%	0%
Medium Density Residential (MDR)	50%	29%	0%
High Density Residential (HDR)	65%	47%	0%
General Commercial (GC)	80%	69%	0%
Commercial Mixed Use (CMU)	80%	69%	0%
Campus Park (CP)	70%	59%	0%
University Campus (UZ)	50%	35%	0%
Public Facilities - Schools (PF)	50%	35%	0%
Public Facilities - County Facilities (PF)	50%	35%	0%
Parks and Recreation (PR)	5%	0%	0%
Open Space Preserves (OS)	5%	5%	0%
Placer Parkway (Parkway)	85%	65%	0%
Major Roads (Roadway)	85%	77%	0%
Existing Conditions and Off-Site Land Use:			
Existing Roadway	85%	85%	85%
Industrial	80%	80%	80%
Off-Site Parkway	85%	85%	85%
Park	5%	5%	5%
Residential	50%	50%	50%
Open Space (Pervious)	5%	5%	5%

1. Modified percent imperviousness based on the addition of LID measures without a swale outfall.
2. Modified percent imperviousness based on all LID measures including the swale outfall.

5.4 Hydromodification

The goal of hydromodification per the West Placer Storm Water Quality Design Manual, is to mitigate the post-development peak flow rates to at or below that of the existing conditions peak flow rates. To determine the hydromodification compliance at Compliance Points 1, 2, 4, 5, and 6 a hydrologic HEC-1 model was developed using the modified percent imperviousness, shown in Table 9. Contributing sheds of these compliance points use the resulting modified percent imperviousness based on all three LID measures being applied: trees, disconnected impervious areas, and swales. Compliance Point 3 was modeled in XPStorm and used the resulting percent imperviousness from using only trees and disconnected impervious areas: no swales at the outfalls. Based on the results presented in Table 10 below, the proposed LID measures previously described are sufficient to mitigate the hydromodification impacts of the project. The resultant hydrographs for each of the compliance points can be found in Appendix I.

Table 10: Hydromodification Compliance

Compliance Point No.	Creek Name	Existing 2-Year 24-Hour (cfs)	Developed 2-Year 24-Hour (cfs)
CP#1	University Creek	275.9	248.3
CP#2	North Branch Placer	83.3	72.4
CP#3	Orchard Creek	16.4	13.7
CP#4	Amoruso Ranch	305.2	281.4
CP#5	North Branch Placer at Pleasant Grove	610.4	599.8
CP#6	University Creek at Pleasant Grove	1299.0	1276.8

6. Volumetric Impacts/Retention 100-Year 8-Day Event

The Plan Area is a part of the Pleasant Grove Creek and Orchard Grove Creek watersheds which are a part of the larger Natomas Cross Canal watershed (Exhibit 7). It has been previously identified by the Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation study (CH2MHILL 1993), that upstream development increases the potential flooding in the lower portion of Natomas Cross Canal watershed. In order to mitigate the increase in runoff volume, the use of regional retention facilities are proposed.

To determine the share of funding and retention needed for Placer Ranch within the regional facilities, the equations in the Pleasant Grove/Curry Creek Watershed Mitigation Fee report updated by Civil Engineering Solutions, Inc. in 2017 for the City of Roseville were utilized. The infiltration rates used in the equations are from Table 5-3 in the Placer County Flood Control and Water Conservation District Stormwater Management Manual and are shown in Table 11. Tables 12 through 14 present the resultant volumetric impact rates, retention volume, and the retention volume by watershed, respectively. Appendix H contains the supporting documentation for the results presented in the tables below.

Table 11: Infiltration Rates

	USGS Soil Type		
	B/D	C	D
Pre-Project Infiltration Rate	0.07	0.09	0.07
Post-Project Infiltration Rate	0.12	0.16	0.12

Table 12: 100-Year 8-Day Volumetric Impact Rates by USGS Soil Type

Land Use Designation	% Impervious	Volumetric Impact Rates		
		Type B/D Soil (ac-ft/acre)	Type C Soil (ac-ft/acre)	Type D Soil (ac-ft/acre)
Low Density Residential (LDR & LDR-A)	40%	0.090323	0.117062	0.090323
Medium Density Residential (MDR)	50%	0.145981	0.178801	0.145981
High Density Residential (HDR)	65%	0.229469	0.271410	0.229469
General Commercial (GC)	80%	0.312956	0.364019	0.312956
Commercial Mixed Use (CMU)	80%	0.312956	0.364019	0.312956
Campus Park (CP)	70%	0.257298	0.302280	0.257298
University Campus (UZ)	50%	0.145981	0.178801	0.145981
Public Facilities - Schools (PF)	50%	0.145981	0.178801	0.145981
Public Facilities - County Facilities (PF)	50%	0.145981	0.178801	0.145981
Parks and Recreation (PR)	5%	-0.104481	-0.099025	-0.104481
Open Space Preserves (OS)	2%	0.000000	0.000000	0.000000
Placer Parkway (Parkway)	85%	0.340785	0.394888	0.340785
Major Roads (Roadway)	85%	0.340785	0.394888	0.340785

Table 13: 100-Year 8-Day Retention Volume by USGS Soil Type

Land Use Designation	Total Area (ac)	Volumetric Impact			
		Type B/D Soil (ac-ft)	Type C Soil (ac-ft)	Type D Soil (ac-ft)	Total Volume (ac-ft)
Low Density Residential (LDR & LDR-A)	538.84	1.15	5.29	43.44	49.88
Medium Density Residential (MDR)	130.74	0.07	7.22	13.12	20.41
High Density Residential (HDR)	93.13	0.00	15.65	8.14	23.79
General Commercial (GC)	26.24	0.00	0.86	7.47	8.33
Commercial Mixed Use (CMU)	48.77	0.00	6.11	10.01	16.12
Campus Park (CP)	395.52	0.00	37.59	69.77	107.36
University Campus (UZ)	301.21	0.67	0.00	43.30	43.97
Public Facilities – Schools, County Facilities (PF)	37.42	0.00	2.99	3.02	6.01
Parks and Recreation (PR)	99.96	-0.01	-2.72	-7.56	-10.29
Open Space Preserves (OS)	255.64	0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	173.53	0.00	27.89	35.07	62.96
Major Roads (Roadway)	134.18	0.74	11.07	35.43	47.24
				Total Required Volume:	**375.78**

Table 14: 100-Year 8-Day Retention Volume by Watershed

Land Use Designation	Total Area (ac)	Watershed			Total Volume (ac-ft)
		University Creek (ac-ft)	Pleasant Grove Creek (ac-ft)	Orchard Creek (ac-ft)	
Low Density Residential (LDR & LDR-A)	538.84	48.97	0.91	0.00	49.88
Medium Density Residential (MDR)	130.74	9.23	11.19	0.00	20.41
High Density Residential (HDR)	93.13	15.57	8.22	0.00	23.79
General Commercial (GC)	26.24	8.33	0.00	0.00	8.33
Commercial Mixed Use (CMU)	48.77	13.52	2.60	0.00	16.12
Campus Park (CP)	395.52	54.81	36.27	16.27	107.36
University Campus (UZ)	301.21	43.97	0.00	0.00	43.97
Public Facilities – Schools, County Facilities (PF)	37.42	5.32	0.70	0.00	6.01
Parks and Recreation (PR)	99.96	-8.49	-1.80	0.00	-10.29
Open Space Preserves (OS)	255.64	0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	173.53	50.74	12.21	0.01	62.96
Major Roads (Roadway)	134.18	34.81	11.35	1.08	47.24
Totals	**2235.18**	**276.77**	**81.64**	**17.36**	**375.78**

At this time, the specific location for retention has not been determined, however, regional retention facilities within the Natomas Cross Canal watershed are planned to be utilized. Should the Plan Area develop prior to regional facilities becoming available for use, interim retention facilities located on-site may be needed. These facilities are sized and located in areas to support a phased buildout of the project, however, further study and detailed hydraulic analysis is necessary to verify the potential interim facilities. The location and size of these potential interim retention facilities are depicted on Exhibit 8 in Appendix A.

7. Conclusions

Based on the results of this SDMP, the Placer Ranch Plan Area can develop as proposed. This SDMP has analyzed the existing conditions and determined the required drainage facilities that are necessary to maintain downstream drainage, water quality, and hydromodification impacts equal to or below existing conditions.

Through the implementation of LID measures, the proposed Plan Area can fully mitigate for storm water quality and hydromodification. The LID measures proposed are tree planting, impervious area disconnection, and swales at each outfall. These measures reduce storm water runoff volumes and the amount of pollutants entering receiving waters for the 85th percentile, 24-hour event. By retaining storm water runoff on-site through the use of LID, it was found that hydromodification provisions in addition to the abovementioned measures at the storm drainage outfalls were not needed for the 2-year 24-hour event.

A total of 375.8 acre-feet of retention is estimated to be mitigated to account for potential downstream impacts of the 100-year 8-day design event. The required volume must be accounted for in the design of future retention facilities within the Natomas Cross Canal watershed.

In addition to storm water quality and retention, the traditional requirement for no adverse downstream impacts due to increasing peak storm drainage flows from a proposed development must be met. Peak flows are proposed to be attenuated by using in-stream storage in University Creek and detention basins for North Branch Placer tributary and Orchard Creek. The existing project analysis is compared to the proposed project analysis at six separate compliance points (shown on Plate 7). At these locations, the peak flow rate, peak timing, and water surface elevation under existing site conditions are compared to the peak flow rate, timing, and water surface elevation under proposed site conditions. The Sunset Industrial Area Plan Goal 3.E.7 of mitigating post-development peak flows to 90% of existing peak flows has been met through the abovementioned infrastructure and is achieved for the compliance points at the project boundary (CP#1, CP#2, and CP#3). Compliance points 4, 5, and 6 are further downstream from the project boundary and include additional contributing area that cannot nor will not be attenuated by the proposed project.

Tables 15, 16, and 17 summarize the results for each of the compliance points. Comparisons of the hydrographs for each can be viewed in Appendix I. As can be observed in the tables below, the post-development peak flow rates and water surface elevations are less than existing conditions.

Table 15: Existing and Proposed Conditions – Peak Flows

Location	Existing Conditions Peak Flow (cfs)				Proposed Conditions Peak Flow (cfs)			
	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour
CP#1	275.9	501.7	895.9	1003.0	248.3	435.2	612.9	657.9
CP#2	83.3	185.9	443.5	n/a	72.4	159.9	374.0	n/a
CP#3	16.4	37.0	91.3	109.6	13.7	30.6	72.0	86.0
CP#4	305.2	563.6	1027.1	n/a	281.4	554.9	968.7	n/a
CP#5	610.4	1121.6	2317.5	n/a	599.8	1090.4	2226.4	n/a
CP#6	1299.0	2698.7	5431.4	n/a	1276.8	2659.4	5251.4	n/a

Table 16: Existing and Proposed Conditions – Peak Timing

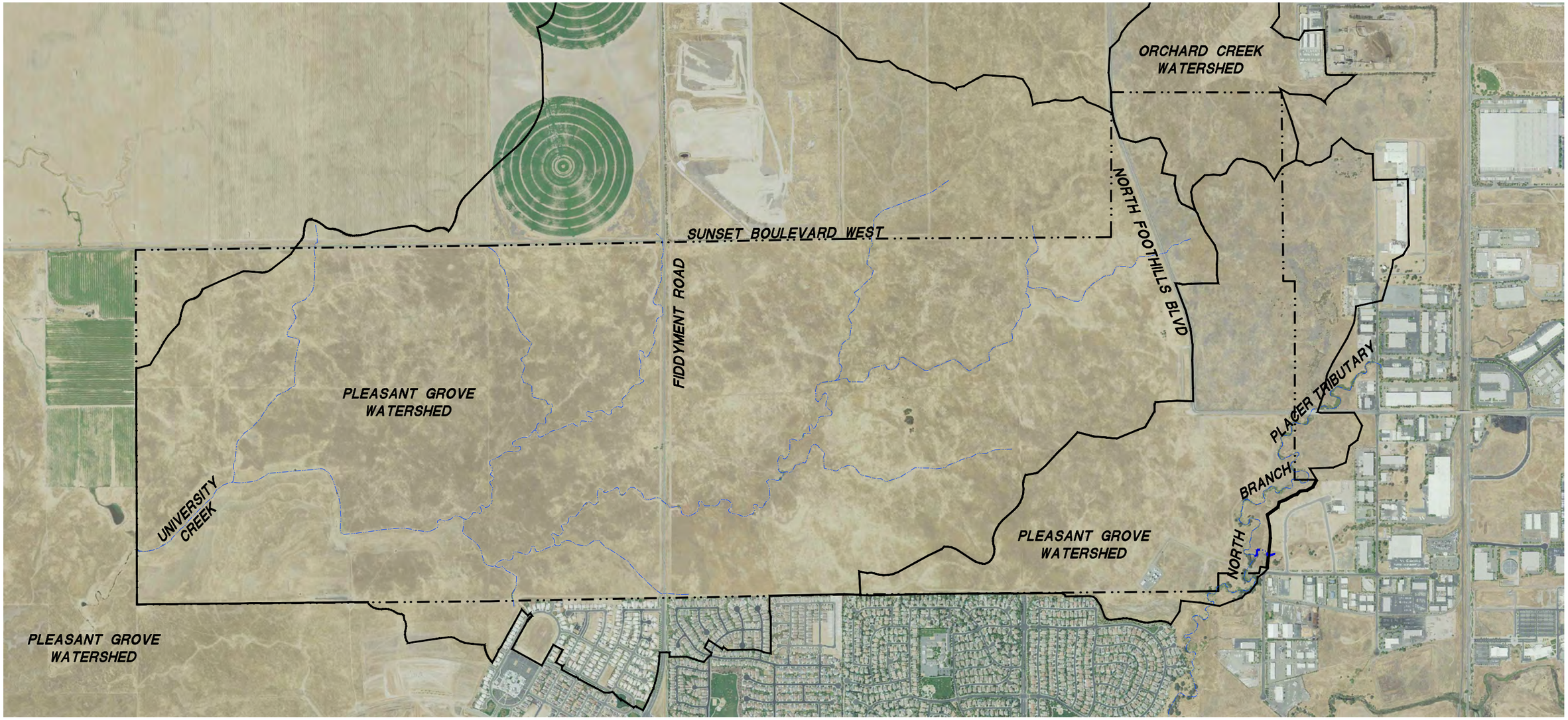
Location	Existing Conditions Peak Timing (hh:mm)				Proposed Conditions Peak Timing (hh:mm)			
	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour
CP#1	04:10	03:30	03:45	03:45	01:25	01:15	01:10	01:10
CP#2	05:25	05:00	03:40	n/a	06:05	04:55	03:40	n/a
CP#3	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:04
CP#4	07:15	06:05	05:30	n/a	05:30	04:10	03:25	n/a
CP#5	04:10	04:30	03:50	n/a	04:05	04:25	03:50	n/a
CP#6	09:00	07:05	05:50	n/a	08:40	06:45	05:50	n/a

Table 17: Existing and Proposed Conditions – Water Surface Elevations

Location	Existing Conditions Water Surface Elevation (ft)				Proposed Conditions Water Surface Elevations (ft)			
	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour	2-Year 24-Hour	10-Year 24-Hour	100-Year 24-Hour	200-Year 24-Hour
CP#1	86.81	87.41	88.15	88.16	86.70	87.31	87.69	87.70
CP#2	99.47	100.24	101.30	n/a	99.33	100.04	101.05	n/a
CP#3[1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CP#4	75.31	75.82	76.55	n/a	75.26	75.79	76.45	n/a
CP#5	96.26	97.74	99.47	n/a	96.22	97.68	99.37	n/a
CP#6	65.26	66.59	68.55	n/a	65.23	66.56	68.45	n/a

1. No creek corridor was modeled at this location. Results are a combination of hydrographs to Orchard Creek.

Appendix A
Exhibits



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SCALE: 1"=1500'

LEGEND

- PLAN AREA CREEK
- MAJOR WATERSHED
- PLACER RANCH PROJECT BOUNDARY

Exhibit 1
Existing Conditions With Aerial Photo

Placer Ranch Storm Drainage Master Plan

Placer County
Scale 1"=1500'

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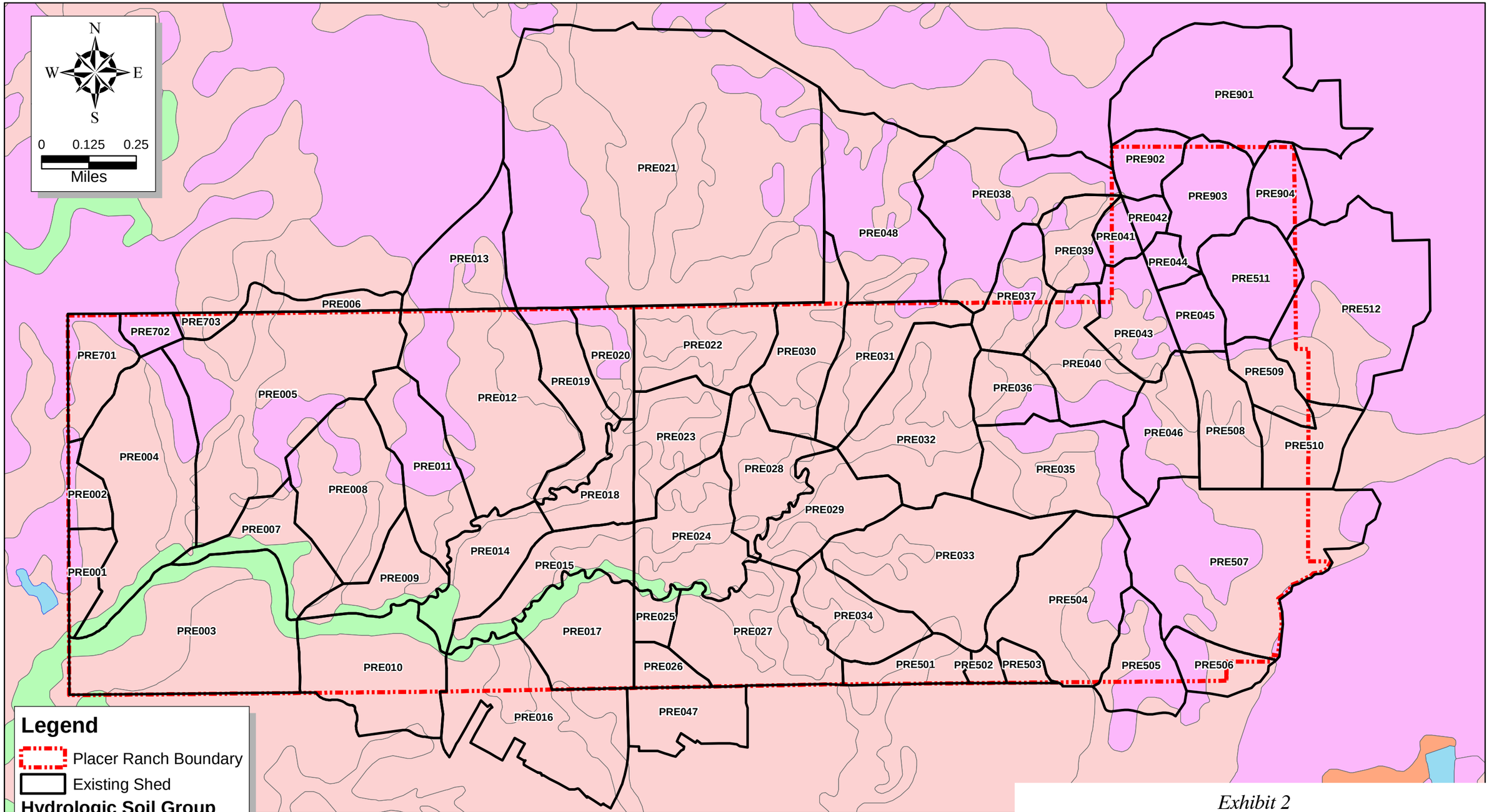

Legend

- Placer Ranch Boundary
- Existing Shed

Hydrologic Soil Group

- A
- B
- B/D
- C
- D
- Water

Exhibit 2
Existing Shed Area Soils

Placer Ranch Storm Drainage Master Plan

Placer County,
Scale 1" = 1/4 Mile

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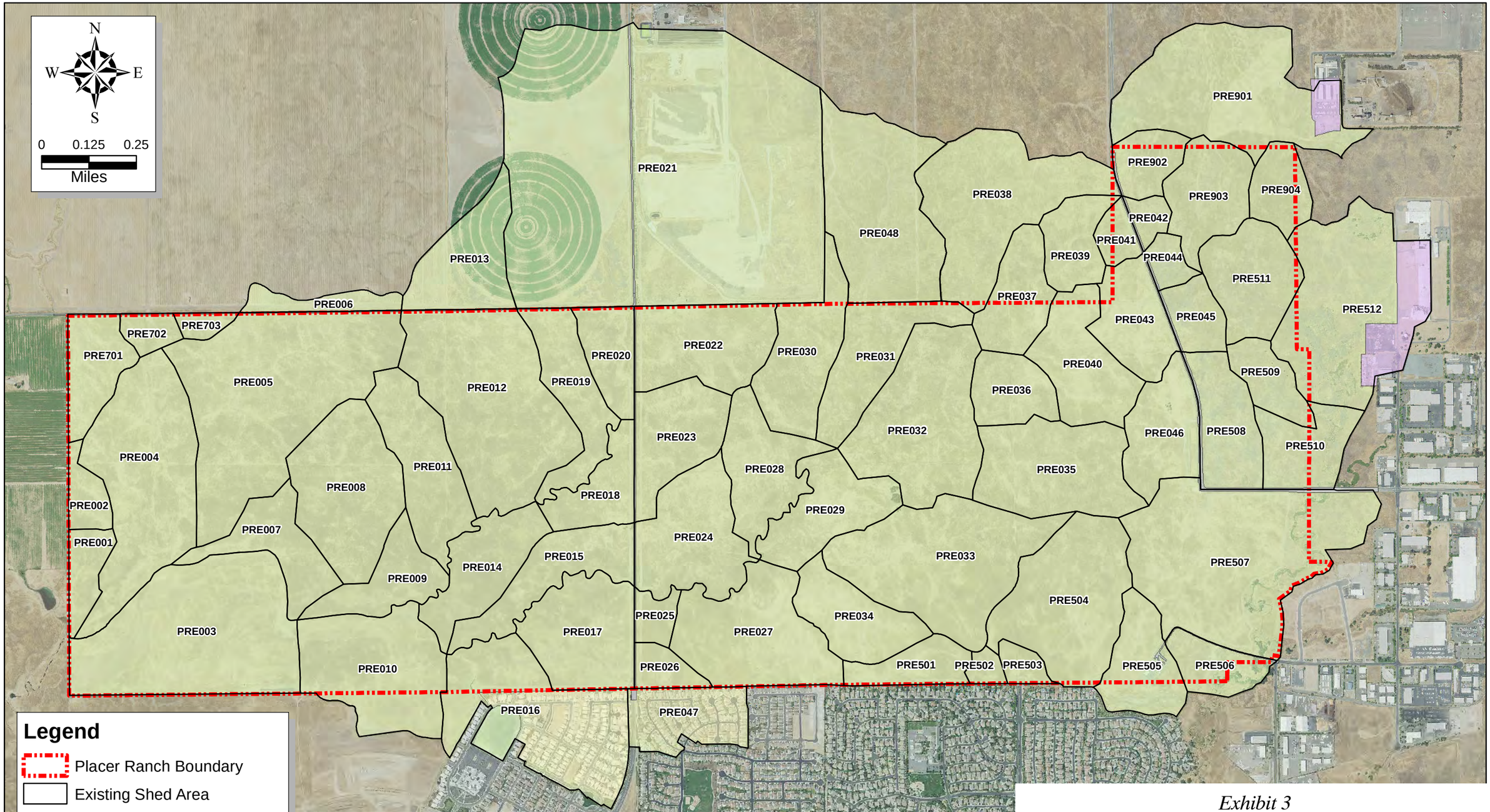

Legend

- Placer Ranch Boundary
- Existing Shed Area

Land Use

- Industrial - 80% Impervious
- Park - 5% Impervious
- Pervious - 5% Impervious
- Residential - 50% Impervious
- Roadway - 85% Impervious

Exhibit 3
Existing Pervious / Impervious Areas

Placer Ranch
Storm Drainage Master Plan

Placer County,
Scale 1" = 1/4 Mile

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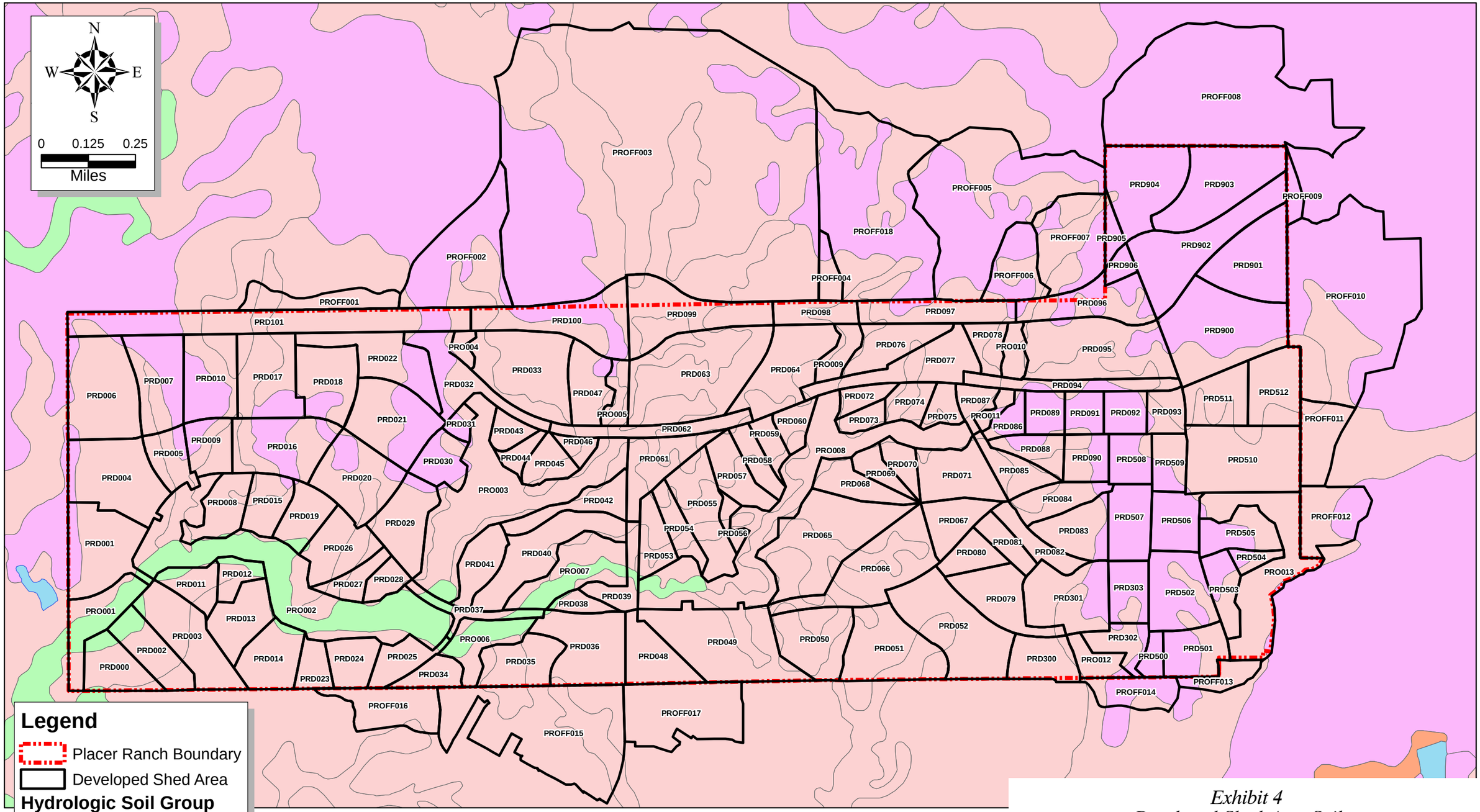

Exhibit 4
Developed Shed Area Soils

Placer Ranch
Storm Drainage Master Plan

Placer County,
Scale 1" = 1/4 Mile

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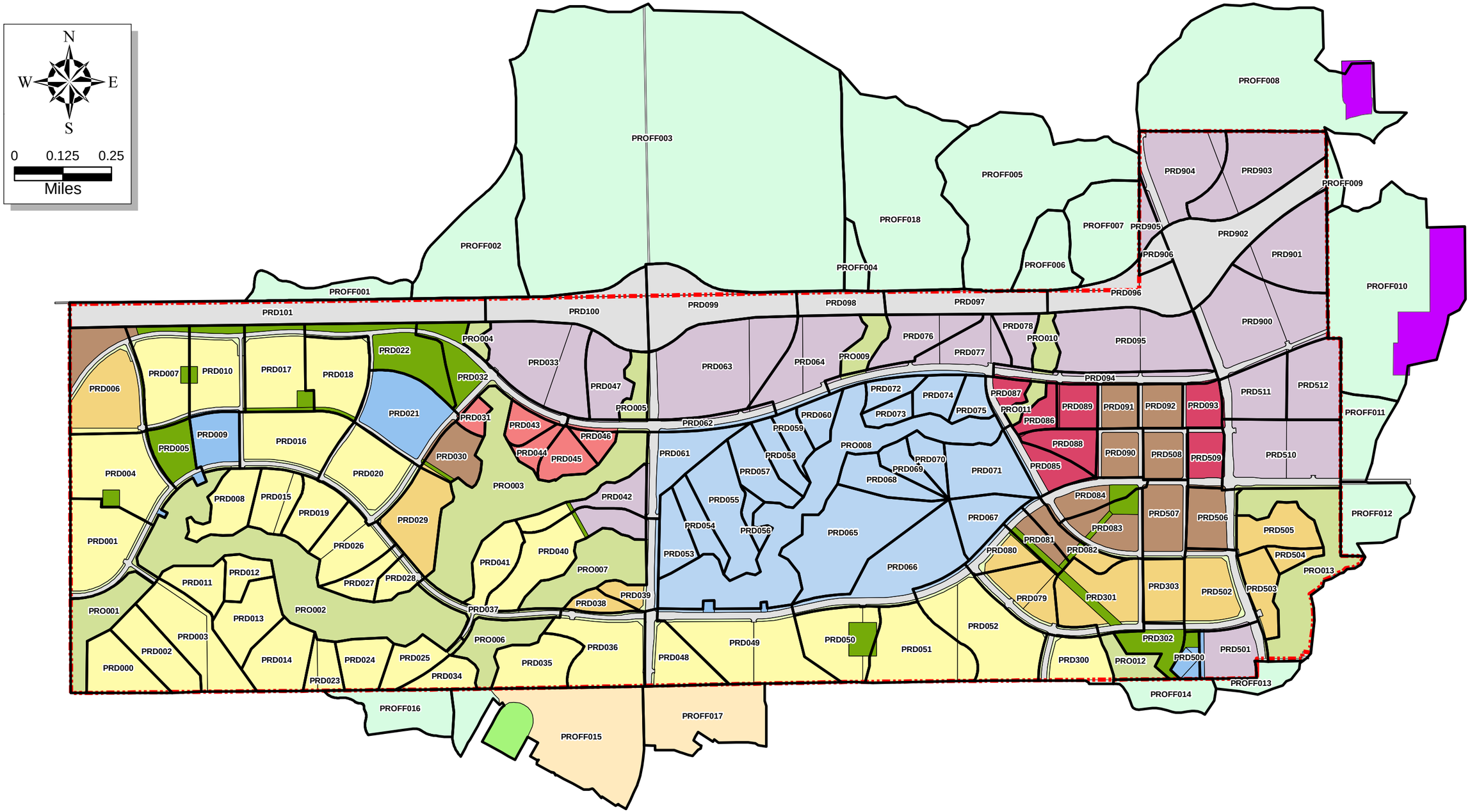

Legend

- Placer Ranch Boundary
- DevelopedShedAreas
- Offsite Parkway - 85% Impervious
- Industrial - 80% Impervious
- Residential - 50% Impervious
- Park - 5% Impervious
- Exist Road - 85% Impervious
- Pervious - 5% Impervious
- LDR - 40% Impervious
- MDR - 50% Impervious
- HDR - 65% Impervious
- GC - 80% Impervious
- CMU - 80% Impervious
- CP - 70% Impervious
- UZ - 50% Impervious
- PF - 50% Impervious
- PR - 5% Impervious
- OS - 5% Impervious
- LS - 5% Impervious
- PARKWAY - 85% Impervious
- ROADWAY - 85% Impervious

Exhibit 5
Proposed Conditions Pervious / Impervious Areas

Placer Ranch
Storm Drainage Master Plan

Placer County,
Scale 1" = 1/4 Mile

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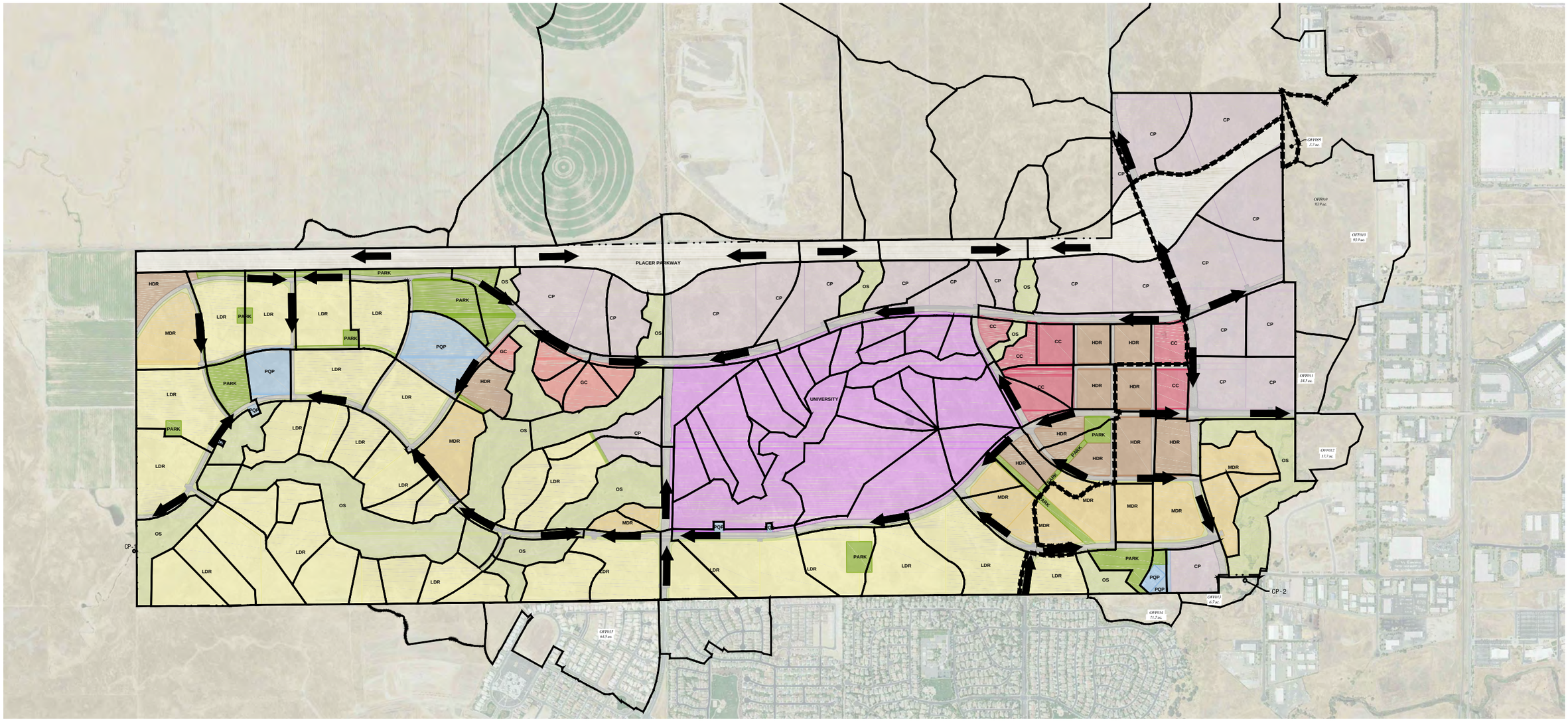

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SCALE: 1"=1500'

LEGEND

- PLAN AREA CREEK
- MAJOR WATERSHED
- PLACER RANCH PROJECT BOUNDARY
- OVERLAND RELEASE DIRECTION

Exhibit 6
Proposed Conditions Overland Release

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=1500'

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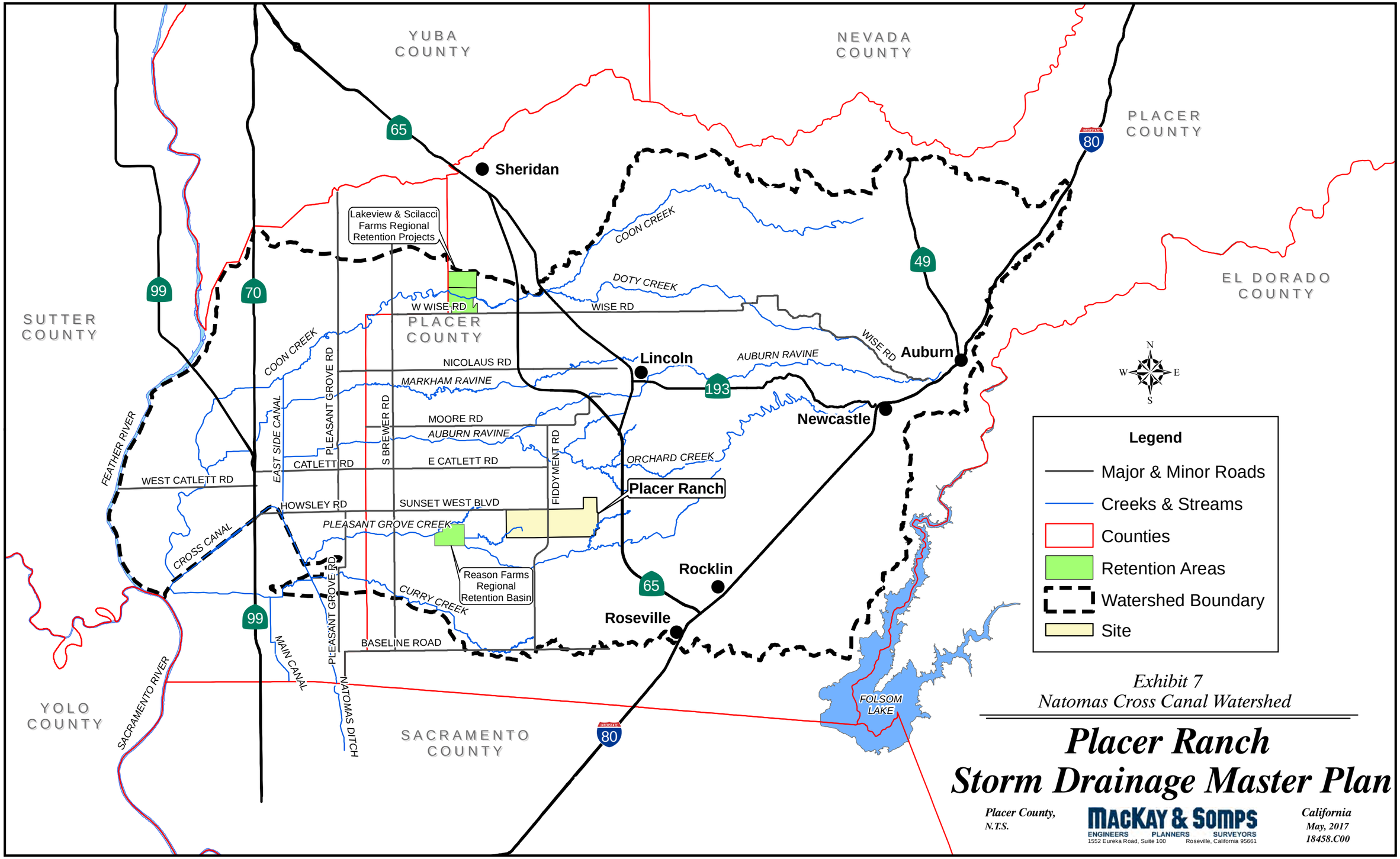

Exhibit 7
Natomas Cross Canal Watershed

Placer Ranch Storm Drainage Master Plan

Placer County, California
N.T.S.

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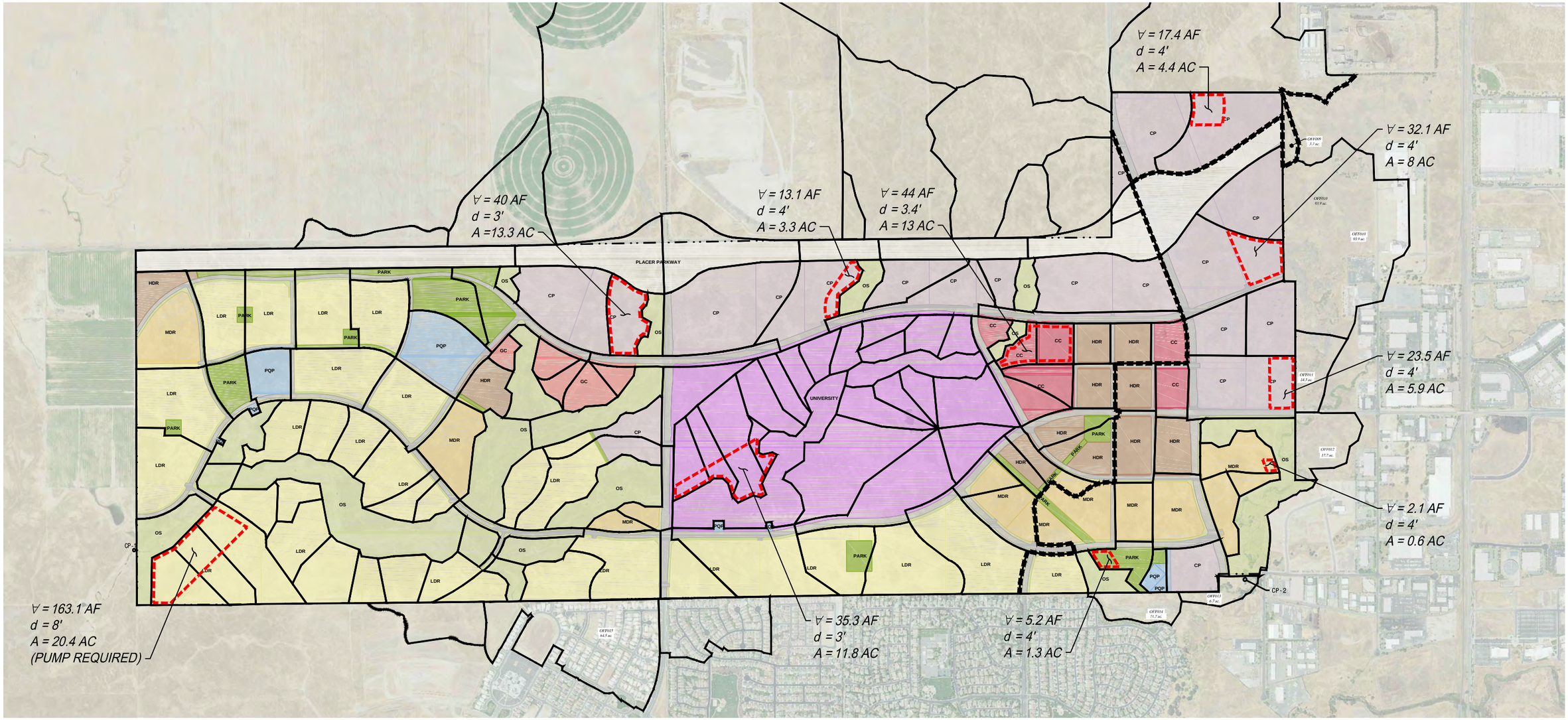

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NOTES:

1. POTENTIAL INTERIM ON-SITE RETENTION FACILITIES ARE LOCATED TO SUPPORT A PHASED BUILDOUT.
2. FURTHER DETAILED STUDY AND HYDRAULIC ANALYSIS NEEDED TO VERIFY PROPOSED INTERIM FACILITIES.

0 1500 3000

SCALE: 1"=1500'

LEGEND

———	SUBSHED BOUNDARY
—··—··—	PLACER RANCH PROJECT BOUNDARY
▭	POTENTIAL INTERIM RETENTION FACILITY LOCATION
∀ = 163.1 AF d = 8' A = 20.4 AC	APPROXIMATE VOLUME, DEPTH, & AREA OF INTERIM RETENTION FACILITY

Exhibit 8

Potential Interim Retention Facility Locations

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=1500'

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Appendix B
Hydrologic Modeling Parameters and Data

Existing Conditions
Hydrologic Soil Type

Shed ID	B/D (acres)	C (acres)	D (acres)	Grand Total
PRE001	0.56	3.31	10.64	14.52
PRE002		3.49	8.36	11.84
PRE003	25.03		88.97	114.00
PRE004	7.66	10.97	73.62	92.24
PRE005	0.12	29.08	104.22	133.42
PRE006			12.71	12.71
PRE007	10.12	0.37	21.84	32.34
PRE008		8.95	56.36	65.31
PRE009	3.90		24.14	28.03
PRE010	13.22		54.01	67.23
PRE011		21.29	25.69	46.98
PRE012		20.84	85.20	106.04
PRE013		27.24	13.11	40.35
PRE014	6.90		30.71	37.61
PRE015	7.32		30.04	37.36
PRE016	2.67		114.16	116.82
PRE017	7.86		41.48	49.34
PRE018			24.69	24.69
PRE019		3.54	32.10	35.64
PRE020		8.14	14.01	22.16
PRE021		91.05	284.54	375.59
PRE022			49.10	49.10
PRE023			39.37	39.37
PRE024	2.94		49.30	52.25
PRE025	0.90		8.37	9.27
PRE026			10.90	10.90
PRE027	0.96		63.88	64.85
PRE028			39.38	39.38
PRE029			39.18	39.18
PRE030		1.41	42.40	43.81
PRE031		2.03	39.22	41.26
PRE032			77.86	77.86
PRE033			91.53	91.53
PRE034			34.28	34.28
PRE035		19.69	40.99	60.68
PRE036		6.57	17.22	23.79
PRE037		10.88	18.89	29.77
PRE038		50.65	29.85	80.50
PRE039		4.82	18.05	22.87
PRE040		15.50	25.98	41.48
PRE041		8.66	0.54	9.20
PRE042		7.16	0.05	7.22
PRE043		14.89	16.77	31.66

Existing Conditions
Hydrologic Soil Type

Shed ID	B/D (acres)	C (acres)	D (acres)	Grand Total
PRE044		8.46		8.46
PRE045		15.65	0.70	16.34
PRE046		14.16	20.99	35.15
PRE501			19.28	19.28
PRE502			4.94	4.94
PRE503			7.16	7.16
PRE504		13.14	60.51	73.65
PRE505		18.85	12.54	31.39
PRE506		8.48	10.86	19.34
PRE507		63.72	67.19	130.91
PRE508		0.43	34.08	34.51
PRE509		2.46	16.01	18.46
PRE510			29.15	29.15
PRE511		39.36		39.36
PRE512		70.33	31.09	101.42
PRE701		7.03	19.31	26.34
PRE702		8.83	0.00	8.84
PRE703		0.41	5.18	5.59
PRE901		97.64		97.64
PRE902		17.47	0.06	17.54
PRE903		34.48		34.48
PRE904		19.33		19.33
Grand Total (acres)	**90.16**	**810.77**	**2242.75**	**3143.67**

Existing Conditions
Land Use

Shed ID	Industrial (acres)	Park (acres)	Pervious (acres)	Residential (acres)	Roadway (acres)	Grand Total (acres)
PRE001			14.52			14.52
PRE002			11.84			11.84
PRE003			114.00			114.00
PRE004			92.24			92.24
PRE005			132.81		0.61	133.42
PRE006			12.17		0.54	12.71
PRE007			32.34			32.34
PRE008			65.31			65.31
PRE009			28.03			28.03
PRE010			67.23			67.23
PRE011			46.98			46.98
PRE012			105.57		0.46	106.04
PRE013			39.97		0.38	40.35
PRE014			37.61			37.61
PRE015			37.10		0.25	37.36
PRE016		7.70	28.10	80.72	0.24	116.77
PRE017			48.81	0.11	0.42	49.34
PRE018			24.29		0.40	24.69
PRE019			35.43		0.22	35.64
PRE020			21.43		0.72	22.16
PRE021			373.07		2.52	375.59
PRE022			48.77		0.34	49.10
PRE023			38.84		0.53	39.37
PRE024			51.98		0.26	52.25
PRE025			9.04		0.23	9.27
PRE026			10.51	0.19	0.20	10.90
PRE027			64.77	0.08		64.85
PRE028			39.38			39.38
PRE029			39.18			39.18
PRE030			43.81			43.81
PRE031			41.26			41.26
PRE032			77.86			77.86
PRE033			91.53			91.53
PRE034			34.28			34.28
PRE035			60.68			60.68
PRE036			23.79			23.79
PRE037			29.77			29.77
PRE038			80.31		0.19	80.50
PRE039			22.86		0.01	22.87
PRE040			41.48			41.48
PRE041			8.74		0.46	9.20
PRE042			6.77		0.44	7.22

Existing Conditions
Land Use

Shed ID	Industrial (acres)	Park (acres)	Pervious (acres)	Residential (acres)	Roadway (acres)	Grand Total (acres)
PRE043			30.84		0.81	31.66
PRE044			8.15		0.31	8.46
PRE045			15.86		0.48	16.34
PRE046			34.18		0.98	35.15
PRE501			19.28			19.28
PRE502			4.94			4.94
PRE503			7.16			7.16
PRE504			73.65			73.65
PRE505			31.10		0.29	31.39
PRE506			19.00		0.35	19.34
PRE507			128.99		1.92	130.91
PRE508			32.91		1.60	34.51
PRE509			18.46			18.46
PRE510			28.51		0.64	29.15
PRE511			39.36			39.36
PRE512	23.58		77.83			101.41
PRE701			26.10		0.24	26.34
PRE702			8.58		0.25	8.84
PRE703			5.30		0.29	5.59
PRE901	6.10		91.55			97.64
PRE902			17.16		0.37	17.54
PRE903			34.48			34.48
PRE904			19.33			19.33
Grand Total (acres)	**29.68**	**7.70**	**3007.20**	**81.09**	**17.94**	**3143.61**

Developed Conditions
Hydrologic Soil Types

Shed ID	B/D (ac)	C (ac)	D (ac)	Grand Total
PRD000	2.48		11.56	14.03
PRD001	0.59	4.30	21.06	25.95
PRD002	3.35		11.18	14.53
PRD003	0.86		22.61	23.47
PRD004		2.55	26.72	29.26
PRD005		1.74	8.44	10.18
PRD006		2.96	28.52	31.48
PRD007		12.23	9.08	21.31
PRD008	0.25		12.35	12.60
PRD009		2.91	8.28	11.19
PRD010		10.65	10.03	20.67
PRD011	1.50		7.46	8.96
PRD012	1.97		4.51	6.48
PRD013	0.16		14.86	15.02
PRD014	0.96		14.77	15.74
PRD015		0.55	10.38	10.93
PRD016		10.32	14.64	24.96
PRD017		5.01	18.13	23.14
PRD018		3.35	15.86	19.21
PRD019	1.02	0.10	10.06	11.18
PRD020		5.28	18.24	23.51
PRD021		11.97	13.53	25.50
PRD022		7.00	13.63	20.63
PRD023	0.00		6.79	6.79
PRD024			10.21	10.21
PRD025	0.42		9.05	9.47
PRD026	0.15		16.20	16.35
PRD027			6.85	6.85
PRD028	0.00		5.54	5.55
PRD029		1.57	16.60	18.17
PRD030		8.14	2.39	10.52
PRD031		2.17	1.07	3.24
PRD032		7.31	10.11	17.42
PRD033			32.83	32.83
PRD034			7.07	7.07
PRD035			15.61	15.61
PRD036	0.15		25.02	25.17
PRD037	3.10		3.51	6.62
PRD038	0.48		3.96	4.44
PRD039	0.62		8.03	8.66
PRD040			24.88	24.88
PRD041	0.07		11.53	11.60
PRD042			11.63	11.63

Developed Conditions
Hydrologic Soil Types

Shed ID	B/D (ac)	C (ac)	D (ac)	Grand Total
PRD043			5.36	5.36
PRD044			4.22	4.22
PRD045			8.01	8.01
PRD046			3.69	3.69
PRD047		1.34	12.19	13.52
PRD048			14.94	14.94
PRD049			38.06	38.06
PRD050			20.72	20.72
PRD051			26.77	26.77
PRD052			33.75	33.75
PRD053	0.10		9.50	9.60
PRD054			8.07	8.07
PRD055			20.54	20.54
PRD056			3.39	3.39
PRD057			11.99	11.99
PRD058			7.33	7.33
PRD059			5.45	5.45
PRD060			6.44	6.44
PRD061			16.10	16.10
PRD062			11.46	11.46
PRD063			47.68	47.68
PRD064			25.24	25.24
PRD065			39.26	39.26
PRD066			31.22	31.22
PRD067			11.65	11.65
PRD068			10.91	10.91
PRD069			5.95	5.95
PRD070			6.04	6.04
PRD071			18.07	18.07
PRD072			5.15	5.15
PRD073			4.63	4.63
PRD074			7.43	7.43
PRD075			5.71	5.71
PRD076			14.08	14.08
PRD077			20.44	20.44
PRD078			7.18	7.18
PRD079			17.50	17.50
PRD080			8.25	8.25
PRD081			6.92	6.92
PRD082		0.00	8.53	8.53
PRD083		2.49	12.60	15.09
PRD084		0.97	10.25	11.22
PRD085			9.96	9.96

Developed Conditions
Hydrologic Soil Types

Shed ID	B/D (ac)	C (ac)	D (ac)	Grand Total
PRD086		4.44	0.86	5.30
PRD087			5.61	5.61
PRD088		2.33	6.49	8.82
PRD089		7.21	0.54	7.75
PRD090		3.94	5.74	9.69
PRD091		6.52	1.10	7.61
PRD092		7.96	0.39	8.36
PRD093		0.50	6.99	7.49
PRD094		2.73	8.85	11.59
PRD095		3.94	34.30	38.24
PRD096		10.02	9.82	19.84
PRD097		2.74	13.79	16.53
PRD098			9.06	9.06
PRD099			27.93	27.93
PRD100		11.50	15.78	27.29
PRD101		13.45	29.71	43.15
PRD300			12.84	12.84
PRD301		6.14	17.82	23.96
PRD302		2.57	6.48	9.04
PRD303		9.37	1.89	11.26
PRD500		4.11		4.11
PRD501		7.52	6.00	13.52
PRD502		16.35	5.01	21.36
PRD503		4.57	5.31	9.88
PRD504		1.54	2.20	3.73
PRD505		6.94	6.01	12.95
PRD506		12.65	0.26	12.91
PRD507		14.69		14.69
PRD508		8.63	1.18	9.80
PRD509		3.40	5.57	8.97
PRD510		0.14	34.27	34.41
PRD511			14.96	14.96
PRD512			17.62	17.62
PRD900		29.93	10.35	40.27
PRD901		25.21		25.21
PRD902		31.40	0.03	31.43
PRD903		30.21		30.21
PRD904		26.08	0.41	26.48
PRD905		3.47	0.25	3.72
PRD906		3.50		3.50
PRO001	8.68		7.37	16.04
PRO002	41.68		27.03	68.71
PRO003	2.05	0.70	53.82	56.57

Developed Conditions
Hydrologic Soil Types

Shed ID	B/D (ac)	C (ac)	D (ac)	Grand Total
PRO004		0.08	2.79	2.87
PRO005		0.53	5.61	6.13
PRO006	7.46		5.78	13.24
PRO007	7.91		13.60	21.50
PRO008	4.21		58.38	62.59
PRO009			6.71	6.71
PRO010			5.44	5.44
PRO011		0.38	2.58	2.96
PRO012		0.59	6.30	6.89
PRO013		1.65	32.27	33.92
PROFF001			12.71	12.71
PROFF002		27.24	13.11	40.35
PROFF003		89.66	275.23	364.89
PROFF004		1.41	3.96	5.37
PROFF005		50.15	29.01	79.16
PROFF006		9.46	5.89	15.34
PROFF007		8.90	18.42	27.32
PROFF008		103.06		103.06
PROFF009		3.74		3.74
PROFF010		67.73	26.14	93.87
PROFF011			14.29	14.29
PROFF012		6.40	11.29	17.69
PROFF013		1.04	5.70	6.74
PROFF014		7.66	4.04	11.70
PROFF015			64.31	64.31
PROFF016			17.56	17.56
PROFF017			31.53	31.53
PROFF018		46.74	37.46	84.20
Grand Total	**90.23**	**857.67**	**2281.15**	**3229.05**

Developed Conditions
Land Use

Shed ID	CMU (ac)	CP (ac)	EXRoadway (ac)	GC (ac)	HDR (ac)	Industrial (ac)	LDR (ac)	LS (ac)	MDR (ac)	Offsite Parkway (ac)	OS (ac)	Park (ac)	PARKWAY (ac)	Pervious (ac)	PF (ac)	PR (ac)	Residential (ac)	ROADWAY (ac)	UZ (ac)	Grand Total
PRD000							13.77				0.11									13.88
PRD001							20.90	1.04			1.43							2.55		25.92
PRD002							14.48													14.48
PRD003							23.46				0.01							0.00		23.47
PRD004							24.92	0.40			0.46				0.23	1.66		1.60		29.26
PRD005											0.23				0.54	8.82		0.60		10.18
PRD006					7.56		1.61	1.21	17.77							0.58		2.75		31.48
PRD007					0.43		16.11	0.64							0.00	2.44		1.69		21.31
PRD008							12.57				0.02							0.01		12.60
PRD009							0.03	0.07			0.31				10.06	0.02		0.70		11.19
PRD010							14.36	0.80							0.41	2.43		2.67		20.67
PRD011							8.95				0.00									8.96
PRD012							6.48													6.48
PRD013							15.02				0.00									15.02
PRD014							15.72				0.02									15.73
PRD015							10.93				0.00									10.93
PRD016							21.28	1.31							0.17			2.19		24.96
PRD017							17.60	0.61								3.83		1.09		23.14
PRD018							18.32	0.21								0.67		0.01		19.21
PRD019							11.14	0.02										0.03		11.18
PRD020							17.34	2.58	0.08									3.52		23.51
PRD021				0.04	0.65		0.45	0.02	0.00						21.25	0.10		2.99		25.50
PRD022							0.08	0.61							0.06	17.38		2.50		20.63
PRD023							6.79							0.00						6.79
PRD024							10.20				0.00			0.00						10.21
PRD025							8.93				0.37			0.00				0.17		9.47
PRD026							15.30	0.49										0.56		16.35
PRD027							6.40	0.22	0.00									0.23		6.85
PRD028							4.35	0.46	0.05		0.00							0.69		5.55
PRD029								0.11	18.03		0.02							0.01		18.17
PRD030				0.00	9.56				0.41		0.00					0.55		0.01		10.52
PRD031				3.23	0.01						0.00							0.00		3.24
PRD032		0.73		0.90							0.67		0.00		0.01	9.49		5.62		17.42
PRD033		32.73									0.01		0.00					0.08		32.83
PRD034							7.07				0.00			0.00						7.07
PRD035							15.50				0.01						0.10			15.61
PRD036							21.04	2.07	0.01		0.02						0.19	1.84		25.17
PRD037							0.01	0.54	0.00		2.98							3.08		6.62
PRD038								0.11	4.30		0.00							0.02		4.44
PRD039		0.21						0.35	3.43		0.24							3.00	1.43	8.66

Developed Conditions
Land Use

Shed ID	CMU (ac)	CP (ac)	EXRoadway (ac)	GC (ac)	HDR (ac)	Industrial (ac)	LDR (ac)	LS (ac)	MDR (ac)	Offsite Parkway (ac)	OS (ac)	Park (ac)	PARKWAY (ac)	Pervious (ac)	PF (ac)	PR (ac)	Residential (ac)	ROADWAY (ac)	UZ (ac)	Grand Total
PRD040		6.66					17.68	0.02			0.07					0.45		0.01		24.88
PRD041							11.54	0.01			0.03							0.02		11.60
PRD042		7.99					3.40				0.05					0.17		0.02		11.63
PRD043				5.36							0.00									5.36
PRD044				4.21														0.01		4.22
PRD045				8.01							0.00									8.01
PRD046				3.69																3.69
PRD047		13.50									0.02		0.00							13.52
PRD048							11.27	0.92									0.09	2.63	0.03	14.94
PRD049							30.09	1.42							0.81		0.00	4.01	1.72	38.05
PRD050							16.79	0.17						0.02		3.71		0.03		20.71
PRD051							26.21	0.01						0.28		0.29				26.79
PRD052							30.23	0.83						0.05				1.76	0.89	33.76
PRD053																			9.60	9.60
PRD054																			8.07	8.07
PRD055																			20.54	20.54
PRD056																			3.39	3.39
PRD057																			11.99	11.99
PRD058																			7.33	7.33
PRD059																			5.45	5.45
PRD060																			6.44	6.44
PRD061		0.64									0.28							2.96	12.22	16.10
PRD062		1.80		0.80							0.66							6.17	2.03	11.46
PRD063		44.83									0.50		0.05					2.30		47.68
PRD064		22.58									0.01							1.67	0.98	25.24
PRD065																			39.26	39.26
PRD066							0.00	1.20										3.53	26.49	31.22
PRD067																			11.65	11.65
PRD068																			10.91	10.91
PRD069																			5.95	5.95
PRD070																			6.04	6.04
PRD071																			18.07	18.07
PRD072																			5.15	5.15
PRD073																			4.63	4.63
PRD074																			7.43	7.43
PRD075																			5.71	5.71
PRD076		14.08																0.00		14.08
PRD077	0.00	12.62									0.33							5.12	2.37	20.44
PRD078		7.18																		7.18
PRD079							0.08	2.63	10.90							0.16		3.73		17.50

Developed Conditions
Land Use

Shed ID	CMU (ac)	CP (ac)	EXRoadway (ac)	GC (ac)	HDR (ac)	Industrial (ac)	LDR (ac)	LS (ac)	MDR (ac)	Offsite Parkway (ac)	OS (ac)	Park (ac)	PARKWAY (ac)	Pervious (ac)	PF (ac)	PR (ac)	Residential (ac)	ROADWAY (ac)	UZ (ac)	Grand Total
PRD080								0.69	4.42							0.41		1.86	0.87	8.25
PRD081					3.72				0.03							2.10		0.69	0.38	6.92
PRD082					4.10				3.03							0.49		0.65	0.25	8.53
PRD083					8.66			0.42	0.19							2.95		2.86		15.09
PRD084	0.26				5.60											1.48		3.87	0.01	11.22
PRD085	6.68										0.00							2.29	0.99	9.96
PRD086	5.24										0.06									5.30
PRD087	3.64										0.05							1.53	0.38	5.61
PRD088	8.78																	0.04		8.82
PRD089	7.74																	0.01		7.75
PRD090	0.37				7.23													2.08		9.69
PRD091	0.17				6.82													0.62		7.61
PRD092					7.60													0.75		8.36
PRD093	6.84				0.10													0.56		7.49
PRD094	1.10	3.36			0.55						0.43							6.15		11.59
PRD095		38.19											0.04					0.01		38.24
PRD096		0.05								3.50	0.00		16.29							19.84
PRD097		0.04								0.01	0.00		15.85	0.68						16.57
PRD098		0.08									0.00		8.54	0.60						9.21
PRD099		0.21								7.54	0.00		19.92	0.23				0.04		27.95
PRD100		0.13	0.22							4.30	0.06		22.51	0.11				0.00		27.34
PRD101			1.68		0.16								40.52	0.99		0.13				43.48
PRD300							10.05	1.15			0.00			0.57				1.07		12.84
PRD301							0.00	0.34	18.14		0.12					3.09		2.27		23.96
PRD302								0.07			0.04					7.92		1.01		9.04
PRD303								0.38	10.89									0.00		11.26
PRD500															2.99	1.12				4.11
PRD501		10.89						0.06			0.19			0.14	0.87	0.08		1.31		13.54
PRD502		0.46			0.42			2.17	12.95						0.03	0.15		5.17		21.36
PRD503								0.32	9.31		0.08							0.17		9.88
PRD504									3.72		0.01									3.73
PRD505								0.02	12.80		0.08							0.04		12.95
PRD506					10.19			0.36	0.00		0.35							2.02		12.91
PRD507					11.63			0.31	0.21									2.54		14.69
PRD508	0.33				7.77													1.70		9.80
PRD509	6.95				0.33													1.69		8.97
PRD510	0.37	26.62			0.05						1.30							6.06		34.41
PRD511	0.30	13.21																1.46		14.96
PRD512		17.60																0.02		17.62
PRD900	0.00	35.56											0.04					4.67		40.27

Developed Conditions
Land Use

Shed ID	CMU (ac)	CP (ac)	EXRoadway (ac)	GC (ac)	HDR (ac)	Industrial (ac)	LDR (ac)	LS (ac)	MDR (ac)	Offsite Parkway (ac)	OS (ac)	Park (ac)	PARKWAY (ac)	Pervious (ac)	PF (ac)	PR (ac)	Residential (ac)	ROADWAY (ac)	UZ (ac)	Grand Total
PRD901		25.17											0.04							25.21
PRD902		0.61											30.82					0.01		31.43
PRD903		30.18											0.02							30.20
PRD904		23.66											0.00					2.78		26.44
PRD905		3.70											0.00							3.70
PRD906		0.02											3.48							3.50
PRO001											15.99									15.99
PRO002							0.08				68.54				0.00			0.09		68.71
PRO003		0.05		0.02	0.01		0.02		0.00		56.48					0.00				56.57
PRO004		0.02									2.85		0.00			0.00				2.87
PRO005											6.13									6.13
PRO006							0.04				13.20			0.00						13.24
PRO007							0.01		0.01		21.48									21.50
PRO008																			62.59	62.59
PRO009		0.01									6.70									6.71
PRO010		0.00									5.44									5.44
PRO011	0.00										2.96							0.00		2.96
PRO012											6.87					0.02				6.89
PRO013			0.06						0.07		32.53			1.26						33.92
PROFF001			0.54											12.17						12.71
PROFF002			0.38											39.97						40.35
PROFF003			1.96											362.93						364.89
PROFF004														5.37						5.37
PROFF005														79.16						79.16
PROFF006														15.34						15.34
PROFF007		0.00											0.00	27.32						27.33
PROFF008			0.00			6.10								96.96				0.00		103.06
PROFF009		0.00											0.00	3.74						3.75
PROFF010		0.10				23.58								70.28						93.97
PROFF011			0.28											14.01				0.00		14.29
PROFF012			0.59								0.00			17.10				0.00		17.69
PROFF013		0.07												6.68						6.75
PROFF014		0.00												11.70	0.01					11.71
PROFF015							0.01					7.70		7.44			49.13			64.29
PROFF016							0.01							17.54						17.56
PROFF017							0.01										31.51			31.52
PROFF018														84.20						84.20
Grand Total (ac)	**48.79**	**395.55**	**5.71**	**26.26**	**93.16**	**29.68**	**538.66**	**27.36**	**130.77**	**15.36**	**250.83**	**7.70**	**158.13**	**876.85**	**37.44**	**72.68**	**81.02**	**132.26**	**301.22**	**3229.41**

Appendix C

HEC-1 Hydrologic Data

(Results on disc)

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IDPLACER RANCH WATERSHED MODEL
IDPLACER RANCH HYDROLOGICAL STUDY 5/2017
IDModel created by MacKay & Somps
IDfor Placer County Flood Control District
IDClarke Unit Hydrograph method used
IDMuskingum-Cunge routing
IDstorm centering PI and PB added
IDEXISTING CONDITIONS
*DIAGRAM
IT     5 30DEC05    1200     289
IO     5
KKPRE045
KMSubshed PRE045
* 16.34 Ac
BA0.0255
PB
* pi e=134.8
BF    -1       1  0.0255
LU     0   0.089    7.51
UC 0.226   0.134
UA     0  0.0008  0.0013   0.002  0.0031  0.0051   0.011  0.0191   0.023  0.0245
UA0.0255
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRE045  C=FLOW   F=0YR
*
KKPRE044
KMSubshed PRE044
* 8.46 Ac
BA0.0132
PB
* pi e=137.6
BF    -1       1  0.0132
LU     0    0.09    8.07
UC 0.175   0.123
UA     0  0.0004  0.0007  0.0011  0.0016  0.0026  0.0057  0.0099  0.0119  0.0127
UA0.0132
*
KK  R044
KMROUTE 44 TO 43
RD   660  0.0076   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE044  C=FLOW   F=0YR
*
KKPRE043
KMSubshed PRE043
* 31.66 Ac
BA0.0495
PB
* pi e=128.5
BF    -1       1  0.0495
LU     0   0.079    7.18
UC 0.321   0.203
UA     0  0.0015  0.0025   0.004  0.0059  0.0099  0.0213  0.0371  0.0445  0.0475
UA0.0495
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE043  C=FLOW   F=0YR
*
KK J4345
KMCOMBINE SUBSHEDS PRE043 THRU PRE045
HC     3
```

```
*
KKPRE046
KMSubshed PRE046
* 35.15 Ac
BA0.0549
PB
* pi e=130.6
BF    -1       1  0.0549
LU     0   0.078    7.36
UC 0.356   0.253
UA     0  0.0016  0.0027  0.0044  0.0066   0.011  0.0236  0.0412  0.0494  0.0527
UA0.0549
*
KK  R046
KMROUTE 46 TO 40
RD  1320  0.0038   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRD  B=R046  C=FLOW   F=0YR
*
KKPRE040
KMSubshed PRE040
* 41.48 Ac
BA0.0648
PB
* pi e=126.7
BF    -1       1  0.0648
LU     0   0.077       5
UC 0.434   0.347
UA     0  0.0019  0.0032  0.0052  0.0078   0.013  0.0279  0.0486  0.0583  0.0622
UA0.0648
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE040  C=FLOW   F=0YR
*
KK J4046
KMCOMBINE SUBSHEDS PRE046 AND PRE040 AND THE CHANNEL
HC     3
*
KKPRE042
KMSubshed PRE042
* 7.22 Ac
BA0.0113
PB
* pi e=137.35
BF    -1       1  0.0113
LU     0    0.09    10.2
UC 0.167   0.119
UA     0  0.0003  0.0006  0.0009  0.0014  0.0023  0.0049  0.0085  0.0102  0.0108
UA0.0113
*
KK  R042
KMROUTE 42 TO 41
RD 577.5  0.0087   0.045            TRAP       5      10
*
KKPRE041
KMSubshed PRE041
* 9.2 Ac
BA0.0144
PB
* pi e=131.7
BF    -1       1  0.0144
LU     0   0.089    9.25
```

```
UC 0.224   0.185
UA     0  0.0004  0.0007  0.0012  0.0017  0.0029  0.0062  0.0108  0.0129  0.0138
UA0.0144
*
KK J4241
KMCOMBINE SUBSHEDS PRE042 & PRE041
HC     2
*
KK  R041
KMROUTE 41 TO 39
RD   825  0.0061   0.045            TRAP       5      10
*
KKPRE039
KMSubshed PRE039
* 22.87 Ac
BA0.0357
PB
* pi e=134
BF    -1       1  0.0357
LU     0   0.074    5.02
UC 0.399   0.374
UA     0  0.0011  0.0018  0.0029  0.0043  0.0071  0.0154  0.0268  0.0322  0.0343
UA0.0357
*
KK J3942
KMCOMBINE SUBSHEDS 39 THRU 42
HC     2
*
KK  R039
KMROUTE 39 TO 37
RD   840   0.006   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRD B=J3942  C=FLOW   F=0YR
*
KKPRE037
KMSubshed PRE037
* 29.77 Ac
BA0.0465
PB
* pi e=118.75
BF    -1       1  0.0465
LU     0   0.077       5
UC 0.497   0.428
UA     0  0.0014  0.0023  0.0037  0.0056  0.0093    0.02  0.0349  0.0419  0.0447
UA0.0465
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE037  C=FLOW   F=0YR
*
KK J3746
KMCOMBINE SUBSHEDS PRE037 THRU PRE036
HC     3
*
KKPRE036
KMSubshed PRE036
* 23.79 Ac
BA0.0372
PB
* pi e=121.6
BF    -1       1  0.0372
LU     0   0.076       5
UC 0.362   0.341
```

```
UA     0  0.0011  0.0019   0.003  0.0045  0.0074   0.016  0.0279  0.0335  0.0357
UA0.0372
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE036  C=FLOW   F=0YR
*
KK J3645
KMCOMBINE SUBSHEDS PRE043 THRU PRE045
HC     2
*
KKPRE035
KMSubshed PRE035
* 60.68 Ac
BA0.0948
PB
* pi e=126.8
BF    -1       1  0.0948
LU     0   0.076       5
UC 0.507   0.416
UA     0  0.0028  0.0047  0.0076  0.0114   0.019  0.0408  0.0711  0.0853   0.091
UA0.0948
*
KK  R035
KMROUTE 35 TO 32
RD1072.5  0.0047   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE035  C=FLOW   F=0YR
*
KKPRE032
KMSubshed PRE032
* 77.86 Ac
BA0.1217
PB
* pi e=118.85
BF    -1       1  0.1217
LU     0    0.07       5
UC 0.638   0.513
UA     0  0.0036  0.0061  0.0097  0.0146  0.0243  0.0523  0.0912  0.1095  0.1168
UA0.1217
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE032  C=FLOW   F=0YR
*
KK J3235
KMCOMBINE SUBSHEDS PRE032 & 35 AND THE CREEK
HC     3
*
KKPRE033
KMSubshed PRE033
* 91.53 Ac
BA 0.143
PB
* pi e=123.1
BF    -1       1   0.143
LU     0    0.07       5
UC 0.648   0.538
UA     0  0.0043  0.0072  0.0114  0.0172  0.0286  0.0615  0.1073  0.1287  0.1373
UA 0.143
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE033  C=FLOW   F=0YR
*
```

```
KKPRE034
KMSubshed PRE034
* 34.28 Ac
BA0.0536
PB
* pi e=115.45
BF    -1       1  0.0536
LU     0    0.07       5
UC 0.437   0.372
UA     0  0.0016  0.0027  0.0043  0.0064  0.0107   0.023  0.0402  0.0482  0.0514
UA0.0536
*
KK  R034
KMROUTE 34 TO 29
RD   550  0.0091   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE034  C=FLOW   F=0YR
*
KKPRE029
KMSubshed PRE029
* 39.18 Ac
BA0.0612
PB
* pi e=112.95
BF    -1       1  0.0612
LU     0    0.07       5
UC  0.48   0.433
UA     0  0.0018  0.0031  0.0049  0.0073  0.0122  0.0263  0.0459  0.0551  0.0588
UA0.0612
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE029  C=FLOW   F=0YR
*
KK J2948
KMCOMBINE SUBSHEDS PRE030 THRU 48
HC     4
*
KKPRE038
KMSubshed PRE038
* 80.5 Ac
BA0.1258
PB
* pi e=127.25
BF    -1       1  0.1258
LU     0   0.083     5.2
UC 0.476   0.301
UA     0  0.0038  0.0063  0.0101  0.0151  0.0252  0.0541  0.0943  0.1132  0.1208
UA0.1258
*
KK  R038
KMROUTE 38 TO 48
RD  1570  0.0032   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE038  C=FLOW   F=0YR
*
KKPRE048
KMSubshed PRE048
* 84.22 Ac
BA0.1316
PB
* pi e=115.85
```

```
BF    -1       1  0.1316
LU     0   0.081       5
UC 0.484   0.199
UA     0  0.0039  0.0066  0.0105  0.0158  0.0263  0.0566  0.0987  0.1184  0.1263
UA0.1316
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE048  C=FLOW   F=0YR
*
KK J3848
KMCOMBINE SUBSHEDS PRE 038 & 048
HC     2
*
KKPRE031
KMSubshed PRE031
* 41.26 Ac
BA0.0645
PB
* pi e=118.95
BF    -1       1  0.0645
LU     0   0.071       5
UC 0.642   0.866
UA     0  0.0019  0.0032  0.0052  0.0077  0.0129  0.0277  0.0484   0.058  0.0619
UA0.0645
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE031  C=FLOW   F=0YR
*
KK J3148
KMCOMBINE SUBSHEDS PRE031 THRU 48
HC     2
*
KKPRE030
KMSubshed PRE030
* 43.81 Ac
BA0.0685
PB
* pi e=121.35
BF    -1       1  0.0685
LU     0   0.071       5
UC 0.287   0.133
UA     0  0.0021  0.0034  0.0055  0.0082  0.0137  0.0294  0.0513  0.0616  0.0657
UA0.0685
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE030  C=FLOW   F=0YR
*
KK J3048
KMCOMBINE SUBSHEDS PRE030 THRU 48
HC     2
*
KKPRE028
KMSubshed PRE028
* 39.38 Ac
BA0.0615
PB
* pi e=114.75
BF    -1       1  0.0615
LU     0    0.07       5
UC 0.415   0.329
UA     0  0.0018  0.0031  0.0049  0.0074  0.0123  0.0265  0.0461  0.0554  0.0591
UA0.0615
*
```

```
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE028  C=FLOW   F=0YR
*
KK J2848
KMCOMBINE SUBSHEDS PRE030 THRU 48
HC     3
*
KKPRE027
KMSubshed PRE027
* 64.85 Ac
BA0.1013
PB
* pi e=114.2
BF    -1       1  0.1013
LU     0    0.07    5.05
UC 0.405   0.278
UA     0   0.003  0.0051  0.0081  0.0122  0.0203  0.0436   0.076  0.0912  0.0973
UA0.1013
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE027  C=FLOW   F=0YR
*
KK J2748
KMCOMBINE SUBSHEDS PRE027 THRU 48
HC     2
*
KKPRE024
KMSubshed PRE024
* 52.25 Ac
BA0.0816
PB
* pi e=110.2
BF    -1       1  0.0816
LU     0    0.07    5.43
UC 0.469   0.342
UA     0  0.0024  0.0041  0.0065  0.0098  0.0163  0.0351  0.0612  0.0735  0.0784
UA0.0816
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE024  C=FLOW   F=0YR
*
KK J2448
KMCOMBINE SUBSHEDS PRE024 THRU 48
HC     2
*
KKPRE026
KMSubshed PRE026
* 10.9 Ac
BA 0.017
PB
* pi e=109.9
BF    -1       1   0.017
LU     0    0.07    7.31
UC 0.205   0.134
UA     0  0.0005  0.0009  0.0014   0.002  0.0034  0.0073  0.0128  0.0153  0.0164
UA 0.017
*
KK  R026
KMROUTE 26 TO 25
RD   590  0.0085   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE026  C=FLOW   F=0YR
```

```
*
KKPRE025
KMSubshed PRE025
* 9.27 Ac
BA0.0145
PB
* pi e=106.65
BF    -1       1  0.0145
LU     0    0.07    7.09
UC 0.217   0.196
UA     0  0.0004  0.0007  0.0012  0.0017  0.0029  0.0062  0.0109   0.013  0.0139
UA0.0145
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE025  C=FLOW   F=0YR
*
KK J2548
KMCOMBINE SUBSHEDS PRE 025 THRU 48
HC     3
*
KKPRE015
KMSubshed PRE015
* 37.36 Ac
BA0.0584
PB
* pi e=100.8
BF    -1       1  0.0584
LU     0    0.07    5.58
UC 0.084    0.02
UA     0  0.0018  0.0029  0.0047   0.007  0.0117  0.0251  0.0438  0.0525   0.056
UA0.0584
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE015  C=FLOW   F=0YR
*
KK J1548
KMCOMBINE SUBSHEDS PRE015 THRU 48
HC     2
*
KKPRE017
KMSubshed PRE017
* 49.34 Ac
BA0.0771
PB
* pi e=104.6
BF    -1       1  0.0771
LU     0    0.07    5.82
UC 0.418   0.287
UA     0  0.0023  0.0039  0.0062  0.0093  0.0154  0.0332  0.0578  0.0694   0.074
UA0.0771
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE017  C=FLOW   F=0YR
*
KK J1748
KMCOMBINE SUBSHEDS PRE017 THRU 48
HC     2
*
KKPRE016
KMSubshed PRE016
* 85.26 Ac
BA0.1332
PB
```

```
* pi e=100.7
BF    -1       1  0.1332
LU     0    0.07   32.45
UC 0.797   0.699
UA     0   0.004  0.0067  0.0107   0.016  0.0266  0.0573  0.0999  0.1199  0.1279
UA0.1332
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE016  C=FLOW   F=0YR
*
KK J1648
KMCOMBINE SUBSHEDS PRE016 THRU 48
HC     2
*
KKPRE021
KMSubshed PRE021
* 375.59 Ac
BA0.5869
PB
* pi e=115
BF    -1       1  0.5869
LU     0   0.075    5.57
UC 0.827   0.341
UA     0  0.0176  0.0293  0.0469  0.0704  0.1174  0.2523  0.4401  0.5282  0.5634
UA0.5869
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE021  C=FLOW   F=0YR
*
KKPRE022
KMSubshed PRE022
* 49.1 Ac
BA0.0767
PB
* pi e=114.87
BF    -1       1  0.0767
LU     0    0.07    5.58
UC 0.464   0.343
UA     0  0.0023  0.0038  0.0061  0.0092  0.0153   0.033  0.0575   0.069  0.0737
UA0.0767
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE022  C=FLOW   F=0YR
*
KK J2122
KMCOMBINE SUBSHEDS PRE021 THRU 21
HC     2
*
KKPRE020
KMSubshed PRE020
* 22.16 Ac
BA0.0346
PB
* pi e=110.65
BF    -1       1  0.0346
LU     0   0.077    7.77
UC 0.455   0.537
UA     0   0.001  0.0017  0.0028  0.0042  0.0069  0.0149   0.026  0.0312  0.0332
UA0.0346
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE020  C=FLOW   F=0YR
*
```

```
KK J2022
KMCOMBINE SUBSHEDS PRE020 THRU 22
HC     2
*
KKPRE023
KMSubshed PRE023
* 39.37 Ac
BA0.0615
PB
* pi e=116.2
BF    -1       1  0.0615
LU     0    0.07    6.14
UC 0.327   0.206
UA     0  0.0018  0.0031  0.0049  0.0074  0.0123  0.0265  0.0461  0.0554  0.0591
UA0.0615
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE023  C=FLOW   F=0YR
*
KK J2023
KMCOMBINE SUBSHEDS PRE020 THRU 23
HC     2
*
KKPRE019
KMSubshed PRE019
* 35.64 Ac
BA0.0557
PB
* pi e=110.5
BF    -1       1  0.0557
LU     0   0.072    5.52
UC 0.403   0.355
UA     0  0.0017  0.0028  0.0045  0.0067  0.0111  0.0239  0.0418  0.0501  0.0535
UA0.0557
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE019  C=FLOW   F=0YR
*
KK J2023
KMCOMBINE SUBSHEDS PRE019 THRU 23
HC     2
*
KKPRE018
KMSubshed PRE018
* 24.69 Ac
BA0.0386
PB
* pi e=102.3
BF    -1       1  0.0386
LU     0    0.07    6.37
UC  0.19    0.07
UA     0  0.0012  0.0019  0.0031  0.0046  0.0077  0.0166  0.0289  0.0347   0.037
UA0.0386
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE018  C=FLOW   F=0YR
*
KK J1823
KMCOMBINE SUBSHEDS PRE018 THRU 23
HC     2
*
KKPRE013
KMSubshed PRE013
```

```
* 40.35 Ac
BA 0.063
PB
* pi e=116.75
BF    -1       1   0.063
LU     0   0.084    5.81
UC 0.434   0.374
UA     0  0.0019  0.0032   0.005  0.0076  0.0126  0.0271  0.0473  0.0567  0.0605
UA 0.063
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE013  C=FLOW   F=0YR
*
KKPRE012
KMSubshed PRE012
* 106.04 Ac
BA0.1657
PB
* pi e=105.7
BF    -1       1  0.1657
LU     0   0.074    5.37
UC 0.722    0.59
UA     0   0.005  0.0083  0.0133  0.0199  0.0331  0.0712  0.1243  0.1491  0.1591
UA0.1657
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE012  C=FLOW   F=0YR
*
KK J1213
KMCOMBINE SUBSHEDS PRE012&13
HC     2
*
KKPRE014
KMSubshed PRE014
* 37.61 Ac
BA0.0588
PB
* pi e=99.85
BF    -1       1  0.0588
LU     0    0.07       5
UC 0.294   0.145
UA     0  0.0018  0.0029  0.0047  0.0071  0.0118  0.0253  0.0441  0.0529  0.0564
UA0.0588
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE014  C=FLOW   F=0YR
*
KK J1423
KMCOMBINE SUBSHEDS PRE014 THRU 23
HC     3
*
KKPRE011
KMSubshed PRE011
* 46.98 Ac
BA0.0734
PB
* pi e=102.55
BF    -1       1  0.0734
LU     0   0.079       5
UC 0.573   0.586
UA     0  0.0022  0.0037  0.0059  0.0088  0.0147  0.0316  0.0551  0.0661  0.0705
UA0.0734
*
```

```
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE011  C=FLOW   F=0YR
*
KK J1123
KMCOMBINE SUBSHEDS PRE011 THRU 23
HC     2
*
KKPRE009
KMSubshed PRE009
* 28.03 Ac
BA0.0438
PB
* pi e=97.75
BF    -1       1  0.0438
LU     0    0.07       5
UC 0.299   0.212
UA     0  0.0013  0.0022  0.0035  0.0053  0.0088  0.0188  0.0328  0.0394   0.042
UA0.0438
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE009  C=FLOW   F=0YR
*
KK J0923
KMCOMBINE SUBSHEDS PRE009 THRU 23
HC     2
*
KKPRE010
KMSubshed PRE010
* 67.23 Ac
BA 0.105
PB
* pi e=99
BF    -1       1   0.105
LU     0    0.07       5
UC  0.46   0.255
UA     0  0.0032  0.0053  0.0084  0.0126   0.021  0.0452  0.0788  0.0945  0.1008
UA 0.105
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE010  C=FLOW   F=0YR
*
KK J1048
KMCOMBINE SUBSHEDS PRE010 THRU 48
HC     3
*
KKPRE008
KMSubshed PRE008
* 65.31 Ac
BA 0.102
PB
* pi e=100.35
BF    -1       1   0.102
LU     0   0.073       5
UC 0.551   0.383
UA     0  0.0031  0.0051  0.0082  0.0122  0.0204  0.0439  0.0765  0.0918   0.098
UA 0.102
*
KK  R008
KMROUTE 8 TO 7
RD   640  0.0078   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE008  C=FLOW   F=0YR
```

```
*
KKPRE007
KMSubshed PRE007
* 32.34 Ac
BA0.0505
PB
* pi e=95.1
BF    -1       1  0.0505
LU     0    0.07       5
UC 0.481   0.465
UA     0  0.0015  0.0025   0.004  0.0061  0.0101  0.0217  0.0379  0.0455  0.0485
UA0.0505
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE007  C=FLOW   F=0YR
*
KK J0708
KMCOMBINE SUBSHEDS PRE007&008 TO CHANNEL
HC     3
*
KKPRE003
KMSubshed PRE003
* 114 Ac
BA0.1781
PB
* pi e=92.05
BF    -1       1  0.1781
LU     0    0.07       5
UC 0.616   0.342
UA     0  0.0053  0.0089  0.0143  0.0214  0.0356  0.0766  0.1336  0.1603   0.171
UA0.1781
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE003  C=FLOW   F=0YR
*
KKJ00348
KMCOMBINE SHED PRE003 TO THE CHANNEL
HC     2
*
KKPRE006
KMSubshed PRE006
* 12.71 Ac
BA0.0199
PB
* pi e=107.3
BF    -1       1  0.0199
LU     0    0.07    8.59
UC 0.133   0.035
UA     0  0.0006   0.001  0.0016  0.0024   0.004  0.0085  0.0149  0.0179  0.0191
UA0.0199
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE006  C=FLOW   F=0YR
*
KKPRE005
KMSubshed PRE005
* 133.42 Ac
BA0.2085
PB
* pi e=103.6
BF    -1       1  0.2085
LU     0   0.074    5.39
UC 0.828   0.657
```

```
UA     0  0.0063  0.0104  0.0167   0.025  0.0417  0.0896  0.1564  0.1876  0.2001
UA0.2085
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE005  C=FLOW   F=0YR
*
KK J0506
KMCOMBINE SUBSHEDS PRE005&006 TO CHANNEL
HC     3
*
KKPRE004
KMSubshed PRE004
* 92.24 Ac
BA0.1441
PB
* pi e=96.5
BF    -1       1  0.1441
LU     0   0.072       5
UC 0.615   0.439
UA     0  0.0043  0.0072  0.0115  0.0173  0.0288   0.062  0.1081  0.1297  0.1384
UA0.1441
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE004  C=FLOW   F=0YR
*
KK J0448
KMCOMBINE SHED PRE004 TO THE CHANNEL
HC     2
*
KKPRE002
KMSubshed PRE002
* 11.84 Ac
BA0.0185
PB
* pi e=102.5
BF    -1       1  0.0185
LU     0   0.076       5
UC 0.222   0.155
UA     0  0.0006  0.0009  0.0015  0.0022  0.0037   0.008  0.0139  0.0167  0.0178
UA0.0185
*
KK  R002
KMROUTE 2 TO 1
RD  1570  0.0032   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE002  C=FLOW   F=0YR
*
KKPRE001
KMSubshed PRE001
* 14.52 Ac
BA0.0227
PB
* pi e=98.71
BF    -1       1  0.0227
LU     0   0.075       5
UC  0.25   0.194
UA     0  0.0007  0.0011  0.0018  0.0027  0.0045  0.0098   0.017  0.0204  0.0218
UA0.0227
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW A=PRDB=PRE001  C=FLOW   F=0YR
*
```

```
KK J0148
KMCOMBINE SUBSHEDS PRE001&048 TO CHANNEL
HC     3
*
ZZ
```

```
IDPLACER RANCH WATERSHED MODEL
IDPLACER RANCH HYDROLOGICAL STUDY 5/2017
IDModel created by MacKay & Somps
IDfor Placer County Flood Control District
IDClarke Unit Hydrograph method used
IDMuskingum-Cunge routing
IDstorm centering PI and PB added
IDDEVELOPED CONDITIONS
*DIAGRAM
IT     5 30DEC05       0     289
IO     5
KKOFF007
KMSubshed OFF007
* 27.32 Ac
BA0.0427
PB
* pi e=127.5
BF    -1       1  0.0427
LU     0   0.077    5.01
UC 0.332   0.227
UA     0  0.0013  0.0021  0.0034  0.0051  0.0085  0.0184   0.032  0.0384   0.041
UA0.0427
*
KK RO007
KMROUTE O7 TO O6
RD   300  0.0167   0.045            TRAP       5      10
*
KKOFF006
KMSubshed OFF006
* 15.34 Ac
BA 0.024
PB
* pi e=125
BF    -1       1   0.024
LU     0   0.082       5
UC 0.285   0.219
UA     0  0.0007  0.0012  0.0019  0.0029  0.0048  0.0103   0.018  0.0216   0.023
UA 0.024
*
KK J0607
KMCOMBINE OFFSITE SUBSHEDS
HC     2
*
KK RO006
KMROUTE O6 TO O10
RD   390  0.0128   0.015            CIRC       3
*
KKPRD096
KMSubshed PRD096
* 19.83 Ac
BA 0.031
PB
* pi e=127
BF    -1       1   0.031
LU     0    0.08   84.96
UC 0.426   0.428
UA     0  0.0009  0.0015  0.0025  0.0037  0.0062  0.0133  0.0232  0.0279  0.0297
UA 0.031
*
KK J9606
KMCOMBINE OFFSITE SUBSHEDS WITH PRD096
HC     2
*
```

```
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD096  C=FLOW   F=0YR
*
KKPRD078
KMSubshed PRD078
* 7.18 Ac
BA0.0112
PB
* pi e=124.5
BF    -1       1  0.0112
LU     0    0.07      70
UC 0.163   0.112
UA     0  0.0003  0.0006  0.0009  0.0013  0.0022  0.0048  0.0084  0.0101  0.0108
UA0.0112
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD078  C=FLOW   F=0YR
*
KKPRD095
KMSubshed PRD095
* 38.27 Ac
BA0.0598
PB
* pi e=129
BF    -1       1  0.0598
LU     0   0.072   70.02
UC 0.405   0.285
UA     0  0.0018   0.003  0.0048  0.0072   0.012  0.0257  0.0448  0.0538  0.0574
UA0.0598
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD095  C=FLOW   F=0YR
*
KK J7895
KMCOMBINE SUBSHEDS PRD078 AND PRD095
HC     2
*
KKPSO019
KMSubshed PSO019
* 5.44 Ac
BA0.0085
PB
* pi e=115.5
BF    -1       1  0.0085
LU     0    0.07       5
UC 0.262   0.302
UA     0  0.0012   0.002  0.0032  0.0047  0.0079   0.017  0.0296  0.0355  0.0379
UA0.0394
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO019  C=FLOW   F=0YR
*
KK JO010
KMCOMBINE SUBSHEDS AT DOWNSTREAM END OF PSO019
HC     3
*
KKPRD093
KMSubshed PRD093
* 7.49 Ac
BA0.0117
PB
* pi e=132
BF    -1       1  0.0117
```

```
LU     0   0.071   80.18
UC 0.204   0.129
UA     0  0.0004  0.0006  0.0009  0.0014  0.0023   0.005  0.0088  0.0105  0.0112
UA0.0117
*
KK  R093
KMROUTE 93 TO 92
RD   782  0.0064   0.015            CIRC       3
*
KKPRD092
KMSubshed PRD092
* 8.36 Ac
BA0.0131
PB
* pi e=130
BF    -1       1  0.0131
LU     0   0.089    66.8
UC 0.311   0.257
UA     0  0.0004  0.0007   0.001  0.0016  0.0026  0.0056  0.0098  0.0118  0.0125
UA0.0131
*
KK J9392
KMCOMBINE SUBSHEDS 92 AND 93
HC     2
*
KK  R092
KMROUTE 92 TO 91
RD   565  0.0071   0.015            CIRC       4
*
KKPRD091
KMSubshed PRD091
* 7.61 Ac
BA0.0119
PB
* pi e=128
BF    -1       1  0.0119
LU     0   0.087   66.96
UC 0.248   0.222
UA     0  0.0004  0.0006   0.001  0.0014  0.0024  0.0051  0.0089  0.0107  0.0114
UA0.0119
*
KK J9193
KMCOMBINE SUBSHEDS 93 THRU 91
HC     2
*
KK  R091
KMROUTE 91 TO 89
RD   539  0.0056   0.015            CIRC       4
*
KKPRD089
KMSubshed PRD089
* 7.75 Ac
BA0.0121
PB
* pi e=124
BF    -1       1  0.0121
LU     0   0.089      80
UC 0.257   0.216
UA     0  0.0004  0.0006   0.001  0.0015  0.0024  0.0052  0.0091  0.0109  0.0116
UA0.0121
*
KK J8993
KMCOMBINE SUBSHEDS 93 THRU 89
```

```
HC     2
*
KK  R089
KMROUTE 89 TO OS
RD   227  0.0088   0.015            CIRC       5
*
KKPRD094
KMSubshed PRD094
* 11.6 Ac
BA0.0181
PB
* pi e=127
BF    -1       1  0.0181
LU     0   0.075   76.25
UC 0.396   0.637
UA     0  0.0005  0.0009  0.0015  0.0022  0.0036  0.0078  0.0136  0.0163  0.0174
UA0.0181
*
KK J8994
KMCOMBINE SUBSHEDS 89 THRU 94
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J8994  C=FLOW   F=0YR
*
KKPRD086
KMSubshed PRD086
* 5.3 Ac
BA0.0083
PB
* pi e=119.5
BF    -1       1  0.0083
LU     0   0.087   79.21
UC 0.127   0.071
UA     0  0.0002  0.0004  0.0007   0.001  0.0017  0.0036  0.0062  0.0075   0.008
UA0.0083
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD086  C=FLOW   F=0YR
*
KKPSO018
KMSubshed PSO018
* 2.96 Ac
BA0.0046
PB
* pi e=113.5
BF    -1       1  0.0046
LU     0    0.07       5
UC 0.194    0.23
UA     0  0.0019  0.0031   0.005  0.0075  0.0126   0.027  0.0472  0.0566  0.0604
UA0.0629
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO018  C=FLOW   F=0YR
*
KKJOS011
KMCOMBINE SUBSHEDS THAT DRAIN TO OS011 TO DOWNSTREAM BRIDGE
HC     4
*
KKPRD090
KMSubshed PRD090
* 9.68 Ac
BA0.0151
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PB
* pi e=130.5
BF    -1       1  0.0151
LU     0   0.078   69.87
UC  0.24   0.185
UA     0  0.0005  0.0008  0.0012  0.0018   0.003  0.0065  0.0113  0.0136  0.0145
UA0.0151
*
KK  R090
KMROUTE 90 TO 88
RD  1111  0.0054   0.015            CIRC       4
*
KKPRD088
KMSubshed PRD088
* 8.81 Ac
BA0.0138
PB
* pi e=125
BF    -1       1  0.0138
LU     0   0.075   80.02
UC 0.277   0.276
UA     0  0.0004  0.0007  0.0011  0.0017  0.0028  0.0059  0.0103  0.0124  0.0132
UA0.0138
*
KK J8890
KMCOMBINE SUBSHEDS 90 & 88
HC     2
*
KK  R088
KMROUTE 88 TO 85
RD   240  0.0083   0.015            CIRC       4
*
KKPRD083
KMSubshed PRD083
* 15.09 Ac
BA0.0236
PB
* pi e=130.5
BF    -1       1  0.0236
LU     0   0.073    55.2
UC 0.365   0.344
UA     0  0.0007  0.0012  0.0019  0.0028  0.0047  0.0101  0.0177  0.0212  0.0226
UA0.0236
*
KK  R083
KMROUTE 83 TO 84
RD   395  0.0051   0.015            CIRC       3
*
KKPRD084
KMSubshed PRD084
* 11.23 Ac
BA0.0175
PB
* pi e=129.5
BF    -1       1  0.0175
LU     0   0.072   64.35
UC 0.311   0.332
UA     0  0.0005  0.0009  0.0014  0.0021  0.0035  0.0075  0.0132  0.0158  0.0168
UA0.0175
*
KK J8483
KMCOMBINE SUBSHEDS 84 & 83
HC     2
```

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*
KK  R084
KMROUTE 84 TO 85
RD  1146  0.0052   0.015            CIRC       3
*
KKPRD085
KMSubshed PRD085
* 9.96 Ac
BA0.0156
PB
* pi e=124.5
BF    -1       1  0.0156
LU     0    0.07   78.17
UC 0.321   0.362
UA     0  0.0005  0.0008  0.0012  0.0019  0.0031  0.0067  0.0117   0.014  0.0149
UA0.0156
*
KK J8390
KMCOMBINE SUBSHEDS 88 AND 85
HC     3
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J8390  C=FLOW   F=0YR
*
KKPRD087
KMSubshed PRD087
* 5.6 Ac
BA0.0088
PB
* pi e=120
BF    -1       1  0.0088
LU     0    0.07   78.64
UC 0.208   0.159
UA     0  0.0003  0.0004  0.0007  0.0011  0.0018  0.0038  0.0066  0.0079  0.0084
UA0.0088
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD087  C=FLOW   F=0YR
*
KKPRD075
KMSubshed PRD075
* 5.71 Ac
BA0.0089
PB
* pi e=118
BF    -1       1  0.0089
LU     0    0.07      50
UC 0.167   0.122
UA     0  0.0003  0.0004  0.0007  0.0011  0.0018  0.0038  0.0067   0.008  0.0086
UA0.0089
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD075  C=FLOW   F=0YR
*
KKPRD071
KMSubshed PRD071
* 18.08 Ac
BA0.0283
PB
* pi e=120
BF    -1       1  0.0283
LU     0    0.07      50
UC 0.433    0.41
```

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UA     0  0.0008  0.0014  0.0023  0.0034  0.0057  0.0121  0.0212  0.0254  0.0271
UA0.0283
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD071  C=FLOW   F=0YR
*
KKPRD074
KMSubshed PRD074
* 7.44 Ac
BA0.0116
PB
* pi e=117.5
BF    -1       1  0.0116
LU     0    0.07      50
UC 0.167   0.094
UA     0  0.0003  0.0006  0.0009  0.0014  0.0023   0.005  0.0087  0.0105  0.0112
UA0.0116
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD074  C=FLOW   F=0YR
*
KKPRD070
KMSubshed PRD070
* 6.04 Ac
BA0.0094
PB
* pi e=115.5
BF    -1       1  0.0094
LU     0    0.07      50
UC 0.272   0.258
UA     0  0.0003  0.0005  0.0008  0.0011  0.0019  0.0041  0.0071  0.0085  0.0091
UA0.0094
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD070  C=FLOW   F=0YR
*
KKPRD073
KMSubshed PRD073
* 4.63 Ac
BA0.0072
PB
* pi e=114.5
BF    -1       1  0.0072
LU     0    0.07      50
UC 0.135   0.093
UA     0  0.0002  0.0004  0.0006  0.0009  0.0014  0.0031  0.0054  0.0065  0.0069
UA0.0072
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD073  C=FLOW   F=0YR
*
KKPRD069
KMSubshed PRD069
* 5.95 Ac
BA0.0093
PB
* pi e=115
BF    -1       1  0.0093
LU     0    0.07      50
UC 0.295    0.37
UA     0  0.0003  0.0005  0.0007  0.0011  0.0019   0.004   0.007  0.0084  0.0089
UA0.0093
*
```

```
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD069  C=FLOW   F=0YR
*
KKPSO017
KMSubshed PSO017
* 14.68 Ac
BA0.0229
PB
* pi e=109.5
BF    -1       1  0.0229
LU     0    0.07       5
UC 0.102   0.018
UA     0  0.0008  0.0014  0.0022  0.0033  0.0055  0.0118  0.0207  0.0248  0.0264
UA0.0275
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO017  C=FLOW   F=0YR
*
KK J6997
KMCOMBINE ALL SUBSHEDS UPSTREAM OF PRD068
HC    10
*
KKOFF005
KMSubshed OFF005
* 79.16 Ac
BA0.1237
PB
* pi e=122.5
BF    -1       1  0.1237
LU     0   0.083       5
UC  0.49   0.279
UA     0  0.0037  0.0062  0.0099  0.0148  0.0247  0.0532  0.0928  0.1113  0.1187
UA0.1237
*
KK  RO05
KMROUTE O05 TO 018
RD  1320  0.0038   0.045            TRAP       5      10
*
KKOFF018
KMSubshed OFF018
* 84.22 Ac
BA0.1316
PB
* pi e=120
BF    -1       1  0.1316
LU     0   0.081       5
UC 0.387   0.143
UA     1  0.0039  0.0066  0.0105  0.0158  0.0263  0.0566  0.0987  0.1184  0.1263
UA0.1316
*
KKOFF004
KMSubshed OFF004
* 5.37 Ac
BA0.0084
PB
* pi e=120
BF    -1       1  0.0084
LU     0   0.075       5
UC 0.191   0.186
UA     0  0.0003  0.0004  0.0007   0.001  0.0017  0.0036  0.0063  0.0076  0.0081
UA0.0084
*
KK J9697
```

```
KMCOMBINE SUBSHEDS PRD097 AND OFFSITE FLOWS
HC     3
*
KK  RO18
KMROUTE O18 TO 97
RD  1200  0.0042   0.015            CIRC       4
*
KKPRD097
KMSubshed PRD097
* 15.86 Ac
BA0.0248
PB
* pi e=122
BF    -1       1  0.0248
LU     0   0.073   81.68
UC 2.378  13.884
UA     0  0.0007  0.0012   0.002   0.003   0.005  0.0107  0.0186  0.0223  0.0238
UA0.0248
*
KK J9718
KMCOMBINE SUBSHEDS PRD097 AND OFFSITE FLOWS
HC     2
*
KKPRD098
KMSubshed PRD098
* 8.46 Ac
BA0.0132
PB
* pi e=119.5
BF    -1       1  0.0132
LU     0    0.07   79.67
UC 0.229   0.185
UA     0  0.0004  0.0007  0.0011  0.0016  0.0026  0.0057  0.0099  0.0119  0.0127
UA0.0132
*
KKJOS498
KMCOMBINE SUBSHEDS PRD098, PRD097, AND OPEN SPACE
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD098  C=FLOW   F=0YR
*
KKPRD076
KMSubshed PRD076
* 14.07 Ac
BA 0.022
PB
* pi e=122
BF    -1       1   0.022
LU     0    0.07      70
UC 0.254   0.211
UA     0  0.0007  0.0011  0.0018  0.0026  0.0044  0.0095  0.0165  0.0198  0.0211
UA 0.022
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD076  C=FLOW   F=0YR
*
KKPRD064
KMSubshed PRD064
* 25.24 Ac
BA0.0394
PB
* pi e=120.5
```

```
BF    -1       1  0.0394
LU     0    0.07    70.2
UC 0.218   0.078
UA     0  0.0012   0.002  0.0032  0.0047  0.0079   0.017  0.0296  0.0355  0.0379
UA0.0394
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD064  C=FLOW   F=0YR
*
KKPRD077
KMSubshed PRD077
* 20.43 Ac
BA0.0319
PB
* pi e=122
BF    -1       1  0.0319
LU     0    0.07   70.39
UC 0.487   0.597
UA     0   0.001  0.0016  0.0026  0.0038  0.0064  0.0137  0.0239  0.0287  0.0306
UA0.0319
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD077  C=FLOW   F=0YR
*
KKPSO016
KMSubshed PSO016
* 6.71 Ac
BA0.0105
PB
* pi e=109.5
BF    -1       1  0.0105
LU     0    0.07       5
UC  0.31   0.334
UA     0  0.0007  0.0012  0.0019  0.0028  0.0047  0.0101  0.0175   0.021  0.0224
UA0.0234
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO016  C=FLOW   F=0YR
*
KK J6498
KMCOMBINE SUBSHEDS PRD098, PRD077, PRD076, PRD064, AND OPEN SPACE 016
HC     5
*
KKPRD072
KMSubshed PRD072
* 5.16 Ac
BA0.0081
PB
* pi e=116
BF    -1       1  0.0081
LU     0    0.07      50
UC 0.255   0.309
UA     0  0.0002  0.0004  0.0006   0.001  0.0016  0.0035   0.006  0.0073  0.0077
UA0.0081
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD072  C=FLOW   F=0YR
*
KKPSO015
KMSubshed PSO015
* 5.94 Ac
BA0.0093
PB
```

```
* pi e=107.5
BF    -1       1  0.0093
LU     0    0.07       5
UC 0.132   0.065
UA     0  0.0016  0.0027  0.0043  0.0065  0.0108  0.0231  0.0403  0.0484  0.0516
UA0.0538
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO015  C=FLOW   F=0YR
*
KK  JUNI
KMCOMBINE SUBSHEDS FROM TRIBUTARIES IN UNIVERSITY
HC     4
*
KKPRD060
KMSubshed PRD060
* 6.44 Ac
BA0.0101
PB
* pi e=114.5
BF    -1       1  0.0101
LU     0    0.07      50
UC 0.219   0.156
UA     0  0.0003  0.0005  0.0008  0.0012   0.002  0.0043  0.0075  0.0091  0.0097
UA0.0101
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD060  C=FLOW   F=0YR
*
KKPRD059
KMSubshed PRD059
* 5.48 Ac
BA0.0086
PB
* pi e=114
BF    -1       1  0.0086
LU     0    0.07      50
UC 0.214   0.193
UA     0  0.0003  0.0004  0.0007   0.001  0.0017  0.0037  0.0064  0.0077  0.0082
UA0.0086
*
KKPRD068
KMSubshed PRD068
* 10.91 Ac
BA 0.017
PB
* pi e=113.5
BF    -1       1   0.017
LU     0    0.07      50
UC 0.335   0.375
UA     0  0.0005  0.0009  0.0014   0.002  0.0034  0.0073  0.0128  0.0153  0.0164
UA 0.017
*
KK J5968
KMCOMBINE SUBSHEDS PRD059 & PRD068
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J5968  C=FLOW   F=0YR
*
KKPRD058
KMSubshed PRD058
* 7.3 Ac
```

```
BA0.0114
PB
* pi e=112.5
BF    -1       1  0.0114
LU     0    0.07      50
UC 0.307   0.364
UA     0  0.0003  0.0006  0.0009  0.0014  0.0023  0.0049  0.0086  0.0103   0.011
UA0.0114
*
KKPRD065
KMSubshed PRD065
* 39.26 Ac
BA0.0613
PB
* pi e=112
BF    -1       1  0.0613
LU     0    0.07      50
UC 0.329   0.194
UA     0  0.0018  0.0031  0.0049  0.0074  0.0123  0.0264   0.046  0.0552  0.0589
UA0.0613
*
KK J5865
KMCOMBINE SUBSHEDS PRD058 & PRD065
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J5865  C=FLOW   F=0YR
*
KKPRD057
KMSubshed PRD057
* 11.99 Ac
BA0.0187
PB
* pi e=112.5
BF    -1       1  0.0187
LU     0    0.07      50
UC  0.29   0.242
UA     0  0.0006  0.0009  0.0015  0.0022  0.0037  0.0081  0.0141  0.0169   0.018
UA0.0187
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD057  C=FLOW   F=0YR
*
KKPRD056
KMSubshed PRD056
* 3.39 Ac
BA0.0053
PB
* pi e=109.5
BF    -1       1  0.0053
LU     0    0.07      50
UC 0.246   0.312
UA     0  0.0002  0.0003  0.0004  0.0006  0.0011  0.0023   0.004  0.0048  0.0051
UA0.0053
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD056  C=FLOW   F=0YR
*
KKPRD082
KMSubshed PRD082
* 8.51 Ac
BA0.0133
PB
```

```
* pi e=126
BF    -1       1  0.0133
LU     0    0.07   57.32
UC 0.339   0.408
UA     0  0.0004  0.0007  0.0011  0.0016  0.0027  0.0057    0.01   0.012  0.0128
UA0.0133
*
KK  R082
KMROUTE 82 TO 81
RD   329  0.0076   0.015            CIRC       3
*
KKPRD081
KMSubshed PRD081
* 6.94 Ac
BA0.0108
PB
* pi e=127.5
BF    -1       1  0.0108
LU     0    0.07   47.89
UC 0.224     0.2
UA     0  0.0003  0.0005  0.0009  0.0013  0.0022  0.0047  0.0081  0.0098  0.0104
UA0.0108
*
KK J8182
KMCOMBINE SUBSHEDS 82 & 81
HC     2
*
KK  R081
KMROUTE 81 TO 67
RD   623  0.0048   0.015            CIRC       3
*
KKPRD067
KMSubshed PRD067
* 11.65 Ac
BA0.0182
PB
* pi e=120.5
BF    -1       1  0.0182
LU     0    0.07      50
UC  0.29   0.231
UA     0  0.0005  0.0009  0.0015  0.0022  0.0036  0.0078  0.0137  0.0164  0.0175
UA0.0182
*
KK J6782
KMCOMBINE SUBSHEDS 82 THRU 67
HC     2
*
KK  R067
KMROUTE 67 TO 80
RD   219  0.0046   0.015            CIRC       4
*
KKPRD079
KMSubshed PRD079
* 17.5 Ac
BA0.0273
PB
* pi e=125
BF    -1       1  0.0273
LU     0    0.07   50.27
UC 0.277   0.187
UA     0  0.0008  0.0014  0.0022  0.0033  0.0055  0.0118  0.0205  0.0246  0.0263
UA0.0273
*
```

```
KK  R079
KMROUTE 79 TO 80
RD   206  0.0049   0.015            CIRC       4
*
KKPRD080
KMSubshed PRD080
* 8.25 Ac
BA0.0129
PB
* pi e=124
BF    -1       1  0.0129
LU     0    0.07   51.88
UC 0.247   0.251
UA     0  0.0004  0.0006   0.001  0.0015  0.0026  0.0055  0.0097  0.0116  0.0124
UA0.0129
*
KK J8082
KMCOMBINE SUBSHEDS 82 THRU 80 & 79
HC     3
*
KK  R080
KMROUTE 80 TO 52
RD   828   0.003   0.015            CIRC       4
*
KKPRD052
KMSubshed PRD052
* 33.7 Ac
BA0.0527
PB
* pi e=121.5
BF    -1       1  0.0527
LU     0    0.07   41.71
UC 0.427   0.375
UA     0  0.0016  0.0026  0.0042  0.0063  0.0105  0.0226  0.0395  0.0474  0.0506
UA0.0527
*
KK J5282
KMCOMBINE SUBSHEDS 82 THRU 52
HC     2
*
KK  R052
KMROUTE 52 TO 51
RD   522  0.0038   0.015            CIRC       4
*
KKPRD051
KMSubshed PRD051
* 26.49 Ac
BA0.0414
PB
* pi e=121.5
BF    -1       1  0.0414
LU     0    0.07   39.24
UC 0.373    0.29
UA     0  0.0012  0.0021  0.0033   0.005  0.0083  0.0178   0.031  0.0373  0.0397
UA0.0414
*
KK J5182
KMCOMBINE SUBSHEDS 82 THRU 52
HC     2
*
KK  R051
KMROUTE 51 TO 50
RD  1165  0.0034   0.015            CIRC       5
```

```
*
*
KKPRD050
KMSubshed PRD050
* 20.71 Ac
BA0.0324
PB
* pi e=117.5
BF    -1       1  0.0324
LU     0    0.07    33.5
UC 0.316   0.235
UA     0   0.001  0.0016  0.0026  0.0039  0.0065  0.0139  0.0243  0.0291  0.0311
UA0.0324
*
KKPRD066
KMSubshed PRD066
* 31.23 Ac
BA0.0488
PB
* pi e=115.5
BF    -1       1  0.0488
LU     0    0.07   52.22
UC 0.626   0.669
UA     0  0.0015  0.0024  0.0039  0.0059  0.0098   0.021  0.0366  0.0439  0.0468
UA0.0488
*
KK J5082
KMCOMBINE SUBSHEDS 82 THRU 50
HC     3
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J5082  C=FLOW   F=0YR
*
KKPRD049
KMSubshed PRD049
* 38.07 Ac
BA0.0595
PB
* pi e=114
BF    -1       1  0.0595
LU     0    0.07    44.1
UC 0.329   0.205
UA     0  0.0018   0.003  0.0048  0.0071  0.0119  0.0256  0.0446  0.0535  0.0571
UA0.0595
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD049  C=FLOW   F=0YR
*
KKPRD055
KMSubshed PRD055
* 20.54 Ac
BA0.0321
PB
* pi e=110
BF    -1       1  0.0321
LU     0    0.07      50
UC 0.429   0.418
UA     0   0.001  0.0016  0.0026  0.0039  0.0064  0.0138  0.0241  0.0289  0.0308
UA0.0321
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD055  C=FLOW   F=0YR
*
```

```
KKPRD054
KMSubshed PRD054
* 8.07 Ac
BA0.0126
PB
* pi e=109
BF    -1       1  0.0126
LU     0    0.07      50
UC 0.256   0.259
UA     0  0.0004  0.0006   0.001  0.0015  0.0025  0.0054  0.0095  0.0113  0.0121
UA0.0126
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD054  C=FLOW   F=0YR
*
KKPRD053
KMSubshed PRD053
* 9.6 Ac
BA 0.015
PB
* pi e=108.5
BF    -1       1   0.015
LU     0    0.07      50
UC 0.254   0.218
UA     0  0.0005  0.0008  0.0012  0.0018   0.003  0.0065  0.0113  0.0135  0.0144
UA 0.015
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD053  C=FLOW   F=0YR
*
KKOFF017
KMSubshed OFF017
* 31.57 Ac
BA0.0493
PB
* pi e=112
BF    -1       1  0.0493
LU     0    0.07      40
UC  0.43   0.352
UA     0  0.0015  0.0025  0.0039  0.0059  0.0099  0.0212   0.037  0.0444  0.0474
UA0.0493
*
KK  RO17
KMROUTE O17 TO 48
RD  1000   0.005   0.045            TRAP       5      10
*
KKPRD048
KMSubshed PRD048
* 14.94 Ac
BA0.0233
PB
* pi e=112
BF    -1       1  0.0233
LU     0    0.07   45.79
UC  0.36   0.425
UA     0  0.0007  0.0012  0.0019  0.0028  0.0047    0.01  0.0175   0.021  0.0224
UA0.0233
*
KKJ48O17
KMCOMBINE SUBSHEDS 82 THRU 50
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
```

```
ZW      B=J48O17  C=FLOW   F=0YR
*
KKPSO014
KMSubshed PSO014
* 41.98 Ac
BA0.0656
PB
* pi e=102.5
BF    -1       1  0.0656
LU     0    0.07       5
UC 1.422   3.705
UA     0  0.0004  0.0007  0.0011  0.0017  0.0028   0.006  0.0105  0.0126  0.0135
UA 0.014
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO014  C=FLOW   F=0YR
*
KK J5082
KMCOMBINE SUBSHEDS 82 THRU 50
HC    13
*
KKPRD039
KMSubshed PRD039
* 8.66 Ac
BA0.0135
PB
* pi e=105
BF    -1       1  0.0135
LU     0    0.07   59.52
UC 0.324   0.286
UA     0  0.0004  0.0007  0.0011  0.0016  0.0027  0.0058  0.0101  0.0122   0.013
UA0.0135
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD039  C=FLOW   F=0YR
*
KKPRD040
KMSubshed PRD040
* 25.89 Ac
BA0.0405
PB
* pi e=105.5
BF    -1       1  0.0405
LU     0    0.07   47.29
UC 0.286     0.2
UA     0  0.0012   0.002  0.0032  0.0049  0.0081  0.0174  0.0303  0.0364  0.0388
UA0.0405
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD040  C=FLOW   F=0YR
*
KKPRD038
KMSubshed PRD038
* 4.44 Ac
BA0.0069
PB
* pi e=104
BF    -1       1  0.0069
LU     0    0.07   49.07
UC 0.179   0.165
UA     0  0.0002  0.0003  0.0006  0.0008  0.0014   0.003  0.0052  0.0062  0.0067
UA0.0069
*
```

```
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD038  C=FLOW   F=0YR
*
KKPSO013
KMSubshed PSO013
* 21.5 Ac
BA0.0336
PB
* pi e=97.5
BF    -1       1  0.0336
LU     0    0.07       5
UC 0.465   0.515
UA     0  0.0005  0.0008  0.0012  0.0018  0.0031  0.0066  0.0115  0.0138  0.0147
UA0.0153
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO013  C=FLOW   F=0YR
*
KK J3840
KMCOMBINE SUBSHEDS 38 THRU 40 AND OPEN SPACE 013
HC     5
*
KKPRD036
KMSubshed PRD036
* 25.17 Ac
BA0.0393
PB
* pi e=105.5
BF    -1       1  0.0393
LU     0    0.07   40.37
UC 0.426   0.342
UA     0  0.0012   0.002  0.0031  0.0047  0.0079  0.0169  0.0295  0.0354  0.0378
UA0.0393
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD036  C=FLOW   F=0YR
*
KKOFF015
KMSubshed OFF015
* 64.52 Ac
BA0.1008
PB
* pi e=102.5
BF    -1       1  0.1008
LU     0    0.07   31.76
UC 0.623   0.417
UA     0   0.003   0.005  0.0081  0.0121  0.0202  0.0433  0.0756  0.0907  0.0968
UA0.1008
*
KK  RO15
KMROUTE O15 TO 35
RD   660  0.0076   0.045            TRAP       5      10
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=OFF015  C=FLOW   F=0YR
*
KKPRD035
KMSubshed PRD035
* 15.62 Ac
BA0.0244
PB
* pi e=104.5
BF    -1       1  0.0244
```

```
LU     0    0.07   39.98
UC  0.29   0.203
UA     0  0.0007  0.0012   0.002  0.0029  0.0049  0.0105  0.0183   0.022  0.0234
UA0.0244
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD035  C=FLOW   F=0YR
*
KKPSO007
KMSubshed PSO007
* 4.82 Ac
BA0.0075
PB
* pi e=94.5
BF    -1       1  0.0075
LU     0    0.07       5
UC 0.237   0.261
UA     0   0.001  0.0017  0.0027   0.004  0.0067  0.0143   0.025    0.03   0.032
UA0.0333
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO007  C=FLOW   F=0YR
*
KKPRD034
KMSubshed PRD034
* 7.07 Ac
BA 0.011
PB
* pi e=101
BF    -1       1   0.011
LU     0    0.07      40
UC 0.273   0.233
UA     0  0.0003  0.0006  0.0009  0.0013  0.0022  0.0048  0.0083  0.0099  0.0106
UA 0.011
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD034  C=FLOW   F=0YR
*
KKPSO006
KMSubshed PSO006
* 8.42 Ac
BA0.0132
PB
* pi e=94.5
BF    -1       1  0.0132
LU     0    0.07       5
UC 0.332   0.382
UA     0  0.0006  0.0011  0.0017  0.0025  0.0042  0.0091  0.0158   0.019  0.0203
UA0.0211
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRO006  C=FLOW   F=0YR
*
KK J3840
KMCOMBINE SUBSHEDS 34 THRU 36 AND OPEN SPACE 006&007
HC     7
*
KKOFF003
KMSubshed OFF003
* 364.89 Ac
BA0.5701
PB
* pi e=120
```

```
BF    -1       1  0.5701
LU     0   0.075    5.43
UC 0.774   0.277
UA     0  0.0171  0.0285  0.0456  0.0684   0.114  0.2452  0.4276  0.5131  0.5473
UA0.5701
*
KK  RO03
KMROUTE O03 TO 05
RD  2300  0.0022   0.015            CIRC       7
*
KKPRD099
KMSubshed PRD099
* 27.71 Ac
BA0.0433
PB
* pi e=114.5
BF    -1       1  0.0433
LU     0    0.07   84.24
UC 0.445   0.442
UA     0  0.0013  0.0022  0.0035  0.0052  0.0087  0.0186  0.0325   0.039  0.0416
UA0.0433
*
KKPRD100
KMSubshed PRD100
* 26.96 Ac
BA0.0421
PB
* pi e=111
BF    -1       1  0.0421
LU     0   0.078   84.41
UC 0.496   0.416
UA     0  0.0013  0.0021  0.0034  0.0051  0.0084  0.0181  0.0316  0.0379  0.0404
UA0.0421
*
KKJ99100
KMCOMBINE SUBSHEDS 99 AND 100 AND OFF003
HC     3
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD100  C=FLOW   F=0YR
*
KKPRD063
KMSubshed PRD063
* 47.7 Ac
BA0.0745
PB
* pi e=115.5
BF    -1       1  0.0745
LU     0    0.07   70.06
UC 0.434   0.273
UA     0  0.0022  0.0037   0.006  0.0089  0.0149   0.032  0.0559  0.0671  0.0716
UA0.0745
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD063  C=FLOW   F=0YR
*
KKPRD047
KMSubshed PRD047
* 13.53 Ac
BA0.0211
PB
* pi e=110.5
BF    -1       1  0.0211
```

```
LU     0   0.072   69.93
UC 0.263   0.179
UA     0  0.0006  0.0011  0.0017  0.0025  0.0042  0.0091  0.0159   0.019  0.0203
UA0.0211
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD047  C=FLOW   F=0YR
*
KKPSO012
KMSubshed PSO012
* 6.14 Ac
BA0.0096
PB
* pi e=102.5
BF    -1       1  0.0096
LU     0    0.07       5
UC  0.29   0.373
UA     0  0.0007  0.0011  0.0018  0.0028  0.0046  0.0099  0.0172  0.0207   0.022
UA 0.023
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO012  C=FLOW   F=0YR
*
KK J3840
KMCOMBINE SUBSHEDS 47 THRU 100 AND OPEN SPACE 012
HC     4
*
KKPRD062
KMSubshed PRD062
* 11.46 Ac
BA0.0179
PB
* pi e=112
BF    -1       1  0.0179
LU     0    0.07   71.48
UC 0.387   0.556
UA     0  0.0005  0.0009  0.0014  0.0021  0.0036  0.0077  0.0134  0.0161  0.0172
UA0.0179
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD062  C=FLOW   F=0YR
*
KKPRD061
KMSubshed PRD061
* 16.1 Ac
BA0.0252
PB
* pi e=114
BF    -1       1  0.0252
LU     0    0.07   56.46
UC 0.303   0.236
UA     0  0.0008  0.0013   0.002   0.003   0.005  0.0108  0.0189  0.0226  0.0242
UA0.0252
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD061  C=FLOW   F=0YR
*
KKPRD046
KMSubshed PRD046
* 3.69 Ac
BA0.0058
PB
* pi e=106.5
```

```
BF    -1       1  0.0058
LU     0    0.07      80
UC 0.181    0.17
UA     0  0.0002  0.0003  0.0005  0.0007  0.0012  0.0025  0.0043  0.0052  0.0055
UA0.0058
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD046  C=FLOW   F=0YR
*
KKPRD042
KMSubshed PRD042
* 11.63 Ac
BA0.0182
PB
* pi e=108
BF    -1       1  0.0182
LU     0    0.07      60
UC 0.159   0.089
UA     0  0.0005  0.0009  0.0015  0.0022  0.0036  0.0078  0.0136  0.0164  0.0174
UA0.0182
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD042  C=FLOW   F=0YR
*
KKPRD045
KMSubshed PRD045
* 8.01 Ac
BA0.0125
PB
* pi e=106
BF    -1       1  0.0125
LU     0    0.07   79.99
UC 0.199   0.128
UA     0  0.0004  0.0006   0.001  0.0015  0.0025  0.0054  0.0094  0.0113   0.012
UA0.0125
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD045  C=FLOW   F=0YR
*
KKPSO011
KMSubshed PSO011
* 19.9 Ac
BA0.0311
PB
* pi e=99
BF    -1       1  0.0311
LU     0    0.07       5
UC 0.546   0.767
UA     0  0.0006   0.001  0.0016  0.0024   0.004  0.0087  0.0151  0.0182  0.0194
UA0.0202
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO011  C=FLOW   F=0YR
*
KK J3840
KMCOMBINE SUBSHEDS 47 THRU 100 AND OPEN SPACE 011
HC     7
*
KKOFF002
KMSubshed OFF002
* 40.35 Ac
BA 0.063
PB
```

```
* pi e=112.5
BF    -1       1   0.063
LU     0   0.084    5.76
UC 0.455   0.337
UA     0  0.0019  0.0032   0.005  0.0076  0.0126  0.0271  0.0473  0.0567  0.0605
UA 0.063
*
KK  RO02
KMROUTE O02 TO OS10
RD   350  0.0143   0.015            CIRC       3
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=OFF002  C=FLOW   F=0YR
*
KKPSO010
KMSubshed PSO010
* 2.87 Ac
BA0.0045
PB
* pi e=104.5
BF    -1       1  0.0045
LU     0    0.07       5
UC 0.173    0.17
UA     0  0.0006   0.001  0.0016  0.0024   0.004  0.0087  0.0152  0.0182  0.0194
UA0.0202
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO010  C=FLOW   F=0YR
*
KKPRD033
KMSubshed PRD033
* 32.84 Ac
BA0.0513
PB
* pi e=110
BF    -1       1  0.0513
LU     0    0.07   70.02
UC 0.319    0.16
UA     0  0.0015  0.0026  0.0041  0.0062  0.0103  0.0221  0.0385  0.0462  0.0493
UA0.0513
*
KK  R033
KMROUTE 33 TO32
RD   460  0.0043   0.015            CIRC       3
*
KKPRD032
KMSubshed PRD032
* 17.44 Ac
BA0.0273
PB
* pi e=110.5
BF    -1       1  0.0273
LU     0   0.078   37.43
UC 0.374    0.34
UA     0  0.0008  0.0014  0.0022  0.0033  0.0055  0.0117  0.0204  0.0245  0.0262
UA0.0273
*
KK J2233
KMCOMBINE SUBSHEDS 32,33
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J2233  C=FLOW   F=0YR
```

```
*
KKPRD031
KMSubshed PRD031
* 3.24 Ac
BA0.0051
PB
* pi e=106
BF    -1       1  0.0051
LU     0   0.083   79.91
UC 0.141    0.08
UA     0  0.0002  0.0003  0.0004  0.0006   0.001  0.0022  0.0038  0.0046  0.0049
UA0.0051
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD031  C=FLOW   F=0YR
*
KKPRD043
KMSubshed PRD043
* 5.36 Ac
BA0.0084
PB
* pi e=105.5
BF    -1       1  0.0084
LU     0    0.07   79.98
UC 0.216   0.186
UA     0  0.0003  0.0004  0.0007   0.001  0.0017  0.0036  0.0063  0.0075   0.008
UA0.0084
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD043  C=FLOW   F=0YR
*
KKPRD044
KMSubshed PRD044
* 4.22 Ac
BA0.0066
PB
* pi e=105.5
BF    -1       1  0.0066
LU     0    0.07   80.01
UC 0.221    0.23
UA     0  0.0002  0.0003  0.0005  0.0008  0.0013  0.0028  0.0049  0.0059  0.0063
UA0.0066
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD044  C=FLOW   F=0YR
*
KKPSO009
KMSubshed PSO009
* 14.04 Ac
BA0.0219
PB
* pi e=100
BF    -1       1  0.0219
LU     0    0.07       5
UC 0.426   0.508
UA     0  0.0002  0.0003  0.0005  0.0007  0.0012  0.0025  0.0044  0.0052  0.0056
UA0.0058
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO009  C=FLOW   F=0YR
*
KK J3342
KMCOMBINE SUBSHEDS 44 THRU 31 & PSO009
```

```
HC     8
*
KKPRD030
KMSubshed PRD030
* 10.53 Ac
BA0.0165
PB
* pi e=104
BF    -1       1  0.0165
LU     0   0.085   61.31
UC 0.324   0.244
UA     0  0.0005  0.0008  0.0013   0.002  0.0033  0.0071  0.0123  0.0148  0.0158
UA0.0165
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD030  C=FLOW   F=0YR
*
KKPRD041
KMSubshed PRD041
* 11.6 Ac
BA0.0181
PB
* pi e=102.5
BF    -1       1  0.0181
LU     0    0.07   39.94
UC 0.223   0.146
UA     0  0.0005  0.0009  0.0015  0.0022  0.0036  0.0078  0.0136  0.0163  0.0174
UA0.0181
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD041  C=FLOW   F=0YR
*
KKPRD029
KMSubshed PRD029
* 18.17 Ac
BA0.0284
PB
* pi e=101
BF    -1       1  0.0284
LU     0   0.072   49.69
UC 0.486   0.472
UA     0  0.0009  0.0014  0.0023  0.0034  0.0057  0.0122  0.0213  0.0256  0.0273
UA0.0284
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD029  C=FLOW   F=0YR
*
KKPSO008
KMSubshed PSO008
* 22.64 Ac
BA0.0354
PB
* pi e=96
BF    -1       1  0.0354
LU     0    0.07       5
UC 0.472   0.486
UA     0  0.0005  0.0008  0.0012  0.0019  0.0031  0.0067  0.0116  0.0139  0.0149
UA0.0155
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO008  C=FLOW   F=0YR
*
KK J3342
```

```
KMCOMBINE SUBSHEDS 44 THRU 31 & PSO008
HC     6
*
KKPSO005
KMSubshed PSO005
* 6.28 Ac
BA0.0098
PB
* pi e=94
BF    -1       1  0.0098
LU     0    0.07       5
UC  0.19   0.149
UA     0  0.0002  0.0003  0.0005  0.0008  0.0013  0.0028  0.0048  0.0058  0.0062
UA0.0064
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO005  C=FLOW   F=0YR
*
KKPRD037
KMSubshed PRD037
* 6.62 Ac
BA0.0103
PB
* pi e=102.5
BF    -1       1  0.0103
LU     0    0.07   42.34
UC 0.347   0.423
UA     0  0.0003  0.0005  0.0008  0.0012  0.0021  0.0044  0.0078  0.0093  0.0099
UA0.0103
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD037  C=FLOW   F=0YR
*
KKOFF016
KMSubshed OFF016
* 17.56 Ac
BA0.0274
PB
* pi e=102.5
BF    -1       1  0.0274
LU     0    0.07    5.03
UC 0.294   0.194
UA     0  0.0008  0.0014  0.0022  0.0033  0.0055  0.0118  0.0206  0.0247  0.0263
UA0.0274
*
KK  RO16
KMROUTE O16 TO 25
RD   630  0.0079   0.045            TRAP       5      10
*
KKPRD025
KMSubshed PRD025
* 9.47 Ac
BA0.0148
PB
* pi e=98
BF    -1       1  0.0148
LU     0    0.07   39.42
UC 0.185   0.103
UA     0  0.0004  0.0007  0.0012  0.0018   0.003  0.0064  0.0111  0.0133  0.0142
UA0.0148
*
KKJ25O16
KMCOMBINE SUBSHEDS OFF16 and PRD025
```

```
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=JO1625  C=FLOW   F=0YR
*
KKPRD028
KM     .
* 5.55 Ac
BA0.0087
PB
* pi e=98
BF    -1       1  0.0087
LU     0    0.07    42.8
UC 0.229   0.202
UA     0  0.0003  0.0004  0.0007   0.001  0.0017  0.0037  0.0065  0.0078  0.0083
UA0.0087
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD028  C=FLOW   F=0YR
*
KKPRD024
KM     .
* 10.21 Ac
BA 0.016
PB
* pi e=98
BF    -1       1   0.016
LU     0    0.07   39.99
UC 0.206   0.122
UA     0  0.0005  0.0008  0.0013  0.0019  0.0032  0.0069   0.012  0.0144  0.0153
UA 0.016
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD024  C=FLOW   F=0YR
*
KKPRD027
KM     .
* 6.84 Ac
BA0.0107
PB
* pi e=98
BF    -1       1  0.0107
LU     0    0.07    40.4
UC 0.233   0.206
UA     0  0.0003  0.0005  0.0009  0.0013  0.0021  0.0046   0.008  0.0096  0.0103
UA0.0107
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD027  C=FLOW   F=0YR
*
KKPRD023
KM     .
* 6.79 Ac
BA0.0106
PB
* pi e=98
BF    -1       1  0.0106
LU     0    0.07   39.99
UC 0.221   0.192
UA     0  0.0003  0.0005  0.0008  0.0013  0.0021  0.0046   0.008  0.0095  0.0102
UA0.0106
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
```

```
ZW      B=PRD023  C=FLOW   F=0YR
*
KKPRD026
KM     .
* 16.36 Ac
BA0.0256
PB
* pi e=95.5
BF    -1       1  0.0256
LU     0    0.07   40.48
UC 0.314   0.216
UA     0  0.0008  0.0013   0.002  0.0031  0.0051   0.011  0.0192   0.023  0.0245
UA0.0256
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD026  C=FLOW   F=0YR
*
KKPRD014
KM     .
* 15.74 Ac
BA0.0246
PB
* pi e=95
BF    -1       1  0.0246
LU     0    0.07   39.96
UC 0.281   0.187
UA     0  0.0007  0.0012   0.002   0.003  0.0049  0.0106  0.0184  0.0221  0.0236
UA0.0246
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD014  C=FLOW   F=0YR
*
KKPRD013
KM     .
* 15.03 Ac
BA0.0235
PB
* pi e=93.5
BF    -1       1  0.0235
LU     0    0.07      40
UC 0.374   0.349
UA     0  0.0007  0.0012  0.0019  0.0028  0.0047  0.0101  0.0176  0.0211  0.0225
UA0.0235
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD013  C=FLOW   F=0YR
*
KKPRD019
KM     .
* 11.19 Ac
BA0.0175
PB
* pi e=94
BF    -1       1  0.0175
LU     0    0.07   40.05
UC 0.244   0.176
UA     0  0.0005  0.0009  0.0014  0.0021  0.0035  0.0075  0.0131  0.0157  0.0168
UA0.0175
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD019  C=FLOW   F=0YR
*
KKPRD015
```

```
KM     .
* 10.93 Ac
BA0.0171
PB
* pi e=93
BF    -1       1  0.0171
LU     0   0.071   39.99
UC 0.262   0.194
UA     0  0.0005  0.0009  0.0014   0.002  0.0034  0.0073  0.0128  0.0154  0.0164
UA0.0171
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD015  C=FLOW   F=0YR
*
KKPRD012
KM     .
* 6.48 Ac
BA0.0101
PB
* pi e=92.5
BF    -1       1  0.0101
LU     0    0.07      40
UC 0.203   0.146
UA     0  0.0003  0.0005  0.0008  0.0012   0.002  0.0044  0.0076  0.0091  0.0097
UA0.0101
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD012  C=FLOW   F=0YR
*
KKPRD011
KM     .
* 8.95 Ac
BA 0.014
PB
* pi e=92.5
BF    -1       1   0.014
LU     0    0.07   39.98
UC 0.193    0.12
UA     0  0.0004  0.0007  0.0011  0.0017  0.0028   0.006  0.0105  0.0126  0.0134
UA 0.014
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD011  C=FLOW   F=0YR
*
KKPSO004
KMSubshed PSO004
* 46.25 Ac
BA0.0723
PB
* pi e=90
BF    -1       1  0.0723
LU     0    0.07       5
UC 0.786   1.014
UA     0  0.0005  0.0009  0.0014  0.0021  0.0035  0.0076  0.0132  0.0158  0.0169
UA0.0176
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO004  C=FLOW   F=0YR
*
KK J3342
KMCOMBINE SUBSHEDS 28 THRU 11 & PSO004
HC    16
*
```

```
KKOFF001
KMSubshed OFF001
* 12.71 Ac
BA0.0199
PB
* pi e=107.5
BF    -1       1  0.0199
LU     0    0.07    8.38
UC 0.341   0.269
UA     0  0.0006   0.001  0.0016  0.0024   0.004  0.0085  0.0149  0.0179  0.0191
UA0.0199
*
KK  RO01
KMROUTE O01 TO 101
RD   300  0.0167   0.045            TRAP       5      10
*
KKPRD022
KM     .
* 20.61 Ac
BA0.0322
PB
* pi e=108
BF    -1       1  0.0322
LU     0   0.077   14.96
UC 0.442   0.352
UA     0   0.001  0.0016  0.0026  0.0039  0.0064  0.0138  0.0242   0.029  0.0309
UA0.0322
*
KK  R022
KMROUTE 22 TO 101
RD   496   0.004   0.015            CIRC       3
*
KKPRD101
KM     .
* 40.49 Ac
BA0.0633
PB
* pi e=105.5
BF    -1       1  0.0633
LU     0   0.076   82.86
UC 0.354     0.3
UA     0  0.0019  0.0032  0.0051  0.0076  0.0127  0.0272  0.0474  0.0569  0.0607
UA0.0633
*
KKJ22101
KMCOMBINE SUBSHEDS 101&22&OFF001
HC     3
*
KK  R101
KMROUTE 101 TO 17
RD  1472  0.0027   0.015            CIRC       3
*
KKPRD018
KM     .
* 19.22 Ac
BA  0.03
PB
* pi e=103
BF    -1       1    0.03
LU     0   0.073   38.41
UC 0.356   0.236
UA     0  0.0009  0.0015  0.0024  0.0036   0.006  0.0129  0.0225   0.027  0.0288
UA  0.03
```

```
*
KK  R018
KMROUTE 18 TO 17
RD  1097  0.0027   0.015            CIRC       3
*
KKPRD017
KM     .
* 23.14 Ac
BA0.0362
PB
* pi e=100
BF    -1       1  0.0362
LU     0   0.074   35.41
UC 0.437   0.369
UA     0  0.0011  0.0018  0.0029  0.0043  0.0072  0.0155  0.0271  0.0325  0.0347
UA0.0362
*
KKPRD010
KM     .
* 20.67 Ac
BA0.0323
PB
* pi e=100.5
BF    -1       1  0.0323
LU     0    0.08   40.54
UC 0.414   0.374
UA     0   0.001  0.0016  0.0026  0.0039  0.0065  0.0139  0.0242  0.0291   0.031
UA0.0323
*
KKJ10101
KMCOMBINE SUBSHEDS 10 THRU 101
HC     4
*
KK  R017
KMROUTE 17 TO 16
RD   700   0.005   0.015            CIRC       4
*
KKPRD021
KMSubshed PRD021
* 25.51 Ac
BA0.0399
PB
* pi e=105
BF    -1       1  0.0399
LU     0   0.079   54.13
UC 0.476   0.373
UA     0  0.0012   0.002  0.0032  0.0048   0.008  0.0171  0.0299  0.0359  0.0383
UA0.0399
*
KK  R021
KMROUTE 21 TO 20
RD  1762  0.0023   0.015            CIRC       3
*
KKPRD020
KMSubshed PRD020
* 23.53 Ac
BA0.0368
PB
* pi e=100.5
BF    -1       1  0.0368
LU     0   0.074   42.92
UC 0.354   0.203
UA     0  0.0011  0.0018  0.0029  0.0044  0.0074  0.0158  0.0276  0.0331  0.0353
```

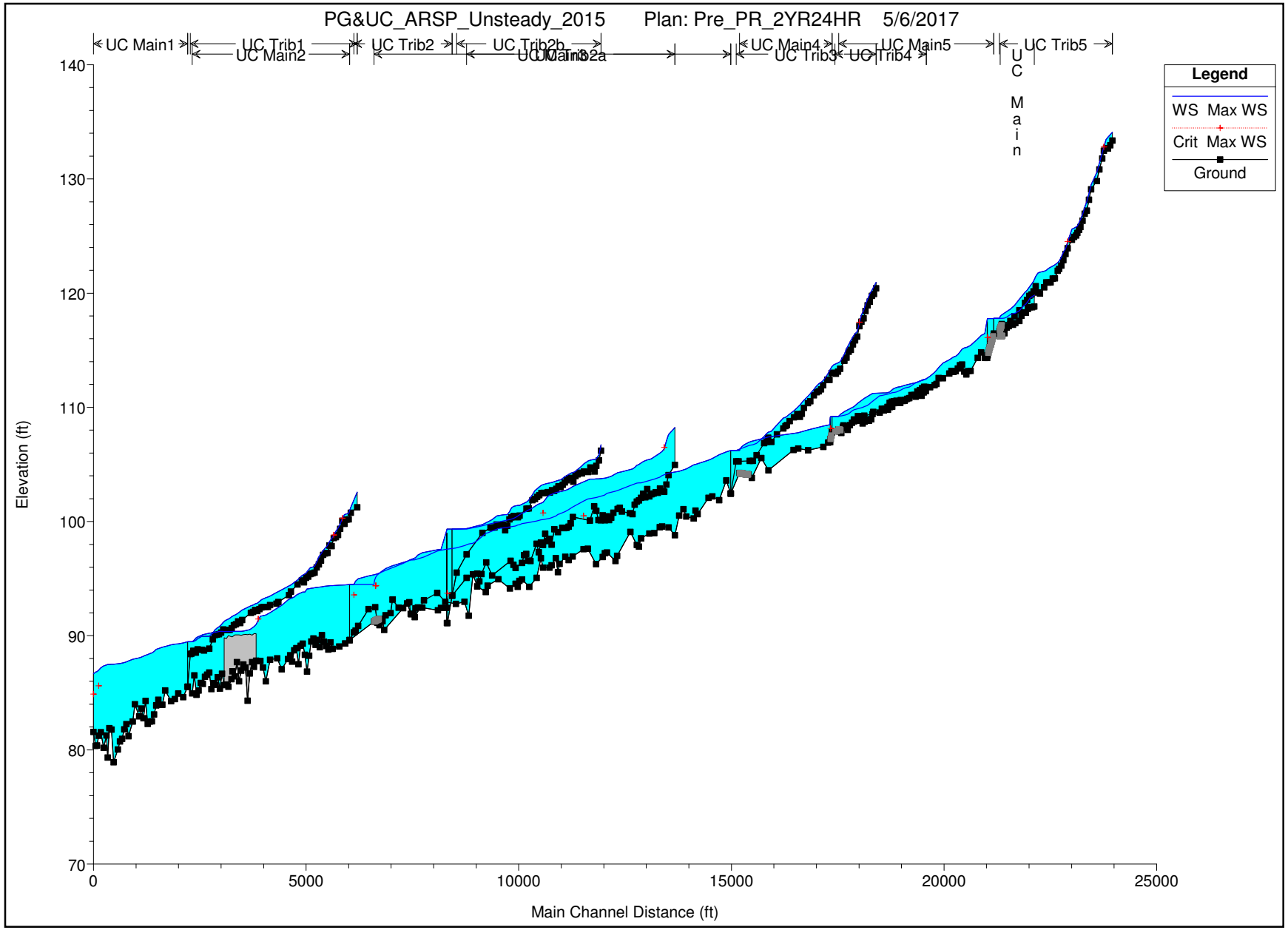
```
UA0.0368
*
KK J2021
KMCOMBINE SUBSHEDS 20&21
HC     2
*
KK  R020
KMROUTE 20 TO 16
RD  1100  0.0027   0.015            CIRC       5
*
KKPRD016
KM     .
* 24.96 Ac
BA 0.039
PB
* pi e=98.5
BF    -1       1   0.039
LU     0   0.078   42.18
UC 0.404   0.326
UA     0  0.0012   0.002  0.0031  0.0047  0.0078  0.0168  0.0293  0.0351  0.0374
UA 0.039
*
KK J1617
KMCOMBINE SUBSHEDS 10 THRU 101
HC     3
*
KK  R016
KMROUE 16 TO 9
RD   515  0.0039   0.015            CIRC       5
*
KKPRD009
KM     .
* 11.19 Ac
BA0.0175
PB
* pi e=95
BF    -1       1  0.0175
LU     0   0.075   50.57
UC 0.172   0.084
UA     0  0.0005  0.0009  0.0014  0.0021  0.0035  0.0075  0.0131  0.0157  0.0168
UA0.0175
*
KK J0916
KMCOMBINE SUBSHEDS 9 THROUGH 101
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J0916  C=FLOW   F=0YR
*
KKPRD007
KM     .
* 21.32 Ac
BA0.0333
PB
* pi e=101
BF    -1       1  0.0333
LU     0   0.081   39.02
UC 0.397     0.3
UA     0   0.001  0.0017  0.0027   0.004  0.0067  0.0143   0.025    0.03   0.032
UA0.0333
*
KKPRD006
KM     .
```

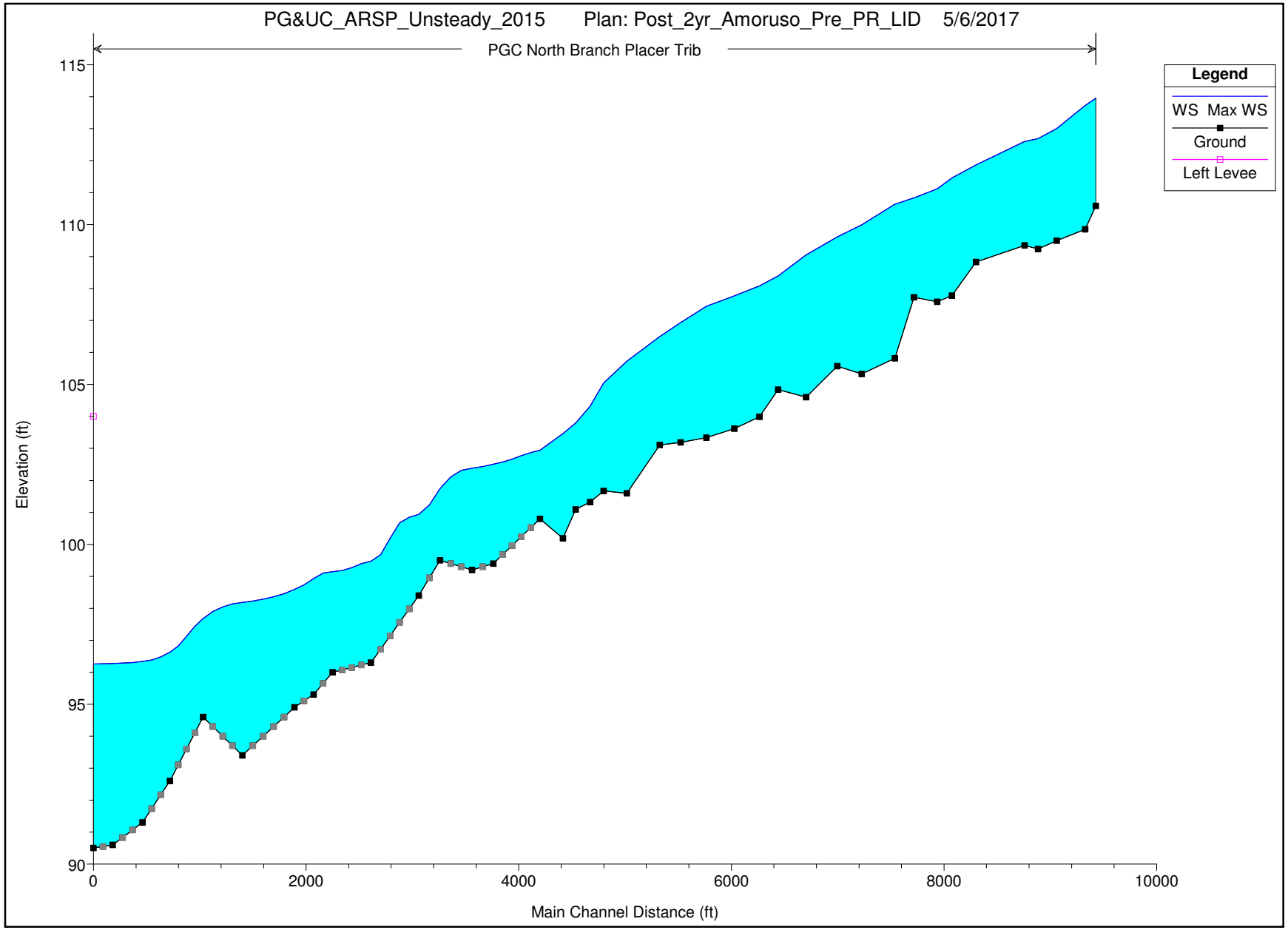
```
* 31.48 Ac
BA0.0492
PB
* pi e=100
BF    -1       1  0.0492
LU     0   0.072   53.58
UC 0.513   0.403
UA     0  0.0015  0.0025  0.0039  0.0059  0.0098  0.0212  0.0369  0.0443  0.0472
UA0.0492
*
KK J0607
KMCOMBINE SUBSHEDS 6&7
HC     2
*
KK  R006
KMROUTE 6 TO 5
RD   921  0.0043   0.015            CIRC       6
*
KKPRD005
KM     .
* 10.19 Ac
BA0.0159
PB
* pi e=95
BF    -1       1  0.0159
LU     0   0.073   12.08
UC 0.284   0.244
UA     0  0.0005  0.0008  0.0013  0.0019  0.0032  0.0068  0.0119  0.0143  0.0153
UA0.0159
*
KK J0507
KMCOMBINE SUBSHEDS 5 THRU 7
HC     2
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW       B=J0507  C=FLOW   F=0YR
*
KKPRD004
KM     .
* 29.26 Ac
BA0.0457
PB
* pi e=99.5
BF    -1       1  0.0457
LU     0   0.072   39.52
UC 0.396   0.282
UA     0  0.0014  0.0023  0.0037  0.0055  0.0091  0.0197  0.0343  0.0411  0.0439
UA0.0457
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD004  C=FLOW   F=0YR
*
KKPRD008
KM     .
* 12.6 Ac
BA0.0197
PB
* pi e=93
BF    -1       1  0.0197
LU     0    0.07   39.99
UC 0.368   0.373
UA     0  0.0006   0.001  0.0016  0.0024  0.0039  0.0085  0.0148  0.0177  0.0189
UA0.0197
```

```
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD008  C=FLOW   F=0YR
*
KKPSO003
KM     .
* 10.76 Ac
BA0.0168
PB
* pi e=92.5
BF    -1       1  0.0168
LU     0    0.07       5
UC 0.202   0.119
UA     0  0.0004  0.0007  0.0011  0.0017  0.0028  0.0061  0.0106  0.0127  0.0136
UA0.0141
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO003  C=FLOW   F=0YR
*
KKJO0337
KMCOMBINE ALL SUBSHEDS TO JUNCTION
HC     5
*
KKPSO002
KM     .
* 5.43 Ac
BA0.0085
PB
* pi e=89.5
BF    -1       1  0.0085
LU     0    0.07       5
UC 0.131   0.079
UA     0  0.0011  0.0019   0.003  0.0045  0.0075  0.0161  0.0281  0.0337  0.0359
UA0.0374
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO002  C=FLOW   F=0YR
*
KKJO0237
KMCOMBINE ALL SUBSHEDS TO JUNCTION
HC     3
*
KKPRD003
KM     .
* 23.48 Ac
BA0.0367
PB
* pi e=94.5
BF    -1       1  0.0367
LU     0    0.07   39.99
UC 0.453   0.429
UA     0  0.0011  0.0018  0.0029  0.0044  0.0073  0.0158  0.0275   0.033  0.0352
UA0.0367
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD003  C=FLOW   F=0YR
*
KKPRD002
KM     .
* 14.54 Ac
BA0.0227
PB
* pi e=93.5
```

```
BF    -1       1  0.0227
LU     0    0.07      40
UC 0.361   0.342
UA     0  0.0007  0.0011  0.0018  0.0027  0.0045  0.0098   0.017  0.0204  0.0218
UA0.0227
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD002  C=FLOW   F=0YR
*
KKPRD000
KM     .
* 14.04 Ac
BA0.0219
PB
* pi e=93
BF    -1       1  0.0219
LU     0    0.07   39.73
UC 0.318   0.264
UA     0  0.0007  0.0011  0.0018  0.0026  0.0044  0.0094  0.0165  0.0197  0.0211
UA0.0219
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD000  C=FLOW   F=0YR
*
KKPRD001
KM     .
* 25.95 Ac
BA0.0405
PB
* pi e=99
BF    -1       1  0.0405
LU     0   0.073    41.1
UC 0.505   0.496
UA     0  0.0012   0.002  0.0032  0.0049  0.0081  0.0174  0.0304  0.0365  0.0389
UA0.0405
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PRD001  C=FLOW   F=0YR
*
KKPSO001
KM     .
* 16.05 Ac
BA0.0251
PB
* pi e=89.5
BF    -1       1  0.0251
LU     0    0.07       5
UC  0.26    0.19
UA     0  0.0006   0.001  0.0015  0.0023  0.0038  0.0082  0.0144  0.0173  0.0184
UA0.0192
*
* WRITE AS HYDROGRAPH TO DSS, TO BE READ INTO HEC-RAS, PLACER RANCH
ZW      B=PSO001  C=FLOW   F=0YR
*
KK  J003
KMCOMBINE SUBSHEDS 0 THRU 3
HC     6
*
ZZ
```

Appendix D
HEC-RAS Hydraulic Data and Results


PG&UC_ARSP_Unsteady_2015 Plan: Pre_PR_2YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC Trib2
UC Trib2b
UC Trib2a
UC Main3
UC Main4
UC Trib3
UC Trib4
UC Main5
UC Trib5
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
140
130
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_2yr_Amoruso_Pre_PR_LID 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
115
110
105
100
95
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib5	2900	Max WS	12.15	133.37	134.09		134.10	0.003512	0.90	13.50	43.18	0.28
Trib5	2850	Max WS	11.95	132.96	133.89		133.91	0.005882	1.15	10.39	33.78	0.37
Trib5	2795.09	Max WS	12.58	132.69	133.65		133.67	0.003926	1.28	9.81	25.56	0.32
Trib5	2750	Max WS	11.34	132.69	133.45		133.47	0.004643	1.18	9.65	25.52	0.34
Trib5	2700	Max WS	14.95	132.48	132.80	132.80	132.91	0.045963	2.67	5.61	24.22	0.98
Trib5	2660.73	Max WS	15.30	131.78	132.31		132.35	0.010669	1.49	10.29	35.68	0.49
Trib5	2597.42	Max WS	16.43	130.84	131.39		131.48	0.026880	2.34	7.03	24.77	0.77
Trib5	2534.37	Max WS	17.69	129.81	130.57		130.60	0.005780	1.31	13.72	41.82	0.38
Trib5	2400	Max WS	20.47	129.10	129.48		129.54	0.022078	2.00	10.31	42.16	0.69
Trib5	2350	Max WS	21.55	128.19	128.72		128.80	0.020691	2.26	9.53	29.01	0.69
Trib5	2300	Max WS	22.57	127.22	128.03		128.09	0.010821	1.90	11.89	28.89	0.52
Trib5	2250	Max WS	23.48	126.96	127.51		127.57	0.013299	1.90	12.37	35.16	0.56
Trib5	2200	Max WS	24.71	126.33	126.89		126.95	0.015374	2.02	12.24	35.30	0.60
Trib5	2150	Max WS	25.18	125.79	126.45		126.48	0.006401	1.49	16.97	46.34	0.40
Trib5	2115.69	Max WS	26.08	125.55	126.17		126.23	0.014630	2.05	12.70	34.43	0.60
Trib5	2075.19	Max WS	33.44	125.27	125.89		125.91	0.006375	1.23	27.08	84.51	0.38
Trib5	2050	Max WS	32.01	125.04	125.80		125.82	0.003404	1.14	28.20	62.32	0.30
Trib5	2000	Max WS	30.42	124.92	125.70		125.71	0.002535	1.03	29.74	68.31	0.26
Trib5	1950	Max WS	33.19	124.67	125.61		125.62	0.001018	0.79	50.16	111.29	0.17
Trib5	1850	Max WS	49.84	123.93	124.49	124.51	124.60	0.032986	2.72	21.70	192.90	0.87
Trib5	1800	Max WS	47.37	123.43	123.87		123.90	0.012751	1.78	36.56	139.18	0.55
Trib5	1750	Max WS	46.26	122.89	123.60		123.61	0.003409	1.13	48.11	112.45	0.30
Trib5	1700	Max WS	46.34	122.42	123.14		123.21	0.015440	2.21	24.66	71.89	0.62
Trib5	1650	Max WS	45.53	122.12	122.81		122.82	0.001664	0.88	52.88	111.39	0.21
Trib5	1614.93	Max WS	44.84	121.96	122.67		122.71	0.007019	1.63	28.41	82.46	0.43
Trib5	1550	Max WS	39.60	121.29	122.49		122.50	0.001146	0.94	52.14	119.82	0.19
Trib5	1500	Max WS	56.69	121.27	122.38		122.41	0.002537	1.39	50.15	135.70	0.28
Trib5	1450	Max WS	57.11	120.95	122.26		122.30	0.002548	1.51	46.75	99.86	0.29
Trib5	1400	Max WS	57.58	120.93	122.16		122.18	0.002074	1.21	58.32	120.81	0.25
Trib5	1350	Max WS	57.51	120.94	122.01		122.05	0.004056	1.73	45.49	107.86	0.35
Trib5	1300	Max WS	57.54	120.51	121.91		121.93	0.000944	0.95	74.88	110.11	0.18
Trib5	1200	Max WS	58.70	119.97	121.83		121.84	0.000813	0.82	74.61	166.41	0.16
Trib5	1150	Max WS	59.34	120.06	121.76		121.79	0.001863	1.48	58.53	112.38	0.25
Trib5	1100	Max WS	60.03	120.61	121.47		121.53	0.008815	2.13	29.93	90.92	0.50
Trib5	1050	Max WS	60.68	120.15	121.06		121.13	0.008384	2.23	30.75	68.13	0.49
Trib5	1000	Max WS	61.37	119.89	120.79		120.83	0.005445	1.75	38.85	103.31	0.40
Trib5	950	Max WS	61.94	119.77	120.52		120.58	0.011258	1.92	32.58	88.02	0.53
Trib5	900	Max WS	62.54	119.41	120.26		120.31	0.005595	1.79	40.28	94.34	0.40
Trib5	850	Max WS	63.17	119.14	120.07		120.10	0.003605	1.52	44.24	82.85	0.33
Trib5	713.21	Max WS	64.91	118.49	119.47		119.52	0.005408	1.88	38.30	75.26	0.40
Trib5	600	Max WS	66.25	117.98	118.93		118.98	0.005247	1.83	40.05	79.20	0.39
Trib5	500	Max WS	65.81	117.57	118.60		118.62	0.002717	1.14	57.55	251.57	0.27
Trib5	300.47	Max WS	64.90	117.29	118.10		118.11	0.003112	0.97	66.79	249.74	0.28
Trib5	291.555*	Max WS	64.90	117.19	118.08		118.09	0.002610	0.93	75.54	210.21	0.26
Trib5	282.64*	Max WS	64.89	117.09	118.05		118.07	0.003276	1.08	61.05	165.67	0.29
Trib5	273.725*	Max WS	64.89	116.99	118.02		118.04	0.003826	1.21	53.66	117.71	0.32
Trib5	264.81*	Max WS	64.89	116.90	117.97		118.00	0.005154	1.42	45.97	107.66	0.37
Trib5	255.895*	Max WS	64.88	116.80	117.90		117.95	0.008323	1.78	38.39	108.52	0.47
Trib5	246.98	Max WS	64.87	116.70	117.78		117.86	0.013880	2.38	31.95	93.49	0.61
Main	22200	Max WS	22.05	118.83	119.80		119.81	0.001318	0.79	28.22	57.63	0.19
Main	22150	Max WS	21.87	118.76	119.71		119.72	0.002975	0.98	22.43	56.65	0.27
Main	22100	Max WS	22.71	118.77	119.56		119.58	0.003736	1.12	20.36	49.53	0.31
Main	22050	Max WS	23.55	118.62	119.26		119.30	0.010051	1.53	15.35	48.66	0.48
Main	22000	Max WS	24.37	118.29	119.05		119.06	0.002222	0.92	26.58	58.77	0.24
Main	21950	Max WS	25.17	118.31	118.90		118.92	0.004683	1.24	20.35	50.25	0.34
Main	21900	Max WS	25.95	118.02	118.69		118.72	0.007678	1.39	18.79	67.00	0.42
Main	21850	Max WS	26.55	117.57	118.46		118.49	0.004468	1.40	18.94	79.06	0.35
Main	21756.27	Max WS	27.80	117.37	118.25		118.25	0.000496	0.53	52.38	86.49	0.12
Main	21700	Max WS	28.67	117.24	118.21		118.21	0.000935	0.75	40.42	79.43	0.17
Main	21650	Max WS	29.41	117.25	118.14		118.15	0.001755	0.89	33.02	63.87	0.22
Main	21600	Max WS	30.05	117.11	118.02		118.04	0.003085	1.07	27.96	92.31	0.28
Main	21550	Max WS	30.41	116.98	117.90		117.92	0.002364	1.12	28.07	59.03	0.26
Main	21500	Max WS	30.57	116.48	117.82		117.84	0.001202	0.95	32.58	53.50	0.19
Main	21450	Max WS	30.94	116.27	117.80		117.80	0.000334	0.56	54.88	69.91	0.10
Main	21441.0*	Max WS	30.82	116.26	117.79		117.80	0.000340	0.56	57.81	104.60	0.11
Main	21432.1*	Max WS	30.82	116.26	117.79		117.80	0.000330	0.55	63.61	138.18	0.10
Main	21423.1*	Max WS	30.81	116.25	117.79		117.79	0.000303	0.53	71.18	146.77	0.10
Main	21414.1*	Max WS	30.78	116.24	117.79		117.79	0.000264	0.49	79.75	153.47	0.09
Main	21405.2*	Max WS	30.74	116.24	117.79		117.79	0.000222	0.45	89.35	159.73	0.08
Main	21396.29	Max WS	30.62	116.23	117.78		117.79	0.000324	0.55	70.29	166.27	0.10
Main5	21246.12	Max WS	95.49	116.44	117.78		117.78	0.000113	0.35	313.04	367.25	0.06
Main5	21227.8*	Max WS	95.53	116.21	117.78		117.78	0.000080	0.34	344.62	357.64	0.05
Main5	21209.5*	Max WS	95.50	115.97	117.78		117.78	0.000061	0.33	370.26	346.81	0.05
Main5	21191.3*	Max WS	95.48	115.74	117.78		117.78	0.000050	0.32	388.99	337.85	0.04
Main5	21173.0*	Max WS	95.46	115.50	117.78		117.78	0.000043	0.33	401.91	326.95	0.04

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main5	21154.7*	Max WS	95.48	115.26	117.78		117.78	0.000040	0.34	407.53	316.17	0.04
Main5	21136.5*	Max WS	95.49	115.03	117.78		117.78	0.000040	0.36	406.94	304.96	0.04
Main5	21118.2*	Max WS	95.49	114.79	117.78		117.78	0.000043	0.39	398.96	293.22	0.04
Main5	21100	Max WS	95.48	114.56	117.78	116.12	117.78	0.000050	0.45	379.61	274.68	0.05
Main5	21050		Inl Struct									
Main5	21037.73	Max WS	95.01	114.34	116.48		116.54	0.004252	2.39	66.89	180.21	0.39
Main5	20950.06	Max WS	94.93	114.81	116.30		116.33	0.003022	1.51	90.62	215.32	0.31
Main5	20867	Max WS	95.09	114.33	115.99		116.04	0.007415	2.24	65.27	192.17	0.47
Main5	20700	Max WS	94.56	113.19	115.42		115.46	0.003376	1.76	89.65	249.09	0.33
Main5	20650	Max WS	94.57	113.17	115.33		115.36	0.004343	1.76	87.06	205.76	0.36
Main5	20600	Max WS	94.61	112.88	115.25		115.27	0.001392	1.42	109.26	188.98	0.22
Main5	20550	Max WS	94.80	113.12	115.20		115.22	0.001390	1.36	110.03	198.69	0.22
Main5	20500	Max WS	94.95	113.75	115.10		115.13	0.003625	1.84	78.31	163.46	0.34
Main5	20450	Max WS	95.09	113.69	114.85		114.94	0.007346	2.41	43.19	169.91	0.48
Main5	20400	Max WS	95.10	113.39	114.61		114.69	0.006399	2.38	54.04	142.48	0.45
Main5	20351.92	Max WS	95.12	113.17	114.49		114.51	0.002316	1.59	92.26	183.32	0.28
Main5	20300	Max WS	95.17	113.10	114.41		114.43	0.001497	1.15	92.80	229.65	0.22
Main5	20250	Max WS	94.88	113.18	114.29		114.33	0.004197	1.99	78.27	220.10	0.37
Main5	20200	Max WS	94.94	112.96	114.16		114.18	0.002515	1.52	94.54	189.40	0.29
Main5	20050	Max WS	95.05	112.55	113.87		113.90	0.001806	1.41	93.38	198.89	0.25
Main5	19950	Max WS	95.31	112.56	113.47		113.52	0.005943	1.98	65.54	146.22	0.42
Main5	19900	Max WS	95.47	112.05	113.26		113.30	0.004583	1.97	72.74	177.63	0.38
Main5	19852.97	Max WS	95.43	111.94	113.06		113.10	0.004650	1.91	76.80	197.41	0.38
Main5	19746.96	Max WS	95.48	111.76	112.74		112.75	0.001953	1.33	110.32	198.35	0.25
Main5	19650	Max WS	94.77	111.42	112.49		112.53	0.003310	1.61	67.35	134.16	0.32
Main5	19600	Max WS	94.55	111.31	112.39		112.42	0.001732	1.23	91.30	179.19	0.24
Main5	19550	Max WS	94.44	111.01	112.34		112.35	0.000988	1.08	125.35	217.25	0.18
Main5	19500	Max WS	94.35	111.18	112.30		112.31	0.000932	1.00	138.87	286.20	0.18
Main5	19450	Max WS	93.75	111.38	112.23		112.24	0.002267	1.23	108.21	288.78	0.26
Main5	19400	Max WS	93.14	111.08	112.16		112.17	0.000880	0.86	187.76	404.19	0.17
Main5	19150	Max WS	93.11	110.58	111.94		111.95	0.001010	1.17	151.80	294.58	0.19
Main5	19050	Max WS	93.58	110.39	111.81		111.83	0.001442	1.29	101.51	233.28	0.22
Main5	19000	Max WS	93.86	110.49	111.77		111.78	0.000703	0.83	162.55	268.07	0.15
Main5	18950	Max WS	94.14	110.54	111.71		111.73	0.001646	1.19	104.19	215.96	0.23
Main5	18900	Max WS	94.39	110.53	111.65		111.66	0.001420	1.08	115.51	228.30	0.21
Main5	18850	Max WS	107.04	110.49	111.50		111.55	0.004685	1.81	76.90	244.69	0.38
Main5	18800	Max WS	100.16	110.40	111.35		111.37	0.002505	1.35	105.07	271.11	0.28
Main5	18750	Max WS	93.01	110.03	111.29		111.29	0.000676	0.82	176.59	348.64	0.15
Main5	18700	Max WS	91.49	109.89	111.27		111.27	0.000232	0.52	290.24	473.54	0.09
Main5	18650	Max WS	90.85	109.86	111.26		111.26	0.000200	0.40	288.68	393.00	0.08
Main5	18397.57	Max WS	89.28	109.41	111.22		111.22	0.000155	0.53	291.59	320.39	0.08
Main5	18200	Max WS	92.77	109.28	110.78		110.79	0.000754	0.82	152.58	214.92	0.16
Main5	18050	Max WS	93.22	109.24	110.36		110.43	0.007028	2.49	62.75	187.86	0.47
Main5	17955.7	Max WS	93.46	108.94	110.06		110.08	0.002625	1.46	107.35	235.03	0.29
Main5	17750	Max WS	94.07	108.17	109.66		109.69	0.002059	1.41	82.93	170.98	0.26
Main5	17700	Max WS	94.22	108.29	109.55		109.58	0.003524	1.44	72.79	145.11	0.32
Main5	17650	Max WS	94.38	107.99	109.42		109.45	0.002579	1.38	81.33	159.16	0.28
Main5	17641.6*	Max WS	94.36	108.00	109.39		109.42	0.003067	1.54	72.59	154.52	0.31
Main5	17633.3*	Max WS	94.32	108.02	109.36		109.40	0.003569	1.69	65.80	145.41	0.33
Main5	17625.*	Max WS	94.25	108.03	109.32		109.37	0.004240	1.88	62.11	159.23	0.37
Main5	17616.6*	Max WS	94.11	108.04	109.29		109.34	0.004527	1.97	61.93	146.22	0.38
Main5	17608.3*	Max WS	93.71	108.06	109.25		109.30	0.004537	2.01	66.26	162.35	0.38
Main5	17600	Max WS	67.03	108.07	109.19		109.23	0.003513	1.75	49.84	153.26	0.34
Trib4	2650	Max WS	38.22	111.78	112.50		112.50	0.000919	0.52	73.04	193.24	0.15
Trib4	2600	Max WS	38.07	111.81	112.45		112.46	0.001907	0.77	49.68	128.16	0.22
Trib4	2550	Max WS	35.70	111.67	112.41		112.41	0.001098	0.55	64.60	179.95	0.16
Trib4	2500	Max WS	72.30	111.51	112.28		112.30	0.004958	1.26	57.49	144.49	0.35
Trib4	2450	Max WS	72.54	111.12	112.19		112.20	0.001234	0.71	101.85	211.68	0.18
Trib4	2400	Max WS	73.17	110.93	112.13		112.14	0.001275	0.75	98.02	194.57	0.19
Trib4	2350	Max WS	73.70	111.08	112.04		112.05	0.002719	0.90	81.76	215.81	0.26
Trib4	2300	Max WS	74.10	111.07	111.88		111.90	0.004872	1.14	64.98	186.63	0.34
Trib4	2250	Max WS	74.43	110.81	111.77		111.78	0.001344	0.75	99.58	205.16	0.19
Trib4	2200	Max WS	74.81	110.75	111.73		111.74	0.000703	0.58	140.20	260.50	0.14
Trib4	2150	Max WS	75.38	110.64	111.69		111.70	0.001270	0.70	107.35	232.84	0.18
Trib4	2100	Max WS	75.87	110.56	111.61		111.63	0.002293	0.89	85.02	200.49	0.24
Trib4	2050	Max WS	76.27	110.63	111.52		111.54	0.001935	1.02	78.39	158.05	0.23
Trib4	1950	Max WS	76.69	110.57	111.35		111.37	0.001791	0.95	82.88	165.73	0.22
Trib4	1900	Max WS	77.05	110.36	111.31		111.31	0.000626	0.61	126.55	199.89	0.13
Trib4	1850	Max WS	77.44	110.06	111.28		111.28	0.000762	0.65	119.47	199.06	0.15
Trib4	1800	Max WS	78.01	110.02	111.22		111.23	0.001414	0.84	92.52	165.32	0.20
Trib4	1747.14	Max WS	78.44	109.80	111.16		111.17	0.001148	0.85	92.46	153.97	0.18
Trib4	1700	Max WS	78.84	109.83	111.11		111.12	0.000882	0.75	104.58	188.76	0.16
Trib4	1650	Max WS	79.31	109.73	111.08		111.08	0.000568	0.59	133.83	207.89	0.13
Trib4	1600	Max WS	79.82	109.88	111.04		111.05	0.000864	0.70	114.08	202.63	0.16
Trib4	1550	Max WS	80.33	109.54	111.02		111.02	0.000255	0.49	177.07	233.52	0.09

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib4	1400	Max WS	81.63	109.60	110.58		110.64	0.006129	1.94	42.78	148.17	0.42
Trib4	1350	Max WS	81.97	108.96	110.42		110.45	0.003232	1.22	67.43	129.30	0.30
Trib4	1300	Max WS	82.14	108.83	110.27		110.30	0.003711	1.27	66.48	177.37	0.32
Trib4	1250	Max WS	81.96	108.93	110.15		110.17	0.002063	1.45	95.75	217.95	0.26
Trib4	1200	Max WS	81.95	108.75	110.08		110.09	0.001338	1.11	117.53	222.12	0.21
Trib4	1150	Max WS	82.01	108.59	109.99		110.02	0.001929	1.47	82.45	201.59	0.26
Trib4	1097.41	Max WS	82.26	108.83	109.94		109.95	0.000402	0.68	180.75	259.82	0.12
Trib4	950	Max WS	83.30	108.77	109.80		109.81	0.001745	1.18	108.74	300.24	0.23
Trib4	900	Max WS	83.73	108.64	109.69		109.71	0.002460	1.32	93.78	320.21	0.27
Trib4	850	Max WS	83.99	108.45	109.51		109.57	0.005642	1.95	58.93	313.89	0.41
Trib4	800	Max WS	84.27	108.03	109.41		109.42	0.000958	1.03	113.23	284.28	0.18
Trib4	750	Max WS	84.26	108.34	109.34		109.35	0.002196	1.13	114.73	340.41	0.25
Trib4	700	Max WS	84.29	108.43	109.30		109.30	0.000314	0.50	228.08	360.80	0.10
Trib4	650	Max WS	83.83	107.75	109.25		109.27	0.001300	1.09	81.32	329.28	0.21
Trib4	600	Max WS	83.25	107.89	109.22		109.23	0.000343	0.70	204.65	384.51	0.11
Trib4	550	Max WS	82.11	107.93	109.20		109.21	0.000537	0.84	181.81	326.94	0.14
Trib4	540.*	Max WS	82.05	107.93	109.20		109.20	0.000289	0.61	221.90	314.16	0.10
Trib4	530.*	Max WS	81.64	107.93	109.20		109.20	0.000291	0.61	220.48	315.73	0.10
Trib4	520.*	Max WS	81.50	107.92	109.19		109.20	0.000264	0.58	223.56	299.69	0.10
Trib4	510.*	Max WS	81.31	107.92	109.19		109.19	0.000202	0.50	252.58	316.99	0.08
Trib4	500	Max WS	81.18	107.92	109.19		109.19	0.000122	0.39	295.94	315.98	0.07
Main4	17447.12	Max WS	148.21	107.81	109.19		109.19	0.000152	0.43	540.10	680.75	0.07
Main4	17428.3*	Max WS	148.20	107.52	109.19		109.19	0.000175	0.50	496.75	734.20	0.08
Main4	17409.5*	Max WS	148.20	107.23	109.18	108.15	109.19	0.000127	0.46	542.93	733.33	0.07
Main4	17400		Inl Struct									
Main4	17390.78	Max WS	146.68	106.94	108.48		108.49	0.000831	0.84	223.53	367.09	0.16
Main4	17350	Max WS	146.64	106.91	108.45		108.46	0.001035	1.01	223.55	421.54	0.18
Main4	17239.4	Max WS	146.95	106.54	108.36		108.37	0.000843	1.05	247.09	456.62	0.17
Main4	16882.6	Max WS	149.62	106.24	108.02		108.04	0.001376	1.58	162.15	228.51	0.23
Main4	16650	Max WS	150.86	106.39	107.79		107.80	0.000944	1.04	223.18	360.01	0.18
Main4	16536.56	Max WS	150.71	106.27	107.72		107.73	0.000378	0.65	338.50	431.52	0.11
Main4	15950	Max WS	149.53	104.49	107.40		107.41	0.000851	1.13	245.11	459.07	0.18
Main4	15779.58	Max WS	149.45	105.55	107.24		107.25	0.001248	1.40	207.40	310.15	0.21
Main4	15556.6	Max WS	149.51	103.82	107.03		107.05	0.000704	1.31	220.83	325.87	0.17
Main4	15479	Max WS	149.57	104.11	106.93		106.96	0.001799	1.95	146.02	300.75	0.27
Main4	15469.0*	Max WS	149.58	104.12	106.91		106.94	0.001859	1.97	142.34	296.26	0.27
Main4	15459.1*	Max WS	149.58	104.12	106.89		106.93	0.001921	1.98	138.74	291.88	0.27
Main4	15449.2*	Max WS	149.57	104.13	106.87		106.91	0.001984	1.99	135.27	284.64	0.28
Main4	15439.3*	Max WS	149.56	104.14	106.85		106.89	0.002052	1.99	132.57	275.38	0.28
Main4	15429.4*	Max WS	149.56	104.14	106.83		106.87	0.002159	2.01	129.96	284.18	0.29
Main4	15419.4*	Max WS	149.56	104.15	106.81		106.85	0.002307	2.04	129.12	279.27	0.30
Main4	15409.5*	Max WS	149.57	104.16	106.78		106.83	0.002363	2.02	128.33	269.99	0.30
Main4	15399.6*	Max WS	149.56	104.16	106.76		106.80	0.002406	2.00	127.95	260.43	0.30
Main4	15389.7*	Max WS	149.57	104.17	106.74		106.78	0.002468	1.97	127.77	254.68	0.30
Main4	15379.8*	Max WS	149.56	104.18	106.72		106.76	0.002548	1.96	127.40	251.25	0.30
Main4	15369.8*	Max WS	149.57	104.18	106.69		106.73	0.002611	1.92	126.72	241.07	0.31
Main4	15359.9*	Max WS	149.57	104.19	106.67		106.71	0.002730	1.91	125.84	234.65	0.31
Main4	15350.0*	Max WS	149.57	104.20	106.64		106.68	0.002862	1.89	125.17	229.05	0.32
Main4	15340.1*	Max WS	149.55	104.20	106.62		106.65	0.003031	1.89	123.88	220.83	0.32
Main4	15330.2*	Max WS	149.55	104.21	106.59		106.62	0.003246	1.88	122.29	219.84	0.33
Main4	15320.2*	Max WS	149.55	104.22	106.55		106.59	0.003575	1.89	119.72	218.89	0.34
Main4	15310.3*	Max WS	149.53	104.22	106.52		106.55	0.004093	1.93	115.74	218.05	0.36
Main4	15300.4*	Max WS	149.52	104.23	106.47		106.51	0.005023	2.00	109.46	216.76	0.39
Main4	15290.5*	Max WS	149.48	104.24	106.41		106.45	0.006361	2.08	100.84	202.87	0.44
Main4	15280.6*	Max WS	149.29	104.24	106.33		106.38	0.008935	2.23	90.04	187.90	0.50
Main4	15270.69	Max WS	148.23	104.25	106.22		106.29	0.013391	2.54	74.51	156.76	0.60
Trib3	4150	Max WS	35.25	120.42	120.94		120.98	0.014040	1.57	22.42	88.03	0.55
Trib3	4100	Max WS	35.13	119.92	120.58		120.60	0.004370	1.10	31.94	89.31	0.32
Trib3	4050	Max WS	35.12	119.76	120.25		120.28	0.010640	1.46	24.04	85.61	0.49
Trib3	4000	Max WS	35.10	119.27	119.92		119.94	0.005304	1.19	29.55	85.07	0.36
Trib3	3950	Max WS	35.10	118.94	119.48		119.53	0.017595	1.77	19.85	77.37	0.62
Trib3	3900	Max WS	35.09	118.43	118.99		119.03	0.009683	1.43	24.54	84.07	0.47
Trib3	3850	Max WS	35.08	117.79	118.46		118.53	0.020862	2.07	16.93	59.10	0.68
Trib3	3800	Max WS	35.08	117.50	118.10		118.12	0.004864	1.08	32.54	119.02	0.34
Trib3	3750	Max WS	35.08	117.11	117.36	117.46	117.72	0.387787	4.77	7.36	65.90	2.51
Trib3	3700	Max WS	35.07	116.20	116.64		116.66	0.010709	1.15	30.42	155.21	0.46
Trib3	3650	Max WS	35.04	115.86	116.45		116.46	0.002827	0.79	44.61	148.96	0.25
Trib3	3600	Max WS	35.03	115.51	116.19		116.23	0.020305	1.69	20.74	96.40	0.64
Trib3	3550	Max WS	35.02	115.04	115.85		115.88	0.006287	1.44	24.35	59.77	0.40
Trib3	3500	Max WS	35.01	114.87	115.50		115.54	0.012240	1.72	20.38	63.17	0.53
Trib3	3450	Max WS	35.01	114.35	115.14		115.17	0.008588	1.40	25.01	80.84	0.44
Trib3	3400	Max WS	35.00	114.09	114.66		114.71	0.014775	1.89	18.54	57.46	0.59
Trib3	3300	Max WS	34.91	113.37	113.99		114.01	0.003732	1.04	33.59	90.81	0.30
Trib3	3250	Max WS	34.89	113.13	113.89		113.90	0.001825	0.87	39.93	81.90	0.22
Trib3	3200	Max WS	34.88	112.94	113.82		113.83	0.001640	0.90	38.73	72.31	0.21

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib3	3150	Max WS	34.88	113.02	113.73		113.75	0.002897	0.99	35.18	84.41	0.27
Trib3	3100	Max WS	34.87	113.01	113.54		113.56	0.006219	1.26	27.61	81.72	0.38
Trib3	3050	Max WS	34.82	112.41	113.18		113.23	0.009461	1.85	22.28	93.37	0.49
Trib3	3000	Max WS	34.76	112.43	112.87		112.89	0.008425	1.30	35.05	140.29	0.43
Trib3	2900	Max WS	34.68	111.94	112.34		112.36	0.010426	1.14	33.82	164.48	0.45
Trib3	2850	Max WS	34.64	111.57	112.18		112.20	0.003491	0.87	39.74	133.11	0.28
Trib3	2800	Max WS	34.62	111.41	112.06		112.08	0.003243	1.04	33.26	81.79	0.29
Trib3	2750	Max WS	34.62	111.33	111.89		111.91	0.004760	1.05	32.97	105.32	0.33
Trib3	2685.69	Max WS	34.60	111.05	111.58		111.60	0.006367	1.21	29.01	107.33	0.38
Trib3	2600	Max WS	34.55	110.54	111.21		111.22	0.004860	1.04	33.28	109.85	0.33
Trib3	2542.55	Max WS	34.55	110.38	110.97		111.01	0.006946	1.58	25.21	100.94	0.42
Trib3	2450	Max WS	34.53	109.96	110.61		110.64	0.004414	1.21	28.78	74.52	0.33
Trib3	2400	Max WS	34.50	109.44	110.40		110.45	0.006457	1.82	22.07	82.69	0.43
Trib3	2353.17	Max WS	34.50	109.16	110.20		110.24	0.005293	1.65	23.66	84.13	0.38
Trib3	2293.77	Max WS	34.48	109.42	109.98		110.00	0.004962	1.06	32.45	105.03	0.34
Trib3	2216.78	Max WS	34.46	109.12	109.71		109.72	0.003973	0.99	34.85	106.34	0.30
Trib3	2117.56	Max WS	34.25	108.79	109.41		109.42	0.004582	1.03	33.39	107.32	0.32
Trib3	2050	Max WS	33.86	108.45	109.21		109.23	0.005355	1.06	31.92	109.62	0.35
Trib3	2014.8	Max WS	33.72	108.36	109.13		109.14	0.002609	0.80	42.17	129.10	0.25
Trib3	1963.01	Max WS	33.64	108.16	109.05		109.06	0.001682	0.75	45.07	110.06	0.21
Trib3	1814.06	Max WS	33.59	107.64	108.47		108.51	0.006915	1.47	22.87	58.41	0.41
Trib3	1680.02	Max WS	33.51	106.98	107.91		107.92	0.003148	0.94	35.73	120.30	0.28
Trib3	1611.69	Max WS	33.50	107.34	107.81		107.82	0.000468	0.28	92.13	245.51	0.10
Trib3	1567.88	Max WS	40.95	106.98	107.69		107.71	0.004433	1.30	38.35	336.96	0.34
Trib3	1515.42	Max WS	40.89	106.86	107.45		107.47	0.006678	1.15	35.55	127.75	0.38
Trib3	1339.26	Max WS	39.83	105.80	106.84		106.86	0.001906	1.09	36.66	55.95	0.24
Trib3	1245.45	Max WS	39.15	105.31	106.72		106.73	0.001048	0.88	48.71	108.52	0.18
Trib3	1172.67	Max WS	39.04	105.31	106.68		106.68	0.000363	0.68	81.62	161.21	0.11
Trib3	911.97	Max WS	35.88	105.27	106.30		106.32	0.002072	1.13	32.03	56.56	0.25
Trib3	856.45	Max WS	28.13	105.26	106.22		106.23	0.001160	0.84	34.22	142.71	0.18
Trib2b	3500	Max WS	18.49	106.21	106.71		106.79	0.026818	2.31	9.25	40.49	0.77
Trib2b	3450	Max WS	18.49	105.35	105.85		105.89	0.009279	1.55	12.01	41.77	0.47
Trib2b	3389.72	Max WS	18.64	104.88	105.50		105.51	0.004030	1.03	18.20	58.55	0.31
Trib2b	3352.29	Max WS	18.62	104.38	105.43		105.44	0.000724	0.72	31.67	59.62	0.15
Trib2b	3300	Max WS	19.06	104.63	105.41		105.41	0.000464	0.49	40.52	87.81	0.11
Trib2b	3250	Max WS	19.51	104.73	105.37		105.37	0.001272	0.62	32.67	95.68	0.18
Trib2b	3203.29	Max WS	19.94	104.34	105.32		105.32	0.001056	0.75	32.82	128.99	0.17
Trib2b	3100	Max WS	20.95	104.37	105.06		105.09	0.007953	1.26	17.29	119.71	0.42
Trib2b	3050	Max WS	21.40	104.22	104.88		104.90	0.005089	1.00	22.59	142.41	0.34
Trib2b	3000	Max WS	21.92	104.27	104.72		104.73	0.004930	0.99	25.66	127.67	0.33
Trib2b	2950	Max WS	22.44	104.12	104.56		104.58	0.004513	0.92	26.26	130.50	0.31
Trib2b	2900	Max WS	22.95	103.98	104.40		104.42	0.006397	1.11	25.12	133.52	0.37
Trib2b	2850	Max WS	23.48	103.49	104.30		104.31	0.000734	0.56	41.89	86.45	0.14
Trib2b	2800	Max WS	24.06	103.81	104.25		104.26	0.002130	0.64	42.00	159.07	0.22
Trib2b	2750	Max WS	24.64	103.79	104.14		104.15	0.008533	0.96	30.00	166.27	0.40
Trib2b	2700	Max WS	25.23	103.62	104.03		104.04	0.003077	0.82	30.89	107.77	0.26
Trib2b	2650	Max WS	23.79	103.42	103.95		103.96	0.001201	0.52	45.31	145.84	0.17
Trib2b	2600	Max WS	26.35	103.22	103.78		103.80	0.007166	1.04	26.22	131.47	0.38
Trib2b	2550	Max WS	26.59	103.01	103.65		103.65	0.000711	0.44	69.92	232.69	0.13
Trib2b	2500	Max WS	27.14	103.07	103.61		103.61	0.001265	0.58	46.85	135.31	0.17
Trib2b	2450	Max WS	27.51	102.87	103.55		103.55	0.001598	0.65	42.42	123.11	0.19
Trib2b	2400	Max WS	27.90	102.68	103.48		103.49	0.001662	0.65	42.62	125.67	0.20
Trib2b	2350	Max WS	28.22	102.74	103.42		103.43	0.001213	0.62	45.78	116.64	0.17
Trib2b	2300	Max WS	28.63	102.54	103.38		103.38	0.000629	0.53	59.40	158.11	0.13
Trib2b	2250	Max WS	29.08	102.58	103.35		103.35	0.000829	0.53	57.03	163.56	0.14
Trib2b	2200	Max WS	29.55	102.50	103.29		103.30	0.001397	0.62	47.35	132.44	0.18
Trib2b	2150	Max WS	30.00	102.52	103.23		103.24	0.001302	0.60	50.14	140.83	0.18
Trib2b	2100	Max WS	30.49	102.50	103.17		103.18	0.001648	0.68	44.61	122.57	0.20
Trib2b	2050	Max WS	30.96	102.30	103.03		103.05	0.004320	1.17	27.17	90.40	0.33
Trib2b	2000	Max WS	31.42	102.16	102.86		102.88	0.003942	1.13	27.86	100.04	0.31
Trib2b	1950	Max WS	31.89	101.98	102.72		102.74	0.003805	1.14	30.82	119.24	0.31
Trib2b	1887.66	Max WS	32.44	101.86	102.34		102.37	0.010612	1.47	24.63	119.68	0.49
Trib2b	1800	Max WS	33.27	101.14	101.84		101.86	0.006409	1.08	37.79	165.77	0.37
Trib2b	1750	Max WS	33.61	101.12	101.69		101.71	0.004375	0.97	34.76	117.97	0.31
Trib2b	1587.06	Max WS	34.58	100.52	101.42		101.42	0.000255	0.34	103.23	203.56	0.08
Trib2b	1547.11	Max WS	34.91	100.38	101.40		101.41	0.000375	0.47	86.45	167.46	0.10
Trib2b	1494.66	Max WS	35.33	100.39	101.37		101.38	0.001352	0.63	58.33	183.49	0.18
Trib2b	1450	Max WS	35.76	100.48	101.33		101.34	0.000964	0.64	58.72	145.79	0.16
Trib2b	1400	Max WS	36.15	100.35	101.21		101.23	0.003488	1.15	41.90	156.53	0.30
Trib2b	1350	Max WS	36.59	100.19	100.86		100.90	0.029144	1.69	21.70	132.53	0.73
Trib2b	1300	Max WS	36.52	99.63	100.61		100.61	0.000494	0.45	81.36	170.08	0.11
Trib2b	1250	Max WS	36.75	99.24	100.60		100.60	0.000183	0.35	106.33	177.19	0.07
Trib2b	1200	Max WS	37.05	99.73	100.58		100.58	0.000621	0.45	82.08	201.86	0.12
Trib2b	1064.85	Max WS	38.01	99.70	100.49		100.50	0.000701	0.55	83.33	198.64	0.14
Trib2b	1050	Max WS	38.12	99.74	100.48		100.48	0.001117	0.56	72.86	180.01	0.16

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1000	Max WS	38.48	99.49	100.33		100.35	0.004566	1.24	31.13	109.74	0.34
Trib2b	950	Max WS	38.81	99.47	100.19		100.20	0.002852	0.95	53.49	208.75	0.27
Trib2b	902.71	Max WS	39.10	99.46	100.09		100.10	0.002643	0.77	50.89	185.30	0.25
Trib2b	715.36	Max WS	40.02	99.00	99.73		99.74	0.002193	0.66	60.88	231.39	0.22
Trib2b	339.81	Max WS	30.36	97.12	99.37		99.37	0.000188	0.43	101.96	210.68	0.08
Trib2b	106.24	Max WS	28.79	95.53	99.35		99.35	0.000071	0.37	98.84	92.35	0.05
Trib2a	7650	Max WS	20.00	104.96	108.23		108.23	0.000002	0.07	440.29	364.60	0.01
Trib2a	7500.06	Max WS	160.54	104.07	107.61		107.64	0.002013	2.11	161.63	237.54	0.27
Trib2a	7450	Max WS	180.74	103.23	107.05		107.63	0.018215	6.15	31.04	249.47	0.81
Trib2a	7400	Max WS	187.82	102.62	106.39	106.50	106.73	0.012982	5.13	69.79	270.43	0.68
Trib2a	7350	Max WS	186.28	102.67	106.15		106.20	0.004452	2.55	140.47	284.24	0.39
Trib2a	7300	Max WS	185.48	102.88	106.00		106.03	0.002926	1.85	179.45	319.77	0.31
Trib2a	7250	Max WS	184.40	102.52	105.87		105.90	0.003277	2.04	160.18	300.77	0.33
Trib2a	7200	Max WS	183.87	102.55	105.75		105.78	0.002257	1.95	172.44	270.89	0.28
Trib2a	7150	Max WS	182.54	102.46	105.63		105.66	0.002686	1.99	163.84	248.20	0.31
Trib2a	7100	Max WS	180.91	102.39	105.50		105.53	0.002376	1.74	159.19	220.59	0.29
Trib2a	7050	Max WS	180.29	102.20	105.44		105.46	0.000720	1.41	209.04	233.73	0.17
Trib2a	7000	Max WS	180.16	102.84	105.40		105.42	0.000863	1.28	194.45	218.10	0.18
Trib2a	6950	Max WS	179.59	102.11	105.32		105.37	0.002063	2.19	152.98	213.84	0.29
Trib2a	6900	Max WS	179.17	102.43	105.26		105.28	0.001236	1.47	182.04	229.08	0.22
Trib2a	6850	Max WS	178.42	102.08	105.12		105.19	0.004033	2.31	114.51	227.72	0.38
Trib2a	6800	Max WS	178.56	101.85	104.99		105.03	0.002124	2.04	139.92	212.97	0.29
Trib2a	6750	Max WS	178.65	101.74	104.91		104.93	0.001744	1.62	173.64	226.50	0.25
Trib2a	6700	Max WS	178.51	101.48	104.74		104.79	0.004433	2.46	126.03	237.10	0.39
Trib2a	6650	Max WS	178.63	100.64	104.60		104.63	0.002305	1.84	147.25	237.93	0.28
Trib2a	6592.43	Max WS	174.38	100.72	104.54		104.56	0.000619	1.22	229.71	248.94	0.16
Trib2a	6400	Max WS	178.00	100.87	104.36		104.38	0.001322	1.61	196.54	243.15	0.22
Trib2a	6350	Max WS	177.42	101.21	104.32		104.33	0.000686	1.10	260.32	265.26	0.16
Trib2a	6300	Max WS	177.21	101.10	104.28		104.29	0.000844	1.43	225.93	283.68	0.18
Trib2a	6200	Max WS	174.29	100.78	104.07		104.14	0.003013	2.46	98.55	167.75	0.34
Trib2a	6150	Max WS	170.80	100.34	103.96		104.01	0.002025	2.15	118.11	148.54	0.28
Trib2a	6100	Max WS	161.81	100.13	103.90		103.92	0.001259	1.74	148.14	164.77	0.22
Trib2a	6050	Max WS	155.99	100.45	103.85		103.87	0.000962	1.37	163.83	163.03	0.19
Trib2a	6000	Max WS	150.23	100.10	103.80		103.82	0.000783	1.48	165.71	167.02	0.18
Trib2a	5950	Max WS	146.60	100.55	103.77		103.79	0.000695	1.11	183.95	188.39	0.16
Trib2a	5905.86	Max WS	144.44	100.10	103.76		103.76	0.000372	0.86	248.90	246.63	0.12
Trib2a	5850	Max WS	143.10	100.12	103.74		103.74	0.000243	0.69	325.09	386.64	0.10
Trib2a	5800	Max WS	142.20	100.93	103.73		103.73	0.000207	0.65	376.67	431.79	0.09
Trib2a	5750	Max WS	141.92	101.33	103.72		103.72	0.000139	0.45	479.35	515.63	0.07
Trib2a	5647.95	Max WS	141.34	100.09	103.71		103.71	0.000198	0.66	400.34	469.95	0.09
Trib2a	5250	Max WS	139.96	100.39	103.08		103.14	0.003036	2.07	70.85	343.24	0.33
Trib2a	5200	Max WS	138.75	99.84	102.96		103.01	0.002859	2.29	122.73	340.14	0.33
Trib2a	5150	Max WS	138.97	99.55	102.85		102.89	0.002192	2.04	146.72	324.27	0.29
Trib2a	5100	Max WS	138.38	99.45	102.75		102.78	0.001892	2.07	156.53	297.56	0.27
Trib2a	5050	Max WS	137.97	99.42	102.70		102.71	0.000744	1.28	219.20	290.06	0.17
Trib2a	5000	Max WS	137.86	99.45	102.67		102.68	0.000677	1.35	209.37	281.97	0.17
Trib2a	4896.6	Max WS	137.53	99.08	102.58		102.60	0.001046	1.69	179.25	314.64	0.20
Trib2a	4817.5	Max WS	137.39	99.31	102.49		102.52	0.001108	1.36	110.21	244.90	0.20
Trib2a	4750	Max WS	126.90	97.98	102.38		102.43	0.001396	1.82	72.28	343.27	0.24
Trib2a	4700	Max WS	118.30	98.48	102.30		102.35	0.001722	1.82	66.96	194.68	0.26
Trib2a	4650	Max WS	126.36	98.29	102.16		102.23	0.002118	2.12	59.67	187.67	0.29
Trib2a	4600	Max WS	137.47	98.92	101.92		102.12	0.006388	3.59	39.43	170.42	0.50
Trib2a	4550	Max WS	137.35	97.96	101.68	100.74	101.85	0.004983	3.41	49.12	242.80	0.44
Trib2a	4500	Max WS	137.20	98.15	101.60		101.62	0.001297	1.85	157.36	259.21	0.23
Trib2a	4450	Max WS	137.13	97.30	101.54		101.57	0.000958	1.57	169.30	284.91	0.20
Trib2a	4400	Max WS	136.85	98.06	101.43		101.49	0.003426	2.04	74.47	328.40	0.34
Trib2a	4250.25	Max WS	136.54	96.55	101.07		101.13	0.001906	1.85	74.44	117.07	0.27
Trib2a	4200	Max WS	136.40	96.59	100.99		101.02	0.002689	1.58	108.44	182.56	0.29
Trib2a	4150	Max WS	136.19	97.16	100.89		100.91	0.002114	1.51	124.51	200.67	0.26
Trib2a	4100	Max WS	135.97	97.05	100.80		100.82	0.002133	1.50	120.45	188.90	0.26
Trib2a	4050	Max WS	135.82	96.37	100.72		100.75	0.001375	1.75	141.06	218.14	0.23
Trib2a	3900	Max WS	134.83	95.93	100.35		100.44	0.003151	2.82	99.67	288.76	0.34
Trib2a	3850	Max WS	134.10	96.20	100.27		100.32	0.001526	2.21	125.76	283.71	0.25
Trib2a	3784.11	Max WS	133.36	96.57	100.20		100.22	0.001468	1.36	148.23	305.60	0.22
Trib2a	3350	Max WS	132.52	95.27	99.83		99.84	0.000518	1.09	213.67	304.97	0.14
Trib2a	3214.64	Max WS	132.43	96.42	99.72		99.75	0.001024	1.31	105.69	183.70	0.20
Trib2a	3100	Max WS	133.00	95.40	99.61		99.64	0.001157	1.69	115.33	149.78	0.21
Trib2a	3050	Max WS	133.33	94.76	99.56		99.60	0.000855	1.69	127.43	213.38	0.19
Trib2a	3000	Max WS	133.67	95.44	99.53		99.55	0.000910	1.60	161.31	240.22	0.19
Trib2a	2750	Max WS	133.60	95.06	99.35		99.37	0.000676	1.55	188.97	354.07	0.17
Trib2	2409.07	Max WS	162.50	93.51	99.35		99.35	0.000120	0.66	489.84	517.45	0.07
Trib2	2299.16	Max WS	162.47	91.10	99.34	93.71	99.34	0.000042	0.52	547.92	488.59	0.05
Trib2	2200		Inl Struct									
Trib2	2147.44	Max WS	159.49	92.44	97.56		97.61	0.001370	2.17	145.42	225.92	0.23
Trib2	2078.76	Max WS	159.33	92.22	97.53		97.54	0.000211	0.61	287.65	278.05	0.09

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2	1707.37	Max WS	159.62	92.46	97.27		97.30	0.001339	1.54	132.34	203.89	0.22
Trib2	1601.61	Max WS	159.87	92.48	97.06		97.12	0.002398	2.31	109.92	231.62	0.30
Trib2	1548.15	Max WS	159.36	92.39	96.83		96.97	0.004624	3.40	73.60	210.77	0.41
Trib2	1500	Max WS	159.36	91.91	96.75		96.79	0.001368	2.01	167.35	268.05	0.23
Trib2	1450	Max WS	159.34	91.87	96.70		96.72	0.001092	1.75	166.50	203.41	0.20
Trib2	1350	Max WS	159.10	92.83	96.52		96.57	0.002469	2.02	125.48	239.35	0.30
Trib2	1150	Max WS	159.00	92.45	96.29		96.30	0.000451	0.94	241.17	284.30	0.13
Trib2	1006.62	Max WS	158.99	93.17	96.12		96.16	0.001937	1.79	143.59	249.14	0.27
Trib2	961.42	Max WS	158.95	91.98	96.06		96.07	0.001662	1.39	173.20	276.59	0.24
Trib2	848.73	Max WS	158.61	91.79	95.87		95.90	0.001902	1.52	170.47	305.58	0.25
Trib2	752.77	Max WS	159.12	91.40	95.62		95.68	0.003542	2.47	133.65	317.69	0.35
Trib2	700	Max WS	158.55	90.92	95.48		95.53	0.002771	2.14	133.58	341.11	0.31
Trib2	650	Max WS	158.40	91.12	95.42		95.43	0.000991	1.26	235.49	385.25	0.19
Trib2	600	Max WS	158.27	92.50	95.37		95.38	0.000967	1.29	217.05	380.30	0.19
Trib2	443.45	Max WS	158.09	92.33	95.23		95.24	0.000872	1.33	201.99	231.02	0.18
Trib2	200	Max WS	154.90	90.85	94.98		95.00	0.001144	1.31	171.99	189.87	0.20
Trib2	137.55	Max WS	152.06	90.44	94.78		94.84	0.004378	2.09	86.42	168.07	0.38
Trib2	101.92	Max WS	149.37	90.29	94.49	93.57	94.69	0.012399	3.60	44.67	129.66	0.63
Main3	15063.95	Max WS	176.42	102.46	106.22		106.24	0.001005	1.69	218.01	414.90	0.20
Main3	14955.43	Max WS	176.13	103.59	106.10		106.11	0.001488	1.31	204.81	384.70	0.22
Main3	14788.2	Max WS	175.72	101.86	105.85		105.87	0.001723	1.44	203.76	419.62	0.24
Main3	14628.77	Max WS	174.55	102.21	105.53		105.57	0.002556	2.19	152.23	322.86	0.31
Main3	14541.77	Max WS	172.87	102.08	105.37		105.40	0.001621	1.61	192.93	365.62	0.24
Main3	14280.86	Max WS	172.69	100.65	105.05		105.08	0.001201	1.86	207.97	293.23	0.21
Main3	14234.63	Max WS	172.60	100.96	105.00		105.02	0.001350	1.26	189.42	253.87	0.21
Main3	14185.8	Max WS	172.55	100.28	104.96		104.97	0.000752	1.20	203.19	164.80	0.16
Main3	14016.19	Max WS	171.47	100.44	104.60		104.71	0.002813	2.68	67.16	49.40	0.34
Main3	13950	Max WS	171.10	101.08	104.53		104.56	0.001340	1.90	157.66	245.21	0.23
Main3	13850	Max WS	170.22	100.53	104.40		104.46	0.001656	2.11	131.11	231.21	0.26
Main3	13750	Max WS	169.89	98.79	104.34		104.36	0.000313	1.20	239.10	269.89	0.12
Main3	13600	Max WS	169.72	99.49	104.23		104.27	0.001080	1.90	146.16	153.65	0.21
Main3	13450	Max WS	169.43	99.56	104.03		104.08	0.001768	2.30	155.98	266.38	0.26
Main3	13391.27	Max WS	169.23	99.51	103.89		103.97	0.002611	2.71	107.38	183.55	0.32
Main3	13266.46	Max WS	168.54	98.98	103.72		103.74	0.000757	1.86	181.48	209.37	0.18
Main3	13150	Max WS	168.01	98.95	103.58		103.63	0.001405	2.37	179.47	403.88	0.24
Main3	12950	Max WS	167.78	98.53	103.39		103.42	0.000718	1.65	223.32	445.40	0.18
Main3	12900	Max WS	167.98	97.80	103.38		103.39	0.000190	0.93	334.03	541.65	0.09
Main3	12850	Max WS	168.06	97.94	103.35		103.38	0.000594	1.52	217.09	388.87	0.16
Main3	12700	Max WS	166.42	99.10	103.16		103.23	0.001896	2.25	118.02	228.08	0.28
Main3	12393.1	Max WS	162.54	97.00	102.70		102.76	0.001553	2.03	108.70	165.12	0.25
Main3	12350	Max WS	162.33	96.55	102.66		102.70	0.001087	1.72	167.26	278.96	0.21
Main3	12150	Max WS	162.46	97.28	102.47		102.52	0.000792	1.80	105.86	416.09	0.19
Main3	12100	Max WS	162.06	97.22	102.33		102.45	0.002289	2.80	57.89	173.77	0.31
Main3	12050	Max WS	161.96	96.90	102.27		102.35	0.001796	2.26	71.70	181.09	0.27
Main3	11896.14	Max WS	161.57	96.27	102.10		102.12	0.001103	1.28	126.16	239.45	0.20
Main3	11700	Max WS	161.26	97.61	101.98		101.99	0.000230	0.94	349.56	413.91	0.10
Main3	11600	Max WS	160.65	97.58	101.79	100.50	101.93	0.003168	3.04	65.80	387.89	0.36
Main3	11346.39	Max WS	159.52	96.94	101.27		101.32	0.001205	1.90	83.86	157.27	0.23
Main3	11250	Max WS	159.51	96.63	101.05		101.16	0.002273	2.63	60.63	169.28	0.31
Main3	11168.79	Max WS	159.39	96.91	100.87		100.98	0.002374	2.74	68.72	53.62	0.32
Main3	11038.46	Max WS	159.14	96.30	100.66		100.73	0.001503	2.09	79.14	65.17	0.25
Main3	11000	Max WS	159.07	95.56	100.62		100.68	0.001439	2.07	76.80	108.87	0.24
Main3	10950	Max WS	158.62	96.78	100.48		100.58	0.002655	2.60	61.05	94.72	0.33
Main3	10850	Max WS	158.08	96.17	100.33		100.39	0.001350	2.06	113.71	172.14	0.24
Main3	10800	Max WS	157.64	95.97	100.26		100.32	0.001246	1.96	94.50	123.70	0.23
Main3	10650	Max WS	156.97	95.97	100.18		100.19	0.000388	1.07	181.19	207.89	0.13
Main3	10600	Max WS	156.74	96.78	100.15		100.17	0.000615	1.20	150.11	203.65	0.16
Main3	10496.09	Max WS	155.91	95.06	100.05		100.09	0.001143	1.71	129.18	272.53	0.21
Main3	10323.48	Max WS	154.98	94.27	99.93		99.95	0.000672	1.39	174.80	210.30	0.17
Main3	10150	Max WS	154.42	94.92	99.81		99.84	0.000670	1.45	154.79	170.60	0.17
Main3	10089.9	Max WS	153.99	94.80	99.72		99.78	0.001692	1.97	83.92	157.80	0.26
Main3	10050	Max WS	153.85	94.29	99.68		99.72	0.001055	1.66	114.70	193.88	0.21
Main3	10000	Max WS	153.61	94.56	99.62		99.66	0.001189	1.72	89.42	179.75	0.22
Main3	9869.95	Max WS	153.27	94.14	99.54		99.56	0.000341	1.31	180.26	367.61	0.13
Main3	9595.54	Max WS	153.15	94.94	99.39		99.41	0.000700	1.32	135.94	225.24	0.17
Main3	9343.2	Max WS	154.00	94.38	99.02		99.10	0.002052	2.52	89.79	247.66	0.29
Main3	9300	Max WS	154.17	93.82	98.96		99.02	0.001411	2.25	104.01	280.42	0.24
Main3	9100	Max WS	153.66	94.32	98.33		98.43	0.004757	2.55	63.01	209.13	0.41
Main3	9000	Max WS	153.10	95.38	98.10		98.13	0.001406	1.45	124.67	330.91	0.23
Main3	8900	Max WS	152.86	91.75	98.03		98.04	0.000288	0.81	248.38	480.90	0.11
Main3	8801.81	Max WS	152.46	92.97	97.89		97.95	0.002231	1.93	87.66	359.97	0.28
Main3	8600	Max WS	151.73	92.78	97.67		97.69	0.000548	1.33	212.73	306.26	0.15
Main3	8350	Max WS	151.46	92.98	97.56		97.58	0.000419	1.26	247.87	331.21	0.14
Main3	8162.22	Max WS	151.33	93.75	97.40		97.43	0.001205	1.54	138.53	273.96	0.22
Main3	7850.11	Max WS	150.75	93.09	96.89		96.95	0.002140	2.01	90.37	335.92	0.29

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	7633.01	Max WS	150.46	91.62	96.65		96.67	0.000517	1.46	158.22	323.87	0.15
Main3	7536.49	Max WS	150.47	91.92	96.62		96.63	0.000360	0.89	243.88	490.56	0.12
Main3	7500	Max WS	152.54	92.94	96.61		96.61	0.000252	0.75	276.64	417.73	0.10
Main3	7359.01	Max WS	152.51	92.42	96.34		96.41	0.003196	2.17	74.88	304.24	0.34
Main3	6910.56	Max WS	152.50	90.51	95.67		95.68	0.000243	0.94	187.90	200.90	0.10
Main3	6872.46	Max WS	152.49	91.27	95.61		95.67	0.001602	2.12	130.95	234.20	0.26
Main3	6795.89	Max WS	152.40	91.48	95.45		95.52	0.002633	2.46	112.06	213.03	0.32
Main3	6786.28*	Max WS	152.36	91.46	95.43		95.50	0.002750	2.50	110.19	217.81	0.33
Main3	6776.68*	Max WS	152.35	91.44	95.40		95.48	0.002898	2.54	107.75	221.84	0.33
Main3	6767.08*	Max WS	152.30	91.42	95.37		95.45	0.003098	2.60	104.67	226.48	0.34
Main3	6757.48*	Max WS	152.20	91.41	95.34		95.43	0.003356	2.67	100.70	231.40	0.36
Main3	6747.87*	Max WS	152.11	91.39	95.31		95.40	0.003712	2.77	95.65	236.54	0.38
Main3	6738.27*	Max WS	151.90	91.37	95.27		95.38	0.004221	2.91	88.86	241.41	0.40
Main3	6728.67*	Max WS	151.57	91.35	95.21		95.35	0.005082	3.12	78.68	245.82	0.44
Main3	6719.07*	Max WS	151.28	91.33	95.14	94.38	95.32	0.006725	3.47	62.41	247.22	0.50
Main3	6709.46*	Max WS	150.72	91.31	95.08	94.36	95.29	0.008374	3.76	47.53	246.49	0.55
Main3	6699.86*	Max WS	150.02	91.30	94.99		95.24	0.009698	3.99	37.80	239.10	0.59
Main3	6690.26*	Max WS	148.98	91.28	94.89		95.17	0.011207	4.23	35.23	226.57	0.63
Main3	6680.66*	Max WS	143.66	91.26	94.69		95.03	0.014311	4.68	30.69	173.29	0.71
Main3	6671.06	Max WS	111.29	91.24	94.49		94.76	0.011488	4.17	26.68	142.79	0.63
Trib1	4400	Max WS	5.00	101.24	102.57		102.57	0.000008	0.06	77.19	127.95	0.01
Trib1	4250	Max WS	12.64	100.77	101.25		101.31	0.027755	2.06	6.14	26.81	0.76
Trib1	4200	Max WS	8.12	100.19	100.73		100.74	0.000947	0.47	17.20	54.31	0.15
Trib1	4150	Max WS	1.64	100.17	100.66		100.66	0.000016	0.06	29.06	103.04	0.02
Trib1	4100	Max WS	15.38	99.80	100.61		100.61	0.000219	0.32	47.42	87.53	0.08
Trib1	4050	Max WS	21.07	100.07	100.26	100.30	100.38	0.126686	2.81	7.51	64.38	1.45
Trib1	4000	Max WS	17.62	99.35	99.80		99.83	0.010501	1.30	13.52	56.53	0.47
Trib1	3950	Max WS	17.18	98.83	99.41		99.44	0.009354	1.30	13.20	50.70	0.45
Trib1	3900	Max WS	16.75	98.64	99.15		99.16	0.004193	0.86	19.52	76.76	0.30
Trib1	3850	Max WS	16.53	98.56	98.78	98.82	98.92	0.147824	3.03	5.46	46.86	1.56
Trib1	3800	Max WS	15.35	97.84	98.51		98.52	0.000817	0.53	28.85	68.11	0.14
Trib1	3750	Max WS	15.28	97.89	98.25		98.29	0.023074	1.72	8.90	44.40	0.68
Trib1	3700	Max WS	15.24	97.25	97.88		97.91	0.011263	1.27	11.98	54.70	0.48
Trib1	3650	Max WS	14.34	97.20	97.69		97.70	0.002945	0.83	17.33	55.19	0.26
Trib1	3600	Max WS	14.93	97.08	97.45		97.48	0.015008	1.48	10.11	45.80	0.55
Trib1	3550	Max WS	15.37	96.58	97.16		97.19	0.006300	1.15	13.31	45.51	0.38
Trib1	3500	Max WS	15.41	96.24	96.92		96.94	0.005849	1.21	12.73	122.75	0.37
Trib1	3450	Max WS	16.01	95.98	96.45		96.49	0.016208	1.63	9.85	153.25	0.58
Trib1	3400	Max WS	16.51	95.52	96.09		96.11	0.003202	0.88	19.50	117.81	0.27
Trib1	3350	Max WS	17.08	95.47	96.00		96.01	0.002090	0.70	26.07	110.83	0.22
Trib1	3300	Max WS	11.57	95.40	95.96		95.96	0.000507	0.40	34.77	122.68	0.11
Trib1	3250	Max WS	18.32	95.18	95.73		95.74	0.009555	0.95	19.31	121.21	0.42
Trib1	3200	Max WS	18.77	95.07	95.48		95.50	0.009511	1.04	18.06	98.50	0.43
Trib1	3150	Max WS	19.20	94.68	95.37		95.37	0.000789	0.51	37.71	112.20	0.14
Trib1	3100	Max WS	19.78	94.83	95.24		95.26	0.007468	1.03	19.16	88.05	0.39
Trib1	3000.11	Max WS	20.91	94.48	94.88		94.90	0.007418	1.00	20.95	100.73	0.39
Trib1	2840.15	Max WS	22.53	93.86	94.46		94.47	0.003752	0.88	25.68	89.86	0.29
Trib1	2800	Max WS	22.96	93.56	94.37		94.39	0.003900	1.11	20.64	95.65	0.31
Trib1	2550	Max WS	25.29	92.95	93.86		93.88	0.002935	1.12	27.04	170.58	0.28
Trib1	2503.6	Max WS	25.84	92.81	93.78		93.79	0.001694	0.78	33.29	77.09	0.21
Trib1	2350	Max WS	27.39	92.69	93.48		93.49	0.003385	1.01	27.07	70.79	0.29
Trib1	2300	Max WS	27.89	92.51	93.40		93.40	0.001213	0.74	37.78	73.41	0.18
Trib1	2250	Max WS	28.38	92.52	93.32		93.33	0.002462	0.86	33.01	86.79	0.25
Trib1	2200	Max WS	28.86	92.51	93.25		93.26	0.001956	0.80	35.93	88.08	0.22
Trib1	2150	Max WS	29.35	92.48	93.17		93.18	0.002791	0.90	32.70	88.57	0.26
Trib1	2100	Max WS	29.84	92.33	92.99		93.02	0.007854	1.43	20.81	60.62	0.43
Trib1	2050	Max WS	30.32	92.16	92.85		92.85	0.002646	0.78	38.90	125.14	0.25
Trib1	2000	Max WS	30.81	92.24	92.78		92.79	0.001398	0.64	48.06	128.41	0.18
Trib1	1950	Max WS	30.77	92.08	92.68		92.69	0.005452	0.97	31.84	127.55	0.34
Trib1	1900	Max WS	30.97	91.99	92.62		92.62	0.000380	0.32	98.18	286.35	0.09
Trib1	1694.11	Max WS	32.54	91.37	92.24		92.26	0.004536	1.30	24.96	165.34	0.34
Trib1	1650	Max WS	32.90	91.11	92.13		92.14	0.002217	1.11	32.31	91.75	0.25
Trib1	1600	Max WS	33.31	91.25	91.98		92.01	0.004672	1.39	23.99	49.68	0.35
Trib1	1550	Max WS	33.72	91.01	91.86		91.88	0.002503	1.10	30.85	81.02	0.26
Trib1	1500	Max WS	34.13	90.92	91.78		91.79	0.002472	0.93	36.75	114.93	0.25
Trib1	1450	Max WS	34.54	90.63	91.67		91.68	0.002696	0.99	34.77	78.80	0.26
Trib1	1400	Max WS	34.95	90.50	91.52		91.54	0.003071	1.15	30.39	80.35	0.29
Trib1	1350	Max WS	35.35	90.50	91.42		91.43	0.001855	0.86	40.95	86.57	0.22
Trib1	1300	Max WS	35.76	90.50	91.33		91.34	0.003330	1.01	35.54	92.62	0.29
Trib1	1250	Max WS	36.16	90.54	91.17		91.20	0.005078	1.29	27.97	68.64	0.36
Trib1	1200	Max WS	36.56	90.27	90.94		90.98	0.008507	1.52	24.00	67.80	0.45
Trib1	1150	Max WS	36.97	90.13	90.78		90.79	0.002982	0.93	39.75	107.33	0.27
Trib1	1100	Max WS	37.36	90.10	90.66		90.67	0.003376	0.88	42.59	137.71	0.28
Trib1	1050	Max WS	36.43	90.06	90.49		90.51	0.005781	1.00	36.49	145.52	0.35
Trib1	1004.24	Max WS	37.87	89.67	90.22		90.24	0.009294	1.16	32.63	149.03	0.44

HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

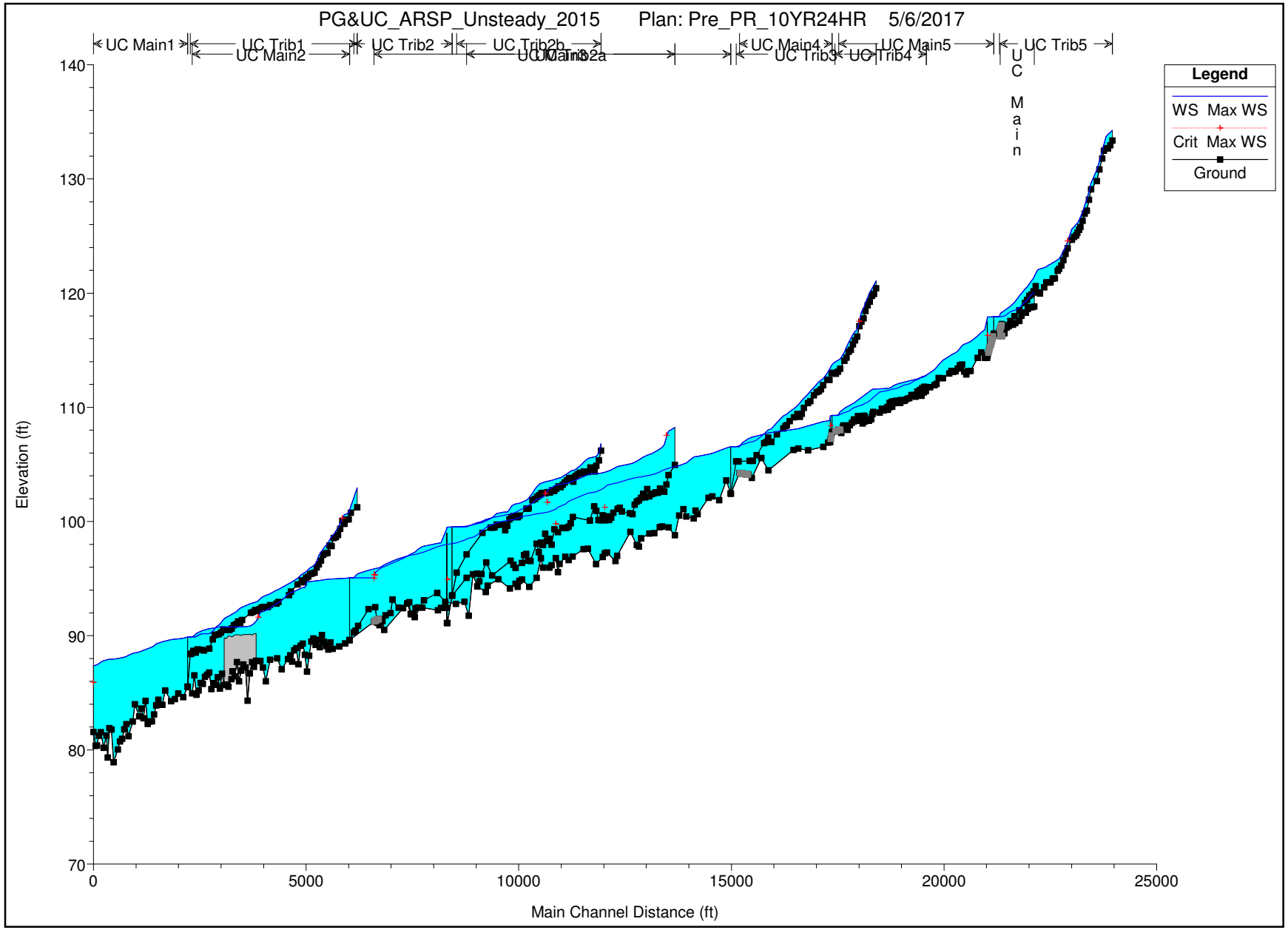
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib1	920.64	Max WS	36.59	88.86	89.94		89.94	0.000099	0.27	141.32	262.13	0.06
Trib1	800	Max WS	37.27	88.71	89.94		89.94	0.000012	0.11	354.84	405.66	0.02
Trib1	750	Max WS	37.56	88.77	89.94		89.94	0.000027	0.14	265.17	352.59	0.03
Trib1	650	Max WS	38.15	88.80	89.74		89.76	0.004058	1.28	29.72	191.84	0.33
Trib1	603.8	Max WS	38.36	88.51	89.60		89.62	0.002786	1.20	32.08	56.41	0.28
Trib1	550	Max WS	15.05	88.68	89.49		89.49	0.000397	0.44	34.37	64.67	0.10
Trib1	504.41	Max WS	14.82	88.43	89.48		89.48	0.000104	0.23	63.24	108.74	0.05
Trib1	478.55	Max WS	14.74	88.39	89.48		89.48	0.000078	0.20	75.48	137.10	0.05
Main2	6100	Max WS	260.66	89.62	94.49		94.51	0.000918	1.48	325.62	427.06	0.19
Main2	5995.41	Max WS	259.55	89.33	94.45		94.45	0.000275	0.93	516.39	483.66	0.10
Main2	5852.28	Max WS	259.22	89.05	94.42		94.42	0.000183	0.82	596.68	467.54	0.09
Main2	5700	Max WS	258.99	88.85	94.39		94.39	0.000206	0.80	584.21	504.91	0.09
Main2	5650	Max WS	258.95	89.40	94.38		94.38	0.000204	0.67	605.74	512.61	0.09
Main2	5600	Max WS	258.90	88.79	94.36		94.37	0.000302	0.96	450.71	414.70	0.11
Main2	5550	Max WS	258.71	89.09	94.34		94.35	0.000477	1.09	361.35	320.28	0.14
Main2	5500	Max WS	258.65	89.47	94.31		94.32	0.000627	1.09	346.19	338.85	0.15
Main2	5450	Max WS	258.63	90.05	94.28		94.29	0.000718	1.28	345.33	360.59	0.17
Main2	5400	Max WS	258.12	89.00	94.25		94.27	0.000310	1.20	404.51	384.25	0.12
Main2	5347.58	Max WS	258.05	89.63	94.23		94.24	0.000521	1.24	376.25	372.82	0.15
Main2	5300	Max WS	258.00	89.20	94.21		94.22	0.000482	1.12	394.18	379.62	0.14
Main2	5250	Max WS	257.98	89.77	94.18		94.19	0.000612	1.22	369.56	386.19	0.16
Main2	5200	Max WS	257.71	89.49	94.15		94.16	0.000721	1.21	338.97	334.49	0.17
Main2	5150	Max WS	257.16	88.25	94.11		94.13	0.000731	1.35	324.50	335.23	0.17
Main2	5100	Max WS	256.70	86.86	94.08		94.10	0.000237	1.35	368.73	337.20	0.11
Main2	5050	Max WS	257.28	88.33	93.83		94.12	0.004984	4.34	62.43	319.94	0.45
Main2	5000	Max WS	256.31	89.31	93.82		93.86	0.001714	1.95	238.08	355.53	0.25
Main2	4950	Max WS	255.85	89.11	93.73		93.77	0.001814	2.05	227.72	372.62	0.27
Main2	4900	Max WS	254.04	87.49	93.65		93.69	0.001457	1.99	231.18	390.60	0.24
Main2	4850	Max WS	253.19	88.91	93.55		93.60	0.002179	2.29	201.51	391.28	0.29
Main2	4800	Max WS	254.61	88.72	93.40		93.47	0.003262	2.47	180.40	399.32	0.35
Main2	4750	Max WS	250.59	87.72	93.30		93.35	0.001233	2.09	222.12	388.51	0.23
Main2	4700	Max WS	248.72	88.29	93.24		93.28	0.001157	1.84	202.48	370.49	0.22
Main2	4650	Max WS	247.67	87.95	93.15		93.21	0.001860	2.31	167.55	282.41	0.28
Main2	4504.57	Max WS	247.21	87.06	92.67		92.79	0.003723	2.84	87.14	60.34	0.38
Main2	4397.85	Max WS	237.02	88.02	92.42		92.44	0.000986	1.38	231.71	229.58	0.19
Main2	4231.14	Max WS	239.37	87.89	92.03		92.07	0.002856	2.07	184.71	261.75	0.32
Main2	4128.64	Max WS	234.15	86.00	91.81		91.83	0.000995	1.57	248.95	263.86	0.19
Main2	4061.14	Max WS	240.20	87.21	91.75		91.77	0.000741	1.25	281.75	275.84	0.17
Main2	4000	Max WS	227.71	87.79	91.71		91.72	0.000450	1.00	343.80	331.55	0.13
Main2	3950	Max WS	271.45	87.78	91.35	91.46	91.68	0.012744	5.26	97.56	271.75	0.70
Main2	3900	Max WS	286.03	87.81	90.99		91.04	0.004344	2.54	181.43	238.54	0.39
Main2	3875		Lat Struct									
Main2	3850	Max WS	219.19	87.27	90.79		90.88	0.004564	3.17	131.92	203.04	0.42
Main2	3808.17	Max WS	175.58	87.69	90.66		90.70	0.004655	2.09	138.02	269.96	0.38
Main2	3750	Max WS	134.30	86.70	90.53		90.55	0.001855	1.44	158.34	307.79	0.25
Main2	3700	Max WS	105.08	84.31	90.49		90.50	0.000470	0.92	198.84	312.76	0.13
Main2	3650	Max WS	81.06	87.21	90.45		90.46	0.001339	1.01	131.32	289.46	0.20
Main2	3600	Max WS	62.72	87.47	90.41		90.42	0.001018	0.85	121.49	276.70	0.17
Main2	3550.1	Max WS	46.51	86.93	90.39		90.39	0.000641	0.75	95.46	182.81	0.14
Main2	3500	Max WS	34.94	86.01	90.38		90.38	0.000055	0.38	135.01	172.41	0.05
Main2	3450	Max WS	23.67	87.68	90.37		90.38	0.000081	0.40	116.70	189.96	0.05
Main2	3400	Max WS	14.67	86.44	90.37		90.37	0.000030	0.27	108.21	192.98	0.03
Main2	3344.35	Max WS	4.40	86.87	90.37		90.37	0.000001	0.05	159.39	223.29	0.01
Main2	3320.7	Max WS	-2.10	86.20	90.37		90.37	0.000000	-0.02	164.87	239.76	0.00
Main2	3250	Max WS	-16.58	85.52	90.37		90.37	0.000007	-0.14	228.55	278.57	0.02
Main2	3200	Max WS	-27.88	85.71	90.37		90.37	0.000019	-0.17	220.45	226.12	0.03
Main2	3150	Max WS	-40.34	85.68	90.37		90.37	0.000035	-0.27	221.56	211.07	0.04
Main2	3100	Max WS	-40.75	86.67	90.37		90.37	0.000025	-0.19	345.86	534.75	0.03
Main2	3050	Max WS	-40.66	85.37	90.37		90.37	0.000019	-0.18	366.34	511.86	0.03
Main2	3000	Max WS	261.06	86.35	90.33		90.34	0.000997	1.39	330.85	548.98	0.19
Main2	2950	Max WS	261.02	85.70	90.30		90.31	0.000645	1.00	414.26	611.73	0.15
Main2	2900	Max WS	260.95	85.85	90.27		90.28	0.000524	1.06	421.15	571.55	0.14
Main2	2850	Max WS	261.02	85.33	90.24		90.25	0.000578	1.34	401.79	536.85	0.15
Main2	2800	Max WS	261.08	86.78	90.21		90.22	0.000672	1.16	369.95	526.00	0.16
Main2	2750.23	Max WS	261.14	86.59	90.18		90.19	0.000975	1.45	325.31	486.26	0.19
Main2	2700	Max WS	261.18	86.41	90.13		90.15	0.000930	1.45	316.91	495.71	0.19
Main2	2650	Max WS	261.25	85.77	90.08		90.11	0.001343	1.66	272.66	380.75	0.22
Main2	2600	Max WS	261.32	85.86	90.02		90.05	0.001554	1.92	249.16	308.53	0.25
Main2	2550	Max WS	261.42	85.20	89.94		89.97	0.001747	1.86	234.07	302.30	0.26
Main2	2500	Max WS	261.49	84.82	89.84		89.87	0.002197	1.86	225.98	308.72	0.28
Main2	2450	Max WS	261.50	86.53	89.64		89.72	0.005365	2.81	162.19	288.72	0.44
Main2	2397.32	Max WS	261.16	84.95	89.48		89.55	0.001699	2.30	173.89	282.12	0.27
Main1	2291.46	Max WS	275.90	85.53	89.48		89.49	0.001785	1.51	311.81	514.24	0.25
Main1	2189.07	Max WS	275.29	84.62	89.36		89.37	0.000814	1.36	422.59	642.90	0.18
Main1	2069.18	Max WS	275.00	84.93	89.29		89.30	0.000605	1.30	446.79	573.89	0.16

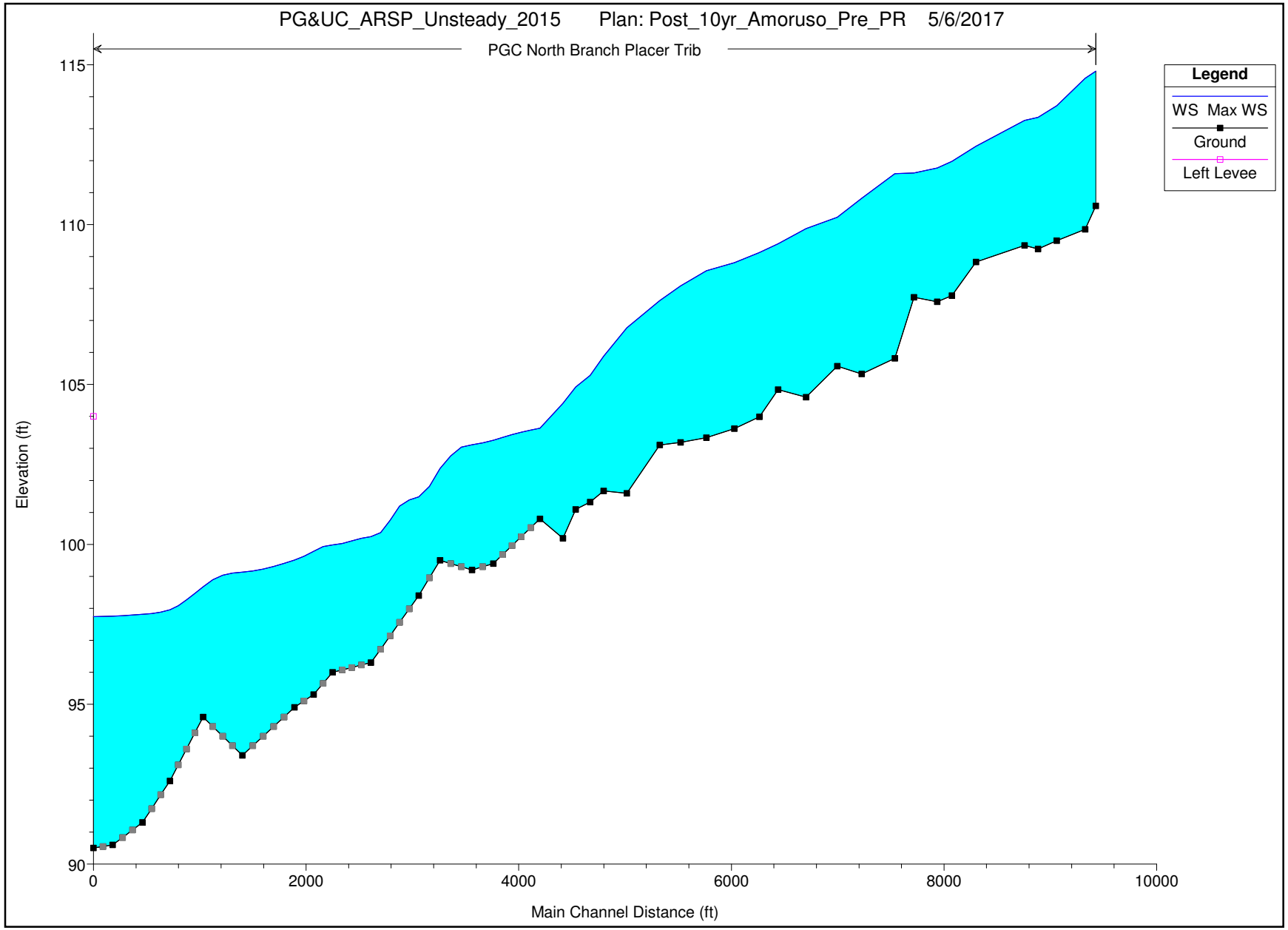
HEC-RAS Plan: PrePR2YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	1990.13	Max WS	274.74	84.45	89.25		89.26	0.000422	0.91	500.83	627.68	0.12
Main1	1902.51	Max WS	274.73	84.27	89.21		89.22	0.000545	1.36	440.70	602.09	0.15
Main1	1760.99	Max WS	274.72	85.19	89.06		89.09	0.001651	1.77	266.54	429.27	0.25
Main1	1698.99	Max WS	274.73	83.95	88.99		89.02	0.001005	1.96	300.65	357.14	0.21
Main1	1600	Max WS	274.81	84.38	88.87		88.90	0.001496	1.75	253.09	264.85	0.24
Main1	1550	Max WS	274.86	83.89	88.80		88.84	0.001584	2.04	231.57	254.85	0.25
Main1	1500	Max WS	274.83	83.11	88.62		88.75	0.005780	3.35	133.74	245.27	0.46
Main1	1450	Max WS	274.82	82.50	88.50		88.57	0.001811	2.28	179.07	221.09	0.27
Main1	1400	Max WS	274.87	82.49	88.43		88.47	0.001985	2.00	197.84	226.97	0.27
Main1	1350	Max WS	274.83	82.27	88.35		88.39	0.001572	1.85	218.90	241.00	0.24
Main1	1300	Max WS	274.83	84.29	88.28		88.32	0.001801	2.44	225.42	246.69	0.28
Main1	1250	Max WS	274.78	82.78	88.21		88.24	0.001581	2.10	235.33	254.73	0.25
Main1	1200	Max WS	274.69	83.63	88.12		88.18	0.001917	2.57	211.86	246.22	0.28
Main1	1150	Max WS	274.65	82.93	88.06		88.10	0.001002	2.09	256.84	258.84	0.21
Main1	1050	Max WS	274.59	84.00	87.98		88.00	0.001102	1.67	288.43	296.89	0.21
Main1	1000	Max WS	274.56	82.49	87.94		87.96	0.000807	1.68	315.27	318.75	0.18
Main1	902.45	Max WS	274.29	81.20	87.79		87.88	0.002048	2.91	182.41	262.43	0.28
Main1	850	Max WS	274.05	82.25	87.71		87.77	0.001677	2.44	201.25	250.30	0.26
Main1	800	Max WS	273.88	81.79	87.64		87.71	0.001396	2.54	218.52	267.63	0.25
Main1	750	Max WS	273.86	80.96	87.60		87.64	0.000906	1.97	268.22	283.81	0.20
Main1	700	Max WS	273.81	80.75	87.57		87.60	0.000889	1.69	292.38	315.88	0.19
Main1	650	Max WS	273.90	80.03	87.54		87.57	0.000590	1.76	329.81	322.69	0.16
Main1	550	Max WS	274.01	78.91	87.51		87.52	0.000281	1.24	425.51	353.13	0.11
Main1	500	Max WS	274.18	81.77	87.50		87.51	0.000303	1.14	444.80	381.95	0.12
Main1	450.28	Max WS	274.28	81.91	87.49		87.50	0.000207	0.98	482.49	408.69	0.10
Main1	411.53	Max WS	274.36	79.33	87.47		87.49	0.000402	1.24	396.57	354.03	0.13
Main1	381.37	Max WS	274.43	81.25	87.45		87.48	0.001037	1.78	284.53	358.56	0.21
Main1	316.15	Max WS	275.56	80.18	87.36		87.42	0.001329	2.11	228.92	369.13	0.23
Main1	250	Max WS	275.72	81.54	87.20		87.31	0.003141	2.95	162.11	358.44	0.35
Main1	200	Max WS	275.81	81.23	86.98	85.61	87.21	0.007703	3.89	97.43	324.73	0.53
Main1	161.78	Max WS	275.85	80.38	86.86		86.96	0.003296	2.56	118.85	254.26	0.35
Main1	126.68	Max WS	275.93	80.35	86.81		86.88	0.003010	2.10	141.98	202.84	0.33
Main1	76.78	Max WS	275.90	81.56	86.68	84.89	86.77	0.002501	2.63	147.98	231.90	0.32

HEC-RAS Plan: PostARSPPrePR2 River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	70.30	110.59	113.96		113.99	0.002986	1.54	49.37	35.77	0.19
Placer Trib	65.0000	Max WS	70.29	109.85	113.72		113.75	0.001872	1.29	54.32	25.31	0.16
Placer Trib	64.0000	Max WS	69.39	109.50	113.01		113.05	0.003300	1.72	40.47	19.24	0.20
Placer Trib	63.0000	Max WS	68.00	109.24	112.69		112.69	0.000688	0.74	156.19	194.33	0.09
Placer Trib	62.0000	Max WS	74.27	109.35	112.60		112.61	0.000628	0.69	107.02	383.97	0.09
Placer Trib	61.0000	Max WS	73.72	108.83	111.87		111.90	0.002466	1.44	72.26	280.91	0.18
Placer Trib	60.0000	Max WS	70.65	107.78	111.46		111.48	0.001228	1.15	77.87	93.46	0.13
Placer Trib	59.0000	Max WS	74.02	107.59	111.12		111.17	0.004777	1.82	44.23	141.84	0.24
Placer Trib	58.0000	Max WS	75.57	107.73	110.84		110.84	0.000122	0.31	247.57	136.99	0.04
Placer Trib	57.0000	Max WS	83.89	105.82	110.64		110.67	0.002691	1.43	58.73	335.13	0.18
Placer Trib	56.0000	Max WS	74.62	105.33	109.99		110.04	0.002462	1.70	44.24	86.73	0.18
Placer Trib	55.0000	Max WS	74.43	105.57	109.61		109.63	0.001118	0.97	76.85	146.17	0.12
Placer Trib	54.0000	Max WS	74.53	104.60	109.05		109.09	0.002589	1.50	49.72	73.67	0.18
Placer Trib	53.0000	Max WS	75.94	104.84	108.40		108.43	0.002425	1.48	58.01	51.95	0.18
Placer Trib	52.0000	Max WS	75.97	103.99	108.08		108.10	0.001278	1.06	71.79	52.79	0.13
Placer Trib	51.0000	Max WS	76.02	103.62	107.77		107.79	0.001388	1.06	71.73	38.18	0.13
Placer Trib	50.0000	Max WS	76.04	103.34	107.44		107.46	0.001123	1.13	110.28	139.54	0.12
Placer Trib	49.0000	Max WS	76.20	103.19	106.94		106.98	0.002887	1.60	47.50	37.86	0.19
Placer Trib	48.0000	Max WS	76.27	103.11	106.50		106.52	0.001844	1.15	66.34	37.19	0.15
Placer Trib	47.0000	Max WS	76.37	101.60	105.73		105.76	0.003035	1.45	52.66	167.42	0.19
Placer Trib	46.0000	Max WS	76.58	101.67	105.05		105.10	0.003107	1.74	45.35	26.64	0.20
Placer Trib	45.0000	Max WS	76.67	101.32	104.32		104.40	0.007884	2.22	34.69	24.57	0.31
Placer Trib	44.0000	Max WS	76.77	101.09	103.79		103.80	0.000520	0.58	133.75	113.29	0.08
Placer Trib	43.0000	Max WS	76.85	100.19	103.47		103.52	0.004415	1.91	40.30	19.65	0.23
Placer Trib	42	Max WS	83.40	100.80	102.94		102.95	0.000707	0.66	189.27	184.56	0.09
Placer Trib	41.12*	Max WS	83.40	100.52	102.87		102.88	0.000902	0.82	176.18	213.31	0.11
Placer Trib	40.24*	Max WS	83.40	100.24	102.78		102.79	0.001335	1.07	143.65	242.57	0.13
Placer Trib	39.36*	Max WS	83.42	99.96	102.66		102.68	0.001327	1.13	118.12	156.82	0.13
Placer Trib	38.48*	Max WS	83.44	99.68	102.57		102.58	0.000910	1.00	122.83	115.85	0.11
Placer Trib	37.6	Max WS	83.49	99.40	102.51		102.52	0.000580	0.84	146.78	107.72	0.09
Placer Trib	36.6*	Max WS	83.46	99.30	102.43		102.44	0.000922	1.03	147.60	194.26	0.11
Placer Trib	35.6	Max WS	83.44	99.20	102.38		102.38	0.000229	0.49	276.24	199.67	0.06
Placer Trib	34.6*	Max WS	83.44	99.30	102.32		102.33	0.000977	0.99	145.67	164.45	0.12
Placer Trib	33.6*	Max WS	83.43	99.40	102.10		102.14	0.002936	1.58	61.11	59.95	0.20
Placer Trib	32.6	Max WS	83.42	99.50	101.75		101.78	0.004349	1.65	65.73	86.31	0.23
Placer Trib	31.6*	Max WS	83.41	98.95	101.23		101.28	0.005886	1.80	48.78	50.83	0.27
Placer Trib	30.6	Max WS	83.38	98.40	100.93		100.94	0.000633	0.60	206.50	218.43	0.09
Placer Trib	29.7*	Max WS	83.37	97.98	100.85		100.86	0.001228	0.85	147.96	189.73	0.12
Placer Trib	28.8*	Max WS	83.37	97.56	100.67		100.69	0.002598	1.18	90.94	152.59	0.18
Placer Trib	27.9*	Max WS	83.36	97.14	100.19		100.23	0.007689	1.65	52.55	71.99	0.29
Placer Trib	27*	Max WS	83.24	96.72	99.68		99.69	0.004591	1.14	96.24	142.11	0.21
Placer Trib	26.1	Max WS	83.13	96.30	99.47		99.47	0.000334	0.31	259.84	218.76	0.06
Placer Trib	25.2*	Max WS	86.45	96.23	99.40		99.40	0.001370	0.72	157.81	190.80	0.12
Placer Trib	24.3*	Max WS	86.39	96.15	99.27		99.28	0.001442	0.90	108.96	134.67	0.13
Placer Trib	23.4*	Max WS	86.36	96.07	99.18		99.19	0.000615	0.69	134.48	106.40	0.09
Placer Trib	22.5	Max WS	86.34	96.00	99.14		99.15	0.000272	0.52	189.78	128.32	0.06
Placer Trib	21.6*	Max WS	86.34	95.65	99.10		99.11	0.000666	0.68	133.94	106.59	0.09
Placer Trib	20.7	Max WS	86.29	95.30	98.93		98.95	0.002945	1.08	80.17	71.71	0.18
Placer Trib	19.8*	Max WS	86.22	95.10	98.73		98.74	0.001737	0.89	96.63	77.58	0.14
Placer Trib	18.9	Max WS	86.18	94.90	98.59		98.60	0.001455	0.82	105.19	84.11	0.13
Placer Trib	17.92*	Max WS	89.84	94.60	98.46		98.47	0.001185	0.77	116.14	86.77	0.12
Placer Trib	16.94*	Max WS	89.80	94.30	98.36		98.37	0.000844	0.73	122.87	81.99	0.10
Placer Trib	15.96*	Max WS	89.77	94.00	98.29		98.30	0.000678	0.75	122.53	75.15	0.09
Placer Trib	14.98*	Max WS	89.75	93.70	98.22		98.23	0.000631	0.80	132.69	125.40	0.09
Placer Trib	14	Max WS	89.74	93.40	98.18		98.19	0.000289	0.57	271.88	306.52	0.06
Placer Trib	13.075*	Max WS	89.74	93.70	98.14		98.14	0.000676	0.87	162.43	183.75	0.10
Placer Trib	12.15*	Max WS	89.74	94.00	98.04		98.06	0.001243	1.15	93.42	100.40	0.13
Placer Trib	11.225*	Max WS	89.72	94.30	97.90		97.92	0.001704	1.28	78.65	59.63	0.15
Placer Trib	10.3	Max WS	89.68	94.60	97.68		97.72	0.002814	1.49	65.56	52.15	0.19
Placer Trib	9.525*	Max WS	89.54	94.10	97.44		97.47	0.003500	1.50	60.48	44.82	0.21
Placer Trib	8.75*	Max WS	89.06	93.60	97.13		97.17	0.004356	1.60	55.80	36.76	0.23
Placer Trib	7.975*	Max WS	87.34	93.10	96.82		96.86	0.003662	1.59	60.48	54.98	0.21
Placer Trib	7.2	Max WS	84.69	92.60	96.62		96.64	0.001835	1.21	88.86	83.32	0.15
Placer Trib	6.3333*	Max WS	80.61	92.17	96.48		96.50	0.001486	1.07	90.24	88.71	0.14
Placer Trib	5.46659*	Max WS	77.18	91.73	96.38		96.40	0.000868	0.88	102.25	120.93	0.11
Placer Trib	4.5999	Max WS	75.69	91.30	96.34		96.34	0.000385	0.69	154.90	191.99	0.07
Placer Trib	3.6666*	Max WS	74.80	91.07	96.30		96.31	0.000287	0.63	125.29	85.25	0.06
Placer Trib	2.7333*	Max WS	74.29	90.83	96.28		96.29	0.000191	0.53	144.38	72.98	0.05
Placer Trib	1.8	Max WS	73.81	90.60	96.27		96.27	0.000136	0.46	165.76	85.44	0.05
Placer Trib	0.9*	Max WS	73.44	90.55	96.26		96.26	0.000048	0.29	329.61	180.66	0.03
Placer Trib	0	Max WS	73.37	90.50	96.26		96.26	0.000040	0.27	333.50	192.31	0.03


PG&UC_ARSP_Unsteady_2015 Plan: Pre_PR_10YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC Trib2
UC Trib2b
UC Main3
UC Trib2a
UC Main4
UC Trib3
UC Trib4
UC Main5
UC Trib5
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
140
130
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_10yr_Amoruso_Pre_PR 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
115
110
105
100
95
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib5	2900	Max WS	23.60	133.37	134.25		134.27	0.003705	1.09	21.58	71.43	0.30
Trib5	2850	Max WS	23.07	132.96	134.09		134.11	0.004572	1.20	20.37	68.47	0.34
Trib5	2795.09	Max WS	22.00	132.69	133.89		133.92	0.003420	1.41	17.15	51.10	0.31
Trib5	2750	Max WS	24.10	132.69	133.69		133.72	0.004800	1.42	17.03	34.93	0.36
Trib5	2700	Max WS	28.93	132.48	133.01		133.11	0.023463	2.52	11.47	32.52	0.75
Trib5	2660.73	Max WS	29.65	131.78	132.47		132.52	0.009427	1.77	17.14	49.69	0.49
Trib5	2597.42	Max WS	31.75	130.84	131.54		131.67	0.028268	2.81	11.38	39.63	0.83
Trib5	2534.37	Max WS	33.52	129.81	130.80		130.83	0.003810	1.44	25.75	57.97	0.33
Trib5	2400	Max WS	40.09	129.10	129.66		129.74	0.014284	2.27	18.68	52.63	0.61
Trib5	2350	Max WS	42.23	128.19	128.89		129.02	0.021669	2.80	15.07	34.40	0.75
Trib5	2300	Max WS	44.36	127.22	128.24		128.33	0.012708	2.40	18.50	35.74	0.59
Trib5	2250	Max WS	46.46	126.96	127.69		127.78	0.013709	2.43	20.51	56.77	0.61
Trib5	2200	Max WS	48.58	126.33	127.09		127.18	0.014341	2.45	19.85	42.00	0.62
Trib5	2150	Max WS	50.65	125.79	126.67		126.72	0.006109	1.83	30.09	63.21	0.42
Trib5	2115.69	Max WS	52.09	125.55	126.37		126.47	0.015327	2.53	20.70	46.60	0.64
Trib5	2075.19	Max WS	65.65	125.27	126.13		126.15	0.003660	1.31	53.13	135.63	0.32
Trib5	2050	Max WS	67.26	125.04	126.03		126.06	0.004270	1.54	44.17	82.97	0.35
Trib5	2000	Max WS	69.28	124.92	125.80		125.86	0.006595	1.90	37.94	82.31	0.43
Trib5	1950	Max WS	35.39	124.67	125.62		125.63	0.001100	0.82	51.10	112.13	0.18
Trib5	1850	Max WS	71.25	123.93	124.55	124.57	124.66	0.030386	2.92	32.81	196.84	0.86
Trib5	1800	Max WS	72.62	123.43	124.00		124.03	0.007790	1.76	56.23	146.96	0.45
Trib5	1750	Max WS	74.16	122.89	123.73		123.76	0.003969	1.36	64.38	128.41	0.33
Trib5	1700	Max WS	75.45	122.42	123.31		123.37	0.014368	2.30	37.92	97.92	0.61
Trib5	1650	Max WS	75.98	122.12	123.02		123.03	0.001496	1.04	77.11	126.07	0.21
Trib5	1614.93	Max WS	74.69	121.96	122.91		122.95	0.004057	1.64	52.43	113.76	0.35
Trib5	1550	Max WS	73.45	121.29	122.78		122.79	0.000994	1.09	93.69	155.72	0.19
Trib5	1500	Max WS	108.50	121.27	122.68		122.71	0.002237	1.62	93.99	161.11	0.28
Trib5	1450	Max WS	109.28	120.95	122.55		122.59	0.002729	1.89	78.25	121.18	0.31
Trib5	1400	Max WS	110.09	120.93	122.45		122.48	0.001966	1.47	94.22	129.68	0.26
Trib5	1350	Max WS	110.13	120.94	122.31		122.36	0.003353	1.97	81.06	130.39	0.34
Trib5	1300	Max WS	110.48	120.51	122.22		122.24	0.001125	1.27	110.49	120.80	0.20
Trib5	1200	Max WS	112.69	119.97	122.13		122.15	0.000957	1.09	127.04	255.12	0.18
Trib5	1150	Max WS	114.01	120.06	122.04		122.08	0.002239	1.90	95.04	202.33	0.29
Trib5	1100	Max WS	115.32	120.61	121.73		121.83	0.008389	2.67	49.21	145.44	0.52
Trib5	1050	Max WS	116.64	120.15	121.32		121.43	0.008313	2.79	50.26	85.10	0.52
Trib5	1000	Max WS	117.97	119.89	121.07		121.13	0.004272	2.00	76.90	156.03	0.37
Trib5	950	Max WS	119.20	119.77	120.81		120.87	0.006541	1.97	65.66	131.35	0.44
Trib5	900	Max WS	120.36	119.41	120.54		120.60	0.004781	2.13	69.11	108.50	0.40
Trib5	850	Max WS	121.61	119.14	120.35		120.41	0.003669	1.95	71.12	103.43	0.35
Trib5	713.21	Max WS	125.05	118.49	119.77		119.85	0.005134	2.34	64.95	103.90	0.42
Trib5	600	Max WS	127.23	117.98	119.20		119.28	0.005367	2.32	64.41	98.55	0.42
Trib5	500	Max WS	125.78	117.57	118.85		118.88	0.002905	1.44	93.42	378.80	0.30
Trib5	300.47	Max WS	124.32	117.29	118.32		118.34	0.002772	1.15	107.72	300.57	0.28
Trib5	291.555*	Max WS	124.30	117.19	118.30		118.32	0.002286	1.07	128.53	274.00	0.25
Trib5	282.64*	Max WS	124.30	117.09	118.27		118.30	0.003177	1.27	105.70	236.24	0.30
Trib5	273.725*	Max WS	124.30	116.99	118.23		118.27	0.004329	1.49	87.26	203.48	0.35
Trib5	264.81*	Max WS	124.29	116.90	118.18		118.22	0.005942	1.75	75.99	170.12	0.41
Trib5	255.895*	Max WS	124.29	116.80	118.09		118.16	0.009227	2.17	64.26	150.92	0.51
Trib5	246.98	Max WS	124.28	116.70	117.93		118.05	0.021754	2.98	49.83	137.79	0.76
Main	22200	Max WS	41.84	118.83	120.03		120.04	0.001380	1.02	43.10	71.71	0.21
Main	22150	Max WS	41.75	118.76	119.93		119.95	0.002627	1.17	36.23	70.65	0.27
Main	22100	Max WS	43.47	118.77	119.76		119.79	0.004319	1.39	31.29	61.03	0.34
Main	22050	Max WS	45.02	118.62	119.47		119.52	0.007666	1.66	27.24	65.72	0.44
Main	22000	Max WS	46.58	118.29	119.27		119.29	0.002218	1.13	41.84	81.63	0.25
Main	21950	Max WS	48.17	118.31	119.12		119.15	0.004266	1.46	35.00	89.43	0.34
Main	21900	Max WS	49.27	118.02	118.94		118.97	0.003854	1.40	38.74	118.91	0.33
Main	21850	Max WS	50.47	117.57	118.72		118.77	0.004738	1.67	30.17	101.42	0.37
Main	21756.27	Max WS	52.98	117.37	118.51		118.52	0.000547	0.70	76.89	103.57	0.13
Main	21700	Max WS	54.61	117.24	118.46		118.47	0.001014	0.98	62.54	93.37	0.18
Main	21650	Max WS	55.88	117.25	118.38		118.40	0.001948	1.12	50.07	122.67	0.24
Main	21600	Max WS	56.94	117.11	118.26		118.29	0.002926	1.28	44.71	178.53	0.29
Main	21550	Max WS	57.96	116.98	118.12		118.15	0.002697	1.49	43.17	75.48	0.29
Main	21500	Max WS	58.52	116.48	118.01		118.04	0.002057	1.40	47.29	98.03	0.26
Main	21450	Max WS	58.80	116.27	117.96		117.97	0.000683	0.89	71.14	140.27	0.15
Main	21441.0*	Max WS	58.72	116.26	117.95		117.97	0.000647	0.87	79.51	145.08	0.15
Main	21432.1*	Max WS	58.65	116.26	117.95		117.96	0.000603	0.83	86.70	149.78	0.14
Main	21423.1*	Max WS	58.64	116.25	117.95		117.95	0.000543	0.79	94.96	155.15	0.14
Main	21414.1*	Max WS	58.64	116.24	117.94		117.95	0.000475	0.74	104.29	161.05	0.13
Main	21405.2*	Max WS	58.43	116.24	117.94		117.95	0.000401	0.68	114.62	167.07	0.12
Main	21396.29	Max WS	58.36	116.23	117.93		117.94	0.000574	0.81	96.04	172.76	0.14
Main5	21246.12	Max WS	182.64	116.44	117.93		117.94	0.000253	0.58	369.46	376.55	0.09
Main5	21227.8*	Max WS	182.64	116.21	117.93		117.94	0.000191	0.56	398.96	370.67	0.08
Main5	21209.5*	Max WS	182.68	115.97	117.93		117.93	0.000152	0.55	422.51	358.96	0.08
Main5	21191.3*	Max WS	182.64	115.74	117.93		117.93	0.000129	0.55	439.18	346.79	0.07
Main5	21173.0*	Max WS	182.59	115.50	117.92		117.93	0.000115	0.56	450.01	335.58	0.07

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main5	21154.7*	Max WS	182.58	115.26	117.92		117.93	0.000109	0.58	453.60	323.08	0.07
Main5	21136.5*	Max WS	182.58	115.03	117.92		117.92	0.000110	0.62	450.93	311.19	0.07
Main5	21118.2*	Max WS	182.57	114.79	117.92		117.92	0.000119	0.68	440.79	298.77	0.07
Main5	21100	Max WS	182.57	114.56	117.92	116.31	117.92	0.000146	0.79	418.97	286.23	0.08
Main5	21050		Inl Struct									
Main5	21037.73	Max WS	182.34	114.34	116.81		116.86	0.003315	2.49	134.01	212.28	0.36
Main5	20950.06	Max WS	183.35	114.81	116.57		116.60	0.002847	1.79	151.12	238.11	0.31
Main5	20867	Max WS	182.45	114.33	116.26		116.31	0.005664	2.35	123.52	228.91	0.43
Main5	20700	Max WS	181.11	113.19	115.77		115.79	0.002007	1.60	180.81	284.89	0.26
Main5	20650	Max WS	181.24	113.17	115.68		115.70	0.002436	1.67	169.15	261.37	0.29
Main5	20600	Max WS	180.98	112.88	115.60		115.62	0.001358	1.65	181.96	237.27	0.23
Main5	20550	Max WS	181.38	113.12	115.54		115.56	0.001395	1.61	181.29	227.92	0.23
Main5	20500	Max WS	181.42	113.75	115.41		115.45	0.003138	2.10	139.22	219.21	0.34
Main5	20450	Max WS	181.50	113.69	115.15		115.28	0.007296	2.98	81.35	269.60	0.50
Main5	20400	Max WS	181.43	113.39	114.92		115.00	0.005019	2.59	107.14	187.30	0.42
Main5	20351.92	Max WS	181.15	113.17	114.79		114.83	0.002247	1.87	150.68	198.75	0.29
Main5	20300	Max WS	181.21	113.10	114.70		114.73	0.001548	1.42	163.20	249.90	0.23
Main5	20250	Max WS	181.28	113.18	114.60		114.63	0.002933	2.03	154.14	264.01	0.33
Main5	20200	Max WS	181.14	112.96	114.47		114.49	0.002396	1.81	164.22	240.21	0.29
Main5	20050	Max WS	181.73	112.55	114.12		114.16	0.002333	1.85	144.60	217.70	0.29
Main5	19950	Max WS	182.35	112.56	113.74		113.80	0.005696	2.32	105.34	158.93	0.43
Main5	19900	Max WS	182.38	112.05	113.51		113.56	0.004463	2.32	119.67	192.33	0.39
Main5	19852.97	Max WS	182.29	111.94	113.32		113.37	0.004034	2.16	130.83	215.19	0.37
Main5	19746.96	Max WS	182.08	111.76	113.05		113.07	0.002100	1.69	183.56	284.88	0.27
Main5	19650	Max WS	180.17	111.42	112.79		112.84	0.003301	1.99	114.93	186.83	0.34
Main5	19600	Max WS	179.50	111.31	112.68		112.71	0.001893	1.56	149.68	225.08	0.26
Main5	19550	Max WS	178.85	111.01	112.62		112.64	0.001203	1.39	188.19	234.92	0.21
Main5	19500	Max WS	178.37	111.18	112.57		112.58	0.001011	1.22	219.51	306.64	0.19
Main5	19450	Max WS	176.80	111.38	112.49		112.51	0.001992	1.44	193.91	342.25	0.26
Main5	19400	Max WS	175.62	111.08	112.44		112.44	0.000739	0.95	301.85	422.92	0.16
Main5	19150	Max WS	175.63	110.58	112.22		112.24	0.001008	1.36	243.10	338.27	0.20
Main5	19050	Max WS	176.00	110.39	112.10		112.13	0.001469	1.54	183.33	303.44	0.23
Main5	19000	Max WS	176.30	110.49	112.06		112.07	0.000755	1.03	242.98	285.46	0.16
Main5	18950	Max WS	176.46	110.54	112.00		112.02	0.001684	1.38	173.82	269.05	0.24
Main5	18900	Max WS	176.43	110.53	111.92		111.94	0.001501	1.35	180.46	250.19	0.23
Main5	18850	Max WS	193.41	110.49	111.79		111.83	0.003058	1.83	156.60	296.64	0.32
Main5	18800	Max WS	182.64	110.40	111.70		111.72	0.001399	1.30	215.53	349.13	0.22
Main5	18750	Max WS	176.24	110.03	111.66		111.67	0.000488	0.87	317.49	405.18	0.13
Main5	18700	Max WS	174.55	109.89	111.65		111.65	0.000195	0.58	476.19	512.08	0.09
Main5	18650	Max WS	173.38	109.86	111.64		111.64	0.000195	0.51	451.15	464.95	0.08
Main5	18397.57	Max WS	170.04	109.41	111.59		111.60	0.000206	0.71	420.33	372.28	0.09
Main5	18200	Max WS	175.41	109.28	111.06		111.08	0.000963	1.07	220.00	268.62	0.18
Main5	18050	Max WS	176.33	109.24	110.65		110.70	0.004894	2.52	120.18	212.33	0.42
Main5	17955.7	Max WS	176.89	108.94	110.36		110.38	0.001956	1.56	178.91	241.73	0.26
Main5	17750	Max WS	178.24	108.17	109.95		109.99	0.002218	1.76	145.31	253.78	0.28
Main5	17700	Max WS	178.59	108.29	109.81		109.85	0.003629	1.84	115.46	183.48	0.34
Main5	17650	Max WS	178.93	107.99	109.66		109.70	0.003163	1.83	127.26	237.91	0.33
Main5	17641.6*	Max WS	178.94	108.00	109.63		109.69	0.003759	2.04	120.96	249.53	0.36
Main5	17633.3*	Max WS	178.92	108.02	109.60		109.66	0.004260	2.20	114.69	240.35	0.38
Main5	17625.*	Max WS	178.87	108.03	109.55		109.63	0.004969	2.40	107.10	229.97	0.41
Main5	17616.6*	Max WS	178.80	108.04	109.51		109.59	0.005774	2.60	102.00	223.03	0.45
Main5	17608.3*	Max WS	178.60	108.06	109.46		109.54	0.006070	2.68	102.49	193.33	0.46
Main5	17600	Max WS	162.78	108.07	109.29		109.45	0.013285	3.66	58.58	169.66	0.66
Trib4	2650	Max WS	74.55	111.78	112.77		112.78	0.000628	0.55	134.63	246.00	0.13
Trib4	2600	Max WS	68.86	111.81	112.73		112.74	0.001352	0.68	101.76	244.50	0.18
Trib4	2550	Max WS	66.93	111.67	112.70		112.71	0.000555	0.54	124.22	215.46	0.13
Trib4	2500	Max WS	144.93	111.51	112.55		112.58	0.004041	1.45	100.12	176.06	0.34
Trib4	2450	Max WS	145.04	111.12	112.44		112.45	0.001279	0.91	160.18	253.55	0.19
Trib4	2400	Max WS	146.02	110.93	112.37		112.39	0.001575	0.97	150.33	237.30	0.21
Trib4	2350	Max WS	146.65	111.08	112.28		112.30	0.002153	1.08	136.57	239.24	0.25
Trib4	2300	Max WS	146.35	111.07	112.15		112.17	0.003067	1.15	127.22	254.97	0.29
Trib4	2250	Max WS	146.39	110.81	112.06		112.07	0.001397	0.88	166.44	280.08	0.20
Trib4	2200	Max WS	146.99	110.75	112.02		112.02	0.000679	0.75	220.25	290.83	0.15
Trib4	2150	Max WS	147.88	110.64	111.97		111.98	0.001047	0.85	174.74	247.84	0.18
Trib4	2100	Max WS	148.62	110.56	111.90		111.91	0.001718	1.03	144.36	221.23	0.22
Trib4	2050	Max WS	148.83	110.63	111.81		111.83	0.001808	1.28	129.00	195.27	0.24
Trib4	1950	Max WS	147.80	110.57	111.66		111.68	0.001471	1.15	137.02	188.06	0.22
Trib4	1900	Max WS	148.22	110.36	111.62		111.63	0.000622	0.78	192.23	238.13	0.14
Trib4	1850	Max WS	148.91	110.06	111.59		111.60	0.000700	0.81	186.12	231.80	0.15
Trib4	1800	Max WS	149.79	110.02	111.54		111.55	0.001139	1.00	156.62	226.58	0.19
Trib4	1747.14	Max WS	150.55	109.80	111.48		111.50	0.001048	1.05	154.67	210.50	0.19
Trib4	1700	Max WS	151.24	109.83	111.44		111.45	0.000939	0.96	158.57	242.19	0.18
Trib4	1650	Max WS	152.16	109.73	111.41		111.42	0.000525	0.74	214.44	266.25	0.13
Trib4	1600	Max WS	153.09	109.88	111.37		111.38	0.000773	0.86	178.50	253.20	0.16
Trib4	1550	Max WS	154.08	109.54	111.35		111.36	0.000307	0.66	257.78	254.16	0.11

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib4	1400	Max WS	156.72	109.60	110.86		110.94	0.005797	2.36	82.73	200.65	0.44
Trib4	1350	Max WS	157.40	108.96	110.68		110.71	0.003214	1.54	106.03	180.10	0.31
Trib4	1300	Max WS	157.98	108.83	110.53		110.56	0.003165	1.51	118.38	248.26	0.31
Trib4	1250	Max WS	158.50	108.93	110.42		110.44	0.001967	1.67	159.28	246.45	0.27
Trib4	1200	Max WS	159.11	108.75	110.34		110.36	0.001576	1.44	179.59	259.57	0.24
Trib4	1150	Max WS	159.55	108.59	110.23		110.27	0.002609	1.96	134.89	239.14	0.31
Trib4	1097.41	Max WS	160.19	108.83	110.16		110.17	0.000689	1.01	238.66	279.01	0.16
Trib4	950	Max WS	161.74	108.77	109.98		110.00	0.002321	1.56	163.51	311.43	0.28
Trib4	900	Max WS	162.16	108.64	109.87		109.90	0.002786	1.63	153.24	328.80	0.30
Trib4	850	Max WS	162.41	108.45	109.73		109.78	0.004361	2.06	131.09	337.35	0.38
Trib4	800	Max WS	162.73	108.03	109.63		109.66	0.001656	1.55	158.96	327.50	0.25
Trib4	750	Max WS	163.11	108.34	109.56		109.57	0.001962	1.31	192.24	366.63	0.25
Trib4	700	Max WS	163.54	108.43	109.52		109.52	0.000487	0.74	311.22	391.17	0.13
Trib4	650	Max WS	163.82	107.75	109.41		109.46	0.002703	1.75	100.06	358.17	0.30
Trib4	600	Max WS	164.04	107.89	109.36		109.37	0.000776	1.13	245.31	399.44	0.17
Trib4	550	Max WS	162.09	107.93	109.31		109.32	0.001261	1.36	217.87	345.43	0.21
Trib4	540.*	Max WS	161.33	107.93	109.30		109.31	0.000749	1.04	255.25	327.66	0.16
Trib4	530.*	Max WS	118.07	107.93	109.30		109.30	0.000410	0.77	252.76	326.08	0.12
Trib4	520.*	Max WS	114.42	107.92	109.29		109.30	0.000364	0.72	254.30	330.70	0.11
Trib4	510.*	Max WS	112.05	107.92	109.29		109.29	0.000268	0.61	284.59	332.11	0.10
Trib4	500	Max WS	111.07	107.92	109.29		109.29	0.000168	0.48	327.45	323.42	0.08
Main4	17447.12	Max WS	273.85	107.81	109.29		109.29	0.000358	0.70	607.69	690.16	0.11
Main4	17428.3*	Max WS	273.83	107.52	109.28		109.29	0.000415	0.81	567.12	762.62	0.12
Main4	17409.5*	Max WS	273.84	107.23	109.27	108.39	109.28	0.000312	0.75	609.56	741.93	0.11
Main4	17400		Inl Struct									
Main4	17390.78	Max WS	272.93	106.94	108.85		108.86	0.000698	0.98	394.15	547.55	0.16
Main4	17350	Max WS	273.35	106.91	108.82		108.83	0.000749	1.07	415.12	571.73	0.17
Main4	17239.4	Max WS	275.00	106.54	108.76		108.76	0.000589	1.07	452.87	561.49	0.15
Main4	16882.6	Max WS	278.72	106.24	108.39		108.42	0.001470	1.90	261.89	303.22	0.25
Main4	16650	Max WS	277.95	106.39	108.14		108.15	0.000872	1.21	359.27	414.44	0.18
Main4	16536.56	Max WS	277.24	106.27	108.08		108.08	0.000394	0.81	495.75	460.25	0.12
Main4	15950	Max WS	275.81	104.49	107.75		107.76	0.000711	1.22	419.22	510.09	0.17
Main4	15779.58	Max WS	275.79	105.55	107.60		107.61	0.001144	1.58	328.23	347.41	0.21
Main4	15556.6	Max WS	276.06	103.82	107.39		107.41	0.000777	1.55	340.29	349.28	0.18
Main4	15479	Max WS	276.16	104.11	107.26		107.30	0.002238	2.45	221.51	414.03	0.30
Main4	15469.0*	Max WS	276.15	104.12	107.24		107.28	0.002307	2.47	218.82	413.37	0.31
Main4	15459.1*	Max WS	276.17	104.12	107.21		107.26	0.002341	2.47	216.25	407.12	0.31
Main4	15449.2*	Max WS	276.15	104.13	107.19		107.24	0.002389	2.46	213.50	398.48	0.31
Main4	15439.3*	Max WS	276.15	104.14	107.16		107.21	0.002422	2.45	211.13	389.55	0.32
Main4	15429.4*	Max WS	276.14	104.14	107.14		107.19	0.002467	2.43	208.57	382.02	0.32
Main4	15419.4*	Max WS	276.16	104.15	107.12		107.17	0.002508	2.41	206.17	373.02	0.32
Main4	15409.5*	Max WS	276.15	104.16	107.09		107.14	0.002558	2.39	203.57	361.33	0.32
Main4	15399.6*	Max WS	276.15	104.16	107.07		107.12	0.002602	2.37	201.48	343.40	0.32
Main4	15389.7*	Max WS	276.15	104.17	107.04		107.09	0.002657	2.35	199.82	335.40	0.32
Main4	15379.8*	Max WS	276.14	104.18	107.02		107.06	0.002721	2.32	198.29	322.36	0.33
Main4	15369.8*	Max WS	276.14	104.18	106.99		107.04	0.002817	2.31	196.70	314.25	0.33
Main4	15359.9*	Max WS	276.14	104.19	106.96		107.01	0.002942	2.30	194.69	305.69	0.33
Main4	15350.0*	Max WS	276.13	104.20	106.93		106.98	0.003082	2.29	192.84	299.80	0.34
Main4	15340.1*	Max WS	276.13	104.20	106.90		106.95	0.003274	2.29	190.13	291.60	0.35
Main4	15330.2*	Max WS	276.12	104.21	106.87		106.92	0.003410	2.26	187.21	283.58	0.35
Main4	15320.2*	Max WS	276.11	104.22	106.83		106.88	0.003667	2.26	183.61	271.41	0.36
Main4	15310.3*	Max WS	276.10	104.22	106.80		106.84	0.004022	2.28	179.00	256.05	0.37
Main4	15300.4*	Max WS	276.09	104.23	106.75		106.80	0.004525	2.31	173.11	240.91	0.39
Main4	15290.5*	Max WS	275.97	104.24	106.70		106.75	0.005267	2.36	165.71	231.37	0.42
Main4	15280.6*	Max WS	275.84	104.24	106.64		106.70	0.006541	2.46	155.43	229.21	0.46
Main4	15270.69	Max WS	274.87	104.25	106.56		106.63	0.009040	2.64	140.73	226.41	0.53
Trib3	4150	Max WS	65.63	120.42	121.07		121.13	0.013101	1.92	34.18	94.35	0.56
Trib3	4100	Max WS	65.59	119.92	120.72		120.76	0.005194	1.47	44.69	94.63	0.37
Trib3	4050	Max WS	65.54	119.76	120.39		120.44	0.010235	1.80	36.39	91.89	0.50
Trib3	4000	Max WS	65.51	119.27	120.07		120.11	0.005800	1.54	42.65	89.32	0.39
Trib3	3950	Max WS	65.50	118.94	119.60		119.68	0.018883	2.23	29.32	84.81	0.67
Trib3	3900	Max WS	65.47	118.43	119.16		119.21	0.007742	1.66	39.40	91.05	0.45
Trib3	3850	Max WS	65.41	117.79	118.67		118.74	0.013611	2.13	30.68	74.50	0.59
Trib3	3800	Max WS	65.26	117.50	118.35		118.37	0.002652	1.08	60.25	154.50	0.27
Trib3	3750	Max WS	65.25	117.11	117.55	117.54	117.64	0.044907	2.37	27.50	139.29	0.94
Trib3	3700	Max WS	65.10	116.20	116.78		116.80	0.005963	1.21	53.86	164.99	0.37
Trib3	3650	Max WS	65.02	115.86	116.65		116.66	0.001833	0.87	74.71	154.63	0.22
Trib3	3600	Max WS	65.00	115.51	116.38		116.42	0.008757	1.58	41.17	112.68	0.46
Trib3	3550	Max WS	64.97	115.04	116.04		116.09	0.006387	1.75	38.52	87.80	0.42
Trib3	3500	Max WS	64.96	114.87	115.68		115.74	0.011446	1.95	33.30	81.13	0.54
Trib3	3450	Max WS	64.96	114.35	115.30		115.34	0.007766	1.69	38.54	87.40	0.45
Trib3	3400	Max WS	64.93	114.09	114.83		114.90	0.013624	2.22	29.30	67.20	0.59
Trib3	3300	Max WS	64.69	113.37	114.23		114.25	0.002795	1.13	57.46	110.92	0.28
Trib3	3250	Max WS	64.63	113.13	114.12		114.14	0.002207	1.06	61.22	108.98	0.25
Trib3	3200	Max WS	64.60	112.94	114.02		114.04	0.001973	1.21	55.31	93.55	0.25

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib3	3150	Max WS	64.57	113.02	113.89		113.92	0.003727	1.31	49.14	93.33	0.32
Trib3	3100	Max WS	64.56	113.01	113.69		113.73	0.006676	1.58	40.90	91.39	0.42
Trib3	3050	Max WS	64.54	112.41	113.34		113.41	0.011329	2.26	35.84	144.96	0.55
Trib3	3000	Max WS	64.53	112.43	113.01		113.03	0.007180	1.57	55.63	157.01	0.43
Trib3	2900	Max WS	64.41	111.94	112.51		112.53	0.005084	1.18	62.85	180.23	0.35
Trib3	2850	Max WS	64.37	111.57	112.38		112.39	0.002421	0.95	67.50	150.11	0.25
Trib3	2800	Max WS	64.34	111.41	112.24		112.26	0.003710	1.33	49.60	108.61	0.32
Trib3	2750	Max WS	64.32	111.33	112.03		112.06	0.005256	1.34	48.06	114.95	0.36
Trib3	2685.69	Max WS	64.20	111.05	111.74		111.77	0.005130	1.41	47.83	120.62	0.37
Trib3	2600	Max WS	64.07	110.54	111.40		111.42	0.003975	1.10	58.04	150.29	0.31
Trib3	2542.55	Max WS	63.96	110.38	111.17		111.21	0.004851	1.69	52.20	163.85	0.38
Trib3	2450	Max WS	63.91	109.96	110.82		110.85	0.003958	1.44	47.13	112.19	0.33
Trib3	2400	Max WS	63.90	109.44	110.61		110.66	0.005453	2.05	46.09	139.97	0.41
Trib3	2353.17	Max WS	63.84	109.16	110.38		110.44	0.005551	2.02	42.47	121.50	0.41
Trib3	2293.77	Max WS	63.77	109.42	110.14		110.16	0.004613	1.26	50.51	119.56	0.34
Trib3	2216.78	Max WS	63.67	109.12	109.88		109.90	0.003672	1.14	55.93	130.29	0.31
Trib3	2117.56	Max WS	63.62	108.79	109.62		109.63	0.003211	1.06	60.28	142.23	0.29
Trib3	2050	Max WS	63.56	108.45	109.42		109.44	0.003407	1.05	60.68	151.39	0.29
Trib3	2014.8	Max WS	63.54	108.36	109.34		109.35	0.001953	0.88	72.44	155.31	0.23
Trib3	1963.01	Max WS	63.53	108.16	109.26		109.27	0.001874	0.89	71.55	146.04	0.22
Trib3	1814.06	Max WS	63.46	107.64	108.68		108.72	0.007846	1.70	37.34	84.25	0.45
Trib3	1680.02	Max WS	63.03	106.98	108.12		108.14	0.002754	1.07	58.99	155.01	0.27
Trib3	1611.69	Max WS	62.96	107.34	108.02		108.03	0.000649	0.43	137.47	446.03	0.13
Trib3	1567.88	Max WS	76.52	106.98	107.88		107.91	0.004729	1.57	59.34	391.21	0.36
Trib3	1515.42	Max WS	76.22	106.86	107.68		107.69	0.003717	1.06	72.89	209.89	0.30
Trib3	1339.26	Max WS	75.35	105.80	107.14		107.17	0.002267	1.36	55.29	68.44	0.27
Trib3	1245.45	Max WS	74.60	105.31	107.00		107.01	0.001191	1.08	81.69	128.16	0.20
Trib3	1172.67	Max WS	74.36	105.31	106.94		106.95	0.000544	0.95	126.26	295.56	0.14
Trib3	911.97	Max WS	65.64	105.27	106.61		106.63	0.001611	1.28	63.86	197.19	0.23
Trib3	856.45	Max WS	50.59	105.26	106.56		106.57	0.000720	0.88	83.27	266.37	0.16
Trib2b	3500	Max WS	35.23	106.21	106.82		106.94	0.028838	2.99	14.10	47.10	0.84
Trib2b	3450	Max WS	35.21	105.35	106.01		106.07	0.008676	1.94	19.93	55.49	0.48
Trib2b	3389.72	Max WS	34.83	104.88	105.71		105.73	0.002532	1.05	37.82	106.20	0.26
Trib2b	3352.29	Max WS	35.38	104.38	105.65		105.67	0.000933	0.98	49.00	95.11	0.18
Trib2b	3300	Max WS	36.38	104.63	105.62		105.63	0.000546	0.66	60.77	100.99	0.13
Trib2b	3250	Max WS	37.40	104.73	105.58		105.59	0.000981	0.73	54.59	107.29	0.17
Trib2b	3203.29	Max WS	38.35	104.34	105.54		105.55	0.000872	0.85	62.87	140.75	0.17
Trib2b	3100	Max WS	40.54	104.37	105.23		105.26	0.005098	1.24	39.58	166.96	0.35
Trib2b	3050	Max WS	41.50	104.22	105.02		105.04	0.004110	1.18	41.41	195.53	0.32
Trib2b	3000	Max WS	42.51	104.27	104.85		104.87	0.003959	1.16	45.21	159.39	0.32
Trib2b	2950	Max WS	43.50	104.12	104.71		104.72	0.003449	1.05	47.68	159.48	0.29
Trib2b	2900	Max WS	44.45	103.98	104.57		104.59	0.003583	1.12	49.59	152.60	0.30
Trib2b	2850	Max WS	45.46	103.49	104.49		104.50	0.000968	0.78	61.72	157.04	0.17
Trib2b	2800	Max WS	46.54	103.81	104.44		104.44	0.001533	0.77	78.30	205.02	0.20
Trib2b	2750	Max WS	47.55	103.79	104.32		104.33	0.003430	0.93	64.31	206.04	0.28
Trib2b	2700	Max WS	48.43	103.62	104.17		104.19	0.002911	1.01	51.01	171.17	0.27
Trib2b	2650	Max WS	49.36	103.42	104.08		104.08	0.001687	0.77	66.44	185.11	0.21
Trib2b	2600	Max WS	49.91	103.22	103.94		103.95	0.004219	1.08	49.71	164.93	0.32
Trib2b	2550	Max WS	50.41	103.01	103.84		103.85	0.000532	0.50	116.17	249.40	0.12
Trib2b	2500	Max WS	51.52	103.07	103.80		103.81	0.001116	0.69	74.50	150.09	0.17
Trib2b	2450	Max WS	52.31	102.87	103.74		103.75	0.001419	0.77	67.85	138.96	0.19
Trib2b	2400	Max WS	53.07	102.68	103.68		103.68	0.001429	0.77	68.68	140.99	0.20
Trib2b	2350	Max WS	53.79	102.74	103.61		103.62	0.001343	0.75	71.29	144.82	0.19
Trib2b	2300	Max WS	54.66	102.54	103.57		103.57	0.000719	0.69	90.35	174.98	0.15
Trib2b	2250	Max WS	55.60	102.58	103.53		103.54	0.000825	0.68	88.95	182.44	0.15
Trib2b	2200	Max WS	56.53	102.50	103.48		103.49	0.001205	0.77	76.01	167.86	0.18
Trib2b	2150	Max WS	57.46	102.52	103.43		103.44	0.001152	0.72	80.29	157.32	0.18
Trib2b	2100	Max WS	58.44	102.50	103.37		103.38	0.001569	0.82	71.65	156.71	0.21
Trib2b	2050	Max WS	59.38	102.30	103.25		103.27	0.004098	1.22	56.28	176.94	0.32
Trib2b	2000	Max WS	60.36	102.16	103.07		103.10	0.004187	1.36	44.45	145.76	0.34
Trib2b	1950	Max WS	61.35	101.98	102.84		102.87	0.005197	1.52	51.16	199.15	0.37
Trib2b	1887.66	Max WS	62.46	101.86	102.47		102.51	0.010919	1.76	42.95	183.65	0.51
Trib2b	1800	Max WS	63.94	101.14	102.03		102.04	0.003521	1.08	72.22	195.61	0.30
Trib2b	1750	Max WS	64.65	101.12	101.87		101.89	0.004167	1.09	59.71	176.00	0.32
Trib2b	1587.06	Max WS	67.22	100.52	101.61		101.61	0.000338	0.47	143.53	220.38	0.10
Trib2b	1547.11	Max WS	67.93	100.38	101.59		101.59	0.000615	0.68	119.74	199.54	0.14
Trib2b	1494.66	Max WS	68.87	100.39	101.54		101.55	0.001576	0.80	95.02	273.90	0.20
Trib2b	1450	Max WS	69.78	100.48	101.48		101.49	0.001589	0.92	82.22	172.31	0.21
Trib2b	1400	Max WS	66.47	100.35	101.36		101.38	0.003688	1.38	67.13	203.50	0.32
Trib2b	1350	Max WS	71.37	100.19	101.04		101.07	0.009668	1.39	51.47	184.37	0.46
Trib2b	1300	Max WS	70.95	99.63	100.84		100.85	0.000597	0.56	125.93	215.62	0.13
Trib2b	1250	Max WS	71.39	99.24	100.82		100.83	0.000255	0.50	154.90	232.23	0.09
Trib2b	1200	Max WS	72.10	99.73	100.80		100.81	0.000565	0.56	128.82	213.92	0.13
Trib2b	1064.85	Max WS	74.09	99.70	100.72		100.72	0.000721	0.67	132.54	228.54	0.15
Trib2b	1050	Max WS	74.32	99.74	100.70		100.71	0.001040	0.71	119.57	227.97	0.17

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1000	Max WS	75.10	99.49	100.52		100.56	0.005478	1.60	47.85	152.96	0.39
Trib2b	950	Max WS	75.82	99.47	100.36		100.37	0.002455	1.12	91.42	253.42	0.26
Trib2b	902.71	Max WS	76.42	99.46	100.25		100.27	0.002337	0.94	86.30	284.74	0.25
Trib2b	715.36	Max WS	78.11	99.00	99.91		99.92	0.001670	0.76	102.78	286.79	0.21
Trib2b	339.81	Max WS	61.08	97.12	99.59		99.59	0.000287	0.61	148.20	223.92	0.10
Trib2b	106.24	Max WS	59.09	95.53	99.53		99.54	0.000189	0.65	118.78	118.10	0.09
Trib2a	7650	Max WS	15.00	104.96	108.23		108.23	0.000001	0.05	440.07	364.59	0.01
Trib2a	7500.06	Max WS	315.47	104.07	107.91		107.95	0.002689	2.70	235.13	252.64	0.32
Trib2a	7450	Max WS	331.32	103.23	107.38	107.55	108.00	0.020678	7.25	94.54	276.02	0.89
Trib2a	7400	Max WS	346.99	102.62	106.71		106.89	0.009333	4.62	160.86	288.40	0.59
Trib2a	7350	Max WS	345.70	102.67	106.49		106.53	0.003718	2.38	240.75	307.57	0.36
Trib2a	7300	Max WS	344.80	102.88	106.36		106.39	0.002199	1.93	294.64	327.43	0.28
Trib2a	7250	Max WS	343.88	102.52	106.24		106.28	0.002428	2.12	274.97	311.64	0.30
Trib2a	7200	Max WS	343.20	102.55	106.14		106.17	0.002029	2.16	279.31	282.10	0.28
Trib2a	7150	Max WS	342.38	102.46	106.04		106.07	0.002254	2.18	268.14	265.73	0.29
Trib2a	7100	Max WS	341.58	102.39	105.93		105.96	0.002063	2.00	258.00	239.38	0.28
Trib2a	7050	Max WS	341.12	102.20	105.86		105.89	0.000926	1.81	310.36	245.67	0.20
Trib2a	7000	Max WS	341.03	102.84	105.81		105.84	0.001068	1.67	288.00	234.12	0.21
Trib2a	6950	Max WS	340.34	102.11	105.72		105.77	0.002237	2.60	241.85	230.99	0.31
Trib2a	6900	Max WS	339.79	102.43	105.64		105.68	0.001487	1.89	275.86	254.50	0.25
Trib2a	6850	Max WS	338.09	102.08	105.51		105.58	0.003288	2.53	209.61	257.07	0.36
Trib2a	6800	Max WS	335.75	101.85	105.38		105.44	0.002494	2.56	226.57	238.56	0.32
Trib2a	6750	Max WS	333.48	101.74	105.30		105.33	0.001847	1.98	267.98	260.93	0.27
Trib2a	6700	Max WS	330.48	101.48	105.19		105.23	0.002582	2.31	249.65	289.25	0.32
Trib2a	6650	Max WS	327.77	100.64	105.10		105.13	0.001638	1.93	275.21	272.71	0.25
Trib2a	6592.43	Max WS	326.23	100.72	105.05		105.07	0.000655	1.47	363.23	274.14	0.17
Trib2a	6400	Max WS	333.19	100.87	104.89		104.91	0.000999	1.68	336.57	278.94	0.20
Trib2a	6350	Max WS	331.42	101.21	104.86		104.87	0.000592	1.25	408.41	287.91	0.16
Trib2a	6300	Max WS	331.43	101.10	104.82		104.84	0.000659	1.50	387.61	307.02	0.17
Trib2a	6200	Max WS	326.27	100.78	104.64		104.72	0.002935	2.96	188.55	298.95	0.35
Trib2a	6150	Max WS	324.20	100.34	104.52		104.59	0.002149	2.65	210.50	228.19	0.30
Trib2a	6100	Max WS	322.74	100.13	104.45		104.49	0.001575	2.31	245.85	208.10	0.26
Trib2a	6050	Max WS	319.35	100.45	104.38		104.42	0.001349	1.96	260.39	217.60	0.24
Trib2a	6000	Max WS	317.66	100.10	104.32		104.35	0.001181	2.09	258.09	227.46	0.22
Trib2a	5950	Max WS	315.46	100.55	104.27		104.29	0.001008	1.62	289.46	239.01	0.20
Trib2a	5905.86	Max WS	314.41	100.10	104.24		104.26	0.000569	1.26	372.06	268.81	0.15
Trib2a	5850	Max WS	314.01	100.12	104.22		104.23	0.000346	0.98	493.97	473.62	0.12
Trib2a	5800	Max WS	313.96	100.93	104.21		104.21	0.000380	1.04	581.18	566.02	0.13
Trib2a	5750	Max WS	313.66	101.33	104.20		104.20	0.000182	0.64	729.86	541.33	0.09
Trib2a	5647.95	Max WS	314.17	100.09	104.17		104.18	0.000263	0.89	627.86	516.88	0.11
Trib2a	5250	Max WS	291.75	100.39	103.53		103.58	0.002304	2.22	227.01	389.41	0.30
Trib2a	5200	Max WS	291.08	99.84	103.45		103.48	0.001414	1.95	303.67	386.47	0.24
Trib2a	5150	Max WS	288.90	99.55	103.40		103.42	0.001026	1.70	336.72	369.82	0.21
Trib2a	5100	Max WS	287.50	99.45	103.35		103.37	0.000912	1.73	348.27	359.31	0.19
Trib2a	5050	Max WS	287.38	99.42	103.32		103.33	0.000511	1.29	405.98	338.78	0.15
Trib2a	5000	Max WS	287.33	99.45	103.29		103.30	0.000520	1.41	413.22	365.46	0.15
Trib2a	4896.6	Max WS	273.29	99.08	103.24		103.25	0.000529	1.44	401.42	361.26	0.15
Trib2a	4817.5	Max WS	277.99	99.31	103.13		103.17	0.001068	1.72	194.97	416.78	0.21
Trib2a	4750	Max WS	289.16	97.98	102.96		103.09	0.002640	3.01	117.93	418.23	0.34
Trib2a	4700	Max WS	273.24	98.48	102.89		102.97	0.002099	2.48	193.60	440.34	0.30
Trib2a	4650	Max WS	287.85	98.29	102.70	101.67	102.88	0.003990	3.48	112.71	401.97	0.41
Trib2a	4600	Max WS	313.21	98.92	102.40	102.45	102.71	0.008745	4.99	111.35	337.28	0.60
Trib2a	4550	Max WS	294.39	97.96	102.14		102.26	0.003900	3.49	185.68	346.19	0.40
Trib2a	4500	Max WS	291.28	98.15	102.06		102.09	0.001226	2.06	308.38	378.02	0.23
Trib2a	4450	Max WS	291.00	97.30	102.01		102.03	0.000986	1.83	307.92	338.12	0.21
Trib2a	4400	Max WS	290.90	98.06	101.93		101.97	0.001953	1.98	243.49	348.54	0.28
Trib2a	4250.25	Max WS	293.99	96.55	101.48		101.63	0.003838	3.09	100.50	157.82	0.39
Trib2a	4200	Max WS	290.00	96.59	101.40		101.45	0.002766	1.93	197.41	242.11	0.31
Trib2a	4150	Max WS	291.73	97.16	101.30		101.34	0.002169	1.87	229.98	277.03	0.28
Trib2a	4100	Max WS	290.84	97.05	101.19		101.24	0.002425	1.98	214.39	272.37	0.30
Trib2a	4050	Max WS	289.73	96.37	101.09		101.14	0.002043	2.41	232.51	277.73	0.29
Trib2a	3900	Max WS	290.53	95.93	100.81		100.86	0.002256	2.71	259.09	391.76	0.30
Trib2a	3850	Max WS	279.69	96.20	100.73		100.77	0.001330	2.31	288.13	385.17	0.24
Trib2a	3784.11	Max WS	277.03	96.57	100.66		100.68	0.001116	1.49	315.02	393.42	0.21
Trib2a	3350	Max WS	271.95	95.27	100.33		100.34	0.000554	1.33	391.75	385.72	0.15
Trib2a	3214.64	Max WS	271.70	96.42	100.18		100.23	0.001381	1.81	200.58	290.52	0.24
Trib2a	3100	Max WS	273.40	95.40	100.01		100.07	0.001806	2.37	191.29	221.48	0.28
Trib2a	3050	Max WS	274.12	94.76	99.94		100.00	0.001371	2.35	216.45	257.21	0.25
Trib2a	3000	Max WS	274.94	95.44	99.89		99.93	0.001292	2.08	255.36	266.63	0.23
Trib2a	2750	Max WS	274.60	95.06	99.53		99.58	0.001664	2.55	254.61	364.06	0.27
Trib2	2409.07	Max WS	333.82	93.51	99.53		99.54	0.000312	1.12	589.43	540.41	0.12
Trib2	2299.16	Max WS	333.80	91.10	99.51	94.94	99.52	0.000157	1.04	631.92	542.38	0.09
Trib2	2200		Inl Struct									
Trib2	2147.44	Max WS	333.22	92.44	98.14		98.18	0.001268	2.36	296.78	284.74	0.23
Trib2	2078.76	Max WS	332.94	92.22	98.10		98.11	0.000265	0.84	464.20	338.59	0.10

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2	1707.37	Max WS	335.72	92.46	97.79		97.84	0.001610	1.89	274.01	351.76	0.25
Trib2	1601.61	Max WS	336.50	92.48	97.57		97.63	0.002840	2.71	224.26	432.54	0.33
Trib2	1548.15	Max WS	334.68	92.39	97.35		97.47	0.004981	3.60	211.25	420.71	0.43
Trib2	1500	Max WS	334.38	91.91	97.25		97.28	0.001355	2.14	329.93	357.17	0.23
Trib2	1450	Max WS	334.12	91.87	97.17		97.20	0.001557	2.23	286.12	286.06	0.25
Trib2	1350	Max WS	333.71	92.83	96.98		97.03	0.002272	2.34	250.71	302.82	0.30
Trib2	1150	Max WS	332.27	92.45	96.74		96.76	0.000618	1.30	386.34	378.55	0.16
Trib2	1006.62	Max WS	332.08	93.17	96.54		96.58	0.002192	2.13	268.85	366.35	0.29
Trib2	961.42	Max WS	331.88	91.98	96.46		96.49	0.001918	1.62	315.40	404.65	0.26
Trib2	848.73	Max WS	330.55	91.79	96.26		96.29	0.002005	1.74	307.40	393.84	0.27
Trib2	752.77	Max WS	330.44	91.40	96.06		96.09	0.002448	2.01	287.16	374.56	0.30
Trib2	700	Max WS	329.17	90.92	95.96		95.99	0.001816	1.81	326.72	464.43	0.26
Trib2	650	Max WS	328.44	91.12	95.91		95.92	0.000764	1.33	448.93	490.45	0.17
Trib2	600	Max WS	328.14	92.50	95.87		95.89	0.000739	1.37	430.00	468.89	0.17
Trib2	443.45	Max WS	327.48	92.33	95.74		95.76	0.000930	1.60	323.96	242.53	0.20
Trib2	200	Max WS	325.79	90.85	95.45		95.48	0.001394	1.76	264.05	210.99	0.23
Trib2	137.55	Max WS	321.53	90.44	95.26		95.33	0.003523	2.39	185.61	280.39	0.36
Trib2	101.92	Max WS	299.36	90.29	95.08		95.18	0.005047	3.06	160.87	253.07	0.43
Main3	15063.95	Max WS	325.53	102.46	106.56		106.58	0.001181	2.02	367.44	546.87	0.23
Main3	14955.43	Max WS	324.25	103.59	106.43		106.45	0.001414	1.53	350.73	502.35	0.23
Main3	14788.2	Max WS	322.23	101.86	106.21		106.23	0.001342	1.47	375.77	529.33	0.22
Main3	14628.77	Max WS	319.19	102.21	105.98		106.01	0.001704	2.04	342.45	488.31	0.26
Main3	14541.77	Max WS	309.99	102.08	105.89		105.90	0.000851	1.42	411.22	462.14	0.18
Main3	14280.86	Max WS	309.05	100.65	105.71		105.72	0.000600	1.47	439.49	392.33	0.15
Main3	14234.63	Max WS	306.98	100.96	105.67		105.69	0.000698	1.18	392.54	349.04	0.16
Main3	14185.8	Max WS	305.21	100.28	105.64		105.66	0.000636	1.35	323.33	199.43	0.16
Main3	14016.19	Max WS	302.23	100.44	105.12		105.31	0.003958	3.57	99.47	133.59	0.41
Main3	13950	Max WS	301.11	101.08	105.04		105.07	0.001108	2.00	269.80	329.68	0.22
Main3	13850	Max WS	300.37	100.53	104.90		104.94	0.001261	2.13	263.68	365.22	0.24
Main3	13750	Max WS	295.34	98.79	104.82		104.84	0.000394	1.48	361.57	404.70	0.14
Main3	13600	Max WS	301.74	99.49	104.66		104.71	0.001413	2.42	217.94	263.07	0.25
Main3	13450	Max WS	311.92	99.56	104.47		104.51	0.001571	2.38	280.70	422.05	0.25
Main3	13391.27	Max WS	311.75	99.51	104.33		104.42	0.002724	3.01	185.42	363.57	0.34
Main3	13266.46	Max WS	309.29	98.98	104.16		104.19	0.001000	2.32	286.23	306.35	0.21
Main3	13150	Max WS	307.19	98.95	104.04		104.07	0.001026	2.23	355.75	511.44	0.21
Main3	12950	Max WS	306.20	98.53	103.90		103.92	0.000532	1.59	467.76	579.44	0.16
Main3	12900	Max WS	306.93	97.80	103.88		103.89	0.000185	1.02	623.17	607.39	0.10
Main3	12850	Max WS	307.53	97.94	103.86		103.89	0.000633	1.71	418.70	547.79	0.17
Main3	12700	Max WS	302.31	99.10	103.73		103.76	0.001132	2.03	311.16	509.91	0.22
Main3	12393.1	Max WS	298.76	97.00	103.38		103.43	0.001165	2.10	232.62	400.81	0.22
Main3	12350	Max WS	298.68	96.55	103.36		103.38	0.000566	1.49	388.58	466.59	0.16
Main3	12150	Max WS	299.64	97.28	103.19		103.25	0.000950	2.27	192.08	545.42	0.21
Main3	12100	Max WS	299.54	97.22	102.99	101.25	103.24	0.003894	4.04	83.74	385.89	0.41
Main3	12050	Max WS	299.21	96.90	102.86		103.01	0.003032	3.20	99.09	318.38	0.36
Main3	11896.14	Max WS	298.15	96.27	102.59		102.64	0.001327	1.69	176.88	371.11	0.23
Main3	11700	Max WS	297.64	97.61	102.47		102.47	0.000274	1.12	524.68	480.91	0.11
Main3	11600	Max WS	296.98	97.58	102.33		102.40	0.001691	2.57	258.87	471.70	0.27
Main3	11346.39	Max WS	296.24	96.94	101.93		102.02	0.001671	2.50	163.80	337.84	0.27
Main3	11250	Max WS	296.04	96.63	101.77		101.86	0.001849	2.76	201.22	308.24	0.29
Main3	11168.79	Max WS	295.53	96.91	101.52		101.69	0.002876	3.55	109.33	112.17	0.36
Main3	11038.46	Max WS	294.66	96.30	101.32		101.40	0.001598	2.52	194.55	323.06	0.27
Main3	11000	Max WS	294.48	95.56	101.27		101.35	0.001543	2.45	202.61	329.36	0.26
Main3	10950	Max WS	293.41	96.78	101.09	99.79	101.27	0.003830	3.51	97.43	264.73	0.40
Main3	10850	Max WS	292.41	96.17	100.94		100.99	0.001221	2.19	227.87	278.46	0.23
Main3	10800	Max WS	291.73	95.97	100.86		100.93	0.001410	2.35	192.52	285.03	0.25
Main3	10650	Max WS	290.63	95.97	100.76		100.78	0.000430	1.32	309.63	233.44	0.14
Main3	10600	Max WS	290.60	96.78	100.73		100.75	0.000588	1.41	293.83	292.44	0.16
Main3	10496.09	Max WS	290.45	95.06	100.66		100.69	0.000754	1.66	312.69	339.12	0.18
Main3	10323.48	Max WS	289.61	94.27	100.55		100.57	0.000572	1.52	329.45	275.28	0.16
Main3	10150	Max WS	289.05	94.92	100.44		100.47	0.000660	1.69	272.85	217.10	0.17
Main3	10089.9	Max WS	288.15	94.80	100.32		100.41	0.001980	2.54	144.96	255.41	0.29
Main3	10050	Max WS	287.84	94.29	100.28		100.34	0.001205	2.06	188.02	251.41	0.23
Main3	10000	Max WS	287.58	94.56	100.21		100.28	0.001360	2.16	175.67	262.02	0.24
Main3	9869.95	Max WS	287.08	94.14	100.13		100.15	0.000458	1.69	377.24	559.17	0.15
Main3	9595.54	Max WS	286.91	94.94	99.94		99.98	0.000859	1.74	242.42	307.24	0.20
Main3	9343.2	Max WS	288.77	94.38	99.55		99.64	0.002132	2.85	169.22	351.74	0.30
Main3	9300	Max WS	289.12	93.82	99.46		99.55	0.001944	2.96	158.19	334.72	0.29
Main3	9100	Max WS	287.68	94.32	98.83		98.98	0.005041	3.29	112.49	368.60	0.44
Main3	9000	Max WS	286.61	95.38	98.61		98.66	0.001339	1.77	202.25	613.24	0.23
Main3	8900	Max WS	286.30	91.75	98.56		98.57	0.000320	1.01	433.89	527.30	0.12
Main3	8801.81	Max WS	285.67	92.97	98.37		98.46	0.002568	2.48	135.49	446.33	0.32
Main3	8600	Max WS	284.51	92.78	98.11		98.13	0.000597	1.56	353.77	341.70	0.16
Main3	8350	Max WS	284.18	92.98	97.98		97.99	0.000499	1.52	392.91	367.46	0.15
Main3	8162.22	Max WS	284.04	93.75	97.79		97.83	0.001335	1.87	244.83	314.13	0.24
Main3	7850.11	Max WS	284.21	93.09	97.34		97.38	0.001587	2.05	251.88	393.14	0.26

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	7633.01	Max WS	283.82	91.62	97.09		97.14	0.000732	1.92	268.96	405.38	0.19
Main3	7536.49	Max WS	282.12	91.92	97.06		97.07	0.000413	1.11	418.97	562.01	0.13
Main3	7500	Max WS	287.94	92.94	97.04		97.05	0.000358	1.04	374.15	463.06	0.12
Main3	7359.01	Max WS	287.80	92.42	96.76		96.85	0.003114	2.58	165.84	376.76	0.35
Main3	6910.56	Max WS	287.61	90.51	96.05		96.08	0.000480	1.45	253.14	244.44	0.15
Main3	6872.46	Max WS	287.61	91.27	95.99		96.05	0.001781	2.49	224.51	258.61	0.28
Main3	6795.89	Max WS	287.60	91.48	95.82		95.89	0.002698	2.81	194.62	237.81	0.33
Main3	6786.28*	Max WS	287.61	91.46	95.79		95.86	0.002754	2.82	194.96	244.72	0.34
Main3	6776.68*	Max WS	287.61	91.44	95.77		95.84	0.002829	2.84	194.64	251.26	0.34
Main3	6767.08*	Max WS	287.60	91.42	95.74		95.81	0.002930	2.87	193.72	257.70	0.35
Main3	6757.48*	Max WS	287.61	91.41	95.71		95.79	0.003049	2.90	191.83	264.19	0.35
Main3	6747.87*	Max WS	287.60	91.39	95.68		95.76	0.003237	2.95	188.25	273.59	0.36
Main3	6738.27*	Max WS	287.59	91.37	95.65		95.73	0.003466	3.02	183.71	282.66	0.37
Main3	6728.67*	Max WS	287.57	91.35	95.61		95.70	0.003752	3.10	177.71	286.89	0.39
Main3	6719.07*	Max WS	287.58	91.33	95.57		95.67	0.004285	3.27	170.61	288.87	0.41
Main3	6709.46*	Max WS	287.55	91.31	95.52		95.64	0.004971	3.45	161.14	293.38	0.44
Main3	6699.86*	Max WS	287.40	91.30	95.44		95.60	0.006577	3.85	142.81	296.64	0.51
Main3	6690.26*	Max WS	286.82	91.28	95.30	95.32	95.58	0.011348	4.78	107.76	291.10	0.66
Main3	6680.66*	Max WS	286.08	91.26	95.18	95.35	95.66	0.018881	5.84	77.57	287.01	0.83
Main3	6671.06	Max WS	164.40	91.24	95.08	95.02	95.32	0.009449	3.97	50.78	276.55	0.58
Trib1	4400	Max WS	19.20	101.24	102.94		102.94	0.000026	0.15	129.13	156.77	0.03
Trib1	4250	Max WS	19.19	100.77	101.33		101.41	0.024615	2.26	8.49	29.44	0.74
Trib1	4200	Max WS	19.48	100.19	100.77		100.78	0.004148	1.02	19.05	57.13	0.31
Trib1	4150	Max WS	1.64	100.17	100.66		100.66	0.000016	0.06	29.06	103.04	0.02
Trib1	4100	Max WS	15.38	99.80	100.61		100.61	0.000219	0.32	47.42	87.53	0.08
Trib1	4050	Max WS	20.76	100.07	100.29	100.29	100.37	0.057403	2.16	9.62	67.51	1.01
Trib1	4000	Max WS	21.13	99.35	99.85		99.88	0.008936	1.28	16.57	63.43	0.44
Trib1	3950	Max WS	21.51	98.83	99.46		99.49	0.009436	1.39	15.44	53.96	0.46
Trib1	3900	Max WS	21.90	98.64	99.18		99.20	0.004896	0.99	22.20	79.50	0.33
Trib1	3850	Max WS	21.84	98.56	98.86		98.92	0.044831	1.96	11.14	75.00	0.90
Trib1	3800	Max WS	21.91	97.84	98.68		98.68	0.000674	0.53	41.56	86.19	0.13
Trib1	3750	Max WS	22.34	97.89	98.37		98.41	0.011269	1.45	15.46	58.39	0.49
Trib1	3700	Max WS	22.64	97.25	98.01		98.03	0.006416	1.17	19.30	65.35	0.38
Trib1	3650	Max WS	23.14	97.20	97.85		97.86	0.002151	0.86	27.04	67.88	0.23
Trib1	3600	Max WS	23.62	97.08	97.59		97.62	0.007739	1.37	17.29	53.62	0.42
Trib1	3550	Max WS	23.89	96.58	97.31		97.33	0.004560	1.17	20.85	67.59	0.33
Trib1	3500	Max WS	24.35	96.24	97.05		97.07	0.005943	1.35	18.03	140.01	0.38
Trib1	3450	Max WS	24.44	95.98	96.53		96.58	0.017103	1.85	13.23	188.38	0.62
Trib1	3400	Max WS	25.53	95.52	96.17		96.18	0.003405	1.05	28.60	131.93	0.29
Trib1	3350	Max WS	26.60	95.47	96.07		96.08	0.002521	0.87	33.52	114.40	0.25
Trib1	3300	Max WS	27.68	95.40	95.96		95.97	0.002798	0.94	35.26	123.20	0.26
Trib1	3250	Max WS	28.74	95.18	95.80		95.82	0.006821	1.00	28.82	130.32	0.37
Trib1	3200	Max WS	29.84	95.07	95.61		95.62	0.004698	0.91	32.64	127.12	0.32
Trib1	3150	Max WS	30.93	94.68	95.49		95.50	0.000909	0.62	50.09	128.87	0.16
Trib1	3100	Max WS	32.03	94.83	95.37		95.39	0.004234	1.00	33.38	129.55	0.31
Trib1	3000.11	Max WS	34.11	94.48	95.02		95.03	0.003983	0.96	35.55	113.80	0.30
Trib1	2840.15	Max WS	37.25	93.86	94.65		94.66	0.002029	0.82	45.61	113.76	0.23
Trib1	2800	Max WS	38.04	93.56	94.57		94.59	0.003076	1.17	32.70	186.85	0.29
Trib1	2550	Max WS	42.98	92.95	94.06		94.07	0.001741	1.03	61.31	206.68	0.23
Trib1	2503.6	Max WS	44.05	92.81	93.98		94.00	0.001472	0.88	50.82	133.49	0.20
Trib1	2350	Max WS	47.02	92.69	93.69		93.71	0.002688	1.08	43.69	87.64	0.27
Trib1	2300	Max WS	47.97	92.51	93.60		93.62	0.001286	0.88	54.22	83.90	0.19
Trib1	2250	Max WS	48.92	92.52	93.53		93.54	0.001988	0.92	53.13	107.40	0.23
Trib1	2200	Max WS	49.88	92.51	93.45		93.46	0.001655	0.90	56.34	114.96	0.21
Trib1	2150	Max WS	50.83	92.48	93.35		93.37	0.002365	1.00	50.71	102.81	0.25
Trib1	2100	Max WS	51.36	92.33	93.15		93.19	0.009533	1.56	32.83	97.13	0.47
Trib1	2050	Max WS	51.98	92.16	93.00		93.01	0.002217	0.88	59.23	139.69	0.24
Trib1	2000	Max WS	52.49	92.24	92.93		92.94	0.001386	0.77	68.56	139.53	0.19
Trib1	1950	Max WS	52.51	92.08	92.86		92.88	0.002700	0.90	58.45	158.80	0.26
Trib1	1900	Max WS	52.76	91.99	92.83		92.83	0.000228	0.33	159.64	306.62	0.08
Trib1	1694.11	Max WS	63.29	91.37	92.50		92.53	0.003534	1.29	62.43	229.14	0.31
Trib1	1650	Max WS	63.97	91.11	92.42		92.44	0.001965	1.29	58.32	124.16	0.25
Trib1	1600	Max WS	64.71	91.25	92.24		92.29	0.004543	1.69	38.90	125.95	0.37
Trib1	1550	Max WS	65.17	91.01	92.09		92.12	0.002688	1.41	52.48	121.54	0.29
Trib1	1500	Max WS	65.84	90.92	91.99		92.01	0.002494	1.18	58.32	146.89	0.27
Trib1	1450	Max WS	66.57	90.63	91.87		91.90	0.003187	1.24	53.69	102.97	0.30
Trib1	1400	Max WS	67.25	90.50	91.75		91.78	0.003864	1.45	46.44	121.35	0.33
Trib1	1350	Max WS	68.02	90.50	91.66		91.68	0.001738	1.04	69.06	136.80	0.23
Trib1	1300	Max WS	68.78	90.50	91.57		91.59	0.002743	1.05	65.51	138.48	0.27
Trib1	1250	Max WS	69.63	90.54	91.41		91.44	0.006242	1.40	49.84	128.23	0.39
Trib1	1200	Max WS	70.48	90.27	91.14		91.19	0.007513	1.80	40.43	101.12	0.45
Trib1	1150	Max WS	71.33	90.13	90.95		90.97	0.003307	1.21	58.92	120.77	0.30
Trib1	1100	Max WS	72.17	90.10	90.82		90.84	0.003275	1.10	65.54	147.29	0.29
Trib1	1050	Max WS	73.03	90.06	90.62		90.65	0.006358	1.32	55.53	157.24	0.39
Trib1	1004.24	Max WS	70.71	89.67	90.37		90.40	0.005758	1.24	57.15	166.91	0.37

HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

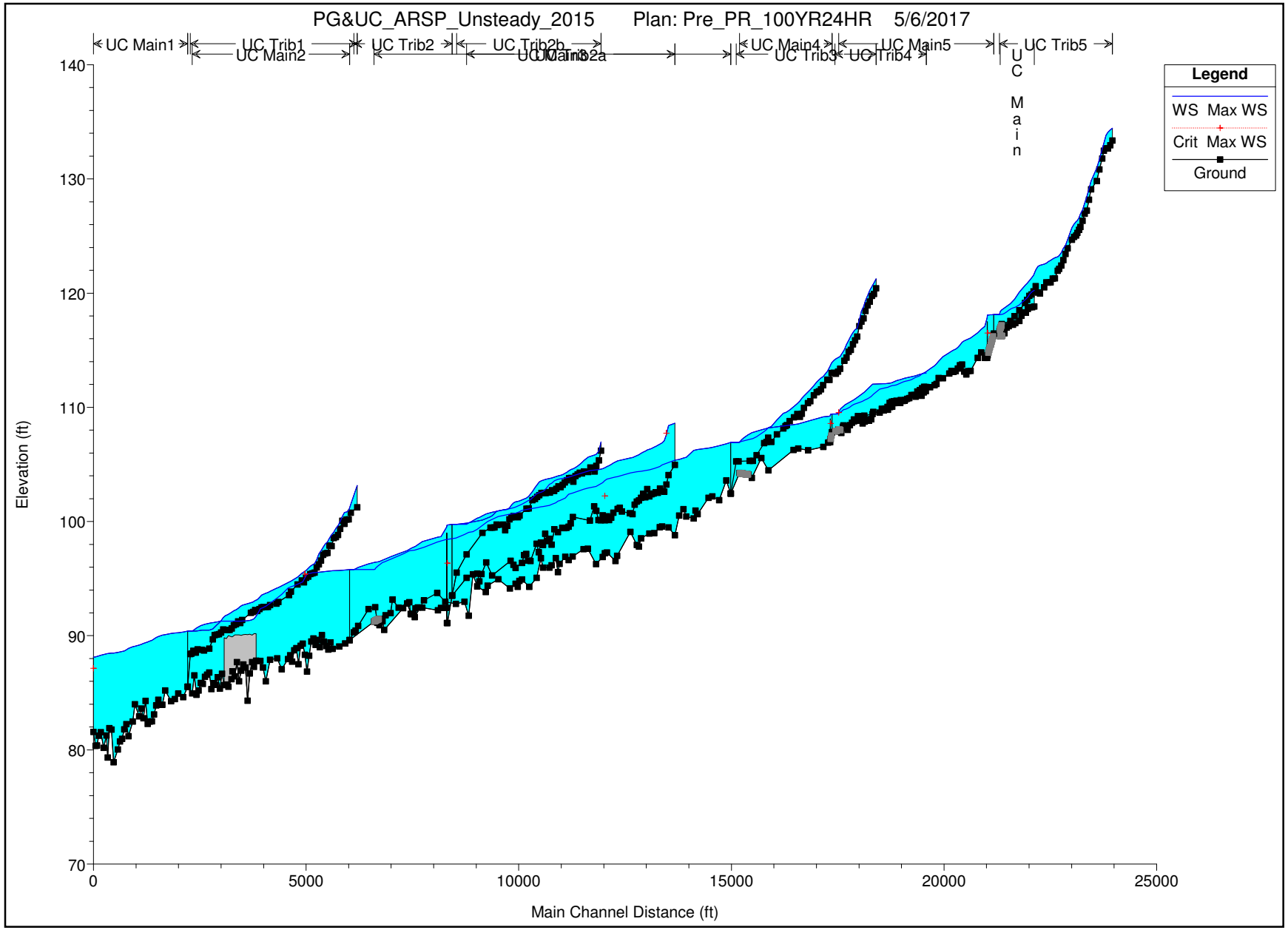
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib1	920.64	Max WS	67.96	88.86	90.18		90.19	0.000123	0.36	221.25	385.24	0.06
Trib1	800	Max WS	69.57	88.71	90.18		90.18	0.000019	0.15	453.34	416.02	0.03
Trib1	750	Max WS	70.20	88.77	90.18		90.18	0.000038	0.20	351.25	366.11	0.04
Trib1	650	Max WS	71.47	88.80	90.02		90.05	0.003570	1.44	49.53	252.80	0.32
Trib1	603.8	Max WS	25.48	88.51	89.90		89.90	0.000346	0.50	50.87	69.01	0.10
Trib1	550	Max WS	24.78	88.68	89.88		89.89	0.000185	0.37	69.73	105.11	0.08
Trib1	504.41	Max WS	24.61	88.43	89.88		89.88	0.000054	0.22	110.98	128.31	0.04
Trib1	478.55	Max WS	24.59	88.39	89.88		89.88	0.000036	0.18	139.27	190.49	0.03
Main2	6100	Max WS	463.95	89.62	95.08		95.09	0.000694	1.41	575.67	585.93	0.17
Main2	5995.41	Max WS	462.00	89.33	95.03		95.04	0.000344	1.19	817.62	667.31	0.12
Main2	5852.28	Max WS	460.90	89.05	95.00		95.01	0.000228	1.02	877.12	586.11	0.10
Main2	5700	Max WS	460.74	88.85	94.97		94.98	0.000191	0.89	884.10	593.17	0.09
Main2	5650	Max WS	460.82	89.40	94.96		94.97	0.000182	0.75	913.07	534.64	0.09
Main2	5600	Max WS	460.75	88.79	94.95		94.96	0.000362	1.20	669.65	516.84	0.13
Main2	5550	Max WS	460.60	89.09	94.92		94.94	0.000467	1.25	543.12	417.58	0.14
Main2	5500	Max WS	460.54	89.47	94.90		94.91	0.000510	1.20	555.43	368.27	0.14
Main2	5450	Max WS	460.44	90.05	94.87		94.88	0.000573	1.39	580.38	436.11	0.16
Main2	5400	Max WS	460.50	89.00	94.85		94.86	0.000330	1.39	661.14	481.34	0.13
Main2	5347.58	Max WS	460.49	89.63	94.83		94.84	0.000443	1.34	612.31	419.32	0.14
Main2	5300	Max WS	460.60	89.20	94.81		94.82	0.000396	1.21	631.71	413.20	0.13
Main2	5250	Max WS	460.75	89.77	94.79		94.80	0.000452	1.26	611.80	415.44	0.14
Main2	5200	Max WS	460.85	89.49	94.76		94.77	0.000540	1.24	549.79	360.78	0.15
Main2	5150	Max WS	461.00	88.25	94.73		94.75	0.000544	1.33	536.03	344.32	0.15
Main2	5100	Max WS	461.16	86.86	94.71		94.73	0.000282	1.59	582.25	347.22	0.12
Main2	5050	Max WS	460.99	88.33	94.23		94.88	0.010389	6.63	77.25	345.79	0.66
Main2	5000	Max WS	461.03	89.31	94.22		94.26	0.001695	2.16	371.45	400.84	0.26
Main2	4950	Max WS	461.04	89.11	94.14		94.18	0.001778	2.24	361.28	419.90	0.27
Main2	4900	Max WS	461.02	87.49	94.05		94.09	0.001654	2.16	364.86	431.62	0.26
Main2	4850	Max WS	461.06	88.91	93.96		94.01	0.001989	2.43	345.51	431.34	0.29
Main2	4800	Max WS	461.08	88.72	93.87		93.91	0.001889	2.21	378.18	437.37	0.28
Main2	4750	Max WS	461.17	87.72	93.80		93.84	0.001088	2.21	425.63	427.50	0.22
Main2	4700	Max WS	461.34	88.29	93.74		93.79	0.001130	2.09	401.23	421.16	0.23
Main2	4650	Max WS	461.44	87.95	93.67		93.73	0.001624	2.49	349.15	375.66	0.27
Main2	4504.57	Max WS	461.35	87.06	93.07		93.28	0.005628	3.81	169.13	265.27	0.48
Main2	4397.85	Max WS	461.74	88.02	92.81		92.85	0.001515	1.98	330.34	274.11	0.25
Main2	4231.14	Max WS	462.34	87.89	92.42		92.48	0.003238	2.62	305.82	369.24	0.35
Main2	4128.64	Max WS	462.75	86.00	92.20		92.24	0.001516	2.17	362.81	313.86	0.25
Main2	4061.14	Max WS	463.01	87.21	92.12		92.14	0.001207	1.82	390.10	314.81	0.22
Main2	4000	Max WS	463.26	87.79	92.06		92.08	0.000926	1.38	467.94	382.27	0.19
Main2	3950	Max WS	463.45	87.78	91.62	91.63	91.84	0.013845	5.09	184.62	369.92	0.72
Main2	3900	Max WS	463.62	87.81	91.28		91.34	0.004263	2.77	258.60	286.30	0.40
Main2	3875		Lat Struct									
Main2	3850	Max WS	364.03	87.27	91.06		91.16	0.005100	3.51	187.35	210.53	0.44
Main2	3808.17	Max WS	292.61	87.69	90.95		90.98	0.003594	1.91	215.99	282.77	0.34
Main2	3750	Max WS	210.49	86.70	90.84		90.85	0.001126	1.30	255.34	311.13	0.20
Main2	3700	Max WS	159.00	84.31	90.82		90.82	0.000368	0.83	303.35	323.57	0.12
Main2	3650	Max WS	117.31	87.21	90.80		90.80	0.000485	0.74	232.24	294.20	0.13
Main2	3600	Max WS	85.07	87.47	90.78		90.79	0.000277	0.51	227.41	288.73	0.09
Main2	3550.1	Max WS	61.55	86.93	90.77		90.77	0.000213	0.49	168.57	192.44	0.08
Main2	3500	Max WS	48.61	86.01	90.77		90.77	0.000044	0.36	206.09	190.51	0.04
Main2	3450	Max WS	33.87	87.68	90.77		90.77	0.000042	0.31	193.10	203.63	0.04
Main2	3400	Max WS	19.73	86.44	90.77		90.77	0.000015	0.20	187.62	213.22	0.02
Main2	3344.35	Max WS	3.11	86.87	90.77		90.77	0.000000	0.02	253.70	247.45	0.00
Main2	3320.7	Max WS	-4.43	86.20	90.77		90.77	0.000000	-0.03	264.86	260.56	0.00
Main2	3250	Max WS	-26.01	85.52	90.77		90.77	0.000006	-0.14	345.50	301.05	0.02
Main2	3200	Max WS	-42.47	85.71	90.77		90.77	0.000017	-0.19	312.88	238.82	0.03
Main2	3150	Max WS	-59.89	85.68	90.77		90.77	0.000032	-0.30	308.12	224.21	0.04
Main2	3100	Max WS	-59.55	86.67	90.77		90.77	0.000016	-0.17	560.17	545.74	0.02
Main2	3050	Max WS	-59.27	85.37	90.77		90.77	0.000012	-0.16	571.08	522.55	0.02
Main2	3000	Max WS	467.46	86.35	90.73		90.74	0.000886	1.49	559.44	618.01	0.19
Main2	2950	Max WS	467.59	85.70	90.69		90.70	0.000582	1.13	668.24	659.82	0.15
Main2	2900	Max WS	467.75	85.85	90.67		90.68	0.000537	1.23	656.14	605.60	0.15
Main2	2850	Max WS	468.04	85.33	90.64		90.65	0.000624	1.53	620.19	562.75	0.16
Main2	2800	Max WS	468.21	86.78	90.60		90.62	0.000697	1.37	578.20	542.27	0.17
Main2	2750.23	Max WS	468.50	86.59	90.56		90.58	0.000951	1.64	530.05	550.11	0.20
Main2	2700	Max WS	468.74	86.41	90.52		90.53	0.000918	1.64	528.99	579.89	0.20
Main2	2650	Max WS	468.98	85.77	90.46		90.48	0.001328	1.88	467.30	586.13	0.23
Main2	2600	Max WS	469.23	85.86	90.38		90.42	0.001626	2.21	410.52	565.71	0.26
Main2	2550	Max WS	469.50	85.20	90.29		90.33	0.001961	2.25	341.27	487.11	0.28
Main2	2500	Max WS	469.74	84.82	90.19		90.23	0.002241	2.18	335.14	450.10	0.29
Main2	2450	Max WS	469.51	86.53	90.03		90.10	0.003859	2.81	285.39	341.46	0.39
Main2	2397.32	Max WS	469.03	84.95	89.88		89.96	0.002092	2.69	304.10	356.43	0.30
Main1	2291.46	Max WS	493.63	85.53	89.88		89.90	0.001281	1.43	537.12	597.79	0.22
Main1	2189.07	Max WS	492.82	84.62	89.79		89.80	0.000618	1.37	715.44	715.72	0.16
Main1	2069.18	Max WS	492.25	84.93	89.72		89.73	0.000535	1.38	727.96	693.79	0.15

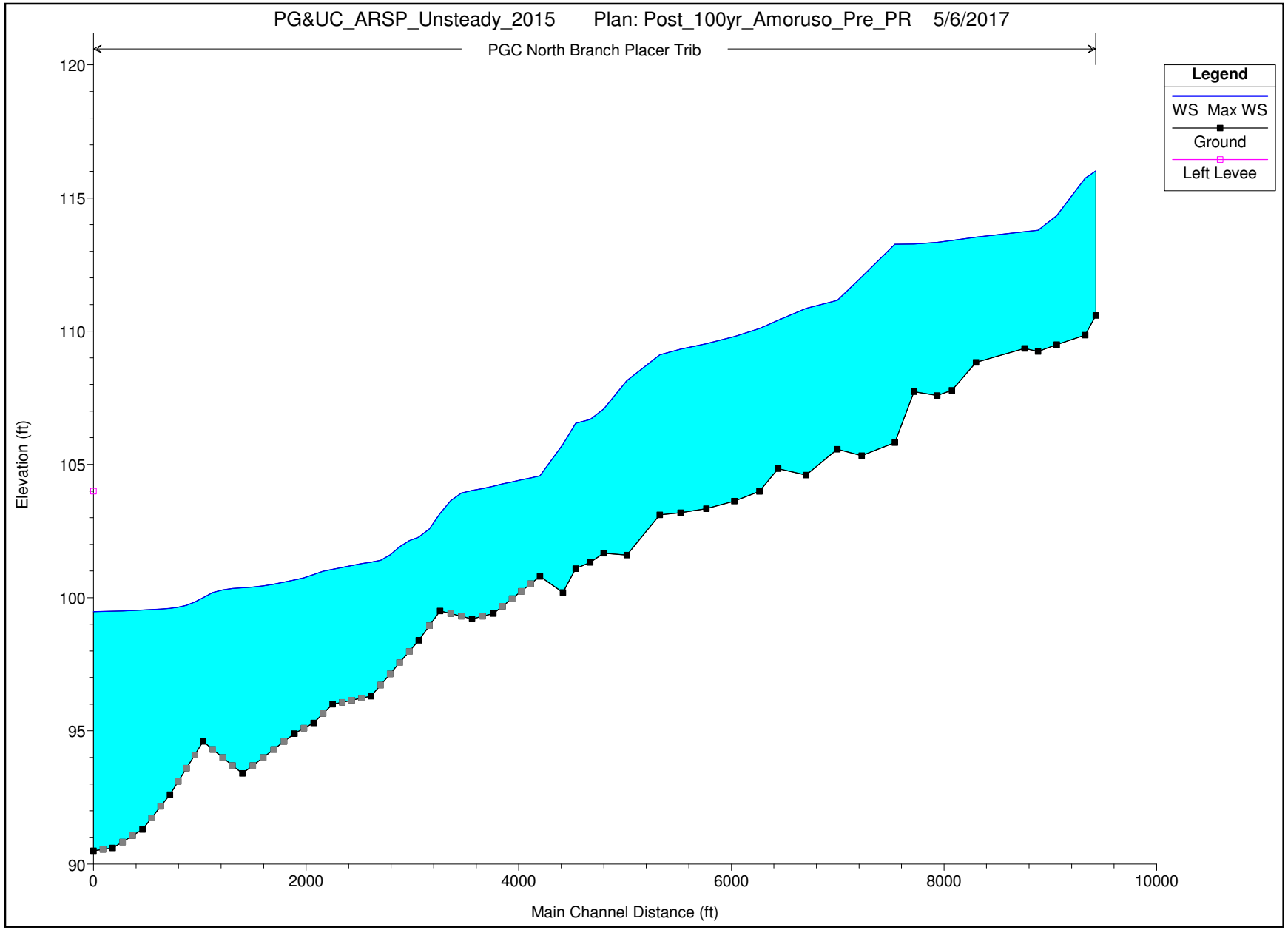
HEC-RAS Plan: PrePR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	1990.13	Max WS	492.34	84.45	89.69		89.70	0.000404	1.01	799.00	728.04	0.13
Main1	1902.51	Max WS	492.45	84.27	89.65		89.66	0.000492	1.44	737.41	704.94	0.15
Main1	1760.99	Max WS	492.68	85.19	89.53		89.56	0.001146	1.76	514.08	588.77	0.22
Main1	1698.99	Max WS	492.99	83.95	89.47		89.50	0.000945	2.11	515.76	530.02	0.20
Main1	1600	Max WS	493.52	84.38	89.35		89.39	0.001458	1.97	397.65	487.54	0.24
Main1	1550	Max WS	493.82	83.89	89.27		89.32	0.001576	2.33	360.99	417.76	0.26
Main1	1500	Max WS	493.93	83.11	89.13		89.22	0.003585	3.14	273.76	332.16	0.38
Main1	1450	Max WS	494.03	82.50	89.01		89.08	0.001812	2.62	317.08	314.24	0.28
Main1	1400	Max WS	494.21	82.49	88.94		88.99	0.001814	2.29	337.82	295.29	0.27
Main1	1350	Max WS	494.45	82.27	88.86		88.91	0.001528	2.15	359.48	306.23	0.25
Main1	1300	Max WS	494.59	84.29	88.79		88.83	0.001588	2.60	370.07	302.89	0.27
Main1	1250	Max WS	494.88	82.78	88.72		88.76	0.001414	2.28	378.74	306.17	0.24
Main1	1200	Max WS	495.04	83.63	88.65		88.70	0.001652	2.70	359.46	311.11	0.27
Main1	1150	Max WS	495.29	82.93	88.58		88.63	0.001078	2.40	405.37	315.08	0.22
Main1	1050	Max WS	495.73	84.00	88.49		88.52	0.001061	1.89	463.43	356.24	0.21
Main1	1000	Max WS	496.05	82.49	88.45		88.48	0.000803	1.88	496.66	374.96	0.18
Main1	902.45	Max WS	496.35	81.20	88.29		88.36	0.002030	3.06	336.71	344.85	0.28
Main1	850	Max WS	496.50	82.25	88.19		88.26	0.001897	2.84	303.57	341.60	0.29
Main1	800	Max WS	496.61	81.79	88.12		88.19	0.001520	2.90	350.64	421.47	0.26
Main1	750	Max WS	496.85	80.96	88.08		88.12	0.001026	2.30	437.23	441.23	0.21
Main1	700	Max WS	497.15	80.75	88.04		88.07	0.000946	1.96	471.23	478.61	0.20
Main1	650	Max WS	497.41	80.03	88.00		88.04	0.000725	2.10	508.53	508.11	0.18
Main1	550	Max WS	498.04	78.91	87.96		87.98	0.000407	1.61	639.67	543.54	0.14
Main1	500	Max WS	498.46	81.77	87.94		87.96	0.000396	1.44	706.88	722.40	0.14
Main1	450.28	Max WS	498.79	81.91	87.93		87.94	0.000300	1.29	771.04	770.55	0.12
Main1	411.53	Max WS	499.08	79.33	87.91		87.92	0.000500	1.52	664.11	752.86	0.15
Main1	381.37	Max WS	499.33	81.25	87.88		87.91	0.001019	1.97	527.11	747.14	0.21
Main1	316.15	Max WS	500.81	80.18	87.80		87.85	0.001300	2.27	464.21	807.00	0.24
Main1	250	Max WS	501.28	81.54	87.68		87.74	0.002355	2.71	356.92	663.23	0.31
Main1	200	Max WS	501.26	81.23	87.54		87.61	0.004038	2.65	303.84	404.84	0.38
Main1	161.78	Max WS	501.18	80.38	87.45		87.51	0.002116	2.25	356.36	440.82	0.29
Main1	126.68	Max WS	501.34	80.35	87.41		87.45	0.001577	1.88	412.01	547.19	0.25
Main1	76.78	Max WS	501.31	81.56	87.36	85.93	87.40	0.001329	2.29	467.94	677.28	0.24

HEC-RAS Plan: PostARSPPrePR10 River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	131.27	110.59	114.80		114.84	0.002158	1.62	119.66	118.50	0.17
Placer Trib	65.0000	Max WS	131.27	109.85	114.58		114.62	0.002136	1.70	79.61	34.88	0.18
Placer Trib	64.0000	Max WS	129.84	109.50	113.72		113.79	0.004061	2.25	72.26	76.94	0.24
Placer Trib	63.0000	Max WS	128.46	109.24	113.36		113.36	0.000444	0.69	303.73	252.51	0.08
Placer Trib	62.0000	Max WS	152.18	109.35	113.26		113.27	0.000994	1.01	164.59	545.72	0.12
Placer Trib	61.0000	Max WS	149.60	108.83	112.46		112.49	0.002438	1.69	143.28	385.49	0.18
Placer Trib	60.0000	Max WS	146.91	107.78	111.98		112.01	0.001786	1.58	157.83	195.26	0.16
Placer Trib	59.0000	Max WS	145.33	107.59	111.77		111.79	0.001390	1.19	201.80	185.18	0.14
Placer Trib	58.0000	Max WS	155.42	107.73	111.61		111.62	0.000145	0.42	438.14	356.50	0.05
Placer Trib	57.0000	Max WS	156.14	105.82	111.60		111.60	0.000069	0.28	772.41	413.98	0.03
Placer Trib	56.0000	Max WS	157.26	105.33	110.82		110.94	0.004694	2.77	59.05	204.59	0.25
Placer Trib	55.0000	Max WS	157.91	105.57	110.23		110.25	0.001081	1.11	207.35	173.73	0.12
Placer Trib	54.0000	Max WS	158.79	104.60	109.88		109.89	0.001325	1.25	232.22	261.90	0.13
Placer Trib	53.0000	Max WS	162.18	104.84	109.40		109.44	0.002166	1.72	137.76	129.51	0.18
Placer Trib	52.0000	Max WS	162.62	103.99	109.13		109.15	0.001065	1.17	190.54	141.96	0.12
Placer Trib	51.0000	Max WS	163.24	103.62	108.81		108.84	0.001521	1.41	125.32	179.98	0.15
Placer Trib	50.0000	Max WS	164.06	103.34	108.56		108.57	0.000557	1.00	284.44	174.38	0.09
Placer Trib	49.0000	Max WS	164.84	103.19	108.08		108.15	0.003060	2.08	91.16	222.37	0.21
Placer Trib	48.0000	Max WS	165.47	103.11	107.63		107.66	0.001911	1.40	122.12	92.49	0.16
Placer Trib	47.0000	Max WS	166.50	101.60	106.78		106.83	0.003437	1.92	86.78	338.34	0.22
Placer Trib	46.0000	Max WS	167.36	101.67	105.89		105.98	0.004452	2.57	83.11	67.51	0.26
Placer Trib	45.0000	Max WS	167.81	101.32	105.28		105.35	0.005451	2.32	103.87	124.76	0.27
Placer Trib	44.0000	Max WS	168.33	101.09	104.92		104.93	0.000405	0.72	249.92	149.63	0.08
Placer Trib	43.0000	Max WS	168.79	100.19	104.41		104.53	0.007089	2.78	60.77	23.92	0.31
Placer Trib	42	Max WS	184.87	100.80	103.63		103.64	0.000669	0.82	317.69	188.17	0.10
Placer Trib	41.12*	Max WS	185.10	100.52	103.57		103.58	0.000703	0.90	328.08	224.71	0.10
Placer Trib	40.24*	Max WS	185.39	100.24	103.51		103.52	0.000779	1.01	329.85	264.09	0.11
Placer Trib	39.36*	Max WS	185.63	99.96	103.43		103.44	0.000897	1.14	318.86	298.94	0.12
Placer Trib	38.48*	Max WS	185.89	99.68	103.35		103.36	0.001062	1.30	291.88	333.91	0.13
Placer Trib	37.6	Max WS	186.15	99.40	103.26		103.27	0.000923	1.26	263.30	276.31	0.12
Placer Trib	36.6*	Max WS	186.10	99.30	103.17		103.18	0.000891	1.20	303.29	297.29	0.12
Placer Trib	35.6	Max WS	186.09	99.20	103.11		103.12	0.000421	0.80	439.29	308.13	0.08
Placer Trib	34.6*	Max WS	186.08	99.30	103.04		103.05	0.000947	1.17	267.84	201.51	0.12
Placer Trib	33.6*	Max WS	186.08	99.40	102.77		102.83	0.003783	2.18	134.35	151.00	0.24
Placer Trib	32.6	Max WS	186.08	99.50	102.37		102.42	0.004334	2.06	132.09	119.79	0.24
Placer Trib	31.6*	Max WS	186.07	98.95	101.81		101.89	0.006524	2.38	113.98	154.07	0.30
Placer Trib	30.6	Max WS	186.06	98.40	101.49		101.49	0.000752	0.81	332.89	235.94	0.10
Placer Trib	29.7*	Max WS	186.05	97.98	101.39		101.40	0.001331	1.08	259.93	218.02	0.13
Placer Trib	28.8*	Max WS	186.05	97.56	101.20		101.23	0.002722	1.49	182.28	190.92	0.19
Placer Trib	27.9*	Max WS	186.01	97.14	100.75		100.81	0.006835	2.05	124.94	211.67	0.29
Placer Trib	27*	Max WS	185.94	96.72	100.36		100.38	0.002480	1.06	225.30	231.29	0.17
Placer Trib	26.1	Max WS	185.92	96.30	100.24		100.25	0.000337	0.38	455.68	300.41	0.06
Placer Trib	25.2*	Max WS	197.70	96.23	100.19		100.20	0.000847	0.79	339.29	291.28	0.10
Placer Trib	24.3*	Max WS	197.60	96.15	100.11		100.12	0.000996	1.01	278.44	254.79	0.12
Placer Trib	23.4*	Max WS	197.57	96.07	100.03		100.04	0.000701	0.95	268.68	210.07	0.10
Placer Trib	22.5	Max WS	197.55	96.00	99.98		99.99	0.000403	0.78	306.69	165.93	0.08
Placer Trib	21.6*	Max WS	197.51	95.65	99.93		99.94	0.000769	0.96	250.98	167.62	0.11
Placer Trib	20.7	Max WS	197.45	95.30	99.78		99.81	0.002175	1.33	160.90	118.07	0.17
Placer Trib	19.8*	Max WS	197.38	95.10	99.63		99.65	0.001475	1.10	185.03	117.00	0.14
Placer Trib	18.9	Max WS	197.30	94.90	99.51		99.53	0.001205	0.97	218.65	197.83	0.13
Placer Trib	17.92*	Max WS	204.78	94.60	99.40		99.42	0.001000	0.99	224.15	178.26	0.12
Placer Trib	16.94*	Max WS	204.73	94.30	99.31		99.33	0.000864	1.01	225.54	171.24	0.11
Placer Trib	15.96*	Max WS	204.64	94.00	99.23		99.24	0.000834	1.08	231.48	205.29	0.11
Placer Trib	14.98*	Max WS	204.58	93.70	99.17		99.18	0.000573	0.96	368.59	364.30	0.09
Placer Trib	14	Max WS	204.57	93.40	99.13		99.13	0.000212	0.60	599.39	376.40	0.06
Placer Trib	13.075*	Max WS	204.55	93.70	99.10		99.11	0.000422	0.86	441.47	320.30	0.08
Placer Trib	12.15*	Max WS	204.55	94.00	99.04		99.05	0.000874	1.22	304.54	270.98	0.12
Placer Trib	11.225*	Max WS	204.52	94.30	98.90		98.93	0.001842	1.71	184.04	219.69	0.17
Placer Trib	10.3	Max WS	204.39	94.60	98.67		98.72	0.002768	1.96	129.31	74.07	0.20
Placer Trib	9.525*	Max WS	204.14	94.10	98.47		98.51	0.002643	1.81	145.03	108.65	0.20
Placer Trib	8.75*	Max WS	203.55	93.60	98.26		98.30	0.002718	1.72	155.66	148.19	0.19
Placer Trib	7.975*	Max WS	202.44	93.10	98.08		98.11	0.002386	1.50	185.48	181.06	0.18
Placer Trib	7.2	Max WS	201.43	92.60	97.96		97.97	0.001086	0.97	279.06	216.87	0.12
Placer Trib	6.3333*	Max WS	200.24	92.17	97.88		97.89	0.000730	0.95	337.86	297.86	0.10
Placer Trib	5.46659*	Max WS	199.35	91.73	97.84		97.84	0.000346	0.77	425.54	286.74	0.07
Placer Trib	4.5999	Max WS	198.77	91.30	97.81		97.82	0.000206	0.67	486.83	261.57	0.06
Placer Trib	3.6666*	Max WS	197.98	91.07	97.79		97.80	0.000218	0.72	457.85	278.43	0.06
Placer Trib	2.7333*	Max WS	197.34	90.83	97.77		97.78	0.000221	0.74	420.46	285.16	0.06
Placer Trib	1.8	Max WS	196.42	90.60	97.75		97.76	0.000194	0.71	400.26	247.39	0.06
Placer Trib	0.9*	Max WS	196.09	90.55	97.74		97.74	0.000063	0.42	734.26	391.12	0.03
Placer Trib	0	Max WS	195.86	90.50	97.74		97.74	0.000058	0.41	674.97	264.74	0.03


PG&UC_ARSP_Unsteady_2015 Plan: Pre_PR_100YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC Trib2
UC Trib2b
UC Main3
UC Trib2a
UC Main4
UC Trib3
UC Trib4
UC Main5
UC Trib5
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
140
130
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_100yr_Amoruso_Pre_PR 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
120
115
110
105
100
95
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib5	2900	Max WS	40.81	133.37	134.44		134.46	0.003425	1.26	33.60	105.76	0.31
Trib5	2850	Max WS	39.86	132.96	134.29		134.31	0.003219	1.27	34.98	87.64	0.30
Trib5	2795.09	Max WS	42.23	132.69	134.09		134.14	0.004429	1.83	27.83	74.97	0.37
Trib5	2750	Max WS	45.02	132.69	133.82		133.89	0.008396	2.05	21.99	40.43	0.48
Trib5	2700	Max WS	48.46	132.48	133.15		133.28	0.024899	2.97	16.34	42.50	0.80
Trib5	2660.73	Max WS	51.15	131.78	132.61		132.69	0.010402	2.25	24.82	68.31	0.54
Trib5	2597.42	Max WS	54.77	130.84	131.71		131.85	0.021461	3.11	19.92	59.16	0.76
Trib5	2534.37	Max WS	59.29	129.81	130.96		131.01	0.004875	1.91	35.72	65.66	0.39
Trib5	2400	Max WS	68.82	129.10	129.83		129.93	0.012833	2.69	28.65	63.17	0.61
Trib5	2350	Max WS	72.48	128.19	129.13		129.27	0.015784	3.04	24.30	45.11	0.68
Trib5	2300	Max WS	76.13	127.22	128.46		128.58	0.013255	2.82	27.04	42.93	0.62
Trib5	2250	Max WS	79.76	126.96	127.88		128.00	0.011964	2.78	32.70	66.97	0.60
Trib5	2200	Max WS	83.38	126.33	127.29		127.42	0.012853	2.89	30.24	58.69	0.62
Trib5	2150	Max WS	86.96	125.79	126.93		126.99	0.004977	2.04	47.91	74.58	0.40
Trib5	2115.69	Max WS	89.44	125.55	126.61		126.72	0.011564	2.73	35.96	71.05	0.59
Trib5	2075.19	Max WS	113.40	125.27	126.37		126.40	0.002790	1.47	90.61	181.75	0.29
Trib5	2050	Max WS	116.09	125.04	126.28		126.33	0.003489	1.76	76.61	151.28	0.34
Trib5	2000	Max WS	119.68	124.92	126.04		126.11	0.005995	2.26	59.68	104.79	0.44
Trib5	1950	Max WS	123.22	124.67	125.74		125.81	0.007004	2.32	65.40	132.79	0.47
Trib5	1850	Max WS	122.93	123.93	124.69		124.78	0.018734	2.86	61.44	208.67	0.71
Trib5	1800	Max WS	124.90	123.43	124.19		124.23	0.006658	2.02	85.57	167.65	0.44
Trib5	1750	Max WS	127.18	122.89	123.92		123.96	0.004218	1.69	93.24	176.22	0.36
Trib5	1700	Max WS	128.65	122.42	123.53		123.61	0.010342	2.46	66.12	164.25	0.55
Trib5	1650	Max WS	127.74	122.12	123.28		123.31	0.001422	1.24	113.51	151.79	0.22
Trib5	1614.93	Max WS	123.83	121.96	123.19		123.23	0.002846	1.73	90.86	153.72	0.31
Trib5	1550	Max WS	123.71	121.29	123.10		123.11	0.000901	1.23	149.34	195.51	0.18
Trib5	1500	Max WS	186.40	121.27	122.99		123.03	0.002065	1.85	148.92	190.78	0.28
Trib5	1450	Max WS	187.67	120.95	122.86		122.92	0.002808	2.25	124.29	172.70	0.33
Trib5	1400	Max WS	189.26	120.93	122.76		122.80	0.001955	1.76	140.69	164.65	0.27
Trib5	1350	Max WS	190.25	120.94	122.63		122.68	0.003040	2.24	126.11	148.77	0.34
Trib5	1300	Max WS	191.33	120.51	122.54		122.57	0.001402	1.65	150.54	135.32	0.23
Trib5	1200	Max WS	195.14	119.97	122.43		122.45	0.000952	1.28	207.92	276.80	0.19
Trib5	1150	Max WS	197.29	120.06	122.34		122.38	0.002175	2.14	159.72	222.55	0.29
Trib5	1100	Max WS	199.43	120.61	122.02		122.16	0.008384	3.25	77.11	210.19	0.54
Trib5	1050	Max WS	201.56	120.15	121.57		121.73	0.009536	3.53	76.07	120.47	0.58
Trib5	1000	Max WS	203.63	119.89	121.31		121.38	0.004537	2.41	116.15	174.22	0.40
Trib5	950	Max WS	205.65	119.77	121.09		121.16	0.005068	2.22	105.76	152.38	0.41
Trib5	900	Max WS	207.77	119.41	120.87		120.95	0.004331	2.49	107.32	129.59	0.40
Trib5	850	Max WS	209.83	119.14	120.68		120.75	0.003654	2.36	107.56	122.38	0.37
Trib5	713.21	Max WS	215.94	118.49	120.09		120.19	0.004807	2.73	102.00	124.24	0.42
Trib5	600	Max WS	218.98	117.98	119.47		119.58	0.006094	2.92	93.27	164.22	0.47
Trib5	500	Max WS	215.43	117.57	119.08		119.13	0.002940	1.74	141.84	430.86	0.31
Trib5	300.47	Max WS	214.07	117.29	118.53		118.56	0.003002	1.40	155.34	381.23	0.30
Trib5	291.555*	Max WS	214.07	117.19	118.52		118.54	0.002312	1.26	191.42	320.74	0.26
Trib5	282.64*	Max WS	214.05	117.09	118.48		118.52	0.003118	1.49	161.80	302.56	0.31
Trib5	273.725*	Max WS	214.05	116.99	118.44		118.49	0.004222	1.76	137.65	268.13	0.36
Trib5	264.81*	Max WS	214.05	116.90	118.38		118.44	0.006058	2.09	115.50	222.02	0.43
Trib5	255.895*	Max WS	214.05	116.80	118.29		118.38	0.009963	2.59	97.51	193.78	0.55
Trib5	246.98	Max WS	214.04	116.70	118.12		118.27	0.020209	3.39	78.12	167.02	0.76
Main	22200	Max WS	72.18	118.83	120.25		120.27	0.001670	1.33	60.15	85.12	0.24
Main	22150	Max WS	71.97	118.76	120.14		120.17	0.002646	1.45	52.64	85.64	0.29
Main	22100	Max WS	74.59	118.77	119.95		119.99	0.004772	1.70	44.42	78.28	0.37
Main	22050	Max WS	77.20	118.62	119.66		119.72	0.006912	1.93	41.34	83.49	0.44
Main	22000	Max WS	79.64	118.29	119.47		119.50	0.002374	1.41	61.81	110.88	0.27
Main	21950	Max WS	81.95	118.31	119.32		119.36	0.004089	1.74	53.46	116.75	0.35
Main	21900	Max WS	84.32	118.02	119.17		119.20	0.003212	1.60	66.40	164.24	0.32
Main	21850	Max WS	85.57	117.57	118.97		119.03	0.005708	1.93	46.19	130.45	0.41
Main	21756.27	Max WS	89.90	117.37	118.77		118.78	0.000632	0.90	106.93	126.58	0.15
Main	21700	Max WS	92.53	117.24	118.71		118.73	0.001162	1.23	87.28	113.95	0.20
Main	21650	Max WS	94.89	117.25	118.63		118.66	0.001980	1.35	74.35	145.44	0.25
Main	21600	Max WS	96.92	117.11	118.50		118.54	0.002795	1.53	65.18	204.10	0.30
Main	21550	Max WS	98.40	116.98	118.35		118.40	0.003106	1.88	63.11	125.98	0.33
Main	21500	Max WS	98.99	116.48	118.22		118.26	0.002491	1.77	69.68	113.35	0.30
Main	21450	Max WS	99.92	116.27	118.15		118.18	0.000987	1.20	100.64	157.68	0.19
Main	21441.0*	Max WS	99.79	116.26	118.15		118.17	0.000910	1.15	109.71	161.87	0.18
Main	21432.1*	Max WS	99.65	116.26	118.14		118.16	0.000845	1.11	117.35	166.45	0.18
Main	21423.1*	Max WS	99.52	116.25	118.14		118.15	0.000763	1.05	126.15	170.98	0.17
Main	21414.1*	Max WS	99.52	116.24	118.13		118.15	0.000673	0.98	136.12	174.46	0.16
Main	21405.2*	Max WS	99.40	116.24	118.13		118.14	0.000580	0.91	147.20	178.54	0.14
Main	21396.29	Max WS	99.27	116.23	118.12		118.14	0.000784	1.05	130.37	197.70	0.17
Main5	21246.12	Max WS	313.20	116.44	118.12		118.13	0.000457	0.86	443.32	411.16	0.13
Main5	21227.8*	Max WS	313.19	116.21	118.12		118.12	0.000352	0.83	468.65	384.86	0.12
Main5	21209.5*	Max WS	313.10	115.97	118.11		118.12	0.000295	0.83	489.32	374.79	0.11
Main5	21191.3*	Max WS	313.09	115.74	118.11		118.11	0.000259	0.83	502.39	359.48	0.10
Main5	21173.0*	Max WS	313.15	115.50	118.10		118.11	0.000236	0.85	510.11	343.12	0.10

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main5	21154.7*	Max WS	313.10	115.26	118.10		118.11	0.000229	0.89	510.72	330.23	0.10
Main5	21136.5*	Max WS	313.08	115.03	118.09		118.10	0.000234	0.95	505.16	317.18	0.10
Main5	21118.2*	Max WS	313.07	114.79	118.09		118.10	0.000257	1.04	492.16	304.99	0.11
Main5	21100	Max WS	313.07	114.56	118.08	116.52	118.09	0.000316	1.20	467.25	292.32	0.12
Main5	21050		Inl Struct									
Main5	21037.73	Max WS	312.45	114.34	117.08		117.15	0.003776	2.96	194.19	236.71	0.39
Main5	20950.06	Max WS	312.90	114.81	116.83		116.88	0.003033	2.15	218.43	262.55	0.33
Main5	20867	Max WS	312.87	114.33	116.54		116.60	0.004782	2.58	192.56	291.32	0.41
Main5	20700	Max WS	312.04	113.19	116.08		116.11	0.001859	1.81	274.78	323.05	0.27
Main5	20650	Max WS	312.32	113.17	115.99		116.02	0.002223	1.89	257.23	318.12	0.29
Main5	20600	Max WS	312.83	112.88	115.90		115.94	0.001644	2.04	263.17	291.61	0.26
Main5	20550	Max WS	313.48	113.12	115.82		115.86	0.001777	2.04	251.82	263.76	0.27
Main5	20500	Max WS	314.09	113.75	115.69		115.75	0.003353	2.49	205.91	259.05	0.36
Main5	20450	Max WS	313.82	113.69	115.46		115.57	0.005759	3.12	165.27	287.62	0.47
Main5	20400	Max WS	313.49	113.39	115.24		115.32	0.004478	2.88	169.71	205.24	0.42
Main5	20351.92	Max WS	313.52	113.17	115.11		115.15	0.002527	2.29	219.97	234.82	0.32
Main5	20300	Max WS	313.44	113.10	115.01		115.04	0.001699	1.74	241.82	275.56	0.26
Main5	20250	Max WS	313.53	113.18	114.91		114.95	0.002568	2.21	238.44	279.60	0.32
Main5	20200	Max WS	313.90	112.96	114.79		114.82	0.002265	2.06	243.47	255.96	0.30
Main5	20050	Max WS	315.20	112.55	114.43		114.49	0.002509	2.23	218.91	255.72	0.31
Main5	19950	Max WS	315.59	112.56	114.04		114.12	0.006275	2.95	163.65	244.78	0.47
Main5	19900	Max WS	315.38	112.05	113.81		113.88	0.004336	2.69	182.02	228.01	0.40
Main5	19852.97	Max WS	314.63	111.94	113.64		113.69	0.003506	2.40	201.46	233.53	0.36
Main5	19746.96	Max WS	314.44	111.76	113.38		113.41	0.001841	1.87	286.75	327.90	0.27
Main5	19650	Max WS	309.84	111.42	113.10		113.17	0.003298	2.36	179.59	219.54	0.35
Main5	19600	Max WS	307.37	111.31	113.00		113.04	0.001929	1.86	224.36	245.48	0.27
Main5	19550	Max WS	304.91	111.01	112.93		112.96	0.001372	1.70	263.89	253.83	0.23
Main5	19500	Max WS	303.53	111.18	112.87		112.90	0.001082	1.46	316.91	338.35	0.21
Main5	19450	Max WS	301.27	111.38	112.81		112.83	0.001623	1.57	313.69	403.31	0.24
Main5	19400	Max WS	300.32	111.08	112.76		112.77	0.000679	1.09	444.00	456.57	0.16
Main5	19150	Max WS	300.43	110.58	112.55		112.57	0.000978	1.53	360.34	371.59	0.20
Main5	19050	Max WS	298.73	110.39	112.43		112.46	0.001337	1.70	287.85	330.09	0.23
Main5	19000	Max WS	297.73	110.49	112.38		112.40	0.000856	1.28	338.91	322.05	0.18
Main5	18950	Max WS	295.36	110.54	112.32		112.34	0.001523	1.57	264.35	307.63	0.24
Main5	18900	Max WS	289.06	110.53	112.24		112.27	0.001492	1.60	267.81	318.15	0.24
Main5	18850	Max WS	300.40	110.49	112.16		112.19	0.001695	1.68	277.41	356.87	0.25
Main5	18800	Max WS	284.89	110.40	112.11		112.12	0.000758	1.19	368.59	387.42	0.17
Main5	18750	Max WS	281.24	110.03	112.09		112.10	0.000358	0.90	507.70	492.18	0.12
Main5	18700	Max WS	280.92	109.89	112.08		112.08	0.000158	0.63	708.88	571.12	0.08
Main5	18650	Max WS	279.61	109.86	112.07		112.07	0.000169	0.59	667.05	544.10	0.08
Main5	18397.57	Max WS	279.57	109.41	112.03		112.03	0.000217	0.84	603.04	479.72	0.10
Main5	18200	Max WS	291.84	109.28	111.33		111.35	0.001178	1.36	295.58	302.90	0.21
Main5	18050	Max WS	293.59	109.24	110.92		110.98	0.004415	2.76	180.18	230.35	0.41
Main5	17955.7	Max WS	294.28	108.94	110.65		110.68	0.001895	1.79	251.10	250.72	0.27
Main5	17750	Max WS	297.08	108.17	110.22		110.27	0.002243	2.02	219.02	277.93	0.29
Main5	17700	Max WS	297.59	108.29	110.06		110.13	0.003933	2.26	167.05	226.21	0.37
Main5	17650	Max WS	297.68	107.99	109.89		109.95	0.003667	2.27	187.82	283.99	0.36
Main5	17641.6*	Max WS	296.83	108.00	109.85		109.92	0.004129	2.43	177.86	273.23	0.39
Main5	17633.3*	Max WS	295.59	108.02	109.80		109.88	0.004744	2.63	167.84	264.59	0.42
Main5	17625.*	Max WS	291.58	108.03	109.76		109.85	0.005619	2.88	158.73	275.30	0.45
Main5	17616.6*	Max WS	288.50	108.04	109.71		109.81	0.006263	3.05	153.18	263.32	0.48
Main5	17608.3*	Max WS	278.67	108.06	109.66		109.76	0.006663	3.16	148.85	255.67	0.49
Main5	17600	Max WS	333.46	108.07	109.42	109.54	109.91	0.035033	6.47	72.95	191.55	1.10
Trib4	2650	Max WS	121.36	111.78	113.01		113.01	0.000541	0.62	195.11	267.82	0.13
Trib4	2600	Max WS	120.75	111.81	112.97		112.98	0.000942	0.74	164.93	280.90	0.17
Trib4	2550	Max WS	119.99	111.67	112.94		112.95	0.000611	0.66	180.93	247.03	0.14
Trib4	2500	Max WS	252.25	111.51	112.79		112.83	0.003779	1.77	147.47	237.81	0.35
Trib4	2450	Max WS	252.02	111.12	112.70		112.72	0.001301	1.13	229.44	286.36	0.21
Trib4	2400	Max WS	253.41	110.93	112.62		112.64	0.001584	1.20	214.42	273.83	0.23
Trib4	2350	Max WS	253.98	111.08	112.53		112.56	0.001936	1.30	200.55	265.45	0.25
Trib4	2300	Max WS	253.92	111.07	112.43		112.46	0.002199	1.24	207.41	313.48	0.26
Trib4	2250	Max WS	254.37	110.81	112.36		112.38	0.001072	1.00	261.83	347.33	0.19
Trib4	2200	Max WS	255.51	110.75	112.32		112.34	0.000702	0.94	313.27	331.38	0.16
Trib4	2150	Max WS	257.36	110.64	112.28		112.29	0.000982	1.02	253.74	266.41	0.18
Trib4	2100	Max WS	258.67	110.56	112.21		112.23	0.001499	1.19	217.76	243.06	0.22
Trib4	2050	Max WS	259.50	110.63	112.12		112.16	0.001739	1.55	196.09	227.94	0.25
Trib4	1950	Max WS	260.20	110.57	111.97		112.00	0.001511	1.44	204.51	229.80	0.23
Trib4	1900	Max WS	261.49	110.36	111.93		111.95	0.000708	1.01	269.99	260.33	0.16
Trib4	1850	Max WS	262.67	110.06	111.89		111.91	0.000792	1.05	259.55	247.24	0.17
Trib4	1800	Max WS	264.53	110.02	111.84		111.86	0.001216	1.27	226.47	239.96	0.21
Trib4	1747.14	Max WS	265.73	109.80	111.77		111.80	0.001281	1.38	219.66	253.07	0.22
Trib4	1700	Max WS	266.98	109.83	111.72		111.74	0.001137	1.26	230.56	272.13	0.20
Trib4	1650	Max WS	268.33	109.73	111.68		111.69	0.000680	1.00	292.94	302.13	0.16
Trib4	1600	Max WS	269.85	109.88	111.63		111.65	0.000997	1.16	247.13	277.34	0.19
Trib4	1550	Max WS	271.45	109.54	111.60		111.62	0.000488	0.95	324.51	272.22	0.14

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib4	1400	Max WS	275.47	109.60	111.13		111.22	0.005401	2.71	144.96	252.51	0.44
Trib4	1350	Max WS	276.52	108.96	110.95		111.01	0.003197	1.89	163.55	236.34	0.33
Trib4	1300	Max WS	277.45	108.83	110.83		110.87	0.002507	1.69	202.36	294.94	0.29
Trib4	1250	Max WS	278.33	108.93	110.73		110.76	0.001929	1.93	240.41	277.97	0.27
Trib4	1200	Max WS	279.28	108.75	110.65		110.67	0.001605	1.70	262.59	279.66	0.25
Trib4	1150	Max WS	279.95	108.59	110.53		110.58	0.002571	2.25	216.64	280.23	0.32
Trib4	1097.41	Max WS	281.05	108.83	110.46		110.47	0.000909	1.33	330.07	331.62	0.19
Trib4	950	Max WS	284.10	108.77	110.26		110.29	0.002093	1.75	252.83	327.27	0.28
Trib4	900	Max WS	285.24	108.64	110.15		110.18	0.002266	1.76	247.59	344.00	0.28
Trib4	850	Max WS	286.28	108.45	110.03		110.06	0.002973	2.05	232.89	364.46	0.33
Trib4	800	Max WS	287.23	108.03	109.91		109.94	0.001995	1.95	253.99	362.10	0.28
Trib4	750	Max WS	288.40	108.34	109.83		109.85	0.001781	1.50	297.15	410.44	0.25
Trib4	700	Max WS	289.29	108.43	109.79		109.80	0.000617	0.97	421.39	415.96	0.15
Trib4	650	Max WS	289.48	107.75	109.62		109.72	0.004566	2.58	140.13	388.41	0.41
Trib4	600	Max WS	289.56	107.89	109.54		109.56	0.001294	1.59	302.20	418.13	0.23
Trib4	550	Max WS	286.21	107.93	109.46		109.48	0.002129	1.91	273.32	395.44	0.28
Trib4	540.*	Max WS	284.98	107.93	109.45		109.46	0.001493	1.58	305.31	379.13	0.24
Trib4	530.*	Max WS	282.65	107.93	109.43		109.45	0.001452	1.55	298.04	341.79	0.23
Trib4	520.*	Max WS	208.42	107.92	109.42		109.43	0.000822	1.16	299.41	353.30	0.18
Trib4	510.*	Max WS	202.88	107.92	109.42		109.43	0.000572	0.96	327.92	342.62	0.15
Trib4	500	Max WS	151.67	107.92	109.42		109.42	0.000217	0.59	369.81	338.53	0.09
Main4	17447.12	Max WS	485.13	107.81	109.42		109.42	0.000731	1.08	696.92	706.04	0.16
Main4	17428.3*	Max WS	467.53	107.52	109.40		109.41	0.000802	1.19	659.71	785.71	0.18
Main4	17409.5*	Max WS	467.12	107.23	109.39	108.58	109.40	0.000618	1.11	694.18	761.86	0.16
Main4	17400		Inl Struct									
Main4	17390.78	Max WS	469.40	106.94	109.24		109.25	0.000607	1.10	659.99	725.34	0.15
Main4	17350	Max WS	468.76	106.91	109.22		109.23	0.000639	1.18	667.64	682.11	0.16
Main4	17239.4	Max WS	477.06	106.54	109.16		109.17	0.000542	1.20	690.84	617.79	0.15
Main4	16882.6	Max WS	473.70	106.24	108.79		108.82	0.001589	2.25	395.65	373.91	0.27
Main4	16650	Max WS	476.24	106.39	108.54		108.55	0.000831	1.40	534.28	470.83	0.18
Main4	16536.56	Max WS	475.64	106.27	108.47		108.48	0.000433	1.01	685.37	494.12	0.13
Main4	15950	Max WS	470.55	104.49	108.18		108.19	0.000582	1.28	645.57	540.61	0.16
Main4	15779.58	Max WS	472.03	105.55	108.02		108.04	0.001051	1.75	481.85	497.48	0.21
Main4	15556.6	Max WS	470.88	103.82	107.77		107.79	0.000951	1.90	482.49	494.52	0.21
Main4	15479	Max WS	469.25	104.11	107.62		107.68	0.002687	3.00	330.94	502.46	0.34
Main4	15469.0*	Max WS	470.13	104.12	107.59		107.66	0.002762	3.02	318.58	496.61	0.35
Main4	15459.1*	Max WS	470.39	104.12	107.57		107.62	0.002436	2.81	315.43	491.04	0.33
Main4	15449.2*	Max WS	469.94	104.13	107.54		107.60	0.002449	2.79	312.96	485.18	0.33
Main4	15439.3*	Max WS	469.96	104.14	107.52		107.58	0.002485	2.78	310.00	479.58	0.33
Main4	15429.4*	Max WS	469.41	104.14	107.49		107.55	0.002518	2.76	307.17	474.26	0.33
Main4	15419.4*	Max WS	469.17	104.15	107.47		107.53	0.002559	2.75	304.08	468.15	0.33
Main4	15409.5*	Max WS	468.79	104.16	107.44		107.50	0.002618	2.74	300.80	463.19	0.33
Main4	15399.6*	Max WS	468.26	104.16	107.41		107.47	0.002689	2.73	297.44	459.08	0.34
Main4	15389.7*	Max WS	468.25	104.17	107.39		107.45	0.002767	2.72	293.97	453.75	0.34
Main4	15379.8*	Max WS	468.34	104.18	107.36		107.42	0.002850	2.71	290.46	448.36	0.34
Main4	15369.8*	Max WS	468.27	104.18	107.33		107.39	0.002951	2.70	286.58	442.11	0.35
Main4	15359.9*	Max WS	468.17	104.19	107.30		107.36	0.003070	2.69	282.35	428.16	0.35
Main4	15350.0*	Max WS	468.16	104.20	107.27		107.33	0.003177	2.68	279.05	411.98	0.36
Main4	15340.1*	Max WS	467.85	104.20	107.24		107.30	0.003303	2.67	275.39	395.46	0.36
Main4	15330.2*	Max WS	467.90	104.21	107.20		107.27	0.003462	2.66	271.89	383.96	0.37
Main4	15320.2*	Max WS	467.83	104.22	107.17		107.23	0.003667	2.66	267.74	375.31	0.38
Main4	15310.3*	Max WS	467.61	104.22	107.13		107.19	0.003934	2.67	262.69	368.25	0.39
Main4	15300.4*	Max WS	467.58	104.23	107.09		107.16	0.004292	2.69	256.43	360.52	0.40
Main4	15290.5*	Max WS	467.68	104.24	107.04		107.11	0.004600	2.68	249.64	346.72	0.41
Main4	15280.6*	Max WS	467.58	104.24	106.99		107.06	0.005152	2.71	240.97	327.94	0.43
Main4	15270.69	Max WS	467.55	104.25	106.93		107.01	0.005943	2.77	230.58	305.85	0.45
Trib3	4150	Max WS	109.59	120.42	121.25		121.32	0.010530	2.12	51.64	104.12	0.53
Trib3	4100	Max WS	109.47	119.92	120.90		120.95	0.005125	1.79	61.91	101.39	0.39
Trib3	4050	Max WS	109.45	119.76	120.58		120.64	0.008408	2.01	54.50	100.85	0.48
Trib3	4000	Max WS	109.41	119.27	120.25		120.30	0.005945	1.86	58.86	94.30	0.41
Trib3	3950	Max WS	109.36	118.94	119.78		119.87	0.013772	2.40	45.56	93.38	0.61
Trib3	3900	Max WS	109.32	118.43	119.36		119.41	0.006690	1.89	57.77	98.48	0.44
Trib3	3850	Max WS	109.30	117.79	118.80		118.91	0.015775	2.66	41.12	81.21	0.65
Trib3	3800	Max WS	79.04	117.50	118.44		118.46	0.002205	1.11	71.98	169.66	0.25
Trib3	3750	Max WS	109.36	117.11	117.65		117.75	0.042588	2.53	43.28	191.71	0.94
Trib3	3700	Max WS	109.22	116.20	116.93		116.96	0.005140	1.39	78.38	176.15	0.37
Trib3	3650	Max WS	109.19	115.86	116.79		116.81	0.002262	1.13	96.72	158.64	0.25
Trib3	3600	Max WS	109.14	115.51	116.56		116.61	0.007106	1.77	61.54	120.97	0.44
Trib3	3550	Max WS	109.13	115.04	116.24		116.31	0.005970	2.05	57.08	95.13	0.43
Trib3	3500	Max WS	109.09	114.87	115.86		115.94	0.009750	2.22	49.12	97.01	0.52
Trib3	3450	Max WS	109.09	114.35	115.51		115.56	0.006503	1.89	57.65	96.20	0.43
Trib3	3400	Max WS	109.05	114.09	115.05		115.14	0.011060	2.42	45.12	77.66	0.56
Trib3	3300	Max WS	108.66	113.37	114.45		114.48	0.002583	1.30	83.81	123.42	0.28
Trib3	3250	Max WS	108.51	113.13	114.35		114.37	0.002404	1.23	87.90	131.98	0.27
Trib3	3200	Max WS	108.45	112.94	114.24		114.27	0.002199	1.52	79.98	121.13	0.27

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib3	3150	Max WS	108.39	113.02	114.10		114.14	0.003839	1.55	69.73	105.26	0.34
Trib3	3100	Max WS	108.35	113.01	113.89		113.94	0.007044	1.77	61.27	120.15	0.44
Trib3	3050	Max WS	108.30	112.41	113.50		113.58	0.011398	2.61	54.61	190.10	0.58
Trib3	3000	Max WS	108.14	112.43	113.14		113.18	0.008012	1.99	78.10	218.80	0.47
Trib3	2900	Max WS	107.73	111.94	112.69		112.71	0.003947	1.36	98.37	218.45	0.33
Trib3	2850	Max WS	107.69	111.57	112.57		112.59	0.002121	1.11	97.92	168.11	0.25
Trib3	2800	Max WS	107.67	111.41	112.41		112.45	0.003877	1.64	69.55	119.15	0.34
Trib3	2750	Max WS	107.64	111.33	112.21		112.25	0.004807	1.54	69.98	127.63	0.37
Trib3	2685.69	Max WS	107.59	111.05	111.90		111.95	0.005155	1.72	68.08	140.77	0.39
Trib3	2600	Max WS	107.47	110.54	111.56		111.59	0.003836	1.28	83.75	168.47	0.32
Trib3	2542.55	Max WS	107.37	110.38	111.34		111.38	0.004382	1.89	82.00	178.41	0.37
Trib3	2450	Max WS	107.28	109.96	111.00		111.04	0.003986	1.74	72.63	162.36	0.35
Trib3	2400	Max WS	107.21	109.44	110.79		110.85	0.005111	2.28	73.45	163.98	0.41
Trib3	2353.17	Max WS	107.16	109.16	110.56		110.63	0.005566	2.34	68.63	162.08	0.43
Trib3	2293.77	Max WS	107.10	109.42	110.33		110.36	0.003911	1.43	76.22	150.35	0.33
Trib3	2216.78	Max WS	107.00	109.12	110.08		110.10	0.003345	1.29	83.19	157.05	0.30
Trib3	2117.56	Max WS	106.33	108.79	109.78		109.80	0.003475	1.25	85.53	178.09	0.31
Trib3	2050	Max WS	105.90	108.45	109.61		109.63	0.002790	1.17	90.48	164.50	0.28
Trib3	2014.8	Max WS	105.76	108.36	109.55		109.56	0.001689	1.00	106.07	168.28	0.22
Trib3	1963.01	Max WS	105.65	108.16	109.48		109.49	0.001653	1.01	105.12	162.14	0.22
Trib3	1814.06	Max WS	105.42	107.64	108.89		108.94	0.007170	1.73	60.95	130.50	0.44
Trib3	1680.02	Max WS	104.99	106.98	108.33		108.35	0.002726	1.21	86.78	192.55	0.28
Trib3	1611.69	Max WS	104.92	107.34	108.22		108.23	0.001377	0.78	205.96	537.78	0.19
Trib3	1567.88	Max WS	128.78	106.98	108.06		108.10	0.005251	1.94	80.35	410.37	0.40
Trib3	1515.42	Max WS	128.05	106.86	107.89		107.90	0.002956	1.06	126.02	313.39	0.28
Trib3	1339.26	Max WS	126.08	105.80	107.42		107.46	0.002777	1.65	76.99	95.19	0.30
Trib3	1245.45	Max WS	123.49	105.31	107.26		107.28	0.001240	1.29	117.90	180.91	0.21
Trib3	1172.67	Max WS	120.76	105.31	107.20		107.21	0.000637	1.16	190.11	348.21	0.16
Trib3	911.97	Max WS	83.08	105.27	106.95		106.97	0.000648	1.00	114.39	261.32	0.15
Trib3	856.45	Max WS	79.73	105.26	106.93		106.94	0.000307	0.71	192.44	345.24	0.11
Trib2b	3500	Max WS	59.73	106.21	106.96		107.12	0.027084	3.54	20.95	52.87	0.86
Trib2b	3450	Max WS	59.71	105.35	106.18		106.25	0.008461	2.31	30.51	70.02	0.50
Trib2b	3389.72	Max WS	61.21	104.88	105.89		105.91	0.002409	1.25	57.82	128.95	0.27
Trib2b	3352.29	Max WS	62.07	104.38	105.83		105.85	0.001385	1.33	66.25	104.33	0.22
Trib2b	3300	Max WS	63.44	104.63	105.77		105.79	0.000863	0.93	76.95	109.61	0.17
Trib2b	3250	Max WS	64.79	104.73	105.71		105.73	0.001472	1.02	69.24	117.53	0.21
Trib2b	3203.29	Max WS	66.20	104.34	105.65		105.66	0.001475	1.20	78.16	149.52	0.22
Trib2b	3100	Max WS	69.09	104.37	105.36		105.38	0.004815	1.45	59.59	180.45	0.36
Trib2b	3050	Max WS	70.56	104.22	105.17		105.19	0.003703	1.36	65.12	226.11	0.32
Trib2b	3000	Max WS	72.13	104.27	104.99		105.02	0.003598	1.34	69.45	182.89	0.32
Trib2b	2950	Max WS	73.67	104.12	104.85		104.87	0.003068	1.22	71.83	174.51	0.29
Trib2b	2900	Max WS	75.17	103.98	104.72		104.74	0.003153	1.29	73.83	165.20	0.30
Trib2b	2850	Max WS	76.79	103.49	104.63		104.65	0.001283	1.03	85.65	166.90	0.20
Trib2b	2800	Max WS	78.59	103.81	104.57		104.58	0.001789	0.98	106.18	213.36	0.23
Trib2b	2750	Max WS	80.27	103.79	104.46		104.47	0.002992	1.09	93.65	218.25	0.28
Trib2b	2700	Max WS	81.78	103.62	104.32		104.34	0.002717	1.20	78.71	197.08	0.28
Trib2b	2650	Max WS	83.17	103.42	104.22		104.24	0.001689	0.94	94.99	202.80	0.22
Trib2b	2600	Max WS	83.74	103.22	104.11		104.13	0.002819	1.15	82.28	199.37	0.28
Trib2b	2550	Max WS	84.99	103.01	104.05		104.05	0.000475	0.59	169.01	267.72	0.12
Trib2b	2500	Max WS	86.93	103.07	104.01		104.02	0.001037	0.82	107.30	171.30	0.18
Trib2b	2450	Max WS	88.36	102.87	103.95		103.96	0.001351	0.89	99.38	165.14	0.20
Trib2b	2400	Max WS	89.60	102.68	103.89		103.90	0.001352	0.90	100.08	158.03	0.20
Trib2b	2350	Max WS	91.03	102.74	103.82		103.83	0.001273	0.88	105.06	191.90	0.19
Trib2b	2300	Max WS	92.44	102.54	103.78		103.79	0.000757	0.85	131.30	203.96	0.16
Trib2b	2250	Max WS	94.05	102.58	103.74		103.75	0.000814	0.82	128.65	200.99	0.16
Trib2b	2200	Max WS	95.68	102.50	103.69		103.70	0.001104	0.91	116.21	210.95	0.18
Trib2b	2150	Max WS	97.38	102.52	103.64		103.65	0.001106	0.86	114.34	181.37	0.18
Trib2b	2100	Max WS	99.10	102.50	103.57		103.59	0.001434	0.96	109.38	210.56	0.21
Trib2b	2050	Max WS	100.76	102.30	103.46		103.48	0.002854	1.21	98.89	219.91	0.28
Trib2b	2000	Max WS	102.48	102.16	103.22		103.27	0.006628	1.72	59.53	191.80	0.42
Trib2b	1950	Max WS	104.18	101.98	102.97		103.01	0.005556	1.82	78.29	220.73	0.40
Trib2b	1887.66	Max WS	106.10	101.86	102.61		102.65	0.008502	1.87	71.69	207.18	0.48
Trib2b	1800	Max WS	108.93	101.14	102.20		102.21	0.003376	1.22	106.67	222.40	0.30
Trib2b	1750	Max WS	110.20	101.12	102.05		102.07	0.003199	1.21	94.72	214.18	0.30
Trib2b	1587.06	Max WS	114.66	100.52	101.80		101.81	0.000425	0.62	189.48	259.39	0.12
Trib2b	1547.11	Max WS	115.87	100.38	101.77		101.78	0.000816	0.87	164.83	261.50	0.16
Trib2b	1494.66	Max WS	117.44	100.39	101.72		101.73	0.001474	0.90	150.89	335.55	0.21
Trib2b	1450	Max WS	119.05	100.48	101.64		101.66	0.001900	1.16	115.15	217.96	0.24
Trib2b	1400	Max WS	120.61	100.35	101.46		101.50	0.006055	1.98	90.32	229.50	0.42
Trib2b	1350	Max WS	121.40	100.19	101.20		101.23	0.006767	1.49	81.28	200.86	0.41
Trib2b	1300	Max WS	122.12	99.63	101.06		101.07	0.000616	0.70	174.96	227.68	0.14
Trib2b	1250	Max WS	123.18	99.24	101.04		101.05	0.000343	0.67	210.81	264.27	0.11
Trib2b	1200	Max WS	124.48	99.73	101.02		101.02	0.000654	0.71	176.43	231.09	0.14
Trib2b	1064.85	Max WS	127.63	99.70	100.92		100.92	0.000850	0.85	178.93	254.88	0.16
Trib2b	1050	Max WS	127.86	99.74	100.90		100.91	0.001115	0.91	165.43	259.24	0.19

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1000	Max WS	129.70	99.49	100.70		100.76	0.006158	1.97	73.07	272.09	0.43
Trib2b	950	Max WS	130.59	99.47	100.53		100.55	0.002435	1.33	133.35	279.26	0.27
Trib2b	902.71	Max WS	131.84	99.46	100.42		100.44	0.002179	1.12	131.52	340.02	0.25
Trib2b	715.36	Max WS	132.81	99.00	100.13		100.14	0.001173	0.84	162.19	324.31	0.19
Trib2b	339.81	Max WS	117.26	97.12	99.86		99.86	0.000414	0.84	213.58	268.27	0.12
Trib2b	106.24	Max WS	113.70	95.53	99.76		99.77	0.000419	1.05	147.42	132.53	0.13
Trib2a	7650	Max WS	532.85	104.96	108.62		108.63	0.000640	1.40	583.19	368.06	0.17
Trib2a	7500.06	Max WS	531.90	104.07	108.39		108.43	0.002151	2.75	363.26	274.81	0.30
Trib2a	7450	Max WS	557.97	103.23	107.60	107.75	108.18	0.021921	7.99	156.56	282.70	0.93
Trib2a	7400	Max WS	581.99	102.62	107.07		107.20	0.007045	4.49	268.38	320.44	0.52
Trib2a	7350	Max WS	578.99	102.67	106.88		106.93	0.002976	2.48	368.07	335.78	0.34
Trib2a	7300	Max WS	577.50	102.88	106.78		106.81	0.001848	2.10	435.89	344.80	0.27
Trib2a	7250	Max WS	576.14	102.52	106.68		106.72	0.002000	2.27	415.68	333.36	0.29
Trib2a	7200	Max WS	574.91	102.55	106.58		106.62	0.001842	2.38	409.23	299.30	0.28
Trib2a	7150	Max WS	573.72	102.46	106.49		106.53	0.001968	2.38	390.04	273.28	0.28
Trib2a	7100	Max WS	572.26	102.39	106.39		106.43	0.001981	2.32	373.14	263.42	0.29
Trib2a	7050	Max WS	571.52	102.20	106.32		106.36	0.001076	2.18	423.51	251.69	0.22
Trib2a	7000	Max WS	571.17	102.84	106.26		106.30	0.001211	2.04	393.93	241.54	0.23
Trib2a	6950	Max WS	569.83	102.11	106.16		106.22	0.002195	2.91	345.79	239.32	0.31
Trib2a	6900	Max WS	568.44	102.43	106.08		106.13	0.001522	2.21	391.69	270.04	0.26
Trib2a	6850	Max WS	565.59	102.08	105.97		106.03	0.002582	2.66	331.24	274.55	0.33
Trib2a	6800	Max WS	562.79	101.85	105.85		105.91	0.002302	2.83	342.13	259.46	0.32
Trib2a	6750	Max WS	561.29	101.74	105.77		105.81	0.001666	2.22	405.16	303.55	0.27
Trib2a	6700	Max WS	558.79	101.48	105.69		105.73	0.001844	2.33	395.85	299.10	0.28
Trib2a	6650	Max WS	557.25	100.64	105.61		105.65	0.001415	2.12	420.52	291.80	0.25
Trib2a	6592.43	Max WS	556.76	100.72	105.56		105.59	0.000724	1.76	507.85	288.77	0.18
Trib2a	6400	Max WS	576.43	100.87	105.39		105.42	0.001079	2.01	478.78	300.50	0.22
Trib2a	6350	Max WS	576.16	101.21	105.35		105.37	0.000723	1.60	558.35	311.71	0.18
Trib2a	6300	Max WS	576.50	101.10	105.31		105.34	0.000742	1.80	544.11	326.91	0.19
Trib2a	6200	Max WS	575.43	100.78	105.12		105.20	0.002706	3.24	337.83	322.53	0.35
Trib2a	6150	Max WS	573.97	100.34	104.99		105.07	0.002400	3.16	328.45	266.31	0.33
Trib2a	6100	Max WS	573.00	100.13	104.89		104.96	0.002036	2.94	350.66	255.45	0.30
Trib2a	6050	Max WS	571.69	100.45	104.81		104.86	0.001808	2.56	360.66	250.75	0.28
Trib2a	6000	Max WS	569.88	100.10	104.71		104.77	0.002004	2.98	348.82	244.87	0.30
Trib2a	5950	Max WS	569.37	100.55	104.63		104.67	0.001636	2.30	372.97	257.20	0.26
Trib2a	5905.86	Max WS	569.08	100.10	104.58		104.61	0.000989	1.84	461.85	282.60	0.21
Trib2a	5850	Max WS	569.15	100.12	104.55		104.56	0.000583	1.40	632.98	557.77	0.16
Trib2a	5800	Max WS	568.71	100.93	104.52		104.54	0.000550	1.38	761.30	585.28	0.16
Trib2a	5750	Max WS	568.66	101.33	104.51		104.51	0.000310	0.94	899.69	559.02	0.12
Trib2a	5647.95	Max WS	569.38	100.09	104.46		104.48	0.000451	1.27	780.46	539.43	0.14
Trib2a	5250	Max WS	541.52	100.39	104.00		104.04	0.001733	2.27	414.09	406.72	0.27
Trib2a	5200	Max WS	540.48	99.84	103.94		103.96	0.001176	2.05	494.80	401.26	0.23
Trib2a	5150	Max WS	540.11	99.55	103.89		103.91	0.000987	1.92	522.58	392.14	0.21
Trib2a	5100	Max WS	539.32	99.45	103.84		103.86	0.000937	1.98	536.22	395.76	0.20
Trib2a	5050	Max WS	539.10	99.42	103.80		103.82	0.000683	1.69	581.08	394.79	0.17
Trib2a	5000	Max WS	539.02	99.45	103.77		103.79	0.000657	1.77	598.41	409.09	0.18
Trib2a	4896.6	Max WS	539.64	99.08	103.70		103.72	0.000796	1.95	582.45	450.53	0.19
Trib2a	4817.5	Max WS	539.90	99.31	103.57		103.64	0.001547	2.35	363.30	452.19	0.26
Trib2a	4750	Max WS	538.82	97.98	103.35		103.52	0.003465	3.81	272.94	438.50	0.40
Trib2a	4700	Max WS	538.63	98.48	103.25		103.34	0.002549	3.03	358.56	482.11	0.34
Trib2a	4650	Max WS	537.99	98.29	103.04		103.22	0.004545	4.08	272.90	488.88	0.45
Trib2a	4600	Max WS	535.94	98.92	102.78		102.98	0.006313	4.74	257.71	434.23	0.53
Trib2a	4550	Max WS	534.06	97.96	102.63		102.70	0.002613	3.24	374.05	422.22	0.34
Trib2a	4500	Max WS	533.94	98.15	102.56		102.59	0.001151	2.25	508.48	418.24	0.23
Trib2a	4450	Max WS	533.77	97.30	102.51		102.54	0.001070	2.15	502.86	434.88	0.22
Trib2a	4400	Max WS	534.09	98.06	102.44		102.48	0.001501	2.09	452.21	462.05	0.25
Trib2a	4250.25	Max WS	531.27	96.55	101.91		102.17	0.005521	4.24	159.94	314.44	0.49
Trib2a	4200	Max WS	529.74	96.59	101.83		101.89	0.002634	2.31	309.59	318.31	0.32
Trib2a	4150	Max WS	528.25	97.16	101.73		101.78	0.002076	2.20	354.36	342.37	0.29
Trib2a	4100	Max WS	525.59	97.05	101.62		101.67	0.002298	2.31	336.62	326.03	0.30
Trib2a	4050	Max WS	521.97	96.37	101.52		101.57	0.002122	2.76	356.72	322.02	0.30
Trib2a	3900	Max WS	508.29	95.93	101.27		101.31	0.001533	2.50	457.31	440.69	0.25
Trib2a	3850	Max WS	503.95	96.20	101.21		101.24	0.001152	2.38	490.99	442.15	0.23
Trib2a	3784.11	Max WS	501.15	96.57	101.15		101.17	0.001021	1.70	529.07	489.05	0.21
Trib2a	3350	Max WS	494.81	95.27	100.82		100.84	0.000597	1.56	596.90	441.61	0.16
Trib2a	3214.64	Max WS	493.79	96.42	100.66		100.72	0.001432	2.16	355.14	374.96	0.25
Trib2a	3100	Max WS	496.85	95.40	100.45		100.53	0.002252	2.97	306.12	295.42	0.32
Trib2a	3050	Max WS	498.29	94.76	100.36		100.43	0.001812	2.96	335.04	392.11	0.29
Trib2a	3000	Max WS	499.86	95.44	100.29		100.34	0.001609	2.57	363.67	291.35	0.27
Trib2a	2750	Max WS	499.70	95.06	99.76		99.84	0.002701	3.43	337.18	372.62	0.35
Trib2	2409.07	Max WS	613.43	93.51	99.76		99.78	0.000628	1.67	712.43	576.06	0.17
Trib2	2299.16	Max WS	613.40	91.10	99.70	96.35	99.73	0.000380	1.67	737.90	561.06	0.14
Trib2	2200		Inl Struct									
Trib2	2147.44	Max WS	608.47	92.44	98.67		98.72	0.001341	2.68	459.51	320.08	0.24
Trib2	2078.76	Max WS	608.90	92.22	98.63		98.65	0.000358	1.14	662.50	500.82	0.13

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2	1707.37	Max WS	610.62	92.46	98.25		98.29	0.001619	2.19	453.31	446.11	0.26
Trib2	1601.61	Max WS	610.27	92.48	97.98		98.05	0.003154	3.15	355.56	524.25	0.36
Trib2	1548.15	Max WS	609.92	92.39	97.83		97.89	0.002868	2.94	434.13	490.23	0.34
Trib2	1500	Max WS	610.05	91.91	97.75		97.77	0.001432	1.82	523.72	411.19	0.23
Trib2	1450	Max WS	609.98	91.87	97.66		97.69	0.001916	2.02	444.32	357.78	0.27
Trib2	1350	Max WS	609.41	92.83	97.45		97.51	0.002073	2.60	395.26	345.71	0.30
Trib2	1150	Max WS	608.53	92.45	97.19		97.22	0.000790	1.68	575.83	446.47	0.19
Trib2	1006.62	Max WS	606.71	93.17	96.98		97.02	0.002148	2.33	447.39	453.19	0.30
Trib2	961.42	Max WS	604.87	91.98	96.91		96.93	0.001652	1.78	507.91	458.73	0.25
Trib2	848.73	Max WS	602.07	91.79	96.73		96.76	0.001640	1.88	504.41	454.16	0.25
Trib2	752.77	Max WS	601.68	91.40	96.57		96.60	0.001759	1.92	502.90	456.11	0.26
Trib2	700	Max WS	599.49	90.92	96.50		96.52	0.001193	1.56	597.68	539.13	0.21
Trib2	650	Max WS	597.54	91.12	96.46		96.48	0.000628	1.43	745.59	582.82	0.16
Trib2	600	Max WS	596.97	92.50	96.43		96.45	0.000616	1.48	706.57	523.74	0.17
Trib2	443.45	Max WS	592.95	92.33	96.29		96.32	0.001001	1.94	478.87	309.73	0.21
Trib2	200	Max WS	564.57	90.85	95.98		96.02	0.001445	2.14	396.30	272.98	0.25
Trib2	137.55	Max WS	564.95	90.44	95.86		95.91	0.002065	2.33	360.83	317.35	0.29
Trib2	101.92	Max WS	563.95	90.29	95.79		95.84	0.002126	2.55	403.51	396.81	0.30
Main3	15063.95	Max WS	547.28	102.46	106.93		106.96	0.001116	2.16	563.49	684.82	0.22
Main3	14955.43	Max WS	544.76	103.59	106.81		106.84	0.001214	1.66	565.39	607.47	0.22
Main3	14788.2	Max WS	541.91	101.86	106.65		106.66	0.000935	1.46	625.46	589.06	0.19
Main3	14628.77	Max WS	540.25	102.21	106.50		106.52	0.000973	1.81	616.26	567.36	0.20
Main3	14541.77	Max WS	539.71	102.08	106.44		106.45	0.000589	1.40	672.17	486.77	0.16
Main3	14280.86	Max WS	539.26	100.65	106.30		106.31	0.000490	1.45	683.31	419.03	0.14
Main3	14234.63	Max WS	539.13	100.96	106.27		106.29	0.000582	1.33	610.52	385.35	0.16
Main3	14185.8	Max WS	539.15	100.28	106.23		106.25	0.000761	1.67	438.93	335.61	0.18
Main3	14016.19	Max WS	536.11	100.44	105.62		105.89	0.004956	4.54	175.60	177.60	0.48
Main3	13950	Max WS	532.71	101.08	105.55		105.59	0.001153	2.31	445.77	364.34	0.23
Main3	13850	Max WS	531.25	100.53	105.44		105.48	0.001120	2.29	438.30	494.52	0.23
Main3	13750	Max WS	530.83	98.79	105.37		105.40	0.000529	1.89	521.92	523.16	0.16
Main3	13600	Max WS	527.97	99.49	105.16		105.24	0.001717	2.96	310.85	451.97	0.28
Main3	13450	Max WS	525.93	99.56	104.96		105.00	0.001320	2.44	444.87	622.96	0.24
Main3	13391.27	Max WS	523.46	99.51	104.82		104.91	0.002542	3.24	296.76	565.90	0.33
Main3	13266.46	Max WS	518.60	98.98	104.64		104.68	0.001074	2.60	454.85	417.93	0.22
Main3	13150	Max WS	514.70	98.95	104.53		104.55	0.000981	2.38	576.67	747.30	0.21
Main3	12950	Max WS	517.26	98.53	104.39		104.40	0.000422	1.56	776.72	716.16	0.14
Main3	12900	Max WS	518.42	97.80	104.38		104.39	0.000196	1.14	935.98	659.76	0.10
Main3	12850	Max WS	519.65	97.94	104.36		104.37	0.000490	1.63	712.69	662.88	0.15
Main3	12700	Max WS	518.02	99.10	104.25		104.28	0.000871	2.02	582.77	596.92	0.20
Main3	12393.1	Max WS	514.71	97.00	103.92		103.99	0.001519	2.70	388.62	581.81	0.26
Main3	12350	Max WS	514.80	96.55	103.91		103.93	0.000527	1.62	587.97	610.81	0.15
Main3	12150	Max WS	515.80	97.28	103.72		103.85	0.001606	3.24	338.90	633.33	0.28
Main3	12100	Max WS	515.47	97.22	103.59	102.25	103.79	0.003254	4.17	256.14	574.62	0.39
Main3	12050	Max WS	514.43	96.90	103.39		103.61	0.003629	3.99	200.88	439.11	0.40
Main3	11896.14	Max WS	512.25	96.27	103.08		103.16	0.001758	2.25	228.16	422.39	0.27
Main3	11700	Max WS	511.38	97.61	102.93		102.94	0.000335	1.34	702.55	519.06	0.13
Main3	11600	Max WS	511.01	97.58	102.82		102.86	0.001247	2.45	445.70	500.30	0.24
Main3	11346.39	Max WS	510.10	96.94	102.49		102.56	0.001347	2.56	376.63	415.18	0.25
Main3	11250	Max WS	510.09	96.63	102.38		102.43	0.001185	2.52	462.91	498.29	0.24
Main3	11168.79	Max WS	508.87	96.91	102.06		102.32	0.003971	4.66	166.06	161.56	0.44
Main3	11038.46	Max WS	507.37	96.30	101.83		101.90	0.001381	2.63	370.40	414.48	0.26
Main3	11000	Max WS	507.20	95.56	101.79		101.85	0.001341	2.55	393.41	405.22	0.25
Main3	10950	Max WS	505.71	96.78	101.64		101.78	0.003006	3.57	261.34	329.31	0.37
Main3	10850	Max WS	504.42	96.17	101.49		101.54	0.001168	2.40	378.46	314.41	0.23
Main3	10800	Max WS	503.68	95.97	101.42		101.49	0.001274	2.53	358.47	321.23	0.24
Main3	10650	Max WS	502.34	95.97	101.31		101.34	0.000528	1.66	478.42	355.46	0.16
Main3	10600	Max WS	502.12	96.78	101.28		101.31	0.000617	1.67	467.35	350.94	0.17
Main3	10496.09	Max WS	501.53	95.06	101.22		101.24	0.000675	1.79	520.73	423.34	0.18
Main3	10323.48	Max WS	500.95	94.27	101.11		101.13	0.000608	1.76	499.86	354.58	0.17
Main3	10150	Max WS	500.47	94.92	100.97		101.02	0.000802	2.09	398.87	251.62	0.20
Main3	10089.9	Max WS	499.95	94.80	100.85		100.95	0.002035	2.95	275.21	318.70	0.31
Main3	10050	Max WS	499.34	94.29	100.79		100.87	0.001624	2.70	255.12	310.25	0.27
Main3	10000	Max WS	498.87	94.56	100.73		100.80	0.001433	2.52	332.73	382.81	0.26
Main3	9869.95	Max WS	498.60	94.14	100.64		100.66	0.000459	1.84	639.04	639.67	0.15
Main3	9595.54	Max WS	498.45	94.94	100.43		100.48	0.000943	2.06	404.51	369.82	0.21
Main3	9343.2	Max WS	503.73	94.38	100.00		100.12	0.002885	3.63	322.11	510.34	0.36
Main3	9300	Max WS	504.72	93.82	99.89		100.01	0.002481	3.63	290.67	401.86	0.34
Main3	9100	Max WS	500.84	94.32	99.31		99.43	0.003593	3.27	262.95	587.99	0.39
Main3	9000	Max WS	499.02	95.38	99.12		99.17	0.001330	2.08	456.61	711.65	0.24
Main3	8900	Max WS	498.61	91.75	99.06		99.07	0.000337	1.19	708.72	568.08	0.12
Main3	8801.81	Max WS	497.71	92.97	98.86		98.97	0.002804	3.00	292.43	488.87	0.34
Main3	8600	Max WS	496.30	92.78	98.56		98.59	0.000685	1.84	514.18	369.30	0.18
Main3	8350	Max WS	495.87	92.98	98.40		98.42	0.000608	1.82	556.23	401.89	0.17
Main3	8162.22	Max WS	495.34	93.75	98.19		98.24	0.001520	2.26	377.76	357.73	0.26
Main3	7850.11	Max WS	493.93	93.09	97.75		97.79	0.001393	2.18	425.04	435.34	0.25

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	7633.01	Max WS	494.13	91.62	97.50		97.55	0.000957	2.37	428.23	433.55	0.22
Main3	7536.49	Max WS	494.23	91.92	97.45		97.47	0.000491	1.35	647.30	613.28	0.15
Main3	7500	Max WS	508.76	92.94	97.42		97.45	0.000597	1.50	519.59	499.71	0.16
Main3	7359.01	Max WS	507.99	92.42	97.17		97.24	0.002603	2.72	327.31	416.86	0.33
Main3	6910.56	Max WS	507.68	90.51	96.46		96.52	0.000791	2.03	361.77	287.84	0.20
Main3	6872.46	Max WS	507.68	91.27	96.41		96.47	0.002030	2.94	337.25	289.82	0.30
Main3	6795.89	Max WS	507.67	91.48	96.20		96.28	0.003132	3.36	292.23	290.44	0.37
Main3	6786.28*	Max WS	507.66	91.46	96.17		96.26	0.003238	3.40	294.27	299.97	0.37
Main3	6776.68*	Max WS	507.64	91.44	96.14		96.23	0.003265	3.39	296.01	306.49	0.38
Main3	6767.08*	Max WS	507.64	91.42	96.11		96.20	0.003317	3.39	296.84	312.58	0.38
Main3	6757.48*	Max WS	507.60	91.41	96.08		96.17	0.003392	3.40	297.08	319.57	0.38
Main3	6747.87*	Max WS	507.62	91.39	96.04		96.14	0.003496	3.42	296.00	324.88	0.39
Main3	6738.27*	Max WS	507.55	91.37	96.01		96.10	0.003632	3.46	293.87	329.82	0.39
Main3	6728.67*	Max WS	507.46	91.35	95.97		96.07	0.003816	3.50	290.81	335.45	0.40
Main3	6719.07*	Max WS	507.38	91.33	95.93		96.04	0.004051	3.56	286.41	340.14	0.41
Main3	6709.46*	Max WS	507.25	91.31	95.89		96.00	0.004371	3.65	279.94	343.74	0.43
Main3	6699.86*	Max WS	506.94	91.30	95.84		95.96	0.004801	3.76	271.06	343.72	0.45
Main3	6690.26*	Max WS	252.37	91.28	95.81		95.84	0.001268	1.91	266.91	349.04	0.23
Main3	6680.66*	Max WS	251.55	91.26	95.80		95.83	0.001241	1.88	271.53	357.85	0.23
Main3	6671.06	Max WS	251.48	91.24	95.79		95.82	0.001220	1.85	276.83	369.66	0.22
Trib1	4400	Max WS	39.22	101.24	103.15		103.15	0.000060	0.24	166.86	189.54	0.04
Trib1	4250	Max WS	39.45	100.77	101.52		101.63	0.021816	2.70	14.60	35.37	0.74
Trib1	4200	Max WS	39.16	100.19	100.96		100.99	0.004148	1.23	31.92	72.84	0.33
Trib1	4150	Max WS	38.80	100.17	100.84		100.85	0.001991	0.78	49.86	129.90	0.22
Trib1	4100	Max WS	39.21	99.80	100.78		100.79	0.000639	0.61	63.90	101.36	0.14
Trib1	4050	Max WS	39.80	100.07	100.45		100.50	0.020160	1.88	21.19	83.58	0.66
Trib1	4000	Max WS	40.41	99.35	100.00		100.04	0.008808	1.48	27.27	82.46	0.45
Trib1	3950	Max WS	41.01	98.83	99.64		99.67	0.007748	1.55	26.42	67.69	0.44
Trib1	3900	Max WS	41.66	98.64	99.39		99.41	0.003009	1.03	40.30	93.47	0.28
Trib1	3850	Max WS	42.27	98.56	99.07		99.11	0.009201	1.46	29.00	92.90	0.46
Trib1	3800	Max WS	42.66	97.84	98.85		98.85	0.001091	0.74	57.56	102.74	0.17
Trib1	3750	Max WS	43.19	97.89	98.55		98.58	0.009927	1.43	30.21	105.47	0.47
Trib1	3700	Max WS	43.68	97.25	98.20		98.22	0.005170	1.30	33.52	82.42	0.36
Trib1	3650	Max WS	44.17	97.20	98.03		98.04	0.002872	1.09	41.78	99.36	0.28
Trib1	3600	Max WS	44.91	97.08	97.75		97.80	0.008327	1.69	26.60	63.43	0.46
Trib1	3550	Max WS	45.56	96.58	97.43		97.47	0.006239	1.62	30.10	80.62	0.41
Trib1	3500	Max WS	46.19	96.24	97.17		97.22	0.008023	1.83	30.81	189.07	0.46
Trib1	3450	Max WS	46.37	95.98	96.67		96.75	0.018610	2.21	20.95	248.75	0.66
Trib1	3400	Max WS	46.53	95.52	96.32		96.34	0.003027	1.22	48.72	237.46	0.29
Trib1	3350	Max WS	47.19	95.47	96.20		96.22	0.002664	1.09	48.95	121.84	0.27
Trib1	3300	Max WS	47.99	95.40	96.08		96.10	0.003084	1.17	50.56	134.57	0.29
Trib1	3250	Max WS	48.82	95.18	95.90		95.92	0.006277	1.14	42.92	149.73	0.37
Trib1	3200	Max WS	49.58	95.07	95.71		95.73	0.004597	1.08	46.01	137.74	0.33
Trib1	3150	Max WS	50.34	94.68	95.59		95.60	0.001386	0.83	60.89	142.16	0.20
Trib1	3100	Max WS	51.54	94.83	95.46		95.48	0.004562	1.23	45.28	137.69	0.34
Trib1	3000.11	Max WS	53.54	94.48	95.14		95.16	0.003580	1.07	49.97	125.08	0.30
Trib1	2840.15	Max WS	59.20	93.86	94.79		94.80	0.002070	0.97	61.63	153.83	0.24
Trib1	2800	Max WS	60.56	93.56	94.69		94.73	0.003666	1.48	46.00	210.44	0.33
Trib1	2550	Max WS	68.68	92.95	94.22		94.23	0.001449	1.09	96.69	225.86	0.21
Trib1	2503.6	Max WS	70.51	92.81	94.15		94.17	0.001533	1.07	72.57	142.07	0.22
Trib1	2350	Max WS	75.62	92.69	93.88		93.90	0.002562	1.23	62.22	111.99	0.27
Trib1	2300	Max WS	77.27	92.51	93.79		93.81	0.001585	1.09	70.86	93.74	0.22
Trib1	2250	Max WS	78.93	92.52	93.72		93.73	0.002113	1.05	75.41	132.38	0.24
Trib1	2200	Max WS	80.58	92.51	93.64		93.66	0.001509	1.05	80.28	130.27	0.21
Trib1	2150	Max WS	82.23	92.48	93.56		93.58	0.002181	1.12	73.27	117.99	0.25
Trib1	2100	Max WS	83.88	92.33	93.34		93.38	0.006376	1.61	52.17	109.51	0.41
Trib1	2050	Max WS	85.45	92.16	93.16		93.18	0.002134	1.04	82.66	150.76	0.24
Trib1	2000	Max WS	86.99	92.24	93.07		93.09	0.001773	0.98	88.48	149.43	0.22
Trib1	1950	Max WS	88.40	92.08	92.96		92.98	0.003584	1.20	74.47	186.60	0.31
Trib1	1900	Max WS	89.82	91.99	92.90		92.90	0.000439	0.50	181.40	311.87	0.11
Trib1	1694.11	Max WS	95.62	91.37	92.67		92.69	0.002408	1.28	99.19	243.39	0.27
Trib1	1650	Max WS	96.97	91.11	92.57		92.60	0.002390	1.59	72.88	151.20	0.28
Trib1	1600	Max WS	98.48	91.25	92.40		92.46	0.004683	1.98	57.94	146.51	0.38
Trib1	1550	Max WS	99.99	91.01	92.27		92.31	0.002628	1.61	78.25	163.71	0.29
Trib1	1500	Max WS	101.50	90.92	92.18		92.21	0.002092	1.30	88.47	161.39	0.26
Trib1	1450	Max WS	103.01	90.63	92.07		92.10	0.002876	1.39	75.84	151.71	0.29
Trib1	1400	Max WS	104.51	90.50	91.93		91.97	0.003682	1.68	68.37	138.13	0.34
Trib1	1350	Max WS	106.03	90.50	91.83		91.86	0.001849	1.25	93.52	152.44	0.24
Trib1	1300	Max WS	107.53	90.50	91.75		91.77	0.002435	1.18	91.41	153.43	0.26
Trib1	1250	Max WS	109.04	90.54	91.58		91.62	0.004417	1.49	74.20	147.21	0.35
Trib1	1200	Max WS	110.54	90.27	91.31		91.37	0.006644	2.04	59.00	120.87	0.44
Trib1	1150	Max WS	112.04	90.13	91.10		91.14	0.003374	1.44	78.92	145.09	0.31
Trib1	1100	Max WS	113.51	90.10	90.95		90.97	0.003667	1.34	84.72	154.41	0.32
Trib1	1050	Max WS	114.21	90.06	90.75		90.78	0.005688	1.50	76.29	168.08	0.39
Trib1	1004.24	Max WS	113.35	89.67	90.59		90.61	0.002965	1.22	94.49	210.02	0.29

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

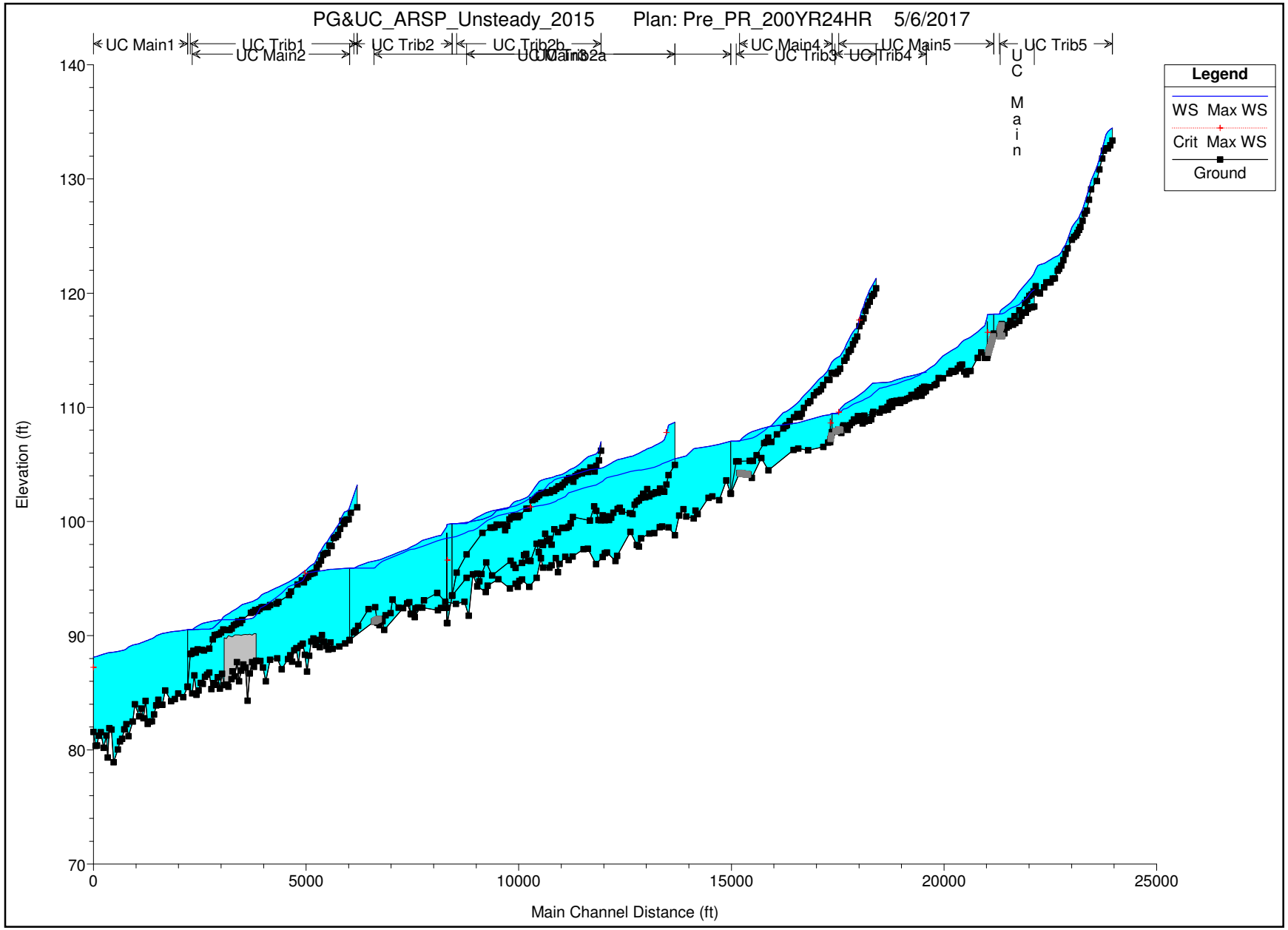
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib1	920.64	Max WS	113.38	88.86	90.48		90.49	0.000112	0.41	356.35	484.82	0.06
Trib1	800	Max WS	116.09	88.71	90.48		90.48	0.000024	0.20	580.30	433.03	0.03
Trib1	750	Max WS	117.35	88.77	90.48		90.48	0.000044	0.25	463.60	385.81	0.04
Trib1	650	Max WS	45.76	88.80	90.42		90.42	0.000273	0.54	91.98	343.27	0.10
Trib1	603.8	Max WS	46.11	88.51	90.41		90.41	0.000192	0.50	101.69	216.72	0.08
Trib1	550	Max WS	46.50	88.68	90.40		90.40	0.000106	0.39	133.24	161.23	0.06
Trib1	504.41	Max WS	46.49	88.43	90.40		90.40	0.000038	0.25	203.34	234.73	0.04
Trib1	478.55	Max WS	46.49	88.39	90.40		90.40	0.000025	0.20	251.40	242.54	0.03
Main2	6100	Max WS	815.43	89.62	95.79		95.80	0.000508	1.43	999.24	692.97	0.15
Main2	5995.41	Max WS	805.17	89.33	95.75		95.76	0.000256	1.19	1322.53	739.60	0.11
Main2	5852.28	Max WS	798.21	89.05	95.72		95.73	0.000209	1.12	1319.23	664.01	0.10
Main2	5700	Max WS	791.06	88.85	95.68		95.69	0.000208	1.07	1356.75	700.96	0.10
Main2	5650	Max WS	787.87	89.40	95.67		95.68	0.000198	0.93	1338.77	736.56	0.09
Main2	5600	Max WS	784.18	88.79	95.66		95.67	0.000325	1.32	1052.77	583.97	0.12
Main2	5550	Max WS	782.84	89.09	95.63		95.65	0.000654	1.75	844.30	579.11	0.17
Main2	5500	Max WS	765.30	89.47	95.60		95.61	0.000543	1.50	902.68	580.66	0.16
Main2	5450	Max WS	745.69	90.05	95.58		95.59	0.000469	1.49	945.12	600.15	0.15
Main2	5400	Max WS	724.10	89.00	95.56		95.57	0.000270	1.41	1045.00	593.63	0.12
Main2	5347.58	Max WS	705.45	89.63	95.55		95.56	0.000329	1.35	941.00	499.37	0.13
Main2	5300	Max WS	685.20	89.20	95.53		95.54	0.000286	1.21	952.49	481.81	0.12
Main2	5250	Max WS	671.05	89.77	95.52		95.53	0.000290	1.20	932.51	468.36	0.12
Main2	5200	Max WS	696.46	89.49	95.48		95.49	0.000442	1.33	861.70	548.00	0.14
Main2	5150	Max WS	723.48	88.25	95.45		95.46	0.000444	1.40	808.71	412.71	0.14
Main2	5100	Max WS	744.28	86.86	95.41		95.43	0.000315	1.82	850.08	447.52	0.13
Main2	5050	Max WS	817.83	88.33	95.06	95.39	96.06	0.013217	8.51	172.84	477.10	0.76
Main2	5000	Max WS	817.56	89.31	94.72		94.76	0.001759	2.51	557.04	460.22	0.27
Main2	4950	Max WS	817.68	89.11	94.63		94.68	0.001737	2.54	576.64	476.06	0.28
Main2	4900	Max WS	817.91	87.49	94.55		94.59	0.001672	2.49	580.68	484.42	0.27
Main2	4850	Max WS	817.96	88.91	94.46		94.51	0.001739	2.60	568.98	465.11	0.28
Main2	4800	Max WS	818.31	88.72	94.38		94.43	0.001547	2.33	614.82	477.70	0.26
Main2	4750	Max WS	818.65	87.72	94.32		94.36	0.001132	2.50	660.58	467.33	0.23
Main2	4700	Max WS	818.96	88.29	94.26		94.31	0.001179	2.40	627.58	456.41	0.24
Main2	4650	Max WS	819.30	87.95	94.18		94.24	0.001696	2.86	550.24	416.14	0.28
Main2	4504.57	Max WS	818.72	87.06	93.61		93.78	0.005196	3.88	322.60	323.64	0.47
Main2	4397.85	Max WS	819.52	88.02	93.30		93.36	0.002040	2.67	504.39	469.79	0.30
Main2	4231.14	Max WS	820.69	87.89	92.85		92.92	0.003149	3.01	483.29	444.29	0.36
Main2	4128.64	Max WS	821.47	86.00	92.59		92.65	0.002201	2.89	490.52	348.73	0.30
Main2	4061.14	Max WS	822.08	87.21	92.45		92.51	0.001936	2.54	501.46	341.53	0.29
Main2	4000	Max WS	822.62	87.79	92.36		92.40	0.001550	1.98	584.69	416.95	0.25
Main2	3950	Max WS	822.43	87.78	92.01		92.16	0.009898	4.64	349.78	468.13	0.62
Main2	3900	Max WS	821.75	87.81	91.70		91.79	0.004380	3.31	388.98	330.52	0.42
Main2	3875		Lat Struct									
Main2	3850	Max WS	648.09	87.27	91.48		91.59	0.005262	3.91	279.19	224.81	0.46
Main2	3808.17	Max WS	525.75	87.69	91.40		91.44	0.002580	2.03	345.43	287.99	0.31
Main2	3750	Max WS	390.99	86.70	91.34		91.35	0.000892	1.37	410.89	316.77	0.19
Main2	3700	Max WS	309.29	84.31	91.32		91.33	0.000379	0.94	467.94	333.14	0.12
Main2	3650	Max WS	241.41	87.21	91.30		91.31	0.000419	0.81	392.95	344.95	0.12
Main2	3600	Max WS	187.40	87.47	91.29		91.29	0.000261	0.61	390.02	348.54	0.10
Main2	3550.1	Max WS	145.51	86.93	91.28		91.28	0.000285	0.67	271.71	244.58	0.10
Main2	3500	Max WS	123.46	86.01	91.27		91.27	0.000108	0.58	309.18	223.82	0.07
Main2	3450	Max WS	95.97	87.68	91.27		91.27	0.000094	0.51	308.04	338.02	0.06
Main2	3400	Max WS	70.40	86.44	91.27		91.27	0.000053	0.40	302.94	262.95	0.05
Main2	3344.35	Max WS	42.88	86.87	91.27		91.27	0.000011	0.18	378.73	251.74	0.02
Main2	3320.7	Max WS	31.36	86.20	91.27		91.27	0.000005	0.13	397.01	266.38	0.01
Main2	3250	Max WS	-2.56	85.52	91.27		91.27	0.000000	-0.01	498.26	307.89	0.00
Main2	3200	Max WS	-26.37	85.71	91.27		91.27	0.000002	-0.08	433.14	242.00	0.01
Main2	3150	Max WS	-50.31	85.68	91.27		91.27	0.000009	-0.18	420.93	227.70	0.02
Main2	3100	Max WS	-49.63	86.67	91.27		91.27	0.000003	-0.09	834.16	647.94	0.01
Main2	3050	Max WS	-48.72	85.37	91.27		91.27	0.000003	-0.09	838.03	656.00	0.01
Main2	3000	Max WS	827.69	86.35	91.22		91.23	0.000792	1.64	887.38	762.96	0.18
Main2	2950	Max WS	828.16	85.70	91.19		91.20	0.000564	1.31	1000.03	728.40	0.15
Main2	2900	Max WS	828.29	85.85	91.16		91.17	0.000603	1.50	958.89	629.21	0.16
Main2	2850	Max WS	828.78	85.33	91.13		91.14	0.000705	1.81	898.01	575.13	0.17
Main2	2800	Max WS	829.22	86.78	91.09		91.11	0.000767	1.66	844.71	555.42	0.19
Main2	2750.23	Max WS	829.50	86.59	91.04		91.06	0.000989	1.92	799.83	565.42	0.21
Main2	2700	Max WS	829.78	86.41	91.00		91.02	0.000954	1.91	810.11	588.77	0.21
Main2	2650	Max WS	830.07	85.77	90.94		90.97	0.001127	2.00	754.91	597.82	0.22
Main2	2600	Max WS	829.99	85.86	90.88		90.91	0.001336	2.29	694.30	582.28	0.24
Main2	2550	Max WS	829.62	85.20	90.77		90.83	0.002056	2.66	489.59	551.64	0.30
Main2	2500	Max WS	828.78	84.82	90.67		90.72	0.002228	2.56	486.52	532.03	0.31
Main2	2450	Max WS	825.46	86.53	90.53		90.60	0.003025	2.97	451.59	520.93	0.36
Main2	2397.32	Max WS	821.54	84.95	90.40		90.48	0.001960	2.96	488.16	524.56	0.30
Main1	2291.46	Max WS	868.04	85.53	90.40		90.42	0.001020	1.59	860.19	770.47	0.20
Main1	2189.07	Max WS	866.23	84.62	90.33		90.34	0.000528	1.45	1116.86	834.81	0.15
Main1	2069.18	Max WS	865.01	84.93	90.27		90.28	0.000478	1.48	1118.05	770.99	0.15

HEC-RAS Plan: PrePR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	1990.13	Max WS	865.23	84.45	90.23		90.24	0.000386	1.16	1219.06	826.26	0.13
Main1	1902.51	Max WS	865.49	84.27	90.20		90.21	0.000448	1.54	1135.43	788.29	0.15
Main1	1760.99	Max WS	866.24	85.19	90.10		90.12	0.000838	1.78	852.07	636.79	0.20
Main1	1698.99	Max WS	867.04	83.95	90.05		90.07	0.000825	2.20	828.71	578.74	0.20
Main1	1600	Max WS	868.27	84.38	89.92		89.97	0.001418	2.29	583.22	520.61	0.25
Main1	1550	Max WS	868.70	83.89	89.84		89.90	0.001635	2.71	526.02	484.39	0.27
Main1	1500	Max WS	868.82	83.11	89.71		89.79	0.002792	3.25	443.09	479.44	0.35
Main1	1450	Max WS	868.93	82.50	89.60		89.68	0.001758	2.95	488.14	468.62	0.29
Main1	1400	Max WS	869.32	82.49	89.53		89.59	0.001668	2.58	515.57	469.60	0.27
Main1	1350	Max WS	869.71	82.27	89.46		89.51	0.001459	2.45	548.04	469.25	0.25
Main1	1300	Max WS	870.10	84.29	89.39		89.44	0.001601	2.95	556.62	464.09	0.28
Main1	1250	Max WS	870.52	82.78	89.31		89.36	0.001422	2.61	561.14	474.85	0.25
Main1	1200	Max WS	870.62	83.63	89.24		89.29	0.001576	2.96	548.18	470.36	0.27
Main1	1150	Max WS	871.09	82.93	89.18		89.23	0.001173	2.77	599.06	493.19	0.24
Main1	1050	Max WS	871.88	84.00	89.08		89.11	0.001070	2.18	675.80	520.59	0.22
Main1	1000	Max WS	872.37	82.49	89.04		89.07	0.000876	2.19	730.44	415.12	0.20
Main1	902.45	Max WS	873.00	81.20	88.89		88.96	0.001765	3.05	552.60	381.88	0.27
Main1	850	Max WS	872.98	82.25	88.76		88.85	0.002183	3.41	426.83	356.89	0.32
Main1	800	Max WS	873.31	81.79	88.66		88.74	0.001729	3.38	505.50	434.03	0.29
Main1	750	Max WS	873.72	80.96	88.62		88.66	0.001088	2.60	693.21	496.94	0.23
Main1	700	Max WS	874.23	80.75	88.57		88.61	0.000974	2.22	743.36	533.18	0.21
Main1	650	Max WS	874.66	80.03	88.54		88.57	0.000812	2.40	805.78	585.25	0.19
Main1	550	Max WS	876.32	78.91	88.48		88.51	0.000489	1.90	987.33	725.62	0.15
Main1	500	Max WS	877.28	81.77	88.46		88.48	0.000428	1.64	1101.90	786.18	0.15
Main1	450.28	Max WS	878.16	81.91	88.45		88.46	0.000335	1.49	1188.73	812.23	0.13
Main1	411.53	Max WS	878.85	79.33	88.43		88.45	0.000513	1.70	1074.38	824.55	0.15
Main1	381.37	Max WS	879.38	81.25	88.41		88.43	0.000803	1.96	936.60	790.38	0.19
Main1	316.15	Max WS	881.94	80.18	88.35		88.38	0.000865	2.06	932.43	904.88	0.20
Main1	250	Max WS	882.94	81.54	88.28		88.31	0.001170	2.19	842.71	869.43	0.23
Main1	200	Max WS	882.99	81.23	88.22		88.25	0.001442	1.92	782.31	829.30	0.24
Main1	161.78	Max WS	882.97	80.38	88.18		88.21	0.000951	1.78	857.93	823.01	0.20
Main1	126.68	Max WS	883.31	80.35	88.15		88.18	0.000775	1.66	816.69	843.25	0.19
Main1	76.78	Max WS	883.32	81.56	88.12	87.15	88.15	0.000624	1.85	956.08	914.65	0.17

HEC-RAS Plan: PostARSPPrePR100 River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	309.93	110.59	116.02		116.06	0.001720	1.86	283.48	179.71	0.17
Placer Trib	65.0000	Max WS	309.92	109.85	115.75		115.84	0.003054	2.55	175.36	184.97	0.22
Placer Trib	64.0000	Max WS	308.39	109.50	114.34		114.48	0.007290	3.45	154.32	177.77	0.33
Placer Trib	63.0000	Max WS	262.68	109.24	113.79		113.80	0.000777	1.02	425.72	310.16	0.11
Placer Trib	62.0000	Max WS	331.67	109.35	113.73		113.74	0.000195	0.51	1020.96	637.25	0.05
Placer Trib	61.0000	Max WS	336.84	108.83	113.53		113.53	0.000254	0.69	925.57	551.15	0.06
Placer Trib	60.0000	Max WS	338.04	107.78	113.41		113.42	0.000721	1.30	470.36	259.01	0.11
Placer Trib	59.0000	Max WS	339.04	107.59	113.33		113.34	0.000478	0.98	595.73	320.90	0.09
Placer Trib	58.0000	Max WS	367.93	107.73	113.27		113.28	0.000079	0.43	1198.80	501.64	0.04
Placer Trib	57.0000	Max WS	370.13	105.82	113.26		113.26	0.000050	0.33	1547.44	515.50	0.03
Placer Trib	56.0000	Max WS	372.98	105.33	112.04		112.27	0.007478	4.21	132.97	387.01	0.33
Placer Trib	55.0000	Max WS	374.55	105.57	111.16		111.18	0.001082	1.36	451.35	312.47	0.13
Placer Trib	54.0000	Max WS	377.30	104.60	110.86		110.87	0.000956	1.30	540.69	352.22	0.12
Placer Trib	53.0000	Max WS	384.92	104.84	110.41		110.45	0.002232	2.06	307.13	177.79	0.19
Placer Trib	52.0000	Max WS	385.88	103.99	110.10		110.13	0.001399	1.63	340.84	197.50	0.15
Placer Trib	51.0000	Max WS	387.29	103.62	109.79		109.82	0.001235	1.55	424.11	318.77	0.14
Placer Trib	50.0000	Max WS	389.13	103.34	109.53		109.55	0.000811	1.41	462.93	194.89	0.11
Placer Trib	49.0000	Max WS	390.98	103.19	109.33		109.34	0.000908	1.41	561.56	375.64	0.12
Placer Trib	48.0000	Max WS	392.69	103.11	109.12		109.14	0.001139	1.50	409.87	315.74	0.14
Placer Trib	47.0000	Max WS	395.45	101.60	108.15		108.27	0.004711	2.83	141.84	366.38	0.27
Placer Trib	46.0000	Max WS	397.44	101.67	107.08		107.21	0.005118	3.41	172.27	179.09	0.29
Placer Trib	45.0000	Max WS	398.66	101.32	106.69		106.72	0.002067	1.96	343.09	197.43	0.18
Placer Trib	44.0000	Max WS	400.00	101.09	106.54		106.55	0.000280	0.82	640.60	233.35	0.07
Placer Trib	43.0000	Max WS	401.20	100.19	105.76		105.99	0.011175	3.97	114.51	95.50	0.40
Placer Trib	42	Max WS	441.07	100.80	104.57		104.58	0.000900	1.20	524.09	258.24	0.12
Placer Trib	41.12*	Max WS	441.84	100.52	104.49		104.51	0.000853	1.22	563.03	282.20	0.12
Placer Trib	40.24*	Max WS	442.50	100.24	104.42		104.43	0.000841	1.27	593.14	310.06	0.12
Placer Trib	39.36*	Max WS	443.30	99.96	104.35		104.36	0.000861	1.33	612.30	341.23	0.12
Placer Trib	38.48*	Max WS	444.02	99.68	104.27		104.28	0.000905	1.42	618.97	373.88	0.12
Placer Trib	37.6	Max WS	444.75	99.40	104.18		104.20	0.000973	1.52	611.42	408.08	0.13
Placer Trib	36.6*	Max WS	444.72	99.30	104.09		104.11	0.000887	1.42	624.27	367.11	0.12
Placer Trib	35.6	Max WS	444.70	99.20	104.03		104.03	0.000531	1.06	735.07	340.66	0.09
Placer Trib	34.6*	Max WS	444.66	99.30	103.93		103.94	0.001321	1.65	499.79	286.08	0.15
Placer Trib	33.6*	Max WS	444.64	99.40	103.64		103.70	0.003937	2.68	320.75	278.35	0.25
Placer Trib	32.6	Max WS	444.62	99.50	103.16		103.24	0.005379	2.81	243.59	188.02	0.29
Placer Trib	31.6*	Max WS	444.52	98.95	102.59		102.67	0.006154	2.87	251.74	196.21	0.30
Placer Trib	30.6	Max WS	444.37	98.40	102.27		102.29	0.001057	1.20	525.58	252.05	0.13
Placer Trib	29.7*	Max WS	444.28	97.98	102.14		102.16	0.001730	1.52	431.79	238.05	0.16
Placer Trib	28.8*	Max WS	444.10	97.56	101.90		101.94	0.003233	2.00	346.53	297.62	0.22
Placer Trib	27.9*	Max WS	443.63	97.14	101.60		101.64	0.003609	1.99	380.26	364.27	0.23
Placer Trib	27*	Max WS	443.27	96.72	101.40		101.42	0.001325	1.16	534.18	410.17	0.13
Placer Trib	26.1	Max WS	443.16	96.30	101.33		101.34	0.000400	0.63	849.85	415.24	0.07
Placer Trib	25.2*	Max WS	471.24	96.23	101.28		101.29	0.000672	0.97	709.30	385.15	0.10
Placer Trib	24.3*	Max WS	470.97	96.15	101.21		101.22	0.000834	1.20	600.98	331.59	0.12
Placer Trib	23.4*	Max WS	470.63	96.07	101.13		101.15	0.000796	1.27	535.06	265.04	0.11
Placer Trib	22.5	Max WS	470.41	96.00	101.07		101.09	0.000652	1.22	506.62	209.92	0.11
Placer Trib	21.6*	Max WS	470.09	95.65	101.00		101.02	0.000903	1.31	527.21	357.11	0.12
Placer Trib	20.7	Max WS	469.43	95.30	100.87		100.90	0.001703	1.58	445.71	388.02	0.16
Placer Trib	19.8*	Max WS	468.87	95.10	100.75		100.77	0.001191	1.34	525.35	492.90	0.14
Placer Trib	18.9	Max WS	468.44	94.90	100.67		100.68	0.000783	1.08	654.36	520.55	0.11
Placer Trib	17.92*	Max WS	483.62	94.60	100.59		100.60	0.000793	1.17	619.86	446.44	0.11
Placer Trib	16.94*	Max WS	483.22	94.30	100.51		100.53	0.000799	1.26	601.99	465.15	0.11
Placer Trib	15.96*	Max WS	482.90	94.00	100.44		100.45	0.000639	1.19	715.01	494.00	0.10
Placer Trib	14.98*	Max WS	482.81	93.70	100.39		100.40	0.000389	0.98	889.91	479.24	0.08
Placer Trib	14	Max WS	482.71	93.40	100.37		100.37	0.000206	0.73	1122.06	465.89	0.06
Placer Trib	13.075*	Max WS	482.69	93.70	100.34		100.35	0.000363	0.97	876.68	398.19	0.08
Placer Trib	12.15*	Max WS	482.70	94.00	100.29		100.30	0.000659	1.31	665.83	327.82	0.11
Placer Trib	11.225*	Max WS	482.68	94.30	100.19		100.22	0.001205	1.73	486.72	252.06	0.14
Placer Trib	10.3	Max WS	482.67	94.60	100.00		100.06	0.002475	2.39	328.20	195.00	0.21
Placer Trib	9.525*	Max WS	482.67	94.10	99.84		99.88	0.002023	2.09	367.26	220.34	0.18
Placer Trib	8.75*	Max WS	482.64	93.60	99.72		99.74	0.001416	1.70	455.41	260.52	0.15
Placer Trib	7.975*	Max WS	482.60	93.10	99.64		99.65	0.000864	1.29	650.84	407.35	0.12
Placer Trib	7.2	Max WS	482.57	92.60	99.60		99.60	0.000338	0.79	992.08	497.13	0.07
Placer Trib	6.3333*	Max WS	482.53	92.17	99.57		99.58	0.000254	0.78	1030.53	448.01	0.07
Placer Trib	5.46659*	Max WS	482.46	91.73	99.55		99.56	0.000207	0.78	1043.26	401.44	0.06
Placer Trib	4.5999	Max WS	482.24	91.30	99.54		99.54	0.000184	0.80	1026.96	357.81	0.06
Placer Trib	3.6666*	Max WS	482.11	91.07	99.52		99.52	0.000179	0.81	1059.02	400.74	0.06
Placer Trib	2.7333*	Max WS	482.00	90.83	99.50		99.51	0.000171	0.81	1085.16	438.07	0.06
Placer Trib	1.8	Max WS	481.85	90.60	99.49		99.49	0.000163	0.80	1101.04	467.35	0.06
Placer Trib	0.9*	Max WS	481.50	90.55	99.48		99.48	0.000071	0.54	1515.74	489.46	0.04
Placer Trib	0	Max WS	481.35	90.50	99.47		99.47	0.000083	0.60	1157.18	285.76	0.04


PG&UC_ARSP_Unsteady_2015 Plan: Pre_PR_200YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC Trib2
UC Trib2b
UC Main3
UC Trib2a
UC Main4
UC Trib3
UC Trib4
UC Main5
UC Trib5
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
140
130
120
110
100
90
80
70
0
5000
10000
15000
20000
25000

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib5	2900	Max WS	45.44	133.37	134.47		134.50	0.003420	1.30	36.62	109.90	0.31
Trib5	2850	Max WS	44.31	132.96	134.33		134.35	0.003081	1.29	38.21	91.60	0.30
Trib5	2795.09	Max WS	47.07	132.69	134.15		134.19	0.004229	1.86	31.27	79.76	0.36
Trib5	2750	Max WS	50.27	132.69	133.87		133.94	0.007822	2.09	24.18	44.32	0.47
Trib5	2700	Max WS	54.13	132.48	133.18		133.33	0.024833	3.09	17.85	51.20	0.80
Trib5	2660.73	Max WS	57.15	131.78	132.63		132.72	0.010951	2.38	26.70	79.62	0.55
Trib5	2597.42	Max WS	61.26	130.84	131.74		131.89	0.021642	3.25	21.73	61.82	0.77
Trib5	2534.37	Max WS	66.27	129.81	131.02		131.07	0.004678	1.96	39.41	68.53	0.38
Trib5	2400	Max WS	76.92	129.10	129.87		129.98	0.012887	2.80	31.05	65.46	0.61
Trib5	2350	Max WS	80.99	128.19	129.18		129.33	0.015442	3.15	26.44	47.37	0.68
Trib5	2300	Max WS	85.05	127.22	128.51		128.64	0.012917	2.91	29.24	44.55	0.62
Trib5	2250	Max WS	89.11	126.96	127.92		128.04	0.012027	2.90	35.43	69.23	0.60
Trib5	2200	Max WS	93.14	126.33	127.34		127.48	0.012823	3.01	32.86	60.63	0.62
Trib5	2150	Max WS	97.13	125.79	126.97		127.03	0.005295	2.17	50.68	76.34	0.41
Trib5	2115.69	Max WS	99.88	125.55	126.65		126.77	0.011989	2.85	38.70	73.29	0.60
Trib5	2075.19	Max WS	126.61	125.27	126.41		126.45	0.002765	1.52	99.29	189.20	0.30
Trib5	2050	Max WS	129.65	125.04	126.32		126.37	0.003578	1.85	83.18	154.26	0.34
Trib5	2000	Max WS	133.60	124.92	126.07		126.16	0.006326	2.39	63.71	108.63	0.45
Trib5	1950	Max WS	137.59	124.67	125.78		125.85	0.007223	2.43	70.42	135.86	0.48
Trib5	1850	Max WS	137.27	123.93	124.73		124.82	0.016727	2.84	69.39	212.90	0.68
Trib5	1800	Max WS	139.85	123.43	124.23		124.27	0.006560	2.10	92.94	171.02	0.44
Trib5	1750	Max WS	142.33	122.89	123.97		124.00	0.004463	1.81	100.70	189.93	0.37
Trib5	1700	Max WS	143.92	122.42	123.58		123.65	0.009927	2.52	73.35	167.44	0.54
Trib5	1650	Max WS	141.87	122.12	123.34		123.37	0.001408	1.29	123.10	157.27	0.22
Trib5	1614.93	Max WS	137.52	121.96	123.26		123.30	0.002640	1.75	101.48	157.21	0.30
Trib5	1550	Max WS	136.93	121.29	123.17		123.19	0.000874	1.25	164.17	204.50	0.18
Trib5	1500	Max WS	207.54	121.27	123.07		123.10	0.002005	1.89	163.41	195.74	0.28
Trib5	1450	Max WS	208.83	120.95	122.94		123.00	0.002753	2.30	137.46	180.64	0.33
Trib5	1400	Max WS	210.31	120.93	122.84		122.88	0.001927	1.81	152.97	167.23	0.27
Trib5	1350	Max WS	211.10	120.94	122.71		122.76	0.003035	2.32	138.16	166.57	0.34
Trib5	1300	Max WS	212.53	120.51	122.61		122.65	0.001444	1.72	160.72	139.26	0.24
Trib5	1200	Max WS	216.86	119.97	122.51		122.53	0.000926	1.30	228.79	281.27	0.19
Trib5	1150	Max WS	219.28	120.06	122.42		122.46	0.002169	2.20	177.18	235.97	0.30
Trib5	1100	Max WS	221.74	120.61	122.09		122.25	0.008644	3.44	89.47	215.77	0.56
Trib5	1050	Max WS	224.12	120.15	121.64		121.81	0.009213	3.61	84.24	126.19	0.58
Trib5	1000	Max WS	226.47	119.89	121.38		121.45	0.004359	2.46	128.09	179.56	0.40
Trib5	950	Max WS	228.82	119.77	121.16		121.23	0.004782	2.26	116.57	157.39	0.40
Trib5	900	Max WS	231.08	119.41	120.94		121.02	0.004284	2.57	116.82	135.07	0.40
Trib5	850	Max WS	233.44	119.14	120.75		120.83	0.003681	2.45	116.26	126.12	0.37
Trib5	713.21	Max WS	240.23	118.49	120.16		120.26	0.004826	2.83	110.46	127.14	0.43
Trib5	600	Max WS	243.36	117.98	119.53		119.65	0.006232	3.05	101.03	181.38	0.48
Trib5	500	Max WS	239.73	117.57	119.15		119.19	0.002857	1.79	155.34	441.97	0.31
Trib5	300.47	Max WS	238.32	117.29	118.58		118.61	0.003027	1.46	166.71	389.76	0.30
Trib5	291.555*	Max WS	238.30	117.19	118.56		118.59	0.002296	1.31	206.41	331.09	0.27
Trib5	282.64*	Max WS	238.29	117.09	118.53		118.56	0.003101	1.55	175.42	309.46	0.31
Trib5	273.725*	Max WS	238.30	116.99	118.49		118.53	0.004202	1.82	149.56	272.79	0.36
Trib5	264.81*	Max WS	238.29	116.90	118.42		118.49	0.006036	2.17	125.37	228.95	0.43
Trib5	255.895*	Max WS	238.28	116.80	118.33		118.43	0.009823	2.68	106.34	209.37	0.55
Trib5	246.98	Max WS	238.28	116.70	118.17		118.32	0.019604	3.44	86.02	174.26	0.76
Main	22200	Max WS	80.38	118.83	120.29		120.32	0.001736	1.40	64.34	88.10	0.24
Main	22150	Max WS	80.15	118.76	120.18		120.22	0.002715	1.52	56.47	90.14	0.29
Main	22100	Max WS	83.06	118.77	119.99		120.04	0.004747	1.77	48.06	83.20	0.38
Main	22050	Max WS	85.93	118.62	119.71		119.77	0.006520	1.98	45.49	88.38	0.44
Main	22000	Max WS	88.68	118.29	119.52		119.55	0.002403	1.48	67.03	115.25	0.28
Main	21950	Max WS	91.17	118.31	119.36		119.41	0.003975	1.79	59.14	119.71	0.35
Main	21900	Max WS	93.66	118.02	119.22		119.25	0.003008	1.61	74.89	166.61	0.31
Main	21850	Max WS	95.43	117.57	119.03		119.08	0.005277	1.96	53.55	132.68	0.40
Main	21756.27	Max WS	100.49	117.37	118.83		118.84	0.000658	0.95	114.52	130.76	0.15
Main	21700	Max WS	103.53	117.24	118.77		118.79	0.001219	1.30	93.09	119.46	0.21
Main	21650	Max WS	106.12	117.25	118.68		118.71	0.002018	1.41	79.89	149.62	0.26
Main	21600	Max WS	108.27	117.11	118.56		118.60	0.002765	1.60	70.46	207.48	0.30
Main	21550	Max WS	109.94	116.98	118.41		118.46	0.003194	1.98	70.09	156.50	0.33
Main	21500	Max WS	110.46	116.48	118.27		118.32	0.002562	1.85	75.63	116.88	0.30
Main	21450	Max WS	111.40	116.27	118.20		118.23	0.001045	1.27	108.24	160.37	0.20
Main	21441.0*	Max WS	111.25	116.26	118.20		118.22	0.000961	1.21	117.46	164.54	0.19
Main	21432.1*	Max WS	111.09	116.26	118.19		118.21	0.000891	1.16	125.29	169.10	0.18
Main	21423.1*	Max WS	111.09	116.25	118.19		118.20	0.000808	1.11	134.24	173.63	0.17
Main	21414.1*	Max WS	110.94	116.24	118.18		118.19	0.000717	1.04	144.37	178.27	0.16
Main	21405.2*	Max WS	110.93	116.24	118.18		118.19	0.000622	0.97	155.62	182.82	0.15
Main	21396.29	Max WS	110.78	116.23	118.17		118.18	0.000828	1.11	139.65	203.05	0.17
Main5	21246.12	Max WS	348.92	116.44	118.17		118.18	0.000502	0.93	462.51	415.57	0.14
Main5	21227.8*	Max WS	348.78	116.21	118.16		118.17	0.000397	0.90	486.44	399.10	0.13
Main5	21209.5*	Max WS	348.88	115.97	118.16		118.16	0.000333	0.89	506.19	378.28	0.12
Main5	21191.3*	Max WS	348.87	115.74	118.15		118.16	0.000295	0.90	518.44	364.40	0.11
Main5	21173.0*	Max WS	348.81	115.50	118.14		118.15	0.000270	0.92	525.15	344.98	0.11

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main5	21154.7*	Max WS	348.74	115.26	118.14		118.15	0.000263	0.96	524.96	331.97	0.11
Main5	21136.5*	Max WS	348.75	115.03	118.13		118.14	0.000270	1.03	518.61	318.62	0.11
Main5	21118.2*	Max WS	348.73	114.79	118.13		118.14	0.000296	1.13	504.85	306.30	0.12
Main5	21100	Max WS	348.73	114.56	118.12	116.56	118.13	0.000364	1.30	479.15	293.80	0.13
Main5	21050		Inl Struct									
Main5	21037.73	Max WS	347.94	114.34	117.15		117.22	0.003798	3.05	211.45	246.85	0.39
Main5	20950.06	Max WS	348.45	114.81	116.90		116.95	0.002968	2.21	237.21	271.42	0.33
Main5	20867	Max WS	348.17	114.33	116.61		116.67	0.004690	2.65	213.95	324.75	0.41
Main5	20700	Max WS	346.95	113.19	116.15		116.18	0.001850	1.86	297.03	332.21	0.27
Main5	20650	Max WS	347.23	113.17	116.06		116.09	0.002188	1.94	280.28	340.15	0.29
Main5	20600	Max WS	347.76	112.88	115.97		116.01	0.001698	2.12	283.52	301.10	0.27
Main5	20550	Max WS	348.36	113.12	115.88		115.92	0.001851	2.13	268.85	269.19	0.28
Main5	20500	Max WS	348.94	113.75	115.75		115.81	0.003509	2.61	221.07	266.26	0.37
Main5	20450	Max WS	348.98	113.69	115.53		115.63	0.005434	3.13	184.85	291.74	0.46
Main5	20400	Max WS	348.56	113.39	115.32		115.40	0.004395	2.94	185.17	219.65	0.42
Main5	20351.92	Max WS	348.27	113.17	115.18		115.23	0.002521	2.36	237.64	240.19	0.32
Main5	20300	Max WS	348.29	113.10	115.08		115.12	0.001705	1.80	262.49	289.52	0.26
Main5	20250	Max WS	348.56	113.18	114.98		115.02	0.002490	2.25	259.13	282.65	0.31
Main5	20200	Max WS	349.05	112.96	114.86		114.89	0.002249	2.12	262.17	259.35	0.30
Main5	20050	Max WS	350.10	112.55	114.50		114.55	0.002527	2.30	236.28	260.61	0.32
Main5	19950	Max WS	351.13	112.56	114.11		114.20	0.006068	3.02	181.27	260.42	0.47
Main5	19900	Max WS	351.11	112.05	113.88		113.95	0.004324	2.78	198.22	245.14	0.41
Main5	19852.97	Max WS	350.84	111.94	113.71		113.76	0.003521	2.48	217.08	237.76	0.37
Main5	19746.96	Max WS	350.19	111.76	113.45		113.48	0.001861	1.93	308.99	336.87	0.27
Main5	19650	Max WS	344.30	111.42	113.18		113.25	0.003242	2.42	196.09	225.08	0.35
Main5	19600	Max WS	342.28	111.31	113.07		113.12	0.001916	1.91	243.17	248.83	0.27
Main5	19550	Max WS	340.42	111.01	113.00		113.03	0.001411	1.78	283.13	259.80	0.24
Main5	19500	Max WS	339.02	111.18	112.95		112.97	0.001087	1.51	342.28	343.64	0.21
Main5	19450	Max WS	336.20	111.38	112.89		112.91	0.001555	1.60	345.08	416.65	0.24
Main5	19400	Max WS	335.09	111.08	112.84		112.85	0.000686	1.13	480.78	488.48	0.16
Main5	19150	Max WS	333.44	110.58	112.63		112.65	0.000965	1.56	389.46	377.84	0.20
Main5	19050	Max WS	331.66	110.39	112.51		112.54	0.001283	1.71	315.45	335.68	0.23
Main5	19000	Max WS	330.13	110.49	112.47		112.49	0.000841	1.32	366.75	331.26	0.18
Main5	18950	Max WS	325.51	110.54	112.41		112.44	0.001453	1.61	293.73	344.87	0.24
Main5	18900	Max WS	316.36	110.53	112.34		112.37	0.001357	1.59	299.15	335.17	0.23
Main5	18850	Max WS	342.64	110.49	112.26		112.29	0.001573	1.70	313.50	364.98	0.25
Main5	18800	Max WS	330.39	110.40	112.21		112.22	0.000757	1.24	407.54	392.32	0.17
Main5	18750	Max WS	325.56	110.03	112.19		112.19	0.000372	0.96	557.38	508.98	0.12
Main5	18700	Max WS	323.77	109.89	112.18		112.18	0.000167	0.66	765.57	578.00	0.08
Main5	18650	Max WS	322.58	109.86	112.17		112.17	0.000177	0.63	720.41	547.79	0.08
Main5	18397.57	Max WS	320.49	109.41	112.12		112.12	0.000232	0.89	649.09	498.75	0.10
Main5	18200	Max WS	332.86	109.28	111.41		111.43	0.001220	1.44	320.91	312.63	0.21
Main5	18050	Max WS	334.79	109.24	111.00		111.07	0.004343	2.84	199.40	237.35	0.41
Main5	17955.7	Max WS	336.16	108.94	110.74		110.76	0.001946	1.89	271.45	253.50	0.27
Main5	17750	Max WS	339.17	108.17	110.30		110.35	0.002265	2.11	241.13	280.98	0.30
Main5	17700	Max WS	339.94	108.29	110.13		110.20	0.004194	2.43	183.02	245.54	0.39
Main5	17650	Max WS	340.71	107.99	109.93		110.00	0.003975	2.42	201.75	285.71	0.38
Main5	17641.6*	Max WS	340.71	108.00	109.89		109.97	0.004519	2.61	190.91	275.07	0.41
Main5	17633.3*	Max WS	340.70	108.02	109.85		109.94	0.005340	2.85	179.03	267.06	0.44
Main5	17625.*	Max WS	321.76	108.03	109.79		109.89	0.005882	3.00	168.58	276.61	0.47
Main5	17616.6*	Max WS	321.07	108.04	109.73		109.85	0.006978	3.26	159.61	264.18	0.51
Main5	17608.3*	Max WS	316.91	108.06	109.68		109.80	0.007843	3.46	154.28	256.55	0.54
Main5	17600	Max WS	366.24	108.07	109.46	109.59	109.97	0.035423	6.68	78.85	198.74	1.11
Trib4	2650	Max WS	135.79	111.78	113.07		113.07	0.000536	0.64	211.14	277.84	0.13
Trib4	2600	Max WS	135.35	111.81	113.04		113.04	0.000862	0.75	182.53	288.05	0.16
Trib4	2550	Max WS	134.53	111.67	113.01		113.01	0.000593	0.68	196.88	251.35	0.14
Trib4	2500	Max WS	282.07	111.51	112.85		112.90	0.003685	1.83	162.22	256.23	0.35
Trib4	2450	Max WS	281.98	111.12	112.76		112.78	0.001304	1.18	247.30	292.53	0.21
Trib4	2400	Max WS	283.20	110.93	112.68		112.71	0.001561	1.25	231.98	289.56	0.23
Trib4	2350	Max WS	283.87	111.08	112.60		112.62	0.001877	1.34	217.97	272.31	0.25
Trib4	2300	Max WS	283.37	111.07	112.50		112.53	0.002000	1.26	229.48	321.60	0.25
Trib4	2250	Max WS	283.98	110.81	112.44		112.45	0.001015	1.03	287.34	351.60	0.18
Trib4	2200	Max WS	285.38	110.75	112.40		112.41	0.000705	0.99	338.32	343.53	0.16
Trib4	2150	Max WS	287.19	110.64	112.35		112.37	0.000969	1.05	273.73	281.65	0.18
Trib4	2100	Max WS	288.73	110.56	112.28		112.31	0.001475	1.23	235.64	248.06	0.22
Trib4	2050	Max WS	289.54	110.63	112.20		112.23	0.001743	1.61	212.80	238.06	0.25
Trib4	1950	Max WS	290.29	110.57	112.05		112.08	0.001502	1.49	221.70	235.22	0.23
Trib4	1900	Max WS	291.70	110.36	112.01		112.02	0.000717	1.05	289.59	264.60	0.16
Trib4	1850	Max WS	292.97	110.06	111.97		111.99	0.000802	1.10	277.94	251.36	0.17
Trib4	1800	Max WS	295.01	110.02	111.91		111.94	0.001214	1.32	244.09	243.63	0.21
Trib4	1747.14	Max WS	296.25	109.80	111.84		111.87	0.001285	1.44	238.15	257.62	0.22
Trib4	1700	Max WS	297.43	109.83	111.79		111.81	0.001139	1.31	250.38	281.22	0.20
Trib4	1650	Max WS	299.04	109.73	111.75		111.77	0.000689	1.04	314.70	306.58	0.16
Trib4	1600	Max WS	300.69	109.88	111.70		111.73	0.001001	1.21	267.20	292.01	0.19
Trib4	1550	Max WS	302.45	109.54	111.67		111.69	0.000512	1.00	343.87	275.99	0.14

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib4	1400	Max WS	306.88	109.60	111.20		111.29	0.005138	2.75	162.47	261.75	0.43
Trib4	1350	Max WS	307.93	108.96	111.02		111.07	0.003138	1.95	179.10	242.46	0.33
Trib4	1300	Max WS	308.97	108.83	110.89		110.93	0.002423	1.73	221.94	301.13	0.29
Trib4	1250	Max WS	310.08	108.93	110.80		110.83	0.001944	1.99	258.97	283.99	0.28
Trib4	1200	Max WS	311.27	108.75	110.71		110.74	0.001637	1.77	280.87	283.79	0.25
Trib4	1150	Max WS	312.33	108.59	110.60		110.64	0.002545	2.30	235.33	283.61	0.32
Trib4	1097.41	Max WS	313.72	108.83	110.52		110.54	0.000936	1.39	352.54	335.70	0.19
Trib4	950	Max WS	317.25	108.77	110.32		110.35	0.002111	1.81	272.04	330.89	0.28
Trib4	900	Max WS	318.65	108.64	110.21		110.24	0.002313	1.83	265.54	347.53	0.29
Trib4	850	Max WS	319.82	108.45	110.08		110.12	0.002992	2.11	251.64	369.51	0.33
Trib4	800	Max WS	320.91	108.03	109.96		110.00	0.002088	2.04	273.31	373.85	0.29
Trib4	750	Max WS	322.12	108.34	109.88		109.90	0.001810	1.56	318.17	413.49	0.25
Trib4	700	Max WS	323.12	108.43	109.84		109.85	0.000667	1.03	442.22	420.67	0.16
Trib4	650	Max WS	323.55	107.75	109.67		109.77	0.004691	2.68	159.70	393.09	0.42
Trib4	600	Max WS	323.76	107.89	109.59		109.61	0.001398	1.69	317.25	423.00	0.24
Trib4	550	Max WS	319.52	107.93	109.50		109.53	0.002284	2.01	289.32	408.25	0.30
Trib4	540.*	Max WS	317.61	107.93	109.49		109.51	0.001637	1.69	320.17	394.58	0.25
Trib4	530.*	Max WS	192.28	107.93	109.47		109.48	0.000596	1.01	311.17	351.42	0.15
Trib4	520.*	Max WS	195.00	107.92	109.46		109.47	0.000629	1.03	313.86	358.49	0.15
Trib4	510.*	Max WS	190.71	107.92	109.46		109.47	0.000442	0.86	342.69	345.94	0.13
Trib4	500	Max WS	186.85	107.92	109.46		109.47	0.000289	0.69	385.09	340.65	0.10
Main4	17447.12	Max WS	553.10	107.81	109.46		109.47	0.000827	1.17	728.78	710.19	0.18
Main4	17428.3*	Max WS	544.37	107.52	109.44		109.45	0.000948	1.32	691.21	789.68	0.19
Main4	17409.5*	Max WS	534.32	107.23	109.43	108.62	109.44	0.000731	1.23	723.81	771.22	0.17
Main4	17400		Inl Struct									
Main4	17390.78	Max WS	530.21	106.94	109.35		109.36	0.000561	1.11	740.39	734.47	0.15
Main4	17350	Max WS	522.09	106.91	109.33		109.34	0.000575	1.17	744.13	689.95	0.15
Main4	17239.4	Max WS	525.03	106.54	109.27		109.28	0.000494	1.19	761.59	629.12	0.15
Main4	16882.6	Max WS	531.90	106.24	108.90		108.94	0.001511	2.27	438.06	381.43	0.26
Main4	16650	Max WS	531.49	106.39	108.65		108.66	0.000794	1.42	586.86	480.29	0.18
Main4	16536.56	Max WS	529.80	106.27	108.58		108.59	0.000425	1.04	740.30	502.70	0.13
Main4	15950	Max WS	527.47	104.49	108.30		108.31	0.000549	1.29	709.89	546.78	0.15
Main4	15779.58	Max WS	527.47	105.55	108.13		108.15	0.001509	2.17	534.97	547.87	0.26
Main4	15556.6	Max WS	527.84	103.82	107.87		107.89	0.001024	2.02	525.03	548.56	0.22
Main4	15479	Max WS	528.06	104.11	107.72		107.78	0.002524	2.98	379.66	509.46	0.34
Main4	15469.0*	Max WS	528.01	104.12	107.69		107.75	0.002583	3.00	368.26	504.35	0.34
Main4	15459.1*	Max WS	527.99	104.12	107.67		107.73	0.002612	2.99	358.85	499.05	0.34
Main4	15449.2*	Max WS	527.97	104.13	107.64		107.71	0.002651	2.99	349.46	494.50	0.34
Main4	15439.3*	Max WS	527.96	104.14	107.62		107.68	0.002700	2.98	340.17	490.87	0.35
Main4	15429.4*	Max WS	527.95	104.14	107.59		107.65	0.002532	2.85	335.54	487.59	0.33
Main4	15419.4*	Max WS	527.93	104.15	107.56		107.63	0.002596	2.85	332.32	484.73	0.34
Main4	15409.5*	Max WS	527.92	104.16	107.54		107.60	0.002679	2.85	329.27	481.95	0.34
Main4	15399.6*	Max WS	527.88	104.16	107.51		107.57	0.002737	2.84	325.99	476.30	0.34
Main4	15389.7*	Max WS	527.90	104.17	107.48		107.55	0.002801	2.82	322.24	469.16	0.35
Main4	15379.8*	Max WS	527.88	104.18	107.45		107.52	0.002870	2.81	318.37	461.84	0.35
Main4	15369.8*	Max WS	527.85	104.18	107.42		107.49	0.002952	2.79	314.49	454.91	0.35
Main4	15359.9*	Max WS	527.83	104.19	107.39		107.46	0.003057	2.78	309.70	446.94	0.36
Main4	15350.0*	Max WS	527.83	104.20	107.36		107.43	0.003157	2.77	305.34	436.09	0.36
Main4	15340.1*	Max WS	527.82	104.20	107.33		107.40	0.003275	2.75	300.97	414.74	0.36
Main4	15330.2*	Max WS	527.78	104.21	107.30		107.36	0.003418	2.74	296.79	397.66	0.37
Main4	15320.2*	Max WS	527.80	104.22	107.26		107.33	0.003598	2.74	292.38	384.65	0.38
Main4	15310.3*	Max WS	527.78	104.22	107.22		107.29	0.003825	2.74	287.50	375.93	0.39
Main4	15300.4*	Max WS	527.69	104.23	107.18		107.25	0.004121	2.76	281.55	368.20	0.40
Main4	15290.5*	Max WS	527.70	104.24	107.14		107.21	0.004484	2.78	274.93	360.66	0.41
Main4	15280.6*	Max WS	527.70	104.24	107.09		107.17	0.004847	2.77	266.70	348.96	0.42
Main4	15270.69	Max WS	527.62	104.25	107.04		107.11	0.005450	2.81	257.03	338.81	0.44
Trib3	4150	Max WS	122.04	120.42	121.29		121.36	0.010197	2.17	56.13	106.59	0.53
Trib3	4100	Max WS	121.95	119.92	120.94		121.00	0.005039	1.86	66.72	103.20	0.39
Trib3	4050	Max WS	121.88	119.76	120.62		120.69	0.008248	2.07	58.99	103.10	0.48
Trib3	4000	Max WS	121.81	119.27	120.29		120.35	0.005996	1.94	62.94	95.51	0.42
Trib3	3950	Max WS	121.77	118.94	119.83		119.92	0.012650	2.42	50.36	95.77	0.59
Trib3	3900	Max WS	121.74	118.43	119.40		119.46	0.006560	1.95	62.44	100.28	0.44
Trib3	3850	Max WS	121.73	117.79	118.84		118.96	0.016191	2.78	43.84	82.94	0.67
Trib3	3800	Max WS	79.25	117.50	118.44		118.46	0.002208	1.11	72.08	169.79	0.25
Trib3	3750	Max WS	121.75	117.11	117.67	117.66	117.77	0.043190	2.63	46.26	194.74	0.95
Trib3	3700	Max WS	121.63	116.20	116.97		117.00	0.004854	1.43	85.47	180.67	0.36
Trib3	3650	Max WS	121.57	115.86	116.83		116.85	0.002285	1.18	103.15	159.80	0.26
Trib3	3600	Max WS	121.53	115.51	116.60		116.65	0.006997	1.83	66.36	125.55	0.44
Trib3	3550	Max WS	121.50	115.04	116.28		116.35	0.006223	2.16	60.66	96.48	0.44
Trib3	3500	Max WS	121.47	114.87	115.90		115.99	0.009798	2.31	52.63	104.28	0.53
Trib3	3450	Max WS	121.47	114.35	115.55		115.61	0.006547	1.96	61.89	98.26	0.44
Trib3	3400	Max WS	121.41	114.09	115.09		115.19	0.011171	2.51	48.45	79.60	0.57
Trib3	3300	Max WS	120.83	113.37	114.50		114.53	0.002569	1.34	90.29	131.08	0.28
Trib3	3250	Max WS	120.73	113.13	114.40		114.43	0.002474	1.27	95.32	140.71	0.27
Trib3	3200	Max WS	120.65	112.94	114.29		114.33	0.002252	1.59	86.14	124.79	0.28

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib3	3150	Max WS	120.59	113.02	114.15		114.19	0.003794	1.60	75.23	107.47	0.34
Trib3	3100	Max WS	120.55	113.01	113.94		113.99	0.006391	1.78	67.61	121.72	0.42
Trib3	3050	Max WS	120.48	112.41	113.54		113.63	0.010754	2.64	60.33	223.60	0.57
Trib3	3000	Max WS	120.29	112.43	113.18		113.22	0.007675	2.04	85.56	230.65	0.47
Trib3	2900	Max WS	119.93	111.94	112.74		112.76	0.003632	1.38	108.29	221.28	0.32
Trib3	2850	Max WS	119.84	111.57	112.62		112.64	0.002069	1.15	105.68	172.30	0.25
Trib3	2800	Max WS	119.78	111.41	112.45		112.49	0.003976	1.72	74.24	121.51	0.35
Trib3	2750	Max WS	119.76	111.33	112.25		112.29	0.004911	1.61	74.36	130.28	0.37
Trib3	2685.69	Max WS	119.73	111.05	111.94		111.98	0.005269	1.81	73.04	146.31	0.39
Trib3	2600	Max WS	119.56	110.54	111.60		111.63	0.003806	1.33	90.05	171.09	0.32
Trib3	2542.55	Max WS	119.44	110.38	111.38		111.42	0.004349	1.95	89.13	181.69	0.37
Trib3	2450	Max WS	119.30	109.96	111.04		111.08	0.004041	1.81	78.86	164.66	0.36
Trib3	2400	Max WS	119.22	109.44	110.83		110.89	0.005032	2.33	80.61	170.05	0.41
Trib3	2353.17	Max WS	119.16	109.16	110.60		110.67	0.005537	2.40	75.27	166.59	0.43
Trib3	2293.77	Max WS	119.09	109.42	110.37		110.40	0.003987	1.49	81.49	156.95	0.34
Trib3	2216.78	Max WS	118.88	109.12	110.11		110.14	0.003489	1.35	88.27	162.99	0.31
Trib3	2117.56	Max WS	117.99	108.79	109.82		109.85	0.003232	1.28	93.57	181.71	0.30
Trib3	2050	Max WS	117.46	108.45	109.67		109.69	0.002529	1.18	99.80	167.11	0.27
Trib3	2014.8	Max WS	117.34	108.36	109.61		109.62	0.001569	1.01	116.14	170.93	0.22
Trib3	1963.01	Max WS	117.14	108.16	109.54		109.55	0.001536	1.02	115.09	164.89	0.21
Trib3	1814.06	Max WS	116.96	107.64	108.95		108.99	0.006316	1.72	68.04	135.07	0.42
Trib3	1680.02	Max WS	116.45	106.98	108.37		108.40	0.002854	1.24	94.01	207.53	0.28
Trib3	1611.69	Max WS	116.37	107.34	108.27		108.27	0.001162	0.76	231.36	540.72	0.18
Trib3	1567.88	Max WS	142.78	106.98	108.11		108.16	0.005106	2.00	86.68	416.17	0.40
Trib3	1515.42	Max WS	142.05	106.86	107.95		107.96	0.002373	1.03	145.81	331.96	0.25
Trib3	1339.26	Max WS	139.73	105.80	107.49		107.53	0.002779	1.70	84.20	114.36	0.30
Trib3	1245.45	Max WS	136.70	105.31	107.32		107.35	0.001228	1.33	127.69	189.71	0.21
Trib3	1172.67	Max WS	135.33	105.31	107.26		107.28	0.000641	1.19	207.11	364.09	0.16
Trib3	911.97	Max WS	90.25	105.27	107.05		107.07	0.000549	0.97	130.48	279.58	0.14
Trib3	856.45	Max WS	87.73	105.26	107.04		107.04	0.000242	0.66	229.05	355.36	0.10
Trib2b	3500	Max WS	66.74	106.21	106.99		107.16	0.027013	3.68	22.66	53.88	0.87
Trib2b	3450	Max WS	66.71	105.35	106.22		106.30	0.008305	2.39	33.45	71.40	0.50
Trib2b	3389.72	Max WS	68.34	104.88	105.94		105.96	0.002358	1.29	63.01	143.08	0.27
Trib2b	3352.29	Max WS	69.20	104.38	105.87		105.89	0.001466	1.40	70.65	106.45	0.23
Trib2b	3300	Max WS	70.70	104.63	105.81		105.83	0.000927	0.99	81.14	111.73	0.18
Trib2b	3250	Max WS	72.22	104.73	105.75		105.76	0.001550	1.08	73.40	120.46	0.22
Trib2b	3203.29	Max WS	73.72	104.34	105.68		105.70	0.001565	1.26	82.93	152.15	0.23
Trib2b	3100	Max WS	77.00	104.37	105.39		105.42	0.004618	1.49	65.42	186.67	0.36
Trib2b	3050	Max WS	78.54	104.22	105.20		105.23	0.003637	1.41	73.53	230.35	0.32
Trib2b	3000	Max WS	80.18	104.27	105.03		105.06	0.003385	1.36	76.62	186.49	0.31
Trib2b	2950	Max WS	81.88	104.12	104.89		104.91	0.002898	1.24	78.89	180.14	0.29
Trib2b	2900	Max WS	83.58	103.98	104.77		104.79	0.003018	1.32	80.64	170.03	0.30
Trib2b	2850	Max WS	85.41	103.49	104.67		104.69	0.001323	1.08	92.18	170.84	0.21
Trib2b	2800	Max WS	87.37	103.81	104.60		104.62	0.001795	1.02	113.88	215.57	0.23
Trib2b	2750	Max WS	89.27	103.79	104.50		104.51	0.002904	1.13	101.23	221.29	0.28
Trib2b	2700	Max WS	90.79	103.62	104.36		104.38	0.002657	1.23	85.86	201.10	0.28
Trib2b	2650	Max WS	92.17	103.42	104.26		104.27	0.001648	0.97	102.84	206.88	0.22
Trib2b	2600	Max WS	93.02	103.22	104.16		104.18	0.002605	1.16	91.03	203.40	0.27
Trib2b	2550	Max WS	94.53	103.01	104.10		104.10	0.000471	0.61	181.69	271.90	0.12
Trib2b	2500	Max WS	96.70	103.07	104.05		104.06	0.001035	0.85	115.42	176.95	0.18
Trib2b	2450	Max WS	98.36	102.87	104.00		104.01	0.001327	0.92	107.54	196.38	0.20
Trib2b	2400	Max WS	100.00	102.68	103.93		103.95	0.001368	0.93	107.53	163.21	0.20
Trib2b	2350	Max WS	101.64	102.74	103.87		103.88	0.001262	0.91	114.09	194.93	0.19
Trib2b	2300	Max WS	103.36	102.54	103.82		103.83	0.000783	0.89	140.52	206.59	0.16
Trib2b	2250	Max WS	105.15	102.58	103.78		103.79	0.000840	0.86	137.53	204.62	0.16
Trib2b	2200	Max WS	106.97	102.50	103.73		103.75	0.001124	0.95	125.29	214.11	0.19
Trib2b	2150	Max WS	108.86	102.52	103.68		103.69	0.001136	0.90	122.71	210.94	0.19
Trib2b	2100	Max WS	110.76	102.50	103.61		103.63	0.001469	1.01	118.47	247.66	0.21
Trib2b	2050	Max WS	112.65	102.30	103.51		103.53	0.002662	1.24	109.44	226.99	0.28
Trib2b	2000	Max WS	114.55	102.16	103.26		103.31	0.006958	1.77	64.54	205.33	0.43
Trib2b	1950	Max WS	116.46	101.98	103.01		103.05	0.005343	1.86	86.57	223.19	0.40
Trib2b	1887.66	Max WS	118.61	101.86	102.65		102.69	0.007832	1.88	79.77	209.65	0.46
Trib2b	1800	Max WS	121.65	101.14	102.23		102.25	0.003435	1.27	114.54	227.46	0.31
Trib2b	1750	Max WS	123.05	101.12	102.09		102.11	0.003142	1.26	102.85	222.47	0.30
Trib2b	1587.06	Max WS	127.88	100.52	101.85		101.85	0.000444	0.66	201.30	266.83	0.12
Trib2b	1547.11	Max WS	129.24	100.38	101.82		101.83	0.000842	0.92	176.37	265.70	0.17
Trib2b	1494.66	Max WS	131.01	100.39	101.77		101.78	0.001390	0.92	166.41	339.98	0.20
Trib2b	1450	Max WS	132.82	100.48	101.69		101.71	0.001898	1.21	125.09	227.84	0.24
Trib2b	1400	Max WS	134.51	100.35	101.50		101.54	0.005825	2.02	99.13	232.84	0.42
Trib2b	1350	Max WS	135.45	100.19	101.24		101.28	0.005954	1.50	90.62	207.25	0.39
Trib2b	1300	Max WS	136.25	99.63	101.12		101.13	0.000617	0.73	187.47	230.66	0.14
Trib2b	1250	Max WS	137.44	99.24	101.10		101.10	0.000358	0.70	225.04	266.73	0.11
Trib2b	1200	Max WS	138.98	99.73	101.07		101.08	0.000673	0.74	188.67	236.67	0.15
Trib2b	1064.85	Max WS	143.16	99.70	100.96		100.97	0.000883	0.89	190.50	258.96	0.17
Trib2b	1050	Max WS	143.62	99.74	100.95		100.96	0.001145	0.96	176.83	264.86	0.19

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1000	Max WS	144.99	99.49	100.74		100.80	0.006164	2.04	80.11	283.90	0.43
Trib2b	950	Max WS	146.01	99.47	100.57		100.59	0.002410	1.37	144.46	286.20	0.27
Trib2b	902.71	Max WS	146.92	99.46	100.47		100.49	0.002088	1.15	144.39	349.70	0.25
Trib2b	715.36	Max WS	148.02	99.00	100.19		100.20	0.001095	0.86	177.86	333.98	0.18
Trib2b	339.81	Max WS	134.87	97.12	99.93		99.93	0.000434	0.89	232.09	270.64	0.13
Trib2b	106.24	Max WS	131.11	95.53	99.81		99.83	0.000491	1.15	155.12	134.71	0.14
Trib2a	7650	Max WS	593.80	104.96	108.70		108.71	0.000680	1.48	612.19	368.76	0.17
Trib2a	7500.06	Max WS	592.91	104.07	108.45		108.50	0.002352	2.92	379.29	277.09	0.31
Trib2a	7450	Max WS	621.66	103.23	107.66	107.79	108.22	0.021720	8.08	172.47	284.38	0.93
Trib2a	7400	Max WS	648.06	102.62	107.16		107.28	0.006527	4.44	297.61	329.45	0.51
Trib2a	7350	Max WS	645.04	102.67	106.98		107.03	0.002802	2.51	402.40	337.34	0.33
Trib2a	7300	Max WS	643.31	102.88	106.88		106.92	0.001772	2.14	473.10	346.79	0.27
Trib2a	7250	Max WS	641.70	102.52	106.79		106.83	0.001913	2.30	453.00	337.81	0.28
Trib2a	7200	Max WS	640.67	102.55	106.70		106.74	0.001828	2.45	443.45	307.89	0.28
Trib2a	7150	Max WS	639.25	102.46	106.60		106.64	0.001978	2.47	421.01	282.00	0.29
Trib2a	7100	Max WS	637.47	102.39	106.50		106.55	0.001948	2.39	402.40	265.25	0.29
Trib2a	7050	Max WS	636.53	102.20	106.43		106.47	0.001110	2.27	451.17	253.14	0.23
Trib2a	7000	Max WS	635.65	102.84	106.36		106.41	0.001241	2.13	420.02	243.34	0.24
Trib2a	6950	Max WS	634.00	102.11	106.27		106.33	0.002193	2.99	371.74	241.70	0.32
Trib2a	6900	Max WS	632.71	102.43	106.19		106.24	0.001526	2.28	421.24	273.69	0.26
Trib2a	6850	Max WS	630.22	102.08	106.08		106.15	0.002476	2.70	362.34	278.27	0.33
Trib2a	6800	Max WS	628.05	101.85	105.97		106.03	0.002332	2.94	372.25	272.05	0.32
Trib2a	6750	Max WS	626.18	101.74	105.89		105.93	0.001622	2.27	440.48	307.52	0.26
Trib2a	6700	Max WS	624.33	101.48	105.80		105.84	0.001784	2.37	430.98	303.19	0.28
Trib2a	6650	Max WS	623.34	100.64	105.73		105.77	0.001394	2.17	454.86	293.71	0.25
Trib2a	6592.43	Max WS	622.51	100.72	105.68		105.71	0.000749	1.84	541.77	292.05	0.19
Trib2a	6400	Max WS	645.21	100.87	105.50		105.53	0.001111	2.10	511.56	304.18	0.22
Trib2a	6350	Max WS	645.18	101.21	105.46		105.48	0.000758	1.69	591.59	313.80	0.18
Trib2a	6300	Max WS	644.89	101.10	105.42		105.44	0.000774	1.88	578.53	329.19	0.19
Trib2a	6200	Max WS	643.63	100.78	105.22		105.31	0.002674	3.31	372.69	329.75	0.35
Trib2a	6150	Max WS	642.62	100.34	105.09		105.18	0.002437	3.26	355.81	270.13	0.34
Trib2a	6100	Max WS	641.52	100.13	104.99		105.06	0.002116	3.06	376.21	260.74	0.31
Trib2a	6050	Max WS	640.27	100.45	104.90		104.96	0.001898	2.69	384.78	255.47	0.29
Trib2a	6000	Max WS	637.43	100.10	104.79		104.86	0.002163	3.15	371.41	265.35	0.31
Trib2a	5950	Max WS	634.44	100.55	104.71		104.76	0.001753	2.43	392.86	261.17	0.27
Trib2a	5905.86	Max WS	630.73	100.10	104.66		104.69	0.001070	1.96	483.29	288.11	0.22
Trib2a	5850	Max WS	628.16	100.12	104.63		104.64	0.000615	1.47	668.08	579.28	0.17
Trib2a	5800	Max WS	624.70	100.93	104.60		104.61	0.000558	1.42	805.69	589.13	0.16
Trib2a	5750	Max WS	622.34	101.33	104.58		104.59	0.000321	0.98	942.41	563.36	0.12
Trib2a	5647.95	Max WS	619.94	100.09	104.54		104.55	0.000460	1.31	820.75	544.54	0.14
Trib2a	5250	Max WS	605.17	100.39	104.09		104.13	0.001699	2.31	451.70	410.00	0.27
Trib2a	5200	Max WS	604.38	99.84	104.03		104.06	0.001180	2.10	532.16	403.86	0.23
Trib2a	5150	Max WS	603.63	99.55	103.98		104.00	0.001011	1.98	558.84	396.83	0.21
Trib2a	5100	Max WS	602.63	99.45	103.93		103.95	0.000962	2.04	572.05	398.67	0.21
Trib2a	5050	Max WS	603.09	99.42	103.89		103.91	0.000722	1.77	616.21	399.94	0.18
Trib2a	5000	Max WS	603.52	99.45	103.86		103.88	0.000715	1.88	633.67	422.09	0.18
Trib2a	4896.6	Max WS	603.81	99.08	103.78		103.80	0.000840	2.04	619.18	456.33	0.20
Trib2a	4817.5	Max WS	604.52	99.31	103.64		103.71	0.001627	2.46	397.45	457.17	0.27
Trib2a	4750	Max WS	604.98	97.98	103.43		103.60	0.003451	3.88	309.69	440.54	0.40
Trib2a	4700	Max WS	605.48	98.48	103.34		103.42	0.002484	3.06	401.21	488.32	0.33
Trib2a	4650	Max WS	605.86	98.29	103.12		103.29	0.004358	4.08	314.40	494.45	0.44
Trib2a	4600	Max WS	601.81	98.92	102.88		103.05	0.005760	4.64	299.38	449.89	0.51
Trib2a	4550	Max WS	600.03	97.96	102.73		102.80	0.002436	3.21	418.02	425.79	0.33
Trib2a	4500	Max WS	599.76	98.15	102.67		102.69	0.001134	2.28	553.20	423.91	0.23
Trib2a	4450	Max WS	600.11	97.30	102.61		102.64	0.001069	2.20	548.78	443.37	0.22
Trib2a	4400	Max WS	600.16	98.06	102.54		102.58	0.001444	2.12	502.22	475.54	0.25
Trib2a	4250.25	Max WS	595.96	96.55	102.01	101.27	102.29	0.005885	4.50	188.34	329.72	0.51
Trib2a	4200	Max WS	594.61	96.59	101.93		102.00	0.002608	2.39	336.99	332.32	0.32
Trib2a	4150	Max WS	592.35	97.16	101.83		101.88	0.002063	2.27	384.53	351.82	0.29
Trib2a	4100	Max WS	588.51	97.05	101.72		101.78	0.002254	2.37	367.51	346.38	0.30
Trib2a	4050	Max WS	584.55	96.37	101.62		101.68	0.002094	2.82	388.77	340.46	0.30
Trib2a	3900	Max WS	570.06	95.93	101.38		101.41	0.001447	2.49	504.78	445.80	0.25
Trib2a	3850	Max WS	566.75	96.20	101.32		101.35	0.001116	2.39	539.16	447.37	0.23
Trib2a	3784.11	Max WS	563.65	96.57	101.26		101.28	0.000979	1.72	583.76	500.86	0.20
Trib2a	3350	Max WS	558.06	95.27	100.93		100.95	0.000609	1.62	647.77	469.99	0.17
Trib2a	3214.64	Max WS	557.14	96.42	100.77		100.83	0.001436	2.23	397.72	422.39	0.25
Trib2a	3100	Max WS	560.66	95.40	100.55		100.64	0.002261	3.05	336.86	305.52	0.32
Trib2a	3050	Max WS	562.31	94.76	100.46		100.54	0.001848	3.05	366.66	426.80	0.29
Trib2a	3000	Max WS	564.04	95.44	100.39		100.44	0.001677	2.68	392.93	316.17	0.27
Trib2a	2750	Max WS	563.99	95.06	99.81		99.90	0.002916	3.61	358.76	374.89	0.36
Trib2	2409.07	Max WS	694.94	93.51	99.81		99.84	0.000713	1.81	744.70	588.64	0.18
Trib2	2299.16	Max WS	694.97	91.10	99.75	96.62	99.78	0.000450	1.83	765.24	570.33	0.15
Trib2	2200		Inl Struct									
Trib2	2147.44	Max WS	688.22	92.44	98.77		98.82	0.001421	2.81	492.03	339.95	0.25
Trib2	2078.76	Max WS	688.39	92.22	98.73		98.75	0.000394	1.23	703.61	557.10	0.13

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2	1707.37	Max WS	690.36	92.46	98.35		98.40	0.001627	2.27	497.25	461.55	0.26
Trib2	1601.61	Max WS	689.90	92.48	98.08		98.18	0.003941	3.62	412.99	549.53	0.41
Trib2	1548.15	Max WS	689.55	92.39	97.95		98.00	0.002579	2.86	491.70	498.10	0.32
Trib2	1500	Max WS	690.04	91.91	97.87		97.89	0.001407	1.85	573.64	420.99	0.23
Trib2	1450	Max WS	690.30	91.87	97.78		97.82	0.001898	2.06	487.86	373.20	0.27
Trib2	1350	Max WS	689.59	92.83	97.57		97.63	0.002198	2.76	432.55	388.41	0.31
Trib2	1150	Max WS	689.00	92.45	97.30		97.33	0.000817	1.76	624.98	454.98	0.19
Trib2	1006.62	Max WS	687.37	93.17	97.09		97.13	0.002060	2.35	498.27	461.44	0.29
Trib2	961.42	Max WS	685.23	91.98	97.02		97.05	0.001580	1.82	559.98	465.62	0.25
Trib2	848.73	Max WS	681.32	91.79	96.85		96.88	0.001550	1.91	558.53	462.30	0.25
Trib2	752.77	Max WS	681.42	91.40	96.70		96.73	0.001648	1.95	562.39	472.55	0.25
Trib2	700	Max WS	678.87	90.92	96.64		96.66	0.001078	1.56	671.95	551.02	0.21
Trib2	650	Max WS	678.42	91.12	96.60		96.62	0.000599	1.45	828.18	597.37	0.16
Trib2	600	Max WS	677.82	92.50	96.57		96.59	0.000598	1.52	781.11	536.49	0.17
Trib2	443.45	Max WS	674.75	92.33	96.43		96.46	0.001018	2.02	522.42	316.86	0.22
Trib2	200	Max WS	655.92	90.85	96.11		96.15	0.001538	2.28	431.79	279.80	0.26
Trib2	137.55	Max WS	640.54	90.44	95.98		96.04	0.002008	2.39	400.69	338.95	0.29
Trib2	101.92	Max WS	628.51	90.29	95.92		95.97	0.001858	2.48	457.59	408.47	0.28
Main3	15063.95	Max WS	615.53	102.46	107.04		107.07	0.001246	2.34	627.09	719.15	0.24
Main3	14955.43	Max WS	611.17	103.59	106.92		106.94	0.001131	1.67	632.36	631.92	0.21
Main3	14788.2	Max WS	609.64	101.86	106.76		106.78	0.000860	1.46	694.07	594.03	0.19
Main3	14628.77	Max WS	606.92	102.21	106.63		106.65	0.000873	1.77	689.73	575.05	0.19
Main3	14541.77	Max WS	606.28	102.08	106.57		106.58	0.000559	1.41	737.68	491.59	0.16
Main3	14280.86	Max WS	605.57	100.65	106.44		106.45	0.000481	1.46	741.25	422.44	0.14
Main3	14234.63	Max WS	605.53	100.96	106.41		106.42	0.000566	1.36	663.94	388.76	0.16
Main3	14185.8	Max WS	605.45	100.28	106.36		106.39	0.000795	1.76	466.02	345.16	0.18
Main3	14016.19	Max WS	600.25	100.44	105.75		106.01	0.004836	4.62	198.65	181.49	0.47
Main3	13950	Max WS	599.37	101.08	105.69		105.72	0.001114	2.33	494.21	369.65	0.23
Main3	13850	Max WS	597.94	100.53	105.58		105.62	0.001102	2.33	484.34	565.10	0.23
Main3	13750	Max WS	597.40	98.79	105.50		105.53	0.000582	2.02	562.90	569.66	0.17
Main3	13600	Max WS	594.83	99.49	105.27		105.35	0.001824	3.12	332.35	492.22	0.29
Main3	13450	Max WS	591.71	99.56	105.07		105.11	0.001346	2.52	483.64	649.10	0.24
Main3	13391.27	Max WS	588.46	99.51	104.93		105.02	0.002574	3.34	324.94	586.11	0.34
Main3	13266.46	Max WS	583.10	98.98	104.75		104.78	0.001096	2.67	496.60	439.25	0.22
Main3	13150	Max WS	577.90	98.95	104.64		104.66	0.000935	2.36	642.22	802.12	0.21
Main3	12950	Max WS	580.01	98.53	104.51		104.52	0.000453	1.64	860.66	734.61	0.15
Main3	12900	Max WS	581.36	97.80	104.49		104.50	0.000201	1.18	1012.37	668.76	0.10
Main3	12850	Max WS	582.54	97.94	104.47		104.49	0.000474	1.64	784.61	729.11	0.15
Main3	12700	Max WS	581.20	99.10	104.37		104.40	0.000799	1.98	655.47	603.73	0.19
Main3	12393.1	Max WS	577.72	97.00	104.04		104.11	0.001442	2.70	438.81	600.18	0.26
Main3	12350	Max WS	577.73	96.55	104.03		104.05	0.000537	1.67	633.43	626.91	0.16
Main3	12150	Max WS	578.83	97.28	103.83		103.95	0.001509	3.20	411.56	635.81	0.27
Main3	12100	Max WS	578.53	97.22	103.72		103.88	0.002875	4.01	329.57	590.08	0.36
Main3	12050	Max WS	577.17	96.90	103.53		103.73	0.003448	4.00	244.35	483.15	0.40
Main3	11896.14	Max WS	575.05	96.27	103.20		103.29	0.001869	2.39	240.92	455.16	0.28
Main3	11700	Max WS	574.08	97.61	103.04		103.05	0.000350	1.40	746.69	525.78	0.13
Main3	11600	Max WS	573.75	97.58	102.93		102.97	0.001196	2.46	500.39	514.71	0.24
Main3	11346.39	Max WS	573.31	96.94	102.61		102.68	0.001280	2.56	430.04	423.84	0.25
Main3	11250	Max WS	573.45	96.63	102.51		102.56	0.001088	2.47	530.18	514.77	0.23
Main3	11168.79	Max WS	572.59	96.91	102.18		102.46	0.004169	4.89	186.54	170.76	0.45
Main3	11038.46	Max WS	571.26	96.30	101.95		102.02	0.001356	2.67	413.97	427.68	0.26
Main3	11000	Max WS	570.94	95.56	101.91		101.97	0.001302	2.57	444.69	423.99	0.25
Main3	10950	Max WS	569.80	96.78	101.76		101.90	0.002824	3.56	303.39	341.45	0.36
Main3	10850	Max WS	568.29	96.17	101.62		101.67	0.001177	2.47	417.95	320.80	0.24
Main3	10800	Max WS	567.43	95.97	101.55		101.61	0.001260	2.58	399.59	326.20	0.24
Main3	10650	Max WS	566.37	95.97	101.43		101.47	0.000553	1.74	524.00	369.69	0.17
Main3	10600	Max WS	566.11	96.78	101.40		101.44	0.000635	1.74	512.66	370.37	0.18
Main3	10496.09	Max WS	565.70	95.06	101.34		101.37	0.000669	1.83	574.53	432.53	0.18
Main3	10323.48	Max WS	565.20	94.27	101.23		101.26	0.000629	1.83	544.88	366.58	0.17
Main3	10150	Max WS	564.70	94.92	101.09		101.14	0.000861	2.21	428.70	263.10	0.21
Main3	10089.9	Max WS	564.13	94.80	100.97		101.07	0.002028	3.02	312.71	341.66	0.31
Main3	10050	Max WS	563.68	94.29	100.90		100.99	0.001765	2.88	276.41	334.79	0.29
Main3	10000	Max WS	563.32	94.56	100.84		100.91	0.001433	2.58	375.89	384.47	0.26
Main3	9869.95	Max WS	562.78	94.14	100.75		100.77	0.000465	1.88	710.31	647.64	0.15
Main3	9595.54	Max WS	562.69	94.94	100.53		100.58	0.000992	2.15	438.56	381.23	0.22
Main3	9343.2	Max WS	569.04	94.38	100.11		100.21	0.002652	3.56	379.40	525.71	0.35
Main3	9300	Max WS	570.17	93.82	99.99		100.11	0.002507	3.72	329.99	411.07	0.34
Main3	9100	Max WS	568.93	94.32	99.40		99.52	0.003609	3.37	295.67	683.36	0.39
Main3	9000	Max WS	568.05	95.38	99.21		99.25	0.001295	2.11	521.23	716.88	0.24
Main3	8900	Max WS	567.71	91.75	99.15		99.16	0.000369	1.27	759.75	578.42	0.13
Main3	8801.81	Max WS	566.54	92.97	98.96		99.06	0.002666	3.01	343.19	494.10	0.34
Main3	8600	Max WS	564.98	92.78	98.68		98.71	0.000710	1.92	558.47	377.07	0.18
Main3	8350	Max WS	564.48	92.98	98.52		98.54	0.000649	1.92	603.32	418.58	0.18
Main3	8162.22	Max WS	563.88	93.75	98.30		98.35	0.001525	2.33	417.07	363.58	0.26
Main3	7850.11	Max WS	562.54	93.09	97.86		97.91	0.001387	2.24	474.09	464.36	0.25

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

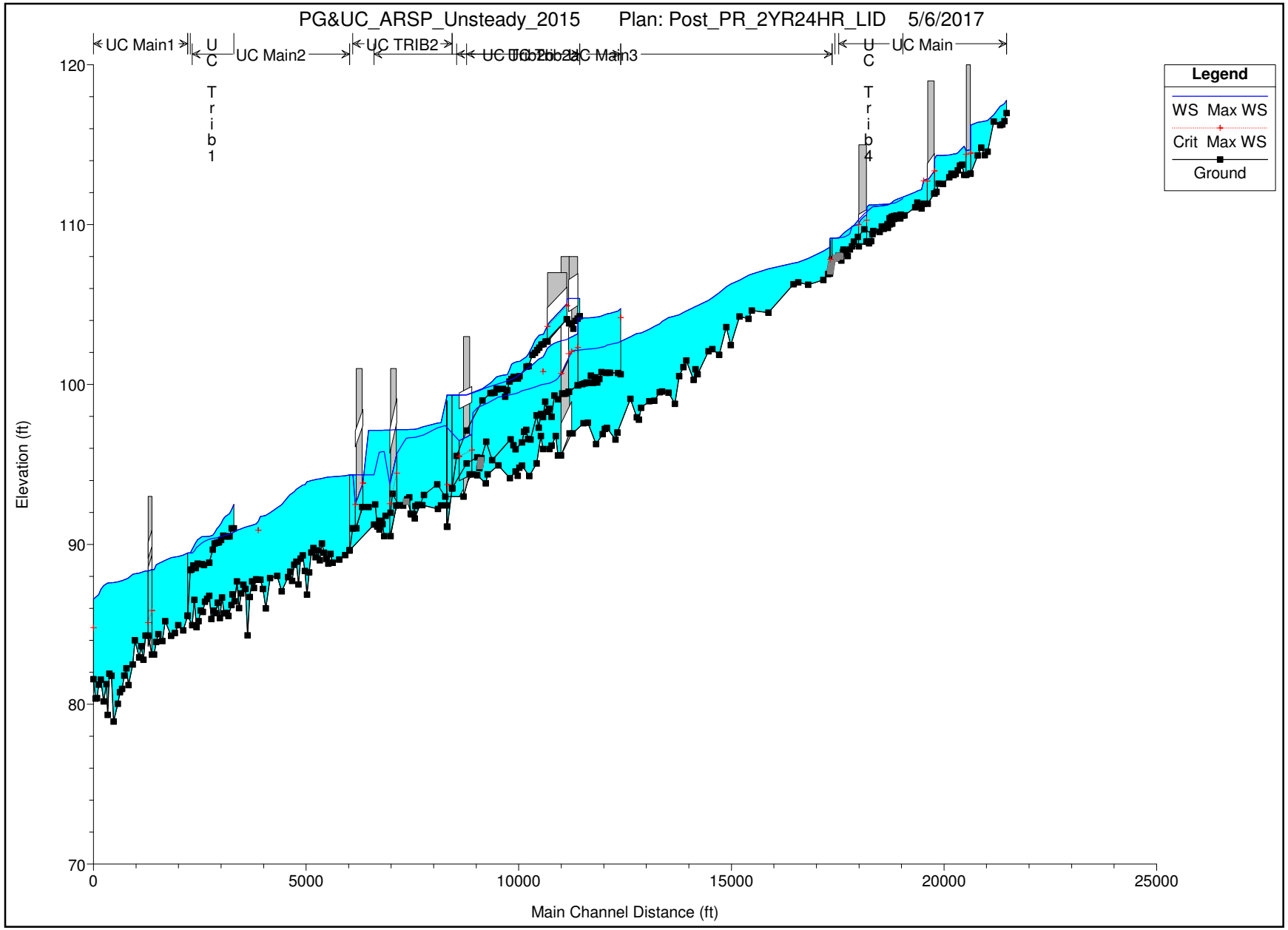
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	7633.01	Max WS	562.07	91.62	97.61		97.66	0.000996	2.46	474.61	441.42	0.22
Main3	7536.49	Max WS	562.08	91.92	97.55		97.57	0.000507	1.40	711.14	630.32	0.15
Main3	7500	Max WS	579.60	92.94	97.52		97.55	0.000648	1.60	570.50	524.31	0.17
Main3	7359.01	Max WS	579.37	92.42	97.28		97.35	0.002483	2.74	372.58	422.69	0.33
Main3	6910.56	Max WS	579.24	90.51	96.58		96.64	0.000859	2.16	396.06	294.61	0.20
Main3	6872.46	Max WS	579.22	91.27	96.52		96.59	0.002047	3.03	371.44	295.75	0.31
Main3	6795.89	Max WS	579.11	91.48	96.31		96.40	0.003213	3.50	324.29	302.50	0.38
Main3	6786.28*	Max WS	579.08	91.46	96.28		96.37	0.003221	3.49	327.33	310.26	0.38
Main3	6776.68*	Max WS	579.01	91.44	96.25		96.34	0.003245	3.48	329.61	317.67	0.38
Main3	6767.08*	Max WS	579.04	91.42	96.21		96.31	0.003295	3.48	330.95	325.00	0.38
Main3	6757.48*	Max WS	578.88	91.41	96.18		96.27	0.003355	3.48	331.88	332.64	0.38
Main3	6747.87*	Max WS	578.73	91.39	96.15		96.24	0.003434	3.49	331.60	338.60	0.39
Main3	6738.27*	Max WS	578.67	91.37	96.12		96.21	0.003543	3.51	330.25	344.23	0.39
Main3	6728.67*	Max WS	578.46	91.35	96.08		96.18	0.003683	3.55	328.27	350.58	0.40
Main3	6719.07*	Max WS	578.16	91.33	96.05		96.14	0.003849	3.59	325.18	355.64	0.41
Main3	6709.46*	Max WS	577.65	91.31	96.01		96.11	0.004069	3.64	320.44	359.82	0.42
Main3	6699.86*	Max WS	577.02	91.30	95.96		96.07	0.004379	3.72	313.95	364.45	0.43
Main3	6690.26*	Max WS	293.96	91.28	95.94		95.97	0.001162	1.90	314.61	373.47	0.22
Main3	6680.66*	Max WS	293.31	91.26	95.93		95.96	0.001132	1.87	321.17	385.05	0.22
Main3	6671.06	Max WS	292.51	91.24	95.92		95.95	0.001093	1.82	327.79	391.78	0.21
Trib1	4400	Max WS	45.04	101.24	103.20		103.20	0.000070	0.26	176.48	198.30	0.05
Trib1	4250	Max WS	45.83	100.77	101.56		101.69	0.021919	2.83	16.20	36.77	0.75
Trib1	4200	Max WS	44.40	100.19	101.01		101.03	0.004029	1.25	35.41	76.51	0.32
Trib1	4150	Max WS	44.06	100.17	100.89		100.90	0.001793	0.77	56.88	137.96	0.21
Trib1	4100	Max WS	44.49	99.80	100.84		100.84	0.000659	0.64	69.46	105.69	0.14
Trib1	4050	Max WS	45.11	100.07	100.49		100.54	0.016018	1.80	25.06	88.63	0.60
Trib1	4000	Max WS	45.74	99.35	100.03		100.07	0.008838	1.53	29.90	86.42	0.46
Trib1	3950	Max WS	46.44	98.83	99.67		99.71	0.008136	1.63	28.42	69.89	0.45
Trib1	3900	Max WS	46.73	98.64	99.42		99.43	0.003245	1.10	42.49	95.01	0.29
Trib1	3850	Max WS	47.85	98.56	99.10		99.13	0.009371	1.53	31.24	94.13	0.47
Trib1	3800	Max WS	48.53	97.84	98.87		98.88	0.001257	0.81	60.05	104.64	0.19
Trib1	3750	Max WS	49.36	97.89	98.58		98.61	0.010189	1.50	32.95	109.36	0.48
Trib1	3700	Max WS	49.65	97.25	98.23		98.26	0.005254	1.36	36.58	85.60	0.37
Trib1	3650	Max WS	50.18	97.20	98.07		98.09	0.002962	1.13	46.22	109.92	0.28
Trib1	3600	Max WS	50.95	97.08	97.79		97.84	0.008291	1.74	29.23	66.20	0.46
Trib1	3550	Max WS	51.61	96.58	97.46		97.50	0.006379	1.71	32.69	82.51	0.42
Trib1	3500	Max WS	52.23	96.24	97.21		97.26	0.007278	1.82	37.88	196.21	0.45
Trib1	3450	Max WS	52.28	95.98	96.71		96.79	0.016749	2.24	23.44	263.51	0.64
Trib1	3400	Max WS	52.21	95.52	96.36		96.38	0.002850	1.24	54.29	246.15	0.28
Trib1	3350	Max WS	52.89	95.47	96.23		96.25	0.002629	1.13	53.22	125.12	0.27
Trib1	3300	Max WS	53.64	95.40	96.11		96.13	0.003050	1.21	54.83	136.43	0.29
Trib1	3250	Max WS	54.48	95.18	95.93		95.95	0.005807	1.15	47.27	152.44	0.36
Trib1	3200	Max WS	55.24	95.07	95.74		95.75	0.004456	1.11	49.97	140.69	0.33
Trib1	3150	Max WS	56.19	94.68	95.62		95.63	0.001496	0.88	63.96	145.47	0.20
Trib1	3100	Max WS	57.08	94.83	95.49		95.51	0.004456	1.26	48.98	140.03	0.34
Trib1	3000.11	Max WS	58.91	94.48	95.17		95.19	0.003430	1.09	54.09	128.00	0.30
Trib1	2840.15	Max WS	65.16	93.86	94.81		94.83	0.002142	1.02	64.93	166.20	0.24
Trib1	2800	Max WS	66.64	93.56	94.72		94.75	0.003767	1.54	51.26	212.23	0.33
Trib1	2550	Max WS	75.68	92.95	94.27		94.28	0.001354	1.10	107.00	231.83	0.21
Trib1	2503.6	Max WS	77.72	92.81	94.20		94.21	0.001490	1.09	79.11	144.29	0.22
Trib1	2350	Max WS	83.37	92.69	93.92		93.94	0.002478	1.27	67.20	115.43	0.27
Trib1	2300	Max WS	85.21	92.51	93.83		93.85	0.001668	1.14	74.65	95.84	0.23
Trib1	2250	Max WS	87.05	92.52	93.75		93.77	0.002125	1.09	80.20	135.24	0.25
Trib1	2200	Max WS	88.89	92.51	93.67		93.69	0.001588	1.11	84.40	132.19	0.22
Trib1	2150	Max WS	90.72	92.48	93.58		93.61	0.002362	1.19	76.38	119.93	0.26
Trib1	2100	Max WS	92.54	92.33	93.37		93.41	0.006499	1.67	55.38	111.34	0.42
Trib1	2050	Max WS	94.28	92.16	93.20		93.22	0.002057	1.06	89.02	153.08	0.24
Trib1	2000	Max WS	96.04	92.24	93.12		93.13	0.001707	1.01	95.44	152.53	0.22
Trib1	1950	Max WS	97.64	92.08	93.01		93.03	0.003197	1.21	82.54	200.76	0.30
Trib1	1900	Max WS	99.29	91.99	92.94		92.95	0.000421	0.51	195.83	315.30	0.11
Trib1	1694.11	Max WS	105.77	91.37	92.72		92.74	0.002258	1.29	109.11	246.87	0.26
Trib1	1650	Max WS	107.27	91.11	92.61		92.65	0.002473	1.66	77.30	157.56	0.29
Trib1	1600	Max WS	108.96	91.25	92.45		92.51	0.004484	2.01	65.36	151.65	0.38
Trib1	1550	Max WS	110.65	91.01	92.33		92.36	0.002579	1.65	87.66	183.11	0.29
Trib1	1500	Max WS	112.33	90.92	92.23		92.26	0.001992	1.32	97.33	164.93	0.25
Trib1	1450	Max WS	114.02	90.63	92.12		92.15	0.002778	1.42	83.80	156.04	0.29
Trib1	1400	Max WS	115.70	90.50	91.97		92.02	0.003652	1.73	74.51	141.23	0.34
Trib1	1350	Max WS	117.39	90.50	91.87		91.90	0.001921	1.32	99.38	155.54	0.25
Trib1	1300	Max WS	119.08	90.50	91.78		91.80	0.002529	1.24	96.53	157.13	0.27
Trib1	1250	Max WS	120.76	90.54	91.62		91.65	0.004480	1.56	79.01	150.58	0.36
Trib1	1200	Max WS	122.43	90.27	91.35		91.41	0.006768	2.13	63.24	124.84	0.45
Trib1	1150	Max WS	124.10	90.13	91.14		91.18	0.003443	1.51	84.11	147.03	0.32
Trib1	1100	Max WS	125.68	90.10	90.98		91.01	0.003637	1.38	90.79	156.59	0.32
Trib1	1050	Max WS	126.07	90.06	90.79		90.83	0.005175	1.51	83.83	171.84	0.37
Trib1	1004.24	Max WS	125.28	89.67	90.65		90.67	0.002589	1.22	105.12	226.18	0.27

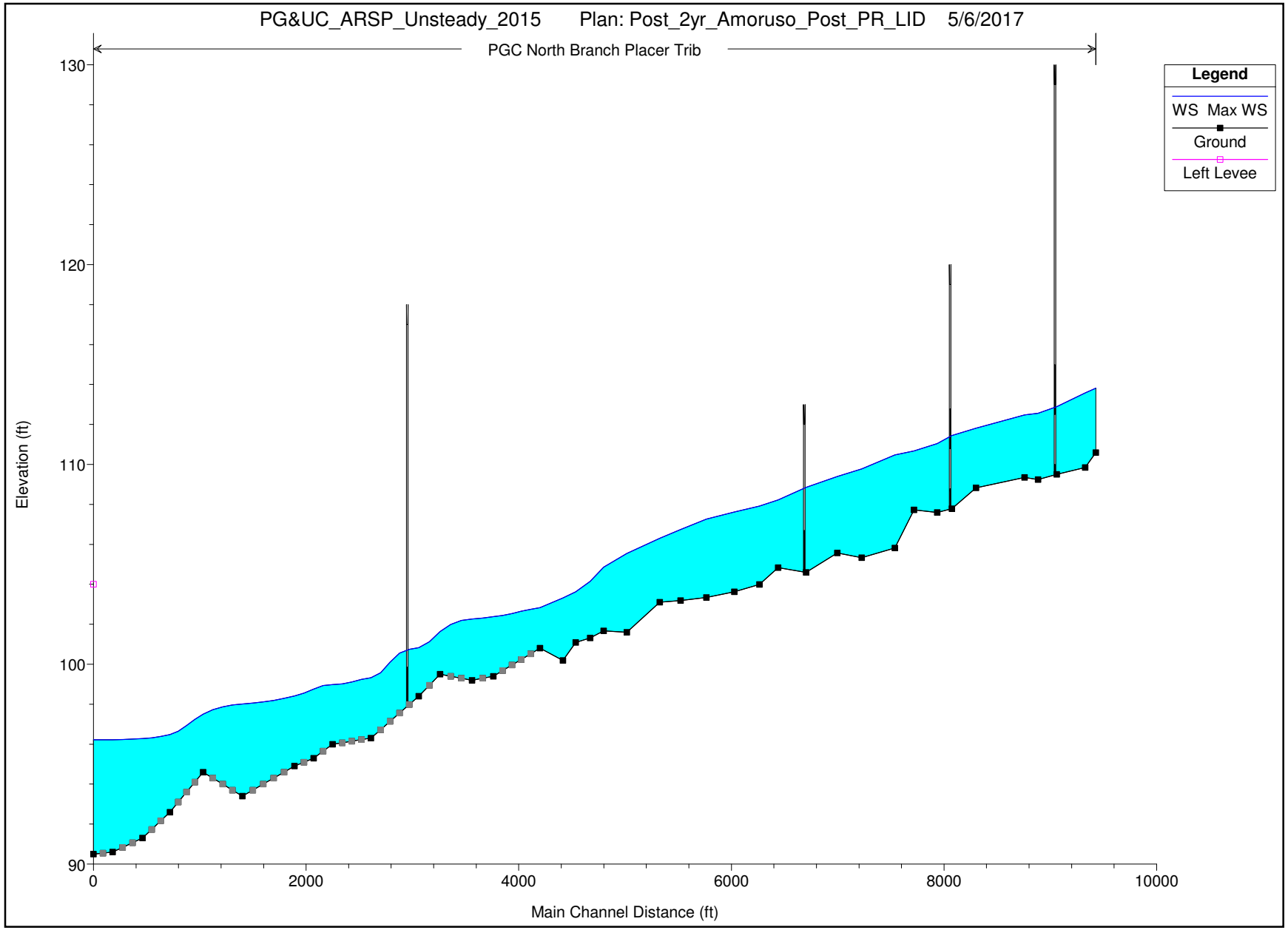
HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib1	920.64	Max WS	48.78	88.86	90.56		90.56	0.000016	0.16	394.69	493.14	0.02
Trib1	800	Max WS	49.83	88.71	90.56		90.56	0.000004	0.08	617.11	444.76	0.01
Trib1	750	Max WS	50.27	88.77	90.56		90.56	0.000006	0.10	496.85	391.15	0.02
Trib1	650	Max WS	51.15	88.80	90.55		90.55	0.000213	0.51	109.85	366.05	0.09
Trib1	603.8	Max WS	51.51	88.51	90.54		90.54	0.000161	0.49	119.55	275.25	0.08
Trib1	550	Max WS	51.98	88.68	90.54		90.54	0.000091	0.39	157.39	197.19	0.06
Trib1	504.41	Max WS	51.92	88.43	90.53		90.53	0.000033	0.25	235.75	241.70	0.04
Trib1	478.55	Max WS	51.86	88.39	90.53		90.53	0.000022	0.20	284.81	249.20	0.03
Main2	6100	Max WS	921.28	89.62	95.92		95.94	0.000512	1.48	1093.84	712.39	0.15
Main2	5995.41	Max WS	919.62	89.33	95.89		95.89	0.000269	1.24	1423.28	752.06	0.11
Main2	5852.28	Max WS	919.40	89.05	95.85		95.86	0.000230	1.21	1407.30	686.19	0.11
Main2	5700	Max WS	920.24	88.85	95.82		95.82	0.000231	1.16	1450.64	712.70	0.10
Main2	5650	Max WS	920.28	89.40	95.81		95.81	0.000244	1.07	1430.19	806.16	0.11
Main2	5600	Max WS	920.53	88.79	95.79		95.80	0.000374	1.45	1129.06	599.44	0.13
Main2	5550	Max WS	920.88	89.09	95.75		95.78	0.000737	1.90	918.54	605.90	0.19
Main2	5500	Max WS	921.21	89.47	95.72		95.74	0.000651	1.69	973.98	606.65	0.17
Main2	5450	Max WS	921.36	90.05	95.69		95.71	0.000602	1.73	1014.76	625.81	0.17
Main2	5400	Max WS	921.71	89.00	95.67		95.68	0.000377	1.70	1108.52	609.99	0.14
Main2	5347.58	Max WS	922.10	89.63	95.64		95.66	0.000494	1.68	988.79	510.32	0.16
Main2	5300	Max WS	922.31	89.20	95.62		95.64	0.000463	1.57	994.88	493.12	0.15
Main2	5250	Max WS	922.77	89.77	95.60		95.61	0.000492	1.59	969.48	474.91	0.15
Main2	5200	Max WS	923.14	89.49	95.56		95.59	0.000686	1.69	904.96	569.19	0.18
Main2	5150	Max WS	923.58	88.25	95.53		95.55	0.000641	1.71	842.44	416.32	0.17
Main2	5100	Max WS	923.97	86.86	95.50		95.53	0.000437	2.16	886.75	485.69	0.15
Main2	5050	Max WS	923.94	88.33	95.18	95.49	96.10	0.012717	8.51	220.17	493.71	0.75
Main2	5000	Max WS	923.66	89.31	94.83		94.88	0.001783	2.60	610.83	472.06	0.28
Main2	4950	Max WS	923.78	89.11	94.75		94.80	0.001746	2.62	631.97	486.48	0.28
Main2	4900	Max WS	924.01	87.49	94.66		94.71	0.001693	2.57	636.07	496.30	0.27
Main2	4850	Max WS	924.19	88.91	94.57		94.63	0.001745	2.68	621.52	474.69	0.28
Main2	4800	Max WS	924.55	88.72	94.50		94.54	0.001547	2.40	668.49	483.32	0.26
Main2	4750	Max WS	924.84	87.72	94.43		94.48	0.001172	2.59	712.39	472.27	0.24
Main2	4700	Max WS	925.23	88.29	94.37		94.42	0.001227	2.51	676.97	464.30	0.24
Main2	4650	Max WS	925.61	87.95	94.28		94.35	0.001771	2.99	594.00	434.78	0.29
Main2	4504.57	Max WS	925.23	87.06	93.71		93.89	0.005178	4.00	355.03	331.37	0.47
Main2	4397.85	Max WS	926.12	88.02	93.40		93.47	0.002453	3.00	554.18	487.82	0.33
Main2	4231.14	Max WS	927.74	87.89	92.96		93.02	0.003103	3.08	529.29	455.34	0.36
Main2	4128.64	Max WS	928.80	86.00	92.68		92.75	0.002344	3.05	524.18	354.90	0.32
Main2	4061.14	Max WS	929.52	87.21	92.54		92.60	0.002109	2.72	530.64	346.56	0.30
Main2	4000	Max WS	930.17	87.79	92.44		92.48	0.001710	2.14	614.97	421.88	0.26
Main2	3950	Max WS	929.98	87.78	92.11		92.25	0.008785	4.54	396.45	472.80	0.59
Main2	3900	Max WS	928.46	87.81	91.82		91.91	0.004260	3.39	427.49	345.71	0.42
Main2	3875		Lat Struct									
Main2	3850	Max WS	735.41	87.27	91.60		91.72	0.005191	3.99	306.46	225.57	0.46
Main2	3808.17	Max WS	600.70	87.69	91.53		91.57	0.002399	2.07	383.08	288.27	0.30
Main2	3750	Max WS	455.05	86.70	91.47		91.49	0.000880	1.41	453.99	317.76	0.19
Main2	3700	Max WS	363.51	84.31	91.45		91.46	0.000390	1.00	514.51	349.31	0.12
Main2	3650	Max WS	287.63	87.21	91.44		91.45	0.000424	0.84	440.65	354.91	0.12
Main2	3600	Max WS	226.19	87.47	91.43		91.43	0.000267	0.65	438.00	354.95	0.10
Main2	3550.1	Max WS	178.27	86.93	91.41		91.42	0.000317	0.71	306.02	261.28	0.11
Main2	3500	Max WS	153.43	86.01	91.41		91.41	0.000128	0.66	341.68	255.35	0.07
Main2	3450	Max WS	121.98	87.68	91.40		91.41	0.000114	0.58	355.66	364.01	0.07
Main2	3400	Max WS	92.95	86.44	91.40		91.40	0.000068	0.47	339.72	284.38	0.05
Main2	3344.35	Max WS	63.34	86.87	91.40		91.40	0.000018	0.24	412.36	254.91	0.03
Main2	3320.7	Max WS	51.10	86.20	91.40		91.40	0.000011	0.19	432.54	266.68	0.02
Main2	3250	Max WS	15.19	85.52	91.40		91.40	0.000001	0.05	539.31	308.19	0.00
Main2	3200	Max WS	-10.22	85.71	91.40		91.40	0.000000	-0.03	465.43	242.32	0.00
Main2	3150	Max WS	-35.84	85.68	91.40		91.40	0.000004	-0.12	451.33	228.39	0.01
Main2	3100	Max WS	-34.96	86.67	91.40		91.40	0.000001	-0.06	909.97	660.94	0.01
Main2	3050	Max WS	-33.91	85.37	91.40		91.40	0.000001	-0.06	913.34	670.37	0.01
Main2	3000	Max WS	937.71	86.35	91.35		91.37	0.000774	1.68	982.29	793.05	0.18
Main2	2950	Max WS	938.05	85.70	91.32		91.33	0.000556	1.35	1089.98	752.61	0.15
Main2	2900	Max WS	938.73	85.85	91.29		91.31	0.000598	1.54	1041.78	647.77	0.16
Main2	2850	Max WS	939.05	85.33	91.26		91.27	0.000702	1.85	973.21	590.01	0.17
Main2	2800	Max WS	939.54	86.78	91.22		91.24	0.000762	1.71	917.02	569.07	0.19
Main2	2750.23	Max WS	939.93	86.59	91.18		91.20	0.000958	1.95	874.14	567.03	0.21
Main2	2700	Max WS	940.47	86.41	91.13		91.15	0.000919	1.94	888.47	590.28	0.21
Main2	2650	Max WS	940.52	85.77	91.08		91.10	0.001173	2.11	834.77	599.61	0.23
Main2	2600	Max WS	940.78	85.86	91.01		91.04	0.001395	2.42	772.30	584.47	0.25
Main2	2550	Max WS	940.11	85.20	90.90		90.96	0.002064	2.76	530.33	553.96	0.30
Main2	2500	Max WS	939.13	84.82	90.80		90.86	0.002211	2.65	528.19	534.14	0.31
Main2	2450	Max WS	934.79	86.53	90.66		90.73	0.002889	3.03	496.55	523.78	0.35
Main2	2397.32	Max WS	929.28	84.95	90.53		90.61	0.001920	3.02	537.62	527.24	0.30
Main1	2291.46	Max WS	981.35	85.53	90.53		90.55	0.000963	1.62	950.48	783.36	0.20
Main1	2189.07	Max WS	979.56	84.62	90.46		90.48	0.000512	1.48	1224.94	846.22	0.15
Main1	2069.18	Max WS	978.35	84.93	90.41		90.42	0.000470	1.51	1221.88	777.52	0.15

HEC-RAS Plan: PrePR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	1990.13	Max WS	978.69	84.45	90.38		90.39	0.000387	1.20	1333.41	847.05	0.13
Main1	1902.51	Max WS	979.10	84.27	90.34		90.35	0.000441	1.57	1240.52	794.97	0.15
Main1	1760.99	Max WS	980.01	85.19	90.24		90.27	0.000803	1.80	938.15	658.49	0.19
Main1	1698.99	Max WS	980.88	83.95	90.19		90.22	0.000806	2.22	908.83	601.94	0.20
Main1	1600	Max WS	982.28	84.38	90.07		90.11	0.001427	2.38	630.85	527.29	0.25
Main1	1550	Max WS	983.05	83.89	89.98		90.04	0.001668	2.82	567.99	490.30	0.28
Main1	1500	Max WS	983.16	83.11	89.85		89.94	0.002725	3.32	485.25	482.22	0.34
Main1	1450	Max WS	983.64	82.50	89.75		89.83	0.001776	3.05	530.76	474.51	0.29
Main1	1400	Max WS	984.12	82.49	89.67		89.74	0.001675	2.68	559.79	475.99	0.28
Main1	1350	Max WS	984.65	82.27	89.60		89.66	0.001472	2.55	594.81	475.70	0.26
Main1	1300	Max WS	985.35	84.29	89.53		89.59	0.001615	3.05	604.11	482.18	0.28
Main1	1250	Max WS	985.75	82.78	89.46		89.51	0.001527	2.78	607.45	498.57	0.26
Main1	1200	Max WS	986.21	83.63	89.38		89.44	0.001600	3.06	593.36	491.19	0.28
Main1	1150	Max WS	986.66	82.93	89.31		89.37	0.001217	2.89	644.41	507.34	0.24
Main1	1050	Max WS	987.81	84.00	89.21		89.25	0.001106	2.28	724.38	540.41	0.22
Main1	1000	Max WS	988.56	82.49	89.17		89.20	0.000909	2.28	783.41	424.98	0.20
Main1	902.45	Max WS	989.08	81.20	89.02		89.08	0.001890	3.19	597.18	384.00	0.28
Main1	850	Max WS	988.15	82.25	88.86		88.96	0.002395	3.64	450.43	362.05	0.33
Main1	800	Max WS	986.46	81.79	88.75		88.84	0.001910	3.61	531.76	436.03	0.30
Main1	750	Max WS	986.44	80.96	88.70		88.75	0.001186	2.76	735.10	498.64	0.24
Main1	700	Max WS	987.25	80.75	88.65		88.69	0.001070	2.37	785.13	535.15	0.22
Main1	650	Max WS	988.07	80.03	88.61		88.65	0.000903	2.56	848.50	619.38	0.20
Main1	550	Max WS	989.48	78.91	88.55		88.58	0.000562	2.06	1035.09	736.99	0.16
Main1	500	Max WS	990.34	81.77	88.53		88.55	0.000488	1.77	1151.15	788.86	0.16
Main1	450.28	Max WS	991.21	81.91	88.51		88.52	0.000384	1.61	1237.47	813.29	0.14
Main1	411.53	Max WS	991.80	79.33	88.49		88.51	0.000582	1.82	1120.80	836.22	0.16
Main1	381.37	Max WS	992.15	81.25	88.46		88.49	0.000903	2.11	979.49	792.07	0.20
Main1	316.15	Max WS	994.80	80.18	88.40		88.43	0.000983	2.22	973.11	907.50	0.21
Main1	250	Max WS	996.22	81.54	88.32		88.35	0.001356	2.37	873.03	872.48	0.24
Main1	200	Max WS	996.55	81.23	88.24		88.28	0.001719	2.12	801.60	830.78	0.26
Main1	161.78	Max WS	995.43	80.38	88.19		88.23	0.001166	1.97	869.89	823.98	0.22
Main1	126.68	Max WS	994.86	80.35	88.16		88.19	0.000969	1.86	820.82	843.64	0.21
Main1	76.78	Max WS	994.91	81.56	88.12	87.23	88.15	0.000791	2.08	956.08	914.65	0.20


PG&UC_ARSP_Unsteady_2015 Plan: Post_PR_2YR24HR_LID 5/6/2017
UC Main1
UC Trib1
UC Main2
UC TRIB2
UC Main3
UC Trib4
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_2yr_Amoruso_Post_PR_LID 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
130
120
110
100
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main	21550	Max WS	32.54	116.98	117.78		117.82	0.005563	1.51	21.81	50.92	0.38
Main	21500	Max WS	32.27	116.48	117.58		117.61	0.003384	1.42	22.64	35.35	0.31
Main	21450	Max WS	32.17	116.27	117.49		117.50	0.001011	0.85	37.73	51.50	0.18
Main	21396.29	Max WS	32.27	116.23	117.40		117.42	0.002015	1.06	30.33	116.31	0.24
Main	21246.12	Max WS	31.92	116.44	116.88		116.89	0.009941	1.14	31.41	198.65	0.44
Main	21100	Max WS	27.89	114.56	116.53		116.53	0.000138	0.48	101.78	167.33	0.07
Main	21037.73	Max WS	37.26	114.34	116.47		116.49	0.001138	1.23	36.33	177.99	0.20
Main	20950.06	Max WS	33.51	114.81	116.42		116.43	0.000416	0.62	77.55	228.68	0.12
Main	20867	Max WS	33.19	114.33	116.40		116.40	0.000280	0.58	96.68	234.85	0.10
Main	20700	Max WS	33.12	113.19	116.22		116.32	0.001521	2.45	13.54	130.13	0.26
Main	20600		Culvert									
Main	20550	Max WS	33.12	113.12	114.91		115.17	0.008478	4.13	8.02	144.96	0.57
Main	20500	Max WS	33.08	113.75	114.78		114.81	0.004663	1.55	22.23	120.99	0.36
Main	20450	Max WS	32.70	113.69	114.64		114.66	0.002590	1.17	28.07	111.42	0.27
Main	20400	Max WS	43.10	113.39	114.49		114.52	0.003022	1.48	30.36	103.20	0.30
Main	20351.92	Max WS	42.87	113.17	114.43		114.44	0.000565	0.76	82.38	158.76	0.14
Main	20300	Max WS	42.86	113.10	114.41		114.41	0.000307	0.52	87.61	149.79	0.10
Main	20250	Max WS	42.87	113.18	114.38		114.39	0.000641	0.83	70.78	123.07	0.15
Main	20200	Max WS	42.94	112.96	114.36		114.37	0.000395	0.69	83.82	109.43	0.12
Main	20050	Max WS	44.15	112.55	114.33		114.33	0.000075	0.37	163.57	166.55	0.05
Main	19950	Max WS	44.27	112.56	114.33		114.33	0.000046	0.29	218.23	222.90	0.04
Main	19900	Max WS	44.33	112.05	114.32		114.32	0.000020	0.22	301.84	240.03	0.03
Main	19852.97	Max WS	57.92	111.94	114.11		114.43	0.006787	4.51	12.83	253.20	0.54
Main	19700		Culvert									
Main	19600	Max WS	57.92	111.31	112.77	112.75	113.46	0.024746	6.66	8.70	216.66	0.97
Main	19550	Max WS	57.85	111.01	112.19		112.20	0.000879	0.92	81.11	204.49	0.17
Main	19500	Max WS	58.82	111.18	112.15		112.16	0.000738	0.80	100.54	252.74	0.15
Main	19450	Max WS	58.74	111.38	112.10		112.11	0.001676	0.92	81.37	251.54	0.22
Main	19400	Max WS	58.52	111.08	112.03		112.04	0.001667	1.05	106.71	390.55	0.22
Main	19150	Max WS	58.32	110.58	111.76		111.77	0.001102	1.10	102.44	271.84	0.19
Main	19050	Max WS	59.33	110.39	111.66		111.67	0.001175	1.05	70.15	138.05	0.20
Main	19000	Max WS	59.34	110.49	111.62		111.63	0.001128	0.93	90.79	258.08	0.19
Main	18950	Max WS	59.35	110.54	111.56		111.57	0.001412	1.01	67.44	174.82	0.21
Main	18900	Max WS	59.37	110.53	111.50		111.51	0.001274	0.89	83.72	170.77	0.19
Main	18850	Max WS	59.31	110.49	111.39		111.41	0.003067	1.31	52.06	222.86	0.30
Main	18800	Max WS	60.92	110.40	111.28		111.30	0.001447	0.96	87.21	262.46	0.21
Main	18750	Max WS	59.49	110.03	111.23		111.24	0.000740	0.83	91.56	340.13	0.15
Main	18700	Max WS	59.67	109.89	111.21		111.21	0.000442	0.68	112.42	450.11	0.12
Main	18650	Max WS	59.11	109.86	111.19		111.19	0.000576	0.64	134.00	387.50	0.13
Main	18397.57	Max WS	57.74	109.41	111.11		111.11	0.000154	0.50	213.48	281.54	0.08
Main	18200	Max WS	57.85	109.70	110.68		110.68	0.000752	0.60	112.14	185.42	0.14
Main	18050	Max WS	58.89	109.24	110.26		110.31	0.005011	1.93	44.57	119.18	0.39
Main	17955.7	Max WS	58.91	108.94	109.94		109.96	0.002316	1.23	71.62	169.89	0.26
Main	17750	Max WS	59.97	108.17	109.55		109.57	0.001564	1.14	56.33	137.90	0.22
Main	17700	Max WS	59.97	108.29	109.43		109.45	0.003614	1.27	47.16	125.89	0.31
Main	17650	Max WS	59.71	107.99	109.29		109.31	0.002469	1.21	51.10	123.70	0.27
Main	17640.*	Max WS	60.58	108.01	109.27		109.29	0.002326	1.21	55.98	108.23	0.26
Main	17630.*	Max WS	60.26	108.02	109.24		109.26	0.002646	1.34	50.03	101.21	0.28
Main	17620.*	Max WS	59.26	108.04	109.21		109.24	0.002931	1.45	47.11	99.70	0.30
Main	17610.*	Max WS	57.23	108.05	109.18		109.21	0.002827	1.48	49.14	110.61	0.30
Main	17600	Max WS	54.30	108.07	109.16		109.18	0.001934	1.27	63.20	147.33	0.25
Trib2b	3000	Max WS	10.13	104.27	105.38		105.38	0.000009	0.09	142.01	197.02	0.02
Trib2b	2950	Max WS	10.07	104.12	105.38		105.38	0.000005	0.07	164.07	182.38	0.01
Trib2b	2900	Max WS	10.27	103.98	105.38		105.38	0.000003	0.07	203.14	215.84	0.01
Trib2b	2850	Max WS	10.46	103.49	105.38		105.38	0.000002	0.06	224.37	201.05	0.01
Trib2b	2800	Max WS	10.65	103.81	105.38		105.38	0.000002	0.06	220.59	180.43	0.01
Trib2b	2750	Max WS	10.85	103.83	105.38		105.38	0.000003	0.07	179.20	133.10	0.01
Trib2b	2700	Max WS	11.05	104.08	105.33		105.37	0.001536	1.49	7.41	65.50	0.24
Trib2b	2500		Culvert									
Trib2b	2200	Max WS	10.97	102.69	103.45		103.59	0.015086	2.95	3.72	96.17	0.66
Trib2b	2150	Max WS	14.06	102.52	103.14		103.14	0.000637	0.37	37.78	126.61	0.12
Trib2b	2100	Max WS	13.57	102.50	103.11		103.12	0.000529	0.36	37.90	117.01	0.11
Trib2b	2050	Max WS	12.79	102.30	103.09		103.09	0.000498	0.42	32.71	110.75	0.11
Trib2b	2000	Max WS	40.55	102.16	102.94		102.97	0.003799	1.19	34.04	122.42	0.31
Trib2b	1950	Max WS	40.50	101.98	102.75		102.78	0.004575	1.29	36.05	145.21	0.34
Trib2b	1887.66	Max WS	40.48	101.86	102.40		102.43	0.008986	1.47	31.83	136.37	0.46
Trib2b	1800	Max WS	40.32	101.14	101.93		101.94	0.003545	0.92	52.13	173.99	0.29
Trib2b	1750	Max WS	39.83	101.12	101.75		101.76	0.003865	0.97	41.11	126.73	0.30
Trib2b	1587.06	Max WS	38.26	100.52	101.45		101.45	0.000256	0.35	109.87	205.70	0.08
Trib2b	1547.11	Max WS	38.21	100.38	101.44		101.44	0.000386	0.49	91.59	171.97	0.11
Trib2b	1494.66	Max WS	39.16	100.39	101.39		101.40	0.001453	0.67	58.71	152.12	0.19
Trib2b	1450	Max WS	39.15	100.48	101.35		101.36	0.001043	0.67	61.23	149.45	0.17
Trib2b	1400	Max WS	39.12	100.35	101.27		101.28	0.002543	1.04	50.97	169.98	0.26
Trib2b	1350	Max WS	39.06	100.19	100.90		100.93	0.016771	1.39	28.12	151.87	0.57
Trib2b	1300	Max WS	37.94	99.63	100.62		100.62	0.000516	0.46	82.31	170.78	0.12
Trib2b	1250	Max WS	37.85	99.24	100.60		100.60	0.000191	0.36	106.98	178.19	0.08

HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1200	Max WS	38.97	99.73	100.58		100.58	0.000673	0.47	82.60	201.98	0.13
Trib2b	1064.85	Max WS	38.68	99.70	100.50		100.50	0.000707	0.56	84.14	199.60	0.14
Trib2b	1050	Max WS	38.66	99.74	100.48		100.49	0.001116	0.56	73.60	180.68	0.16
Trib2b	1000	Max WS	38.59	99.49	100.34		100.37	0.004233	1.20	32.03	110.93	0.33
Trib2b	950	Max WS	38.46	99.47	100.20		100.21	0.002429	0.90	56.34	212.01	0.25
Trib2b	902.71	Max WS	38.30	99.46	100.10		100.11	0.002271	0.73	52.84	192.14	0.23
Trib2b	715.36	Max WS	37.86	99.00	99.73		99.74	0.001958	0.62	60.93	231.61	0.21
Trib2b	339.81	Max WS	23.45	97.12	99.36		99.36	0.000118	0.34	99.87	210.43	0.06
Trib2b	106.24	Max WS	23.18	95.53	99.34		99.34	0.000046	0.30	98.67	92.21	0.04
Trib4	2100	Max WS	79.25	110.56	111.63		111.64	0.002233	0.90	88.20	201.81	0.24
Trib4	2050	Max WS	78.84	110.63	111.54		111.56	0.001836	1.02	81.61	160.28	0.23
Trib4	1950	Max WS	70.73	110.57	111.39		111.40	0.001236	0.82	88.76	168.00	0.19
Trib4	1900	Max WS	69.12	110.36	111.36		111.36	0.000400	0.51	136.18	202.09	0.11
Trib4	1850	Max WS	66.93	110.06	111.34		111.34	0.000416	0.51	131.97	201.72	0.11
Trib4	1800	Max WS	63.93	110.02	111.31		111.32	0.000586	0.59	108.22	171.89	0.13
Trib4	1747.14	Max WS	61.41	109.80	111.29		111.30	0.000378	0.55	116.23	192.11	0.11
Trib4	1700	Max WS	60.31	109.83	111.28		111.28	0.000261	0.46	131.17	214.87	0.09
Trib4	1650	Max WS	59.83	109.73	111.27		111.27	0.000138	0.34	178.52	244.93	0.07
Trib4	1600	Max WS	62.80	109.88	111.26		111.26	0.000201	0.40	155.90	238.40	0.08
Trib4	1550	Max WS	62.58	109.54	111.26		111.26	0.000067	0.29	233.42	242.39	0.05
Trib4	1400	Max WS	62.62	109.60	111.24		111.24	0.000193	0.54	164.55	236.35	0.08
Trib4	1350	Max WS	62.67	108.96	111.23		111.23	0.000065	0.32	232.67	257.75	0.05
Trib4	1300	Max WS	62.78	108.83	111.23		111.23	0.000034	0.25	327.35	324.58	0.04
Trib4	1250	Max WS	62.76	108.93	111.10		111.27	0.003814	3.33	18.83	255.06	0.41
Trib4	1000		Culvert									
Trib4	900	Max WS	62.76	108.64	109.90		110.40	0.022258	5.66	11.09	270.94	0.90
Trib4	850	Max WS	62.73	108.45	109.43		109.48	0.005609	1.80	39.81	258.21	0.40
Trib4	800	Max WS	63.69	108.03	109.34		109.35	0.000720	0.85	102.85	253.21	0.15
Trib4	750	Max WS	63.54	108.34	109.26		109.28	0.002524	1.12	84.12	306.79	0.26
Trib4	700	Max WS	63.30	108.43	109.22		109.23	0.000259	0.43	189.66	299.82	0.09
Trib4	650	Max WS	62.74	107.75	109.20		109.21	0.000685	0.76	109.40	270.84	0.15
Trib4	600	Max WS	62.08	107.89	109.18		109.19	0.000250	0.59	190.91	320.05	0.09
Trib4	550	Max WS	58.41	107.93	109.17		109.17	0.000316	0.63	172.06	322.93	0.11
Trib4	540.*	Max WS	59.29	107.93	109.17		109.17	0.000170	0.46	212.88	311.45	0.08
Trib4	530.*	Max WS	59.01	107.93	109.17		109.17	0.000160	0.44	210.96	294.22	0.07
Trib4	520.*	Max WS	58.71	107.92	109.17		109.17	0.000146	0.42	209.46	268.85	0.07
Trib4	510.*	Max WS	58.33	107.92	109.17		109.17	0.000131	0.40	235.90	319.38	0.07
Trib4	500	Max WS	57.58	107.92	109.16		109.16	0.000364	0.66	165.03	313.85	0.11
Trib2a	6650	Max WS	183.88	100.64	104.75	104.19	104.95	0.007961	3.66	58.98	179.55	0.54
Trib2a	6592.43	Max WS	181.28	100.72	104.60		104.63	0.001150	1.70	173.03	193.62	0.21
Trib2a	6400	Max WS	171.85	100.73	104.45		104.46	0.000610	0.90	209.71	224.71	0.15
Trib2a	6350	Max WS	178.85	100.73	104.43		104.44	0.000360	0.87	275.56	235.96	0.12
Trib2a	6300	Max WS	172.31	100.73	104.40		104.41	0.000694	1.09	193.85	260.23	0.16
Trib2a	6200	Max WS	151.68	100.78	104.29		104.32	0.001256	1.73	125.19	180.23	0.22
Trib2a	6150	Max WS	149.80	100.34	104.25		104.27	0.000760	1.45	159.02	148.58	0.18
Trib2a	6100	Max WS	147.53	100.13	104.22		104.23	0.000473	1.19	198.64	158.69	0.14
Trib2a	6050	Max WS	146.73	100.45	104.20		104.21	0.000370	0.97	219.49	161.58	0.12
Trib2a	6000	Max WS	145.98	100.10	104.19		104.20	0.000313	1.04	229.52	173.65	0.11
Trib2a	5950	Max WS	145.49	100.55	104.18		104.18	0.000266	0.80	256.82	186.52	0.10
Trib2a	5905.86	Max WS	145.38	100.10	104.17		104.17	0.000155	0.64	311.13	194.63	0.08
Trib2a	5850	Max WS	145.30	100.12	104.16		104.17	0.000084	0.47	446.14	303.68	0.06
Trib2a	5800	Max WS	145.46	100.06	104.16		104.16	0.000062	0.50	516.18	336.43	0.05
Trib2a	5750	Max WS	145.40	100.02	104.16		104.16	0.000044	0.37	569.33	334.36	0.04
Trib2a	5647.95	Max WS	145.48	99.94	104.15		104.15	0.000072	0.45	347.56	191.59	0.06
Trib2a	5200		Culvert									
Trib2a	5150	Max WS	141.52	99.55	102.89		102.92	0.001909	1.93	156.49	317.35	0.27
Trib2a	5100	Max WS	140.48	99.45	102.81		102.83	0.001490	1.87	173.28	299.80	0.24
Trib2a	5050	Max WS	142.26	99.42	102.77		102.78	0.000608	1.19	239.51	292.73	0.15
Trib2a	5000	Max WS	143.82	99.45	102.74		102.75	0.000577	1.27	229.12	308.29	0.15
Trib2a	4896.6	Max WS	143.67	99.08	102.67		102.68	0.000827	1.54	206.09	319.76	0.18
Trib2a	4817.5	Max WS	143.66	99.31	102.59		102.61	0.000955	1.32	120.92	296.04	0.19
Trib2a	4750	Max WS	143.73	97.98	102.47		102.53	0.001494	1.95	77.11	360.14	0.25
Trib2a	4700	Max WS	143.82	98.48	102.38		102.45	0.002132	2.09	71.33	256.51	0.29
Trib2a	4650	Max WS	143.90	98.29	102.26		102.34	0.002318	2.29	63.30	180.02	0.30
Trib2a	4600	Max WS	137.52	98.92	101.96		102.15	0.005836	3.49	43.22	180.48	0.48
Trib2a	4550	Max WS	143.77	97.96	101.73	100.80	101.89	0.004691	3.36	60.96	248.07	0.43
Trib2a	4500	Max WS	143.48	98.15	101.64		101.67	0.001197	1.80	168.16	273.47	0.22
Trib2a	4450	Max WS	143.48	97.30	101.60		101.62	0.000891	1.54	183.80	302.38	0.19
Trib2a	4400	Max WS	143.49	98.06	101.47		101.53	0.003251	2.04	89.39	332.51	0.34
Trib2a	4250.25	Max WS	144.58	96.55	101.11		101.17	0.001969	1.91	76.52	119.73	0.27
Trib2a	4200	Max WS	144.62	96.59	101.03		101.06	0.002623	1.59	115.25	188.20	0.29
Trib2a	4150	Max WS	144.67	97.16	100.92		100.95	0.002167	1.53	131.28	210.19	0.27
Trib2a	4100	Max WS	144.71	97.05	100.82		100.85	0.002205	1.54	124.97	194.59	0.27
Trib2a	4050	Max WS	145.77	96.37	100.74		100.77	0.001502	1.84	144.47	220.38	0.24
Trib2a	3900	Max WS	143.95	95.95	100.44		100.51	0.002662	2.66	119.17	287.67	0.32
Trib2a	3850	Max WS	143.66	96.20	100.36		100.41	0.001358	2.13	141.78	279.77	0.24

HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2a	3784.11	Max WS	143.97	96.57	100.29		100.31	0.001393	1.39	144.23	275.61	0.22
Trib2a	3350	Max WS	142.94	95.27	99.91		99.92	0.000483	1.09	235.23	299.68	0.14
Trib2a	3214.64	Max WS	143.93	96.42	99.80		99.83	0.001053	1.37	105.86	206.70	0.20
Trib2a	3100	Max WS	144.03	95.40	99.68		99.72	0.001179	1.75	126.66	160.15	0.22
Trib2a	3090.*	Max WS	143.46	95.27	99.67		99.70	0.001090	1.74	127.46	175.20	0.21
Trib2a	3080.*	Max WS	143.21	95.14	99.65		99.69	0.001011	1.73	129.98	186.22	0.20
Trib2a	3070.*	Max WS	143.20	95.02	99.65		99.68	0.000943	1.71	133.26	195.18	0.20
Trib2a	3060.*	Max WS	143.09	94.89	99.64		99.68	0.000879	1.70	137.43	213.22	0.19
Trib2a	3050	Max WS	143.04	94.76	99.62		99.67	0.001000	1.86	121.96	223.34	0.21
Trib2a	3000	Max WS	143.12	95.44	99.58		99.62	0.001234	1.88	125.61	246.38	0.22
Trib2a	2750	Max WS	143.21	95.06	99.34		99.37	0.000833	1.73	170.07	221.85	0.19
TRIB2	2409.07	Max WS	166.42	93.51	99.34		99.35	0.000146	0.73	411.11	378.48	0.08
TRIB2	2299.16	Max WS	166.43	91.10	99.33	93.75	99.34	0.000042	0.53	551.57	364.54	0.05
TRIB2	2200		Inl Struct									
TRIB2	2147.44	Max WS	163.12	92.44	97.61		97.66	0.001228	2.07	157.62	234.01	0.22
TRIB2	2078.76	Max WS	162.79	92.22	97.59		97.59	0.000193	0.60	300.11	266.98	0.08
TRIB2	1707.37	Max WS	158.91	92.46	97.34		97.37	0.001105	1.42	147.59	217.43	0.20
TRIB2	1601.61	Max WS	101.31	92.48	97.23		97.25	0.000655	1.24	139.96	214.37	0.16
TRIB2	1548.15	Max WS	86.16	92.39	97.20		97.22	0.000573	1.21	148.38	299.34	0.15
TRIB2	1500	Max WS	82.88	91.91	97.20		97.20	0.000097	0.57	310.01	350.73	0.06
TRIB2	1450	Max WS	81.55	91.87	97.19		97.19	0.000088	0.53	292.55	288.64	0.06
TRIB2	1350	Max WS	82.15	92.83	97.18		97.18	0.000075	0.45	312.29	306.08	0.06
TRIB2	1150	Max WS	79.99	92.45	97.17		97.18	0.000021	0.27	456.88	440.26	0.03
TRIB2	1006.62	Max WS	78.55	93.17	97.16		97.16	0.000155	0.65	167.37	446.84	0.08
TRIB2	961.42	Max WS	78.05	91.98	97.15		97.16	0.000151	0.59	153.31	452.99	0.08
TRIB2	848.73	Max WS	77.64	91.79	97.15		97.15	0.000042	0.35	400.23	481.22	0.04
TRIB2	752.77	Max WS	77.54	91.40	97.14		97.14	0.000080	0.50	323.57	512.08	0.06
TRIB2	700	Max WS	77.44	90.92	97.14		97.14	0.000062	0.44	293.84	531.94	0.05
TRIB2	650	Max WS	77.51	91.12	97.14		97.14	0.000006	0.17	885.83	598.49	0.02
TRIB2	600	Max WS	77.52	92.50	97.14		97.14	0.000004	0.15	922.64	558.44	0.01
TRIB2	443.45	Max WS	78.50	92.33	97.14		97.14	0.000005	0.17	773.89	395.33	0.02
TRIB2	200		Culvert									
TRIB2	80	Max WS	74.34	91.00	94.37		94.42	0.002109	1.93	53.44	122.56	0.28
TRIB2	70	Max WS	74.05	91.00	94.35		94.41	0.002228	1.97	51.15	117.43	0.28
Main3	17447.12	Max WS	111.98	107.81	109.16		109.16	0.000097	0.34	520.60	678.01	0.06
Main3	17437.7*	Max WS	111.97	107.67	109.16		109.16	0.000109	0.38	489.36	669.87	0.06
Main3	17428.3*	Max WS	111.97	107.52	109.16		109.16	0.000114	0.40	466.47	676.90	0.06
Main3	17418.9*	Max WS	111.98	107.38	109.16		109.16	0.000107	0.40	464.42	673.88	0.06
Main3	17409.5*	Max WS	111.97	107.23	109.16		109.16	0.000093	0.39	475.51	665.09	0.06
Main3	17400.1*	Max WS	111.97	107.08	109.16	107.83	109.16	0.000072	0.35	518.83	702.64	0.05
Main3	17400		Inl Struct									
Main3	17390.78	Max WS	111.62	106.94	108.59		108.60	0.000825	0.90	124.79	412.09	0.16
Main3	17350	Max WS	111.46	106.91	108.52		108.55	0.002114	1.49	82.50	453.56	0.27
Main3	17239.4	Max WS	111.10	106.54	108.34		108.37	0.001517	1.39	110.25	410.50	0.23
Main3	16882.6	Max WS	111.06	106.24	107.89		107.91	0.001204	1.39	133.43	211.12	0.21
Main3	16650	Max WS	110.34	106.39	107.65		107.66	0.000922	0.93	177.58	316.33	0.17
Main3	16536.56	Max WS	111.07	106.27	107.59		107.59	0.000336	0.56	279.15	417.23	0.10
Main3	15950	Max WS	109.54	104.49	107.24		107.25	0.000954	1.11	174.62	420.49	0.18
Main3	15556.6	Max WS	109.64	104.62	106.91		106.93	0.000906	1.22	140.07	187.11	0.18
Main3	15479	Max WS	111.63	104.11	106.83		106.85	0.001501	1.70	124.32	268.57	0.24
Main3	15270.69	Max WS	113.72	104.25	106.52		106.54	0.001815	1.15	133.57	224.79	0.23
Main3	15063.95	Max WS	114.71	102.46	106.28		106.30	0.000686	1.42	130.81	205.93	0.17
Main3	14955.43	Max WS	115.76	103.59	106.11		106.15	0.002396	1.68	76.72	174.99	0.29
Main3	14788.2	Max WS	115.80	101.86	105.74		105.78	0.002838	1.78	91.54	211.16	0.31
Main3	14628.77	Max WS	115.87	102.21	105.42		105.45	0.001930	1.87	108.27	183.20	0.26
Main3	14541.77	Max WS	115.92	102.08	105.27		105.30	0.001736	1.59	115.54	232.69	0.25
Main3	14280.86	Max WS	137.63	100.65	104.94		104.97	0.001607	2.10	131.18	175.46	0.24
Main3	14234.63	Max WS	137.62	100.96	104.87		104.89	0.001785	1.36	136.65	173.86	0.24
Main3	14185.8	Max WS	150.06	100.28	104.82		104.83	0.000787	1.17	178.47	151.88	0.17
Main3	14016.19	Max WS	148.45	101.50	104.60		104.64	0.001561	1.58	93.73	68.39	0.24
Main3	13950	Max WS	154.44	101.08	104.50		104.54	0.001393	1.92	133.03	211.73	0.24
Main3	13850	Max WS	152.33	100.53	104.36		104.41	0.001519	1.99	120.65	220.81	0.25
Main3	13750	Max WS	152.09	98.79	104.29		104.30	0.000279	1.12	228.39	246.23	0.11
Main3	13600	Max WS	153.58	99.49	104.18		104.21	0.000996	1.80	138.37	151.98	0.20
Main3	13450	Max WS	148.84	99.56	103.94		104.00	0.001972	2.38	125.62	220.47	0.28
Main3	13391.27	Max WS	149.51	99.51	103.80		103.88	0.002517	2.61	91.17	143.47	0.31
Main3	13266.46	Max WS	148.18	98.98	103.64		103.66	0.000672	1.72	166.56	186.84	0.17
Main3	13150	Max WS	145.98	98.95	103.45		103.54	0.002061	2.79	101.95	208.27	0.29
Main3	12950	Max WS	143.62	98.54	103.22		103.25	0.000819	1.69	166.10	293.53	0.19
Main3	12900	Max WS	143.43	97.80	103.21		103.22	0.000199	0.91	238.77	279.64	0.10
Main3	12850	Max WS	143.32	97.94	103.19		103.21	0.000605	1.48	171.10	233.25	0.16
Main3	12700	Max WS	129.52	99.10	102.98		103.04	0.001558	2.00	87.17	118.84	0.25
Main3	12393.1	Max WS	127.63	97.00	102.60		102.64	0.001172	1.71	95.93	110.86	0.21
Main3	12350	Max WS	127.36	96.55	102.58		102.61	0.000873	1.51	143.31	247.53	0.18
Main3	12150	Max WS	126.48	97.28	102.46		102.49	0.000482	1.40	105.62	415.74	0.15
Main3	12100	Max WS	127.85	97.22	102.38		102.45	0.001351	2.16	59.06	180.99	0.24

HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	12050	Max WS	127.54	96.90	102.35		102.39	0.001018	1.72	74.33	209.60	0.20
Main3	11896.14	Max WS	126.78	96.27	102.26		102.28	0.000474	0.89	142.91	265.25	0.13
Main3	11700	Max WS	126.21	97.61	102.22		102.22	0.000080	0.58	426.12	417.29	0.06
Main3	11600	Max WS	126.15	97.58	102.18		102.20	0.000516	1.37	196.26	386.34	0.15
Main3	11346.39	Max WS	126.22	96.94	102.10		102.11	0.000213	0.93	206.81	307.36	0.10
Main3	11100		Culvert									
Main3	11000	Max WS	126.16	95.56	100.39		100.44	0.001209	1.82	69.36	51.43	0.22
Main3	10950	Max WS	126.13	96.78	100.28		100.36	0.002230	2.29	54.98	33.13	0.30
Main3	10850	Max WS	126.11	96.17	100.14		100.20	0.001294	1.96	84.68	151.31	0.23
Main3	10800	Max WS	127.08	95.97	100.09		100.13	0.001075	1.76	76.42	80.92	0.21
Main3	10650	Max WS	127.10	95.97	100.01		100.02	0.000346	0.95	152.12	186.09	0.12
Main3	10600	Max WS	127.08	96.78	99.98		100.00	0.000589	1.10	122.66	168.03	0.15
Main3	10496.09	Max WS	126.93	95.06	99.87		99.91	0.001234	1.68	83.71	240.89	0.22
Main3	10323.48	Max WS	126.84	94.27	99.73		99.75	0.000621	1.27	143.33	192.99	0.16
Main3	10150	Max WS	126.77	94.92	99.61		99.63	0.000730	1.42	122.32	142.65	0.17
Main3	10089.9	Max WS	126.71	94.80	99.52		99.57	0.001536	1.84	71.37	132.19	0.24
Main3	10050	Max WS	126.70	94.29	99.48		99.52	0.001104	1.59	94.11	171.25	0.21
Main3	10000	Max WS	126.65	94.56	99.42		99.46	0.001074	1.57	80.51	155.76	0.21
Main3	9869.95	Max WS	126.64	94.14	99.35		99.37	0.000321	1.23	154.69	289.56	0.12
Main3	9595.54	Max WS	126.70	94.94	99.21		99.23	0.000698	1.24	118.19	201.39	0.17
Main3	9343.2	Max WS	126.70	94.38	98.84		98.93	0.002074	2.44	66.13	222.72	0.29
Main3	9300	Max WS	126.70	93.82	98.79		98.85	0.001263	2.04	88.64	251.20	0.23
Main3	9100	Max WS	30.35	94.32	98.54		98.54	0.000106	0.42	78.00	236.32	0.06
Main3	9000	Max WS	128.63	94.38	98.25		98.27	0.000732	1.14	124.24	235.02	0.17
Main3	8500		Culvert									
Main3	8350	Max WS	128.57	92.98	97.43		97.45	0.000453	1.27	205.32	319.49	0.14
Main3	8162.22	Max WS	127.41	93.75	97.27		97.30	0.001290	1.50	116.65	258.44	0.22
Main3	7850.11	Max WS	126.45	93.09	96.86		96.90	0.001650	1.74	81.67	323.48	0.25
Main3	7633.01	Max WS	127.10	91.62	96.69		96.71	0.000336	1.19	167.88	331.17	0.12
Main3	7536.49	Max WS	128.18	91.92	96.67		96.68	0.000225	0.72	255.01	503.38	0.09
Main3	7500	Max WS	129.22	92.94	96.67		96.67	0.000150	0.59	285.75	407.64	0.08
Main3	7429.50*	Max WS	130.29	92.68	96.63		96.65	0.000574	1.10	136.96	303.84	0.15
Main3	7359.01	Max WS	131.36	92.42	96.34		96.54	0.004341	3.66	35.88	227.77	0.42
Main3	7000		Culvert									
Main3	6910.56	Max WS	131.29	90.51	95.79		95.86	0.000754	2.14	61.40	228.59	0.19
Main3	6872.46	Max WS	131.62	91.27	95.80		95.82	0.000647	1.43	176.63	246.31	0.16
Main3	6795.89	Max WS	132.27	91.48	95.76		95.77	0.000690	1.39	180.17	234.41	0.17
Main3	6671.06	Max WS	132.01	91.24	94.35		94.82	0.019873	5.49	24.02	53.47	0.83
Trib1	1500	Max WS	102.34	91.00	92.50		92.61	0.006442	2.60	39.37	39.25	0.46
Trib1	1450	Max WS	102.10	91.00	92.18		92.25	0.008015	2.05	49.69	85.14	0.47
Trib1	1400	Max WS	102.08	90.50	91.93		91.97	0.003202	1.77	70.94	115.99	0.32
Trib1	1350	Max WS	102.33	90.50	91.83		91.85	0.001683	1.19	95.51	147.17	0.23
Trib1	1300	Max WS	102.74	90.50	91.73		91.75	0.002171	1.12	91.53	146.70	0.25
Trib1	1250	Max WS	103.16	90.54	91.57		91.60	0.004062	1.42	73.90	138.09	0.34
Trib1	1200	Max WS	103.55	90.27	91.31		91.36	0.006104	1.94	56.55	109.25	0.42
Trib1	1150	Max WS	103.99	90.13	91.11		91.14	0.002901	1.37	76.03	113.65	0.29
Trib1	1100	Max WS	104.48	90.10	90.96		90.99	0.003247	1.33	78.38	131.32	0.30
Trib1	1050	Max WS	103.49	90.06	90.74		90.78	0.005579	1.52	68.31	146.10	0.39
Trib1	1004.24	Max WS	98.90	89.67	90.58		90.60	0.002403	1.09	92.64	179.68	0.26
Trib1	920.64	Max WS	96.88	88.86	90.49		90.49	0.000079	0.34	360.05	479.14	0.05
Trib1	800	Max WS	121.06	88.71	90.49		90.49	0.000025	0.21	584.42	433.73	0.03
Trib1	750	Max WS	131.43	88.77	90.48		90.49	0.000054	0.28	466.85	386.41	0.04
Trib1	650	Max WS	132.50	88.80	90.29		90.34	0.003747	1.81	75.72	317.00	0.35
Trib1	603.8	Max WS	133.12	88.51	90.12		90.18	0.004208	1.97	69.30	134.84	0.37
Trib1	550	Max WS	133.79	88.68	89.83		89.90	0.006879	2.15	64.09	102.80	0.45
Trib1	504.41	Max WS	133.24	88.43	89.61		89.65	0.004565	1.72	77.57	114.79	0.37
Trib1	478.55	Max WS	121.53	88.39	89.46		89.50	0.005860	1.67	72.82	135.69	0.40
Main2	6100	Max WS	206.06	89.62	94.35		94.38	0.001187	1.73	199.74	244.80	0.21
Main2	5995.41	Max WS	206.00	89.33	94.29		94.29	0.000265	0.87	426.09	431.46	0.10
Main2	5852.28	Max WS	206.00	89.05	94.26		94.26	0.000178	0.78	490.93	407.34	0.09
Main2	5700	Max WS	207.01	88.85	94.23		94.24	0.000200	0.75	505.81	497.45	0.09
Main2	5650	Max WS	207.03	89.40	94.22		94.22	0.000201	0.64	518.81	488.29	0.09
Main2	5600	Max WS	207.05	88.79	94.21		94.21	0.000280	0.90	397.07	398.03	0.11
Main2	5550	Max WS	209.05	89.09	94.19		94.20	0.000459	1.02	318.08	310.98	0.13
Main2	5500	Max WS	209.07	89.47	94.16		94.17	0.000659	1.06	285.63	303.47	0.15
Main2	5450	Max WS	209.07	90.05	94.12		94.13	0.000725	1.22	281.20	312.09	0.17
Main2	5400	Max WS	209.09	89.00	94.10		94.11	0.000277	1.10	327.63	303.61	0.11
Main2	5347.58	Max WS	209.09	89.63	94.08		94.09	0.000523	1.19	306.72	322.69	0.15
Main2	5300	Max WS	209.10	89.20	94.06		94.07	0.000493	1.08	327.87	344.33	0.14
Main2	5250	Max WS	209.12	89.77	94.03		94.04	0.000676	1.21	290.46	330.06	0.16
Main2	5200	Max WS	209.12	89.49	93.99		94.00	0.000783	1.20	279.58	308.93	0.17
Main2	5150	Max WS	209.14	88.25	93.95		93.96	0.000803	1.36	260.33	300.37	0.18
Main2	5100	Max WS	210.15	86.86	93.92		93.94	0.000211	1.24	308.19	305.50	0.10
Main2	5050	Max WS	211.15	88.33	93.73		93.94	0.003725	3.71	58.95	288.42	0.39
Main2	5000	Max WS	212.17	89.31	93.71		93.75	0.001698	1.88	202.32	328.33	0.25
Main2	4950	Max WS	212.18	89.11	93.62		93.66	0.001819	2.00	191.36	345.39	0.26

HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS (Continued)

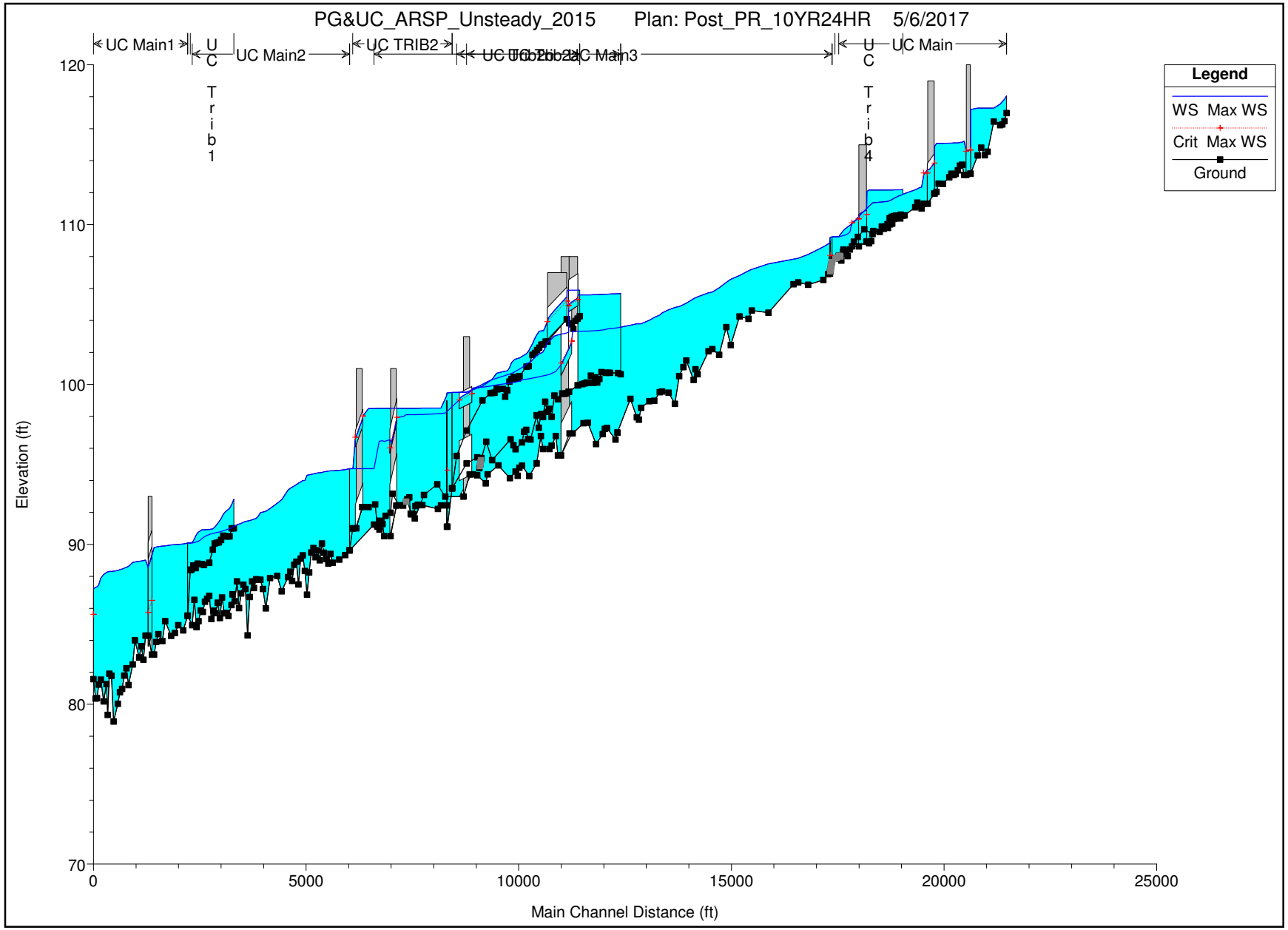
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main2	4900	Max WS	212.19	87.49	93.54		93.58	0.001448	1.95	193.98	373.24	0.24
Main2	4850	Max WS	212.20	88.91	93.44		93.50	0.002264	2.27	166.86	380.11	0.30
Main2	4800	Max WS	212.21	88.72	93.30		93.38	0.003454	2.45	142.20	389.13	0.36
Main2	4750	Max WS	212.22	87.72	93.19		93.26	0.001445	2.20	162.00	364.97	0.25
Main2	4700	Max WS	212.23	88.29	93.13		93.18	0.001465	1.99	136.18	280.15	0.25
Main2	4650	Max WS	212.25	87.95	92.97		93.09	0.003173	2.84	84.31	187.31	0.36
Main2	4504.57	Max WS	213.28	87.06	92.48		92.59	0.003808	2.74	77.76	47.53	0.38
Main2	4397.85	Max WS	213.31	88.02	92.29		92.31	0.001077	1.39	206.15	202.63	0.20
Main2	4231.14	Max WS	214.35	87.89	91.98		92.01	0.002816	2.00	170.74	257.21	0.31
Main2	4128.64	Max WS	214.37	86.00	91.81		91.83	0.000835	1.44	248.15	261.48	0.18
Main2	4061.14	Max WS	214.39	87.21	91.77		91.78	0.000582	1.12	277.77	261.76	0.15
Main2	4000	Max WS	214.41	87.79	91.74		91.75	0.000477	1.02	300.19	278.23	0.14
Main2	3950	Max WS	214.41	87.78	91.43	90.89	91.68	0.009214	4.36	84.33	236.76	0.59
Main2	3900	Max WS	214.42	87.81	91.29		91.30	0.001002	1.35	245.75	277.00	0.19
Main2	3850	Max WS	215.43	87.27	91.23		91.25	0.001076	1.66	227.83	224.46	0.21
Main2	3808.17	Max WS	215.44	87.69	91.19		91.21	0.001136	1.23	237.69	242.15	0.20
Main2	3750	Max WS	215.45	86.70	91.14		91.15	0.000690	1.14	273.50	244.12	0.16
Main2	3700	Max WS	215.46	84.31	91.12		91.13	0.000434	0.96	315.66	248.82	0.13
Main2	3650	Max WS	215.48	87.21	91.08		91.09	0.000910	1.12	256.93	262.01	0.18
Main2	3600	Max WS	215.49	87.47	91.03		91.05	0.001093	1.13	242.41	260.82	0.19
Main2	3550.1	Max WS	216.49	86.93	90.97		90.99	0.001316	1.35	212.35	200.61	0.21
Main2	3500	Max WS	216.51	86.01	90.92		90.94	0.000632	1.36	240.13	205.92	0.16
Main2	3450	Max WS	216.52	87.68	90.88		90.90	0.001247	1.72	217.21	218.29	0.22
Main2	3400	Max WS	216.52	86.44	90.80		90.83	0.001657	2.13	195.19	219.13	0.25
Main2	3344.35	Max WS	216.54	86.87	90.72		90.75	0.001335	1.77	210.66	214.39	0.23
Main2	3320.7	Max WS	216.54	86.20	90.69		90.71	0.001576	1.86	194.86	203.17	0.24
Main2	3250	Max WS	217.56	85.52	90.61		90.63	0.000817	1.60	238.33	217.06	0.18
Main2	3200	Max WS	217.57	85.71	90.58		90.59	0.000707	1.13	257.28	218.27	0.16
Main2	3150	Max WS	217.58	85.68	90.54		90.56	0.000687	1.28	251.59	205.77	0.16
Main2	3100	Max WS	217.60	86.67	90.51		90.52	0.000787	1.11	244.59	201.98	0.17
Main2	3050	Max WS	218.61	85.39	90.47		90.48	0.000693	1.12	250.74	187.72	0.16
Main2	3000	Max WS	218.62	86.35	90.43		90.45	0.000830	1.31	252.01	255.25	0.18
Main2	2950	Max WS	218.63	85.70	90.40		90.41	0.000588	1.00	322.84	332.78	0.15
Main2	2900	Max WS	218.65	85.85	90.38		90.39	0.000469	1.04	330.94	303.61	0.14
Main2	2850	Max WS	218.66	85.33	90.35		90.36	0.000548	1.34	304.43	263.16	0.15
Main2	2800	Max WS	218.68	86.78	90.32		90.33	0.000617	1.16	276.39	232.31	0.16
Main2	2750.23	Max WS	218.69	86.59	90.27		90.29	0.001256	1.70	215.24	212.17	0.22
Main2	2700	Max WS	218.70	86.41	90.21		90.23	0.001142	1.65	221.18	229.66	0.21
Main2	2650	Max WS	218.71	85.77	90.12		90.16	0.001964	2.04	182.35	217.62	0.27
Main2	2600	Max WS	218.72	85.86	90.02		90.07	0.002111	2.24	169.02	217.53	0.29
Main2	2550	Max WS	219.74	85.20	89.91		89.96	0.002292	2.11	159.83	205.55	0.29
Main2	2500	Max WS	219.74	84.82	89.80		89.84	0.002416	1.91	172.75	230.01	0.29
Main2	2450	Max WS	219.72	86.53	89.58		89.67	0.005972	2.89	125.69	235.20	0.46
Main2	2397.32	Max WS	130.23	84.95	89.46		89.48	0.000459	1.19	157.68	242.14	0.14
Main1	2291.46	Max WS	251.76	85.53	89.46		89.48	0.001847	1.53	264.26	401.35	0.25
Main1	2189.07	Max WS	248.11	84.62	89.32		89.34	0.000872	1.39	337.71	423.29	0.18
Main1	2069.18	Max WS	252.68	84.94	89.24		89.25	0.000615	1.30	403.66	469.13	0.16
Main1	1990.13	Max WS	252.68	84.45	89.20		89.21	0.000418	0.91	453.95	447.95	0.12
Main1	1902.51	Max WS	251.73	84.27	89.16		89.17	0.000537	1.33	399.90	472.94	0.15
Main1	1760.99	Max WS	249.15	85.19	89.00		89.02	0.001708	1.74	233.46	345.48	0.25
Main1	1698.99	Max WS	248.65	83.95	88.92		88.94	0.001027	1.95	273.12	319.21	0.21
Main1	1600	Max WS	248.03	84.38	88.80		88.82	0.001521	1.74	232.88	255.56	0.24
Main1	1550	Max WS	247.61	83.89	88.71		88.75	0.001618	2.04	210.52	249.28	0.25
Main1	1500	Max WS	244.53	83.11	88.40		88.57	0.007952	3.63	92.89	131.36	0.53
Main1	1400		Culvert									
Main1	1300	Max WS	243.73	84.29	88.33		88.36	0.001345	2.14	224.12	236.01	0.24
Main1	1250	Max WS	243.26	82.78	88.29		88.31	0.000851	1.58	275.87	277.29	0.18
Main1	1200	Max WS	246.85	83.63	88.24		88.27	0.000971	1.88	266.19	272.67	0.20
Main1	1150	Max WS	246.60	82.93	88.21		88.23	0.000540	1.58	306.97	265.35	0.15
Main1	1050	Max WS	246.40	84.00	88.15		88.17	0.000700	1.40	295.68	233.79	0.17
Main1	1000	Max WS	246.34	82.49	88.12		88.14	0.000614	1.53	280.58	223.65	0.16
Main1	902.45	Max WS	245.61	81.20	87.91		88.06	0.002712	3.38	101.26	95.37	0.32
Main1	850	Max WS	245.46	82.25	87.84		87.93	0.001930	2.67	129.22	94.70	0.28
Main1	800	Max WS	245.32	81.79	87.78		87.85	0.001205	2.42	166.26	134.07	0.23
Main1	750	Max WS	245.21	80.96	87.74		87.79	0.001015	2.14	171.79	129.55	0.21
Main1	700	Max WS	245.22	80.75	87.70		87.74	0.000990	1.84	192.39	149.11	0.20
Main1	650	Max WS	245.18	80.03	87.65		87.70	0.000781	2.06	195.85	144.45	0.18
Main1	550	Max WS	245.19	78.91	87.61		87.63	0.000321	1.35	286.28	188.44	0.12
Main1	500	Max WS	246.98	81.77	87.60		87.62	0.000343	1.25	320.90	216.09	0.13
Main1	450.28	Max WS	246.98	81.91	87.59		87.60	0.000199	0.98	374.07	207.95	0.10
Main1	411.53	Max WS	247.00	79.33	87.58		87.59	0.000392	1.26	298.29	190.23	0.13
Main1	381.37	Max WS	247.01	81.25	87.53		87.58	0.001207	1.96	184.94	161.51	0.22
Main1	316.15	Max WS	247.04	80.18	87.42		87.49	0.001541	2.28	126.40	110.39	0.25
Main1	250	Max WS	247.07	81.54	87.18		87.34	0.003711	3.21	81.83	77.01	0.38
Main1	200	Max WS	247.10	81.23	86.85		87.09	0.007084	3.98	62.06	33.41	0.51
Main1	161.78	Max WS	247.09	80.38	86.77		86.86	0.003175	2.45	101.56	128.14	0.34

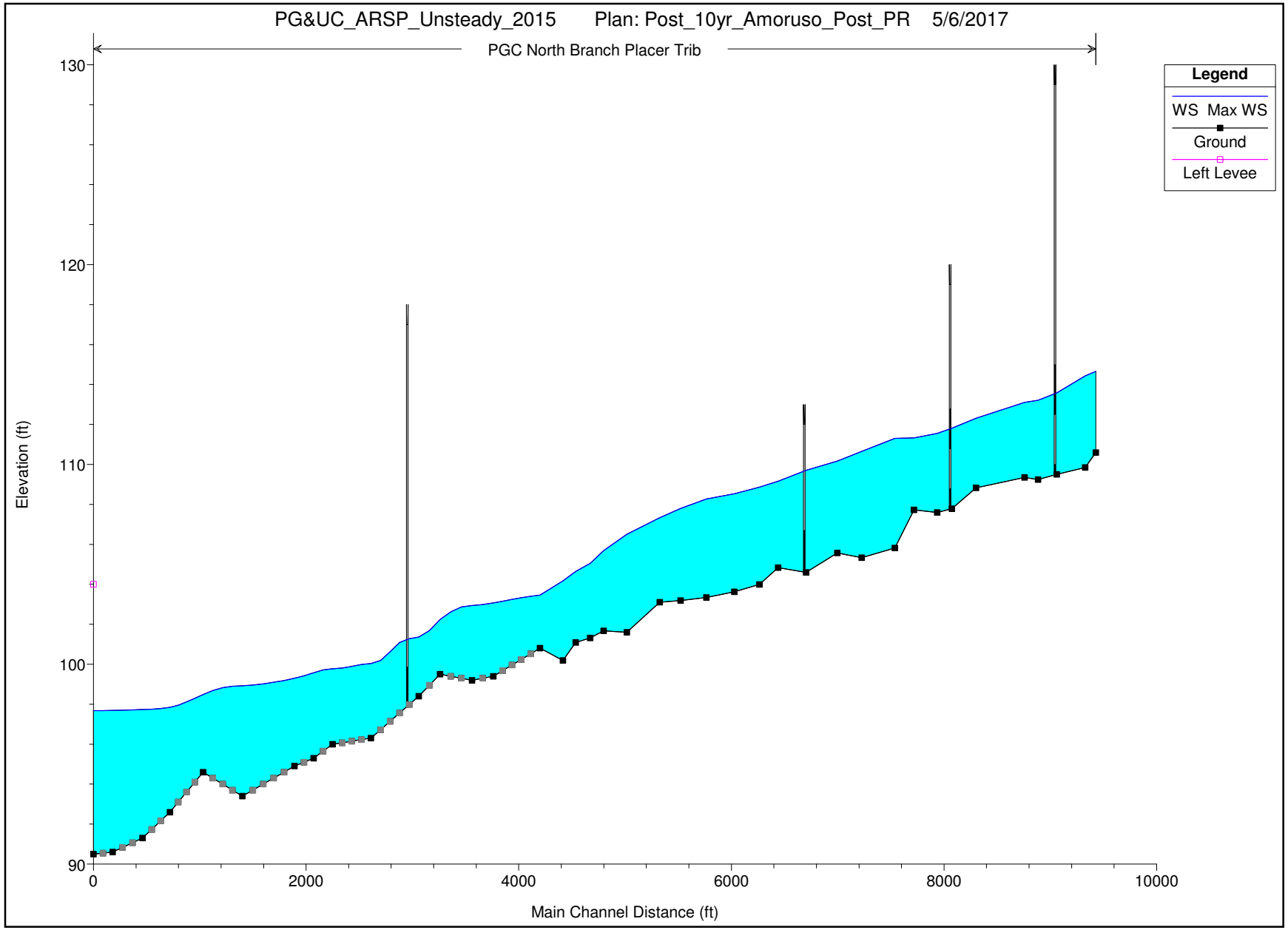
HEC-RAS Plan: PostPR2YR24HRLID Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	126.68	Max WS	248.45	80.35	86.70		86.76	0.003348	2.11	120.92	155.88	0.34
Main1	76.78	Max WS	252.39	81.56	86.57	84.79	86.67	0.002610	2.64	125.45	195.10	0.33

HEC-RAS Plan: PostARPostPR2LID River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	63.27	110.59	113.81		113.85	0.003108	1.51	44.46	33.30	0.20
Placer Trib	65.0000	Max WS	63.26	109.85	113.58		113.60	0.001826	1.25	50.70	24.50	0.15
Placer Trib	64.0000	Max WS	62.95	109.50	112.89		112.93	0.003211	1.65	38.22	18.48	0.20
Placer Trib	63.5		Lat Struct									
Placer Trib	63.0000	Max WS	61.56	109.24	112.56		112.57	0.000823	0.80	131.64	185.40	0.10
Placer Trib	62.0000	Max WS	64.67	109.35	112.47		112.48	0.000577	0.65	99.55	366.11	0.09
Placer Trib	61.0000	Max WS	65.07	108.83	111.81		111.83	0.002256	1.35	66.01	201.37	0.17
Placer Trib	60.0000	Max WS	64.44	107.78	111.44		111.46	0.001055	1.06	76.31	90.17	0.12
Placer Trib	59.5		Lat Struct									
Placer Trib	59.0000	Max WS	67.71	107.59	111.04		111.09	0.004674	1.76	40.50	129.97	0.24
Placer Trib	58.0000	Max WS	66.46	107.73	110.67		110.68	0.000125	0.29	225.57	132.53	0.04
Placer Trib	57.0000	Max WS	66.11	105.82	110.47		110.50	0.001953	1.23	53.84	322.94	0.15
Placer Trib	56.0000	Max WS	65.46	105.33	109.78		109.82	0.002371	1.61	40.85	48.45	0.17
Placer Trib	55.0000	Max WS	65.40	105.57	109.40		109.41	0.001182	0.95	68.69	109.92	0.12
Placer Trib	54.0000	Max WS	64.53	104.60	108.85		108.89	0.002364	1.42	45.36	65.76	0.17
Placer Trib	53.5		Lat Struct									
Placer Trib	53.0000	Max WS	65.77	104.84	108.22		108.25	0.002471	1.43	49.51	43.64	0.18
Placer Trib	52.0000	Max WS	65.81	103.99	107.91		107.92	0.001193	1.00	65.97	32.63	0.12
Placer Trib	51.0000	Max WS	65.84	103.62	107.62		107.63	0.001285	0.99	66.24	35.15	0.13
Placer Trib	50.0000	Max WS	65.83	103.34	107.26		107.28	0.001354	1.18	85.48	131.36	0.13
Placer Trib	49.0000	Max WS	65.89	103.19	106.74		106.77	0.002779	1.53	43.18	20.82	0.19
Placer Trib	48.0000	Max WS	65.92	103.11	106.31		106.33	0.001780	1.11	59.61	34.43	0.15
Placer Trib	47.0000	Max WS	65.95	101.60	105.55		105.58	0.003095	1.40	47.23	123.58	0.19
Placer Trib	46.0000	Max WS	66.03	101.67	104.86		104.90	0.003107	1.65	40.64	23.02	0.20
Placer Trib	45.0000	Max WS	66.07	101.32	104.14		104.21	0.007776	2.14	30.93	19.75	0.30
Placer Trib	44.0000	Max WS	66.22	101.09	103.62		103.63	0.000556	0.56	118.14	106.28	0.08
Placer Trib	43.0000	Max WS	66.25	100.19	103.32		103.37	0.004017	1.77	37.45	19.06	0.22
Placer Trib	42	Max WS	71.72	100.80	102.83		102.84	0.000751	0.65	168.52	183.66	0.09
Placer Trib	41.12*	Max WS	71.70	100.52	102.75		102.76	0.001028	0.83	150.83	212.31	0.11
Placer Trib	40.24*	Max WS	71.68	100.24	102.65		102.66	0.001389	1.04	115.05	183.46	0.13
Placer Trib	39.36*	Max WS	71.67	99.96	102.54		102.55	0.001235	1.05	100.47	119.35	0.13
Placer Trib	38.48*	Max WS	71.67	99.68	102.45		102.46	0.000874	0.94	109.11	102.51	0.11
Placer Trib	37.6	Max WS	71.68	99.40	102.39		102.39	0.000539	0.79	133.85	104.68	0.09
Placer Trib	36.6*	Max WS	71.65	99.30	102.31		102.32	0.000972	1.02	124.38	191.78	0.12
Placer Trib	35.6	Max WS	71.65	99.20	102.26		102.26	0.000224	0.47	252.36	198.83	0.06
Placer Trib	34.6*	Max WS	71.64	99.30	102.19		102.20	0.001038	0.98	125.53	162.93	0.12
Placer Trib	33.6*	Max WS	71.64	99.40	101.99		102.02	0.002718	1.47	54.73	51.74	0.19
Placer Trib	32.6	Max WS	71.63	99.50	101.63		101.67	0.004439	1.58	56.38	77.41	0.23
Placer Trib	31.6*	Max WS	71.62	98.95	101.12		101.17	0.005715	1.68	43.67	44.46	0.26
Placer Trib	30.6	Max WS	71.60	98.40	100.83		100.84	0.000641	0.58	184.73	212.11	0.09
Placer Trib	29.7*	Max WS	71.59	97.98	100.75		100.75	0.001294	0.83	128.74	182.83	0.12
Placer Trib	29.1		Lat Struct									
Placer Trib	28.8*	Max WS	72.46	97.56	100.56		100.58	0.002746	1.15	75.39	123.14	0.18
Placer Trib	27.9*	Max WS	72.45	97.14	100.10		100.14	0.007315	1.57	46.81	58.47	0.28
Placer Trib	27*	Max WS	72.39	96.72	99.57		99.59	0.005213	1.21	81.57	131.18	0.23
Placer Trib	26.1	Max WS	72.31	96.30	99.33		99.33	0.000363	0.34	229.21	209.85	0.06
Placer Trib	25.2*	Max WS	72.99	96.23	99.25		99.25	0.001426	0.71	131.45	160.78	0.12
Placer Trib	24.3*	Max WS	72.94	96.15	99.11		99.12	0.001604	0.87	89.95	102.39	0.14
Placer Trib	23.4*	Max WS	72.92	96.07	99.01		99.02	0.000618	0.65	117.56	93.64	0.09
Placer Trib	22.5	Max WS	72.91	96.00	98.98		98.98	0.000264	0.49	168.43	123.62	0.06
Placer Trib	21.6*	Max WS	72.91	95.65	98.93		98.94	0.000686	0.65	116.74	96.83	0.09
Placer Trib	20.7	Max WS	72.90	95.30	98.75		98.77	0.003050	1.07	68.31	63.47	0.18
Placer Trib	19.8*	Max WS	72.88	95.10	98.55		98.56	0.001702	0.87	83.61	68.44	0.14
Placer Trib	18.9	Max WS	72.87	94.90	98.41		98.42	0.001400	0.80	91.46	74.05	0.13
Placer Trib	17.92*	Max WS	76.45	94.60	98.29		98.30	0.001189	0.75	101.92	79.90	0.12
Placer Trib	16.94*	Max WS	76.40	94.30	98.19		98.20	0.000890	0.70	109.24	76.51	0.10
Placer Trib	15.96*	Max WS	76.39	94.00	98.11		98.12	0.000675	0.70	109.94	70.20	0.09
Placer Trib	14.98*	Max WS	76.38	93.70	98.05		98.06	0.000616	0.75	114.75	83.63	0.09
Placer Trib	14	Max WS	76.36	93.40	98.01		98.01	0.000303	0.56	221.49	275.93	0.06
Placer Trib	13.075*	Max WS	76.36	93.70	97.96		97.97	0.000732	0.87	132.20	158.93	0.10
Placer Trib	12.15*	Max WS	76.36	94.00	97.86		97.88	0.001225	1.09	79.76	69.91	0.13
Placer Trib	11.225*	Max WS	76.35	94.30	97.72		97.75	0.001684	1.20	68.83	52.87	0.15
Placer Trib	10.3	Max WS	76.28	94.60	97.50		97.54	0.002916	1.42	56.80	46.65	0.19
Placer Trib	9.525*	Max WS	75.95	94.10	97.25		97.28	0.003832	1.44	52.69	36.93	0.21
Placer Trib	8.75*	Max WS	74.92	93.60	96.93		96.97	0.004237	1.53	48.86	33.45	0.22
Placer Trib	7.975*	Max WS	71.26	93.10	96.64		96.68	0.003159	1.46	51.49	46.94	0.20
Placer Trib	7.2	Max WS	65.46	92.60	96.49		96.50	0.001419	1.04	77.97	74.47	0.13
Placer Trib	6.3333*	Max WS	63.23	92.17	96.38		96.39	0.001083	0.90	81.71	79.86	0.12
Placer Trib	5.46659*	Max WS	62.12	91.73	96.31		96.32	0.000626	0.74	93.93	93.54	0.09
Placer Trib	4.5999	Max WS	61.59	91.30	96.27		96.28	0.000290	0.59	143.07	189.78	0.06
Placer Trib	3.6666*	Max WS	61.28	91.07	96.25		96.26	0.000206	0.53	121.03	74.64	0.05
Placer Trib	2.7333*	Max WS	60.95	90.83	96.24		96.24	0.000136	0.44	140.98	70.21	0.05
Placer Trib	1.8	Max WS	60.82	90.60	96.23		96.23	0.000097	0.39	162.14	81.66	0.04
Placer Trib	0.9*	Max WS	60.75	90.55	96.22		96.22	0.000034	0.24	322.16	178.01	0.02
Placer Trib	0	Max WS	60.62	90.50	96.22		96.22	0.000029	0.23	325.77	190.15	0.02


PG&UC_ARSP_Unsteady_2015 Plan: Post_PR_10YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC TRIB2
UC Main3
UC Trib4
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_10yr_Amoruso_Post_PR 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
130
120
110
100
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main	21550	Max WS	64.01	116.98	118.05		118.10	0.004512	1.82	38.25	70.58	0.37
Main	21500	Max WS	63.78	116.48	117.83		117.89	0.005005	1.94	33.31	56.07	0.39
Main	21450	Max WS	64.09	116.27	117.71		117.73	0.001900	1.29	49.57	61.80	0.25
Main	21396.29	Max WS	64.53	116.23	117.54		117.59	0.004469	1.72	37.59	142.32	0.37
Main	21246.12	Max WS	23.34	116.44	117.30		117.30	0.000083	0.20	129.57	253.59	0.05
Main	21100	Max WS	25.17	114.56	117.29		117.29	0.000010	0.17	259.42	231.64	0.02
Main	21037.73	Max WS	40.21	114.34	117.29		117.29	0.000046	0.35	216.81	256.10	0.04
Main	20950.06	Max WS	40.35	114.81	117.29		117.29	0.000019	0.21	311.44	316.00	0.03
Main	20867	Max WS	40.55	114.33	117.29		117.29	0.000016	0.20	337.43	308.90	0.03
Main	20700	Max WS	40.54	113.19	117.20		117.28	0.000814	2.20	18.43	185.60	0.20
Main	20600		Culvert									
Main	20550	Max WS	40.13	113.12	115.22		115.49	0.006828	4.18	9.60	196.84	0.53
Main	20500	Max WS	40.06	113.75	115.16		115.18	0.000966	1.00	48.43	171.14	0.18
Main	20450	Max WS	40.07	113.69	115.14		115.15	0.000361	0.66	77.74	226.69	0.11
Main	20400	Max WS	59.92	113.39	115.12		115.12	0.000363	0.77	114.96	159.36	0.12
Main	20351.92	Max WS	60.00	113.17	115.11		115.11	0.000095	0.44	196.01	175.81	0.06
Main	20300	Max WS	60.06	113.10	115.11		115.11	0.000065	0.36	196.96	171.84	0.05
Main	20250	Max WS	60.14	113.18	115.10		115.10	0.000120	0.52	166.67	144.94	0.07
Main	20200	Max WS	60.24	112.96	115.10		115.10	0.000099	0.49	176.23	144.02	0.06
Main	20050	Max WS	61.76	112.55	115.09		115.09	0.000026	0.29	294.86	180.78	0.03
Main	19950	Max WS	61.87	112.56	115.09		115.09	0.000016	0.22	396.55	245.16	0.03
Main	19900	Max WS	61.99	112.05	115.09		115.09	0.000009	0.19	493.17	261.03	0.02
Main	19852.97	Max WS	90.24	111.94	114.89		115.31	0.005859	5.16	17.50	273.42	0.53
Main	19700		Culvert									
Main	19600	Max WS	90.24	111.31	113.11	113.24	114.20	0.029847	8.41	10.73	226.40	1.11
Main	19550	Max WS	90.21	111.01	112.34		112.36	0.001083	1.13	110.99	217.72	0.19
Main	19500	Max WS	91.90	111.18	112.31		112.32	0.000848	0.96	141.44	288.31	0.17
Main	19450	Max WS	91.84	111.38	112.24		112.26	0.001913	1.14	114.22	295.74	0.24
Main	19400	Max WS	91.72	111.08	112.18		112.19	0.001248	1.03	162.92	397.26	0.20
Main	19150	Max WS	91.47	110.58	111.94		111.95	0.000939	1.13	154.09	296.61	0.18
Main	19050	Max WS	92.58	110.39	111.83		111.85	0.001361	1.27	97.31	240.66	0.22
Main	19000	Max WS	92.53	110.49	111.78		111.79	0.001023	1.01	134.75	268.94	0.18
Main	18950	Max WS	92.41	110.54	111.71		111.73	0.001846	1.26	88.34	212.54	0.24
Main	18900	Max WS	92.18	110.53	111.64		111.66	0.001423	1.07	113.35	227.26	0.21
Main	18850	Max WS	91.54	110.49	111.56		111.58	0.002451	1.38	90.69	259.42	0.28
Main	18800	Max WS	95.77	110.40	111.49		111.50	0.001013	0.96	147.06	318.56	0.18
Main	18750	Max WS	94.75	110.03	111.46		111.47	0.000634	0.89	164.64	374.03	0.15
Main	18700	Max WS	95.25	109.89	111.44		111.45	0.000389	0.74	210.41	467.13	0.12
Main	18650	Max WS	94.97	109.86	111.42		111.43	0.000371	0.62	227.04	406.05	0.11
Main	18397.57	Max WS	94.04	109.41	111.36		111.36	0.000167	0.58	283.57	287.30	0.08
Main	18200	Max WS	94.52	109.70	110.86		110.87	0.000861	0.75	146.02	190.64	0.16
Main	18050	Max WS	95.62	109.24	110.45		110.50	0.004567	2.14	69.60	145.74	0.39
Main	17955.7	Max WS	95.63	108.94	110.15		110.17	0.002062	1.39	108.59	194.02	0.26
Main	17750	Max WS	96.71	108.17	109.74		109.77	0.001924	1.43	75.72	191.47	0.25
Main	17700	Max WS	96.73	108.29	109.60		109.63	0.003533	1.52	65.10	152.16	0.32
Main	17650	Max WS	96.68	107.99	109.43		109.47	0.003274	1.58	64.34	162.03	0.32
Main	17640.*	Max WS	97.85	108.01	109.40		109.44	0.003147	1.59	73.25	149.96	0.31
Main	17630.*	Max WS	97.83	108.02	109.36		109.40	0.003895	1.80	64.23	154.05	0.35
Main	17620.*	Max WS	97.80	108.04	109.31		109.37	0.004715	2.02	59.64	137.76	0.39
Main	17610.*	Max WS	97.54	108.05	109.26		109.32	0.005314	2.17	59.77	142.84	0.41
Main	17600	Max WS	96.92	108.07	109.23		109.27	0.004307	1.99	72.45	159.56	0.37
Trib2b	3000	Max WS	18.94	104.27	105.89		105.89	0.000006	0.10	247.84	209.54	0.01
Trib2b	2950	Max WS	18.90	104.12	105.89		105.89	0.000004	0.09	263.86	207.18	0.01
Trib2b	2900	Max WS	19.07	103.98	105.89		105.89	0.000003	0.08	320.88	237.94	0.01
Trib2b	2850	Max WS	19.26	103.49	105.89		105.89	0.000002	0.07	328.28	208.87	0.01
Trib2b	2800	Max WS	19.46	103.81	105.89		105.89	0.000003	0.08	316.13	189.73	0.01
Trib2b	2750	Max WS	19.66	103.83	105.89		105.89	0.000003	0.09	251.36	145.89	0.01
Trib2b	2700	Max WS	19.85	104.08	105.85		105.90	0.001562	1.89	10.49	72.51	0.25
Trib2b	2500		Culvert									
Trib2b	2200	Max WS	19.56	102.69	103.67		103.90	0.017449	3.88	5.04	97.53	0.75
Trib2b	2150	Max WS	23.90	102.52	103.36		103.36	0.000309	0.34	69.69	153.51	0.09
Trib2b	2100	Max WS	23.50	102.50	103.35		103.35	0.000284	0.34	68.70	152.23	0.09
Trib2b	2050	Max WS	22.76	102.30	103.33		103.33	0.000359	0.37	71.52	202.42	0.10
Trib2b	2000	Max WS	77.45	102.16	103.14		103.18	0.005089	1.52	51.00	164.61	0.37
Trib2b	1950	Max WS	77.38	101.98	102.91		102.94	0.004856	1.59	64.95	212.66	0.37
Trib2b	1887.66	Max WS	77.27	101.86	102.54		102.58	0.008576	1.71	56.28	193.88	0.47
Trib2b	1800	Max WS	77.04	101.14	102.09		102.11	0.003193	1.09	81.48	183.10	0.29
Trib2b	1750	Max WS	76.32	101.12	101.93		101.95	0.003602	1.10	70.54	188.27	0.30
Trib2b	1587.06	Max WS	74.81	100.52	101.66		101.66	0.000328	0.49	155.28	228.70	0.10
Trib2b	1547.11	Max WS	74.76	100.38	101.64		101.65	0.000602	0.69	131.10	231.10	0.14
Trib2b	1494.66	Max WS	75.99	100.39	101.59		101.60	0.001578	0.83	93.15	212.29	0.21
Trib2b	1450	Max WS	75.98	100.48	101.52		101.53	0.001461	0.92	89.93	175.23	0.21
Trib2b	1400	Max WS	74.56	100.35	101.37		101.40	0.004080	1.48	70.67	210.62	0.34
Trib2b	1350	Max WS	75.48	100.19	101.04		101.08	0.010505	1.45	51.99	184.95	0.48
Trib2b	1300	Max WS	73.80	99.63	100.85		100.86	0.000618	0.58	127.72	216.16	0.13
Trib2b	1250	Max WS	73.62	99.24	100.83		100.84	0.000263	0.51	156.81	233.80	0.09

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1200	Max WS	75.88	99.73	100.81		100.81	0.000604	0.58	130.32	214.47	0.13
Trib2b	1064.85	Max WS	75.88	99.70	100.72		100.73	0.000748	0.68	133.04	228.65	0.15
Trib2b	1050	Max WS	75.85	99.74	100.71		100.71	0.001075	0.73	119.86	228.02	0.17
Trib2b	1000	Max WS	75.73	99.49	100.52		100.56	0.005622	1.62	47.65	152.34	0.39
Trib2b	950	Max WS	75.56	99.47	100.35		100.37	0.002542	1.13	90.06	252.27	0.27
Trib2b	902.71	Max WS	75.29	99.46	100.24		100.26	0.002419	0.95	84.41	282.95	0.25
Trib2b	715.36	Max WS	73.34	99.00	99.89		99.90	0.001722	0.75	97.48	277.66	0.21
Trib2b	339.81	Max WS	43.20	97.12	99.53		99.53	0.000181	0.47	135.53	217.34	0.08
Trib2b	106.24	Max WS	41.23	95.53	99.50		99.50	0.000101	0.47	113.59	114.02	0.06
Trib4	2100	Max WS	79.92	110.56	112.19		112.19	0.000153	0.38	213.02	241.73	0.07
Trib4	2050	Max WS	79.12	110.63	112.19		112.19	0.000135	0.45	209.93	236.42	0.07
Trib4	1950	Max WS	78.14	110.57	112.18		112.18	0.000076	0.36	252.43	244.10	0.05
Trib4	1900	Max WS	82.45	110.36	112.17		112.18	0.000037	0.26	334.08	269.50	0.04
Trib4	1850	Max WS	82.27	110.06	112.17		112.17	0.000038	0.26	328.54	252.84	0.04
Trib4	1800	Max WS	82.00	110.02	112.17		112.17	0.000047	0.29	304.59	241.39	0.04
Trib4	1747.14	Max WS	82.05	109.80	112.17		112.17	0.000043	0.30	313.74	239.49	0.04
Trib4	1700	Max WS	82.34	109.83	112.17		112.17	0.000035	0.27	327.86	234.02	0.04
Trib4	1650	Max WS	82.23	109.73	112.17		112.17	0.000021	0.22	400.95	250.52	0.03
Trib4	1600	Max WS	88.39	109.88	112.16		112.17	0.000028	0.25	384.46	264.01	0.03
Trib4	1550	Max WS	88.44	109.54	112.16		112.16	0.000016	0.21	468.18	279.53	0.03
Trib4	1400	Max WS	88.85	109.60	112.16		112.16	0.000032	0.32	400.17	264.62	0.04
Trib4	1350	Max WS	88.97	108.96	112.16		112.16	0.000016	0.22	507.33	325.68	0.03
Trib4	1300	Max WS	89.20	108.83	112.16		112.16	0.000009	0.18	645.41	356.29	0.02
Trib4	1250	Max WS	89.16	108.93	112.08		112.24	0.002134	3.22	27.66	280.09	0.32
Trib4	1000		Culvert									
Trib4	900	Max WS	89.16	108.64	110.15	110.12	110.85	0.024308	6.69	13.33	279.92	0.97
Trib4	850	Max WS	89.12	108.45	109.54		109.59	0.005569	1.98	61.29	273.49	0.41
Trib4	800	Max WS	90.12	108.03	109.43		109.44	0.001001	1.07	116.89	261.32	0.19
Trib4	750	Max WS	90.05	108.34	109.36		109.37	0.002377	1.20	112.15	309.88	0.26
Trib4	700	Max WS	89.91	108.43	109.32		109.32	0.000351	0.54	218.05	308.65	0.11
Trib4	650	Max WS	89.59	107.75	109.28		109.30	0.000888	0.92	132.66	278.79	0.17
Trib4	600	Max WS	88.93	107.89	109.26		109.27	0.000358	0.73	216.48	325.48	0.11
Trib4	550	Max WS	87.60	107.93	109.24		109.25	0.000495	0.82	195.92	332.63	0.13
Trib4	540.*	Max WS	88.58	107.93	109.24		109.24	0.000283	0.62	235.52	318.13	0.10
Trib4	530.*	Max WS	88.50	107.93	109.24		109.24	0.000270	0.60	231.95	298.68	0.10
Trib4	520.*	Max WS	88.43	107.92	109.24		109.24	0.000256	0.58	228.39	274.39	0.10
Trib4	510.*	Max WS	88.44	107.92	109.23		109.24	0.000228	0.55	258.06	324.81	0.09
Trib4	500	Max WS	88.18	107.92	109.23		109.23	0.000599	0.88	186.10	318.78	0.15
Trib2a	6650	Max WS	230.09	100.64	105.70		105.72	0.000717	1.54	259.29	248.14	0.18
Trib2a	6592.43	Max WS	227.00	100.72	105.68		105.69	0.000207	0.97	404.06	247.54	0.10
Trib2a	6400	Max WS	223.84	100.73	105.66		105.66	0.000077	0.51	498.78	283.90	0.06
Trib2a	6350	Max WS	241.08	100.73	105.66		105.66	0.000070	0.56	591.04	277.84	0.06
Trib2a	6300	Max WS	240.79	100.73	105.65		105.66	0.000087	0.59	544.20	290.26	0.06
Trib2a	6200	Max WS	240.00	100.78	105.64		105.64	0.000170	0.91	465.10	300.36	0.09
Trib2a	6150	Max WS	243.33	100.34	105.63		105.64	0.000180	0.99	371.02	163.16	0.09
Trib2a	6100	Max WS	243.41	100.13	105.62		105.63	0.000126	0.85	429.55	167.27	0.08
Trib2a	6050	Max WS	243.30	100.45	105.62		105.62	0.000108	0.75	458.99	176.87	0.07
Trib2a	6000	Max WS	243.20	100.10	105.61		105.62	0.000096	0.77	487.25	185.35	0.07
Trib2a	5950	Max WS	243.10	100.55	105.61		105.61	0.000079	0.64	528.92	192.77	0.06
Trib2a	5905.86	Max WS	243.02	100.10	105.61		105.61	0.000056	0.55	595.10	200.24	0.05
Trib2a	5850	Max WS	243.15	100.12	105.61		105.61	0.000026	0.38	890.33	312.53	0.04
Trib2a	5800	Max WS	243.23	100.06	105.61		105.61	0.000021	0.38	1009.24	345.45	0.03
Trib2a	5750	Max WS	243.40	100.02	105.60		105.61	0.000017	0.32	1058.48	342.19	0.03
Trib2a	5647.95	Max WS	243.56	99.94	105.60		105.60	0.000031	0.43	637.52	208.47	0.04
Trib2a	5200		Culvert									
Trib2a	5150	Max WS	241.02	99.55	103.27		103.29	0.001122	1.71	280.38	343.04	0.21
Trib2a	5100	Max WS	239.77	99.45	103.22		103.24	0.000932	1.68	301.06	337.66	0.19
Trib2a	5050	Max WS	243.40	99.42	103.19		103.20	0.000497	1.23	365.75	321.07	0.14
Trib2a	5000	Max WS	246.24	99.45	103.16		103.17	0.000511	1.35	368.46	349.33	0.15
Trib2a	4896.6	Max WS	245.68	99.08	103.11		103.12	0.000581	1.46	351.68	337.94	0.16
Trib2a	4817.5	Max WS	245.02	99.31	103.02		103.06	0.001038	1.63	178.65	400.61	0.21
Trib2a	4750	Max WS	244.34	97.98	102.85		102.96	0.002300	2.72	103.50	404.23	0.31
Trib2a	4700	Max WS	242.92	98.48	102.76		102.86	0.002556	2.63	136.24	417.97	0.33
Trib2a	4650	Max WS	242.10	98.29	102.59		102.75	0.003607	3.20	83.49	219.62	0.39
Trib2a	4600	Max WS	235.19	98.92	102.30		102.55	0.007018	4.33	76.10	304.74	0.54
Trib2a	4550	Max WS	249.88	97.96	102.04		102.17	0.004309	3.56	147.85	321.84	0.42
Trib2a	4500	Max WS	249.39	98.15	101.96		101.98	0.001266	2.03	267.29	341.17	0.23
Trib2a	4450	Max WS	249.05	97.30	101.90		101.93	0.000987	1.77	273.41	326.62	0.20
Trib2a	4400	Max WS	248.75	98.06	101.81		101.86	0.002184	1.99	204.50	343.93	0.29
Trib2a	4250.25	Max WS	248.87	96.55	101.41		101.52	0.003170	2.73	95.28	143.33	0.36
Trib2a	4200	Max WS	249.48	96.59	101.34		101.38	0.002514	1.77	182.67	232.81	0.29
Trib2a	4150	Max WS	249.29	97.16	101.25		101.28	0.001890	1.70	213.68	264.27	0.26
Trib2a	4100	Max WS	249.06	97.05	101.15		101.18	0.002075	1.79	199.30	254.31	0.27
Trib2a	4050	Max WS	250.48	96.37	101.06		101.10	0.001632	2.13	223.00	265.66	0.26
Trib2a	3900	Max WS	250.66	95.95	100.82		100.86	0.001813	2.44	236.70	333.18	0.27
Trib2a	3850	Max WS	249.76	96.20	100.75		100.79	0.001153	2.16	262.67	327.35	0.22

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2a	3784.11	Max WS	248.54	96.57	100.67		100.70	0.001335	1.64	219.94	323.14	0.23
Trib2a	3350	Max WS	249.16	95.27	100.30		100.31	0.000511	1.26	359.45	327.47	0.15
Trib2a	3214.64	Max WS	250.43	96.42	100.14		100.19	0.001490	1.85	156.07	287.27	0.25
Trib2a	3100	Max WS	250.65	95.40	99.98		100.03	0.001655	2.24	183.59	214.39	0.26
Trib2a	3090.*	Max WS	249.92	95.27	99.96		100.02	0.001556	2.25	187.10	225.14	0.26
Trib2a	3080.*	Max WS	249.56	95.14	99.95		100.00	0.001466	2.24	191.45	235.29	0.25
Trib2a	3070.*	Max WS	249.42	95.02	99.93		99.99	0.001390	2.24	196.19	243.85	0.25
Trib2a	3060.*	Max WS	249.39	94.89	99.92		99.97	0.001306	2.23	201.76	247.00	0.24
Trib2a	3050	Max WS	249.41	94.76	99.90		99.97	0.001495	2.43	186.40	248.96	0.26
Trib2a	3000	Max WS	249.52	95.44	99.85		99.89	0.001190	1.98	245.03	266.16	0.22
Trib2a	2750	Max WS	249.05	95.06	99.50		99.55	0.001605	2.49	203.88	222.48	0.26
TRIB2	2409.07	Max WS	290.44	93.51	99.50		99.51	0.000314	1.11	470.18	393.90	0.12
TRIB2	2299.16	Max WS	290.43	91.10	99.48	94.65	99.48	0.000107	0.86	603.25	372.67	0.07
TRIB2	2200		Inl Struct									
TRIB2	2147.44	Max WS	135.79	92.44	98.53		98.54	0.000087	0.67	409.80	298.15	0.06
TRIB2	2078.76	Max WS	134.52	92.22	98.53		98.53	0.000022	0.27	579.69	361.58	0.03
TRIB2	1707.37	Max WS	132.08	92.46	98.52		98.52	0.000042	0.38	537.20	386.19	0.04
TRIB2	1601.61	Max WS	132.11	92.48	98.51		98.52	0.000042	0.42	577.25	424.10	0.04
TRIB2	1548.15	Max WS	131.85	92.39	98.51		98.51	0.000031	0.35	662.46	462.75	0.04
TRIB2	1500	Max WS	131.60	91.91	98.51		98.51	0.000015	0.23	855.06	531.71	0.02
TRIB2	1450	Max WS	131.66	91.87	98.51		98.51	0.000019	0.25	808.60	498.46	0.03
TRIB2	1350	Max WS	132.43	92.83	98.51		98.51	0.000015	0.28	798.74	549.60	0.03
TRIB2	1150	Max WS	132.49	92.45	98.51		98.51	0.000006	0.20	1104.00	530.81	0.02
TRIB2	1006.62	Max WS	132.52	93.17	98.51		98.51	0.000016	0.29	821.87	518.73	0.03
TRIB2	961.42	Max WS	132.51	91.98	98.51		98.51	0.000016	0.28	790.37	493.01	0.03
TRIB2	848.73	Max WS	132.56	91.79	98.50		98.50	0.000007	0.20	1076.47	510.37	0.02
TRIB2	752.77	Max WS	132.63	91.40	98.50		98.50	0.000009	0.23	1047.52	541.41	0.02
TRIB2	700	Max WS	132.74	90.92	98.50		98.50	0.000009	0.22	1051.39	578.56	0.02
TRIB2	650	Max WS	132.78	91.12	98.50		98.50	0.000002	0.13	1714.29	632.50	0.01
TRIB2	600	Max WS	132.82	92.50	98.50		98.50	0.000002	0.13	1764.78	662.97	0.01
TRIB2	443.45	Max WS	134.37	92.33	98.50		98.50	0.000003	0.16	1437.08	562.48	0.01
TRIB2	200		Culvert									
TRIB2	80	Max WS	127.70	91.00	94.75		94.79	0.001706	2.01	118.79	224.01	0.26
TRIB2	70	Max WS	126.28	91.00	94.73		94.78	0.001768	2.03	115.06	219.48	0.26
Main3	17447.12	Max WS	185.06	107.81	109.23		109.23	0.000204	0.51	565.97	684.37	0.08
Main3	17437.7*	Max WS	185.05	107.67	109.23		109.23	0.000229	0.56	533.37	680.39	0.09
Main3	17428.3*	Max WS	185.06	107.52	109.22		109.23	0.000241	0.60	510.56	700.90	0.09
Main3	17418.9*	Max WS	185.05	107.38	109.22		109.22	0.000240	0.62	507.61	703.05	0.09
Main3	17409.5*	Max WS	185.06	107.23	109.22		109.22	0.000202	0.59	516.80	673.39	0.09
Main3	17400.1*	Max WS	185.06	107.08	109.22	108.08	109.22	0.000157	0.54	561.90	710.54	0.08
Main3	17400		Inl Struct									
Main3	17390.78	Max WS	184.66	106.94	108.86		108.88	0.000895	1.12	180.55	555.36	0.18
Main3	17350	Max WS	184.49	106.91	108.79		108.83	0.001973	1.70	157.18	553.54	0.27
Main3	17239.4	Max WS	184.35	106.54	108.62		108.65	0.001508	1.60	184.41	498.30	0.24
Main3	16882.6	Max WS	183.68	106.24	108.14		108.16	0.001342	1.64	190.67	246.25	0.23
Main3	16650	Max WS	182.98	106.39	107.91		107.92	0.000883	1.08	269.79	399.58	0.18
Main3	16536.56	Max WS	183.64	106.27	107.84		107.85	0.000367	0.69	391.03	450.20	0.11
Main3	15950	Max WS	182.22	104.49	107.54		107.55	0.000697	1.10	310.55	485.92	0.16
Main3	15556.6	Max WS	182.64	104.62	107.21		107.23	0.000974	1.44	196.25	195.98	0.20
Main3	15479	Max WS	185.14	104.11	107.11		107.14	0.001446	1.87	185.33	308.76	0.24
Main3	15270.69	Max WS	190.49	104.25	106.82		106.84	0.001432	1.27	203.68	243.96	0.22
Main3	15063.95	Max WS	191.98	102.46	106.58		106.61	0.000940	1.81	189.00	280.14	0.20
Main3	14955.43	Max WS	193.09	103.59	106.39		106.44	0.002361	1.94	138.87	251.59	0.29
Main3	14788.2	Max WS	193.28	101.86	106.05		106.09	0.002167	1.73	177.89	311.64	0.27
Main3	14628.77	Max WS	135.93	102.21	105.79		105.80	0.000828	1.32	198.63	314.71	0.18
Main3	14541.77	Max WS	135.04	102.08	105.74		105.74	0.000447	0.98	244.97	300.15	0.13
Main3	14280.86	Max WS	257.67	100.65	105.48		105.51	0.001317	2.10	246.63	236.84	0.22
Main3	14234.63	Max WS	257.61	100.96	105.43		105.45	0.001215	1.41	246.96	214.84	0.21
Main3	14185.8	Max WS	281.84	100.28	105.37		105.39	0.000802	1.41	263.55	154.24	0.18
Main3	14016.19	Max WS	277.01	101.50	105.09		105.16	0.002031	2.17	127.64	70.60	0.28
Main3	13950	Max WS	288.41	101.08	105.00		105.05	0.001402	2.23	227.06	295.18	0.25
Main3	13850	Max WS	285.28	100.53	104.88		104.92	0.001195	2.07	258.65	364.34	0.23
Main3	13750	Max WS	284.45	98.79	104.82		104.84	0.000371	1.44	355.03	386.68	0.13
Main3	13600	Max WS	286.05	99.49	104.67		104.72	0.001243	2.28	219.85	265.41	0.23
Main3	13450	Max WS	282.22	99.56	104.48		104.52	0.001469	2.31	269.99	434.50	0.24
Main3	13391.27	Max WS	280.02	99.51	104.34		104.42	0.002368	2.81	168.63	318.94	0.31
Main3	13266.46	Max WS	244.35	98.98	104.19		104.21	0.000574	1.77	289.62	254.37	0.16
Main3	13150	Max WS	248.07	98.95	104.03		104.08	0.001424	2.62	209.56	318.91	0.25
Main3	12950	Max WS	220.70	98.54	103.80		103.82	0.000383	1.32	341.94	351.33	0.13
Main3	12900	Max WS	224.45	97.80	103.80		103.81	0.000154	0.91	419.41	339.91	0.09
Main3	12850	Max WS	196.63	97.94	103.80		103.81	0.000267	1.10	330.00	285.36	0.11
Main3	12700	Max WS	218.65	99.10	103.70		103.72	0.000669	1.55	272.38	352.09	0.17
Main3	12393.1	Max WS	215.04	97.00	103.54		103.56	0.000440	1.34	264.87	398.53	0.14
Main3	12350	Max WS	214.88	96.55	103.53		103.54	0.000210	0.94	400.00	421.19	0.10
Main3	12150	Max WS	213.90	97.28	103.47		103.50	0.000329	1.41	236.06	572.35	0.13
Main3	12100	Max WS	217.45	97.22	103.43		103.49	0.000840	2.06	184.10	533.27	0.19

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	12050	Max WS	217.08	96.90	103.41		103.44	0.000628	1.66	205.14	441.04	0.17
Main3	11896.14	Max WS	216.75	96.27	103.36		103.37	0.000213	0.84	258.72	450.96	0.10
Main3	11700	Max WS	216.89	97.61	103.35		103.35	0.000033	0.45	864.97	505.04	0.04
Main3	11600	Max WS	217.04	97.58	103.34		103.34	0.000080	0.69	650.98	453.08	0.06
Main3	11346.39	Max WS	217.31	96.94	103.32		103.32	0.000062	0.64	611.33	360.02	0.06
Main3	11100		Culvert									
Main3	11000	Max WS	216.66	95.56	100.99		101.07	0.001627	2.36	106.52	164.84	0.26
Main3	10950	Max WS	215.93	96.78	100.82		100.96	0.003084	2.97	75.15	121.05	0.36
Main3	10850	Max WS	214.93	96.17	100.69		100.74	0.001166	2.03	177.43	225.81	0.22
Main3	10800	Max WS	215.21	95.97	100.62		100.68	0.001218	2.07	146.73	223.70	0.23
Main3	10650	Max WS	214.06	95.97	100.54		100.55	0.000349	1.12	259.41	225.16	0.13
Main3	10600	Max WS	213.64	96.78	100.51		100.53	0.000503	1.23	234.07	258.42	0.15
Main3	10496.09	Max WS	212.50	95.06	100.45		100.48	0.000686	1.50	244.96	315.12	0.17
Main3	10323.48	Max WS	211.39	94.27	100.36		100.38	0.000455	1.29	278.84	260.94	0.14
Main3	10150	Max WS	210.17	94.92	100.28		100.30	0.000471	1.38	239.94	199.11	0.15
Main3	10089.9	Max WS	208.63	94.80	100.20		100.26	0.001282	1.98	130.16	234.91	0.23
Main3	10050	Max WS	207.92	94.29	100.18		100.21	0.000754	1.60	174.78	245.88	0.18
Main3	10000	Max WS	207.04	94.56	100.14		100.18	0.000820	1.64	162.73	239.19	0.19
Main3	9869.95	Max WS	206.27	94.14	100.08		100.10	0.000263	1.28	344.33	492.61	0.11
Main3	9595.54	Max WS	204.85	94.94	99.99		100.01	0.000402	1.20	248.57	276.36	0.13
Main3	9343.2	Max WS	203.67	94.38	99.87		99.90	0.000573	1.57	252.64	376.20	0.16
Main3	9300	Max WS	203.60	93.82	99.85		99.87	0.000445	1.53	269.02	345.47	0.14
Main3	9100	Max WS	204.60	94.32	99.80		99.81	0.000175	0.82	434.86	371.46	0.09
Main3	9000	Max WS	205.56	94.38	99.79		99.79	0.000074	0.59	522.92	312.43	0.06
Main3	8500		Culvert									
Main3	8350	Max WS	195.37	92.98	98.21		98.22	0.000137	0.83	466.84	347.18	0.08
Main3	8162.22	Max WS	194.71	93.75	98.17		98.18	0.000252	0.92	353.72	314.02	0.11
Main3	7850.11	Max WS	194.55	93.09	98.13		98.13	0.000096	0.63	560.33	435.74	0.07
Main3	7633.01	Max WS	195.81	91.62	98.11		98.11	0.000045	0.57	687.78	428.67	0.05
Main3	7536.49	Max WS	196.94	91.92	98.11		98.11	0.000021	0.33	1021.10	598.11	0.03
Main3	7500	Max WS	199.48	92.94	98.11		98.11	0.000028	0.38	812.49	485.87	0.04
Main3	7429.50*	Max WS	200.57	92.68	98.10		98.11	0.000065	0.57	581.25	370.50	0.06
Main3	7359.01	Max WS	201.61	92.42	97.98		98.15	0.001754	3.27	62.04	309.20	0.29
Main3	7000		Culvert									
Main3	6910.56	Max WS	200.39	90.51	96.44		96.56	0.001043	2.79	71.79	286.51	0.23
Main3	6872.46	Max WS	200.85	91.27	96.48		96.49	0.000269	1.09	358.38	291.68	0.11
Main3	6795.89	Max WS	201.42	91.48	96.46		96.47	0.000265	1.04	368.83	299.50	0.11
Main3	6671.06	Max WS	194.36	91.24	94.73		95.31	0.024165	6.12	31.75	188.42	0.92
Trib1	1500	Max WS	203.00	91.00	92.82		93.06	0.010454	3.89	52.19	40.79	0.61
Trib1	1450	Max WS	202.87	91.00	92.49		92.60	0.007716	2.65	76.46	86.64	0.50
Trib1	1400	Max WS	202.75	90.50	92.26		92.32	0.003597	2.29	111.92	126.41	0.36
Trib1	1350	Max WS	203.11	90.50	92.14		92.18	0.001989	1.61	143.66	157.07	0.27
Trib1	1300	Max WS	203.79	90.50	92.04		92.07	0.002301	1.48	137.74	155.76	0.27
Trib1	1250	Max WS	204.43	90.54	91.88		91.93	0.003590	1.79	117.74	148.12	0.34
Trib1	1200	Max WS	205.02	90.27	91.61		91.70	0.005946	2.48	93.30	129.13	0.45
Trib1	1150	Max WS	205.50	90.13	91.41		91.47	0.003381	1.86	111.84	127.74	0.34
Trib1	1100	Max WS	204.99	90.10	91.25		91.29	0.003502	1.76	117.04	146.31	0.34
Trib1	1050	Max WS	200.78	90.06	91.07		91.12	0.003544	1.71	122.47	179.67	0.33
Trib1	1004.24	Max WS	198.52	89.67	90.98		91.00	0.001501	1.24	170.30	254.92	0.22
Trib1	920.64	Max WS	198.30	88.86	90.93		90.93	0.000093	0.45	573.24	499.19	0.06
Trib1	800	Max WS	249.79	88.71	90.92		90.92	0.000044	0.33	776.69	456.60	0.04
Trib1	750	Max WS	272.59	88.77	90.91		90.92	0.000086	0.44	636.94	406.94	0.06
Trib1	650	Max WS	274.24	88.80	90.73		90.81	0.003565	2.33	144.70	395.60	0.36
Trib1	603.8	Max WS	274.97	88.51	90.53		90.63	0.004666	2.60	118.42	174.09	0.41
Trib1	550	Max WS	271.47	88.68	90.22		90.33	0.006142	2.69	109.52	131.14	0.46
Trib1	504.41	Max WS	183.56	88.43	90.10		90.13	0.001415	1.31	141.91	145.49	0.22
Trib1	478.55	Max WS	178.92	88.39	90.08		90.10	0.001001	1.08	166.06	159.23	0.19
Main2	6100	Max WS	320.85	89.62	94.73		94.76	0.001314	1.83	278.10	301.23	0.22
Main2	5995.41	Max WS	320.69	89.33	94.67		94.67	0.000263	0.96	592.97	449.48	0.10
Main2	5852.28	Max WS	320.72	89.05	94.64		94.64	0.000191	0.87	646.22	419.38	0.09
Main2	5700	Max WS	321.83	88.85	94.61		94.61	0.000191	0.82	694.59	515.88	0.09
Main2	5650	Max WS	321.88	89.40	94.60		94.60	0.000190	0.69	705.56	504.35	0.09
Main2	5600	Max WS	321.88	88.79	94.58		94.59	0.000293	0.99	527.09	456.45	0.11
Main2	5550	Max WS	323.93	89.09	94.56		94.57	0.000468	1.14	420.78	351.31	0.14
Main2	5500	Max WS	323.94	89.47	94.53		94.55	0.000594	1.15	404.82	338.43	0.15
Main2	5450	Max WS	323.96	90.05	94.50		94.52	0.000619	1.29	402.23	324.91	0.16
Main2	5400	Max WS	324.02	89.00	94.48		94.49	0.000316	1.27	445.04	312.78	0.12
Main2	5347.58	Max WS	324.06	89.63	94.46		94.47	0.000481	1.27	432.61	337.19	0.14
Main2	5300	Max WS	324.08	89.20	94.44		94.45	0.000434	1.15	462.93	358.49	0.14
Main2	5250	Max WS	324.11	89.77	94.41		94.43	0.000559	1.26	420.68	340.46	0.15
Main2	5200	Max WS	324.16	89.49	94.38		94.40	0.000622	1.21	402.28	312.62	0.16
Main2	5150	Max WS	324.17	88.25	94.35		94.37	0.000654	1.35	382.38	304.71	0.16
Main2	5100	Max WS	325.22	86.86	94.33		94.35	0.000260	1.46	432.34	309.49	0.11
Main2	5050	Max WS	326.25	88.33	93.99		94.40	0.006770	5.17	68.16	295.70	0.52
Main2	5000	Max WS	327.27	89.31	93.99		94.03	0.001597	1.97	286.28	344.84	0.25
Main2	4950	Max WS	327.30	89.11	93.91		93.95	0.001690	2.07	276.60	363.09	0.26

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS (Continued)

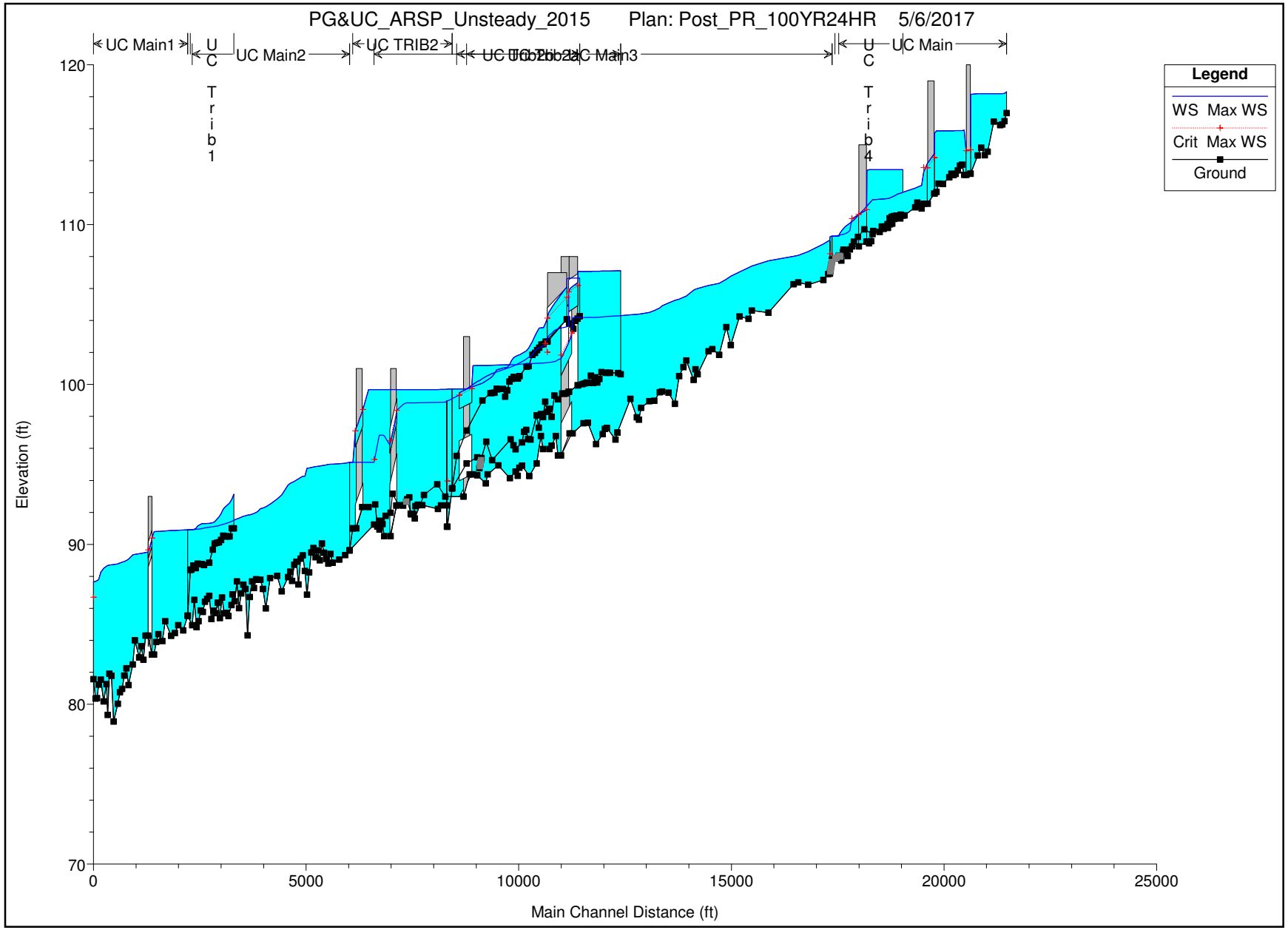
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main2	4900	Max WS	327.34	87.49	93.83		93.87	0.001491	2.02	284.29	394.55	0.24
Main2	4850	Max WS	327.36	88.91	93.74		93.79	0.001912	2.25	263.01	400.72	0.28
Main2	4800	Max WS	327.39	88.72	93.65		93.69	0.001982	2.10	280.42	404.04	0.28
Main2	4750	Max WS	327.42	87.72	93.57		93.62	0.001119	2.13	309.91	398.08	0.22
Main2	4700	Max WS	327.45	88.29	93.51		93.56	0.001233	2.05	275.59	391.04	0.23
Main2	4650	Max WS	327.49	87.95	93.40		93.49	0.002323	2.78	212.14	352.54	0.32
Main2	4504.57	Max WS	328.61	87.06	92.80		92.98	0.005207	3.46	105.59	176.55	0.45
Main2	4397.85	Max WS	328.69	88.02	92.57		92.60	0.001325	1.70	260.20	239.79	0.23
Main2	4231.14	Max WS	329.80	87.89	92.24		92.28	0.002565	2.16	241.14	283.73	0.31
Main2	4128.64	Max WS	329.86	86.00	92.07		92.10	0.001025	1.72	323.22	298.58	0.20
Main2	4061.14	Max WS	329.91	87.21	92.02		92.04	0.000795	1.43	347.09	290.19	0.18
Main2	4000	Max WS	329.96	87.79	91.98		91.99	0.000756	1.22	369.46	307.98	0.17
Main2	3950	Max WS	329.95	87.78	91.75		91.87	0.007115	3.59	182.48	364.14	0.51
Main2	3900	Max WS	329.96	87.81	91.63		91.65	0.000917	1.48	346.13	302.22	0.19
Main2	3850	Max WS	330.99	87.27	91.57		91.60	0.001091	1.82	306.58	234.28	0.21
Main2	3808.17	Max WS	331.00	87.69	91.53		91.55	0.001020	1.35	321.17	245.17	0.20
Main2	3750	Max WS	331.01	86.70	91.49		91.50	0.000703	1.27	358.59	247.85	0.17
Main2	3700	Max WS	331.06	84.31	91.46		91.47	0.000487	1.11	403.42	270.63	0.14
Main2	3650	Max WS	331.09	87.21	91.43		91.44	0.000867	1.20	352.48	292.78	0.18
Main2	3600	Max WS	331.12	87.47	91.38		91.40	0.000976	1.22	339.25	291.69	0.19
Main2	3550.1	Max WS	332.13	86.93	91.32		91.34	0.001295	1.43	289.97	258.49	0.22
Main2	3500	Max WS	332.17	86.01	91.27		91.29	0.000774	1.55	316.29	236.47	0.18
Main2	3450	Max WS	332.18	87.68	91.22		91.24	0.001243	1.84	296.15	261.86	0.22
Main2	3400	Max WS	332.21	86.44	91.14		91.18	0.001561	2.16	274.05	247.23	0.25
Main2	3344.35	Max WS	332.25	86.87	91.07		91.10	0.001295	1.92	285.98	219.89	0.23
Main2	3320.7	Max WS	332.25	86.20	91.03		91.06	0.001513	2.05	266.58	210.69	0.24
Main2	3250	Max WS	333.30	85.52	90.95		90.98	0.000907	1.84	314.04	226.27	0.19
Main2	3200	Max WS	333.31	85.71	90.91		90.93	0.000793	1.36	332.20	225.70	0.18
Main2	3150	Max WS	333.35	85.68	90.87		90.89	0.000814	1.55	321.70	215.56	0.18
Main2	3100	Max WS	333.36	86.67	90.83		90.85	0.000936	1.35	311.16	208.53	0.19
Main2	3050	Max WS	334.39	85.39	90.78		90.80	0.000843	1.36	311.20	195.43	0.18
Main2	3000	Max WS	334.44	86.35	90.74		90.76	0.000887	1.50	338.29	308.33	0.19
Main2	2950	Max WS	334.46	85.70	90.71		90.73	0.000591	1.14	430.89	357.59	0.15
Main2	2900	Max WS	334.48	85.85	90.69		90.70	0.000520	1.22	426.52	315.81	0.15
Main2	2850	Max WS	334.51	85.33	90.66		90.67	0.000655	1.58	388.41	277.20	0.16
Main2	2800	Max WS	334.55	86.78	90.62		90.64	0.000736	1.41	347.73	243.27	0.18
Main2	2750.23	Max WS	334.58	86.59	90.56		90.59	0.001387	1.98	278.43	220.77	0.24
Main2	2700	Max WS	334.61	86.41	90.49		90.52	0.001243	1.90	287.13	232.55	0.23
Main2	2650	Max WS	334.63	85.77	90.40		90.45	0.002042	2.30	246.29	232.61	0.29
Main2	2600	Max WS	334.66	85.86	90.29		90.35	0.002211	2.51	230.74	228.21	0.30
Main2	2550	Max WS	248.85	85.20	90.21		90.24	0.001224	1.73	224.06	219.26	0.22
Main2	2500	Max WS	248.37	84.82	90.16		90.18	0.000996	1.44	257.61	242.90	0.20
Main2	2450	Max WS	247.84	86.53	90.11		90.13	0.001081	1.54	265.15	279.13	0.21
Main2	2397.32	Max WS	247.50	84.95	90.08		90.09	0.000402	1.24	339.07	314.18	0.13
Main1	2291.46	Max WS	426.67	85.53	90.08		90.09	0.000733	1.19	545.05	492.37	0.17
Main1	2189.07	Max WS	422.03	84.62	90.03		90.03	0.000371	1.13	667.73	505.64	0.13
Main1	2069.18	Max WS	420.66	84.94	89.99		90.00	0.000239	0.99	796.52	553.01	0.10
Main1	1990.13	Max WS	421.53	84.45	89.98		89.98	0.000192	0.76	845.63	556.57	0.09
Main1	1902.51	Max WS	421.44	84.27	89.96		89.96	0.000212	1.01	807.41	527.57	0.10
Main1	1760.99	Max WS	420.92	85.19	89.91		89.92	0.000402	1.17	581.52	389.81	0.13
Main1	1698.99	Max WS	420.75	83.95	89.89		89.90	0.000330	1.35	612.01	368.83	0.12
Main1	1600	Max WS	420.74	84.38	89.85		89.87	0.000376	1.16	560.54	345.90	0.13
Main1	1550	Max WS	420.74	83.89	89.83		89.85	0.000386	1.32	524.86	316.56	0.13
Main1	1500	Max WS	420.73	83.11	89.81		89.83	0.000541	1.46	472.48	322.16	0.15
Main1	1400		Culvert									
Main1	1300	Max WS	420.11	84.29	89.02		89.04	0.000829	1.97	413.24	290.84	0.19
Main1	1250	Max WS	420.03	82.78	88.99		89.00	0.000547	1.51	490.55	322.84	0.15
Main1	1200	Max WS	428.36	83.63	88.96		88.98	0.000579	1.70	475.96	302.72	0.16
Main1	1150	Max WS	428.35	82.93	88.94		88.95	0.000408	1.57	509.77	284.19	0.14
Main1	1050	Max WS	428.27	84.00	88.89		88.91	0.000499	1.43	473.88	245.25	0.15
Main1	1000	Max WS	428.28	82.49	88.87		88.89	0.000485	1.58	448.97	228.06	0.15
Main1	902.45	Max WS	428.01	81.20	88.64		88.79	0.002756	3.71	175.60	104.72	0.33
Main1	850	Max WS	427.96	82.25	88.55		88.66	0.001905	3.06	203.29	109.03	0.29
Main1	800	Max WS	427.93	81.79	88.51		88.58	0.001166	2.71	272.91	156.78	0.24
Main1	750	Max WS	427.85	80.96	88.45		88.52	0.001101	2.55	281.30	175.78	0.23
Main1	700	Max WS	427.88	80.75	88.42		88.46	0.000931	2.11	313.83	196.67	0.21
Main1	650	Max WS	427.87	80.03	88.37		88.43	0.000883	2.45	316.42	207.05	0.20
Main1	550	Max WS	427.87	78.91	88.33		88.35	0.000378	1.64	444.75	233.21	0.13
Main1	500	Max WS	431.99	81.77	88.31		88.33	0.000356	1.46	485.48	239.85	0.13
Main1	450.28	Max WS	432.01	81.91	88.30		88.32	0.000242	1.24	533.33	235.21	0.11
Main1	411.53	Max WS	432.01	79.33	88.28		88.30	0.000447	1.54	443.60	224.44	0.14
Main1	381.37	Max WS	432.02	81.25	88.24		88.29	0.001053	2.17	314.06	202.04	0.22
Main1	316.15	Max WS	432.05	80.18	88.12		88.21	0.001612	2.68	222.56	160.04	0.27
Main1	250	Max WS	432.06	81.54	87.89		88.06	0.003706	3.56	160.39	145.49	0.39
Main1	200	Max WS	432.06	81.23	87.47		87.75	0.011317	4.38	110.05	112.51	0.64
Main1	161.78	Max WS	432.03	80.38	87.35		87.41	0.002123	2.22	309.39	422.83	0.29

HEC-RAS Plan: PostPR10YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	126.68	Max WS	435.17	80.35	87.31		87.35	0.001626	1.85	359.90	536.78	0.25
Main1	76.78	Max WS	444.40	81.56	87.23	85.63	87.29	0.001546	2.39	390.90	614.18	0.26

HEC-RAS Plan: Post ARPostPR10 River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	118.14	110.59	114.66		114.70	0.002363	1.64	103.13	115.14	0.18
Placer Trib	65.0000	Max WS	118.12	109.85	114.43		114.47	0.002054	1.62	74.78	33.26	0.17
Placer Trib	64.0000	Max WS	117.07	109.50	113.58		113.65	0.004143	2.20	62.59	63.33	0.24
Placer Trib	63.5		Lat Struct									
Placer Trib	63.0000	Max WS	118.43	109.24	113.21		113.21	0.000538	0.73	266.34	235.55	0.08
Placer Trib	62.0000	Max WS	128.76	109.35	113.11		113.12	0.000912	0.92	145.37	495.95	0.11
Placer Trib	61.0000	Max WS	129.19	108.83	112.32		112.35	0.002512	1.66	123.50	268.23	0.19
Placer Trib	60.0000	Max WS	127.69	107.78	111.82		111.85	0.001928	1.58	127.13	178.83	0.17
Placer Trib	59.5		Lat Struct									
Placer Trib	59.0000	Max WS	133.30	107.59	111.55		111.57	0.002024	1.35	162.41	173.11	0.16
Placer Trib	58.0000	Max WS	132.64	107.73	111.33		111.33	0.000166	0.41	345.97	277.85	0.05
Placer Trib	57.0000	Max WS	132.90	105.82	111.31		111.31	0.000078	0.28	658.78	377.40	0.03
Placer Trib	56.0000	Max WS	133.40	105.33	110.65		110.74	0.003999	2.47	55.55	190.32	0.23
Placer Trib	55.0000	Max WS	125.53	105.57	110.17		110.18	0.000776	0.93	196.57	167.71	0.10
Placer Trib	54.0000	Max WS	133.78	104.60	109.70		109.74	0.002823	1.74	111.47	243.16	0.19
Placer Trib	53.5		Lat Struct									
Placer Trib	53.0000	Max WS	136.57	104.84	109.16		109.19	0.002207	1.67	110.12	101.03	0.18
Placer Trib	52.0000	Max WS	136.43	103.99	108.87		108.89	0.001219	1.17	153.68	140.24	0.13
Placer Trib	51.0000	Max WS	136.87	103.62	108.54		108.56	0.001542	1.33	107.84	155.74	0.15
Placer Trib	50.0000	Max WS	137.00	103.34	108.27		108.28	0.000621	1.01	236.03	162.25	0.09
Placer Trib	49.0000	Max WS	137.07	103.19	107.79		107.85	0.003021	1.96	77.90	200.52	0.20
Placer Trib	48.0000	Max WS	137.18	103.11	107.33		107.36	0.001974	1.34	103.86	76.92	0.16
Placer Trib	47.0000	Max WS	137.39	101.60	106.51		106.55	0.003249	1.77	77.40	306.96	0.21
Placer Trib	46.0000	Max WS	137.73	101.67	105.69		105.77	0.003984	2.33	70.62	60.20	0.24
Placer Trib	45.0000	Max WS	137.90	101.32	105.05		105.13	0.006276	2.32	78.31	97.68	0.28
Placer Trib	44.0000	Max WS	138.51	101.09	104.64		104.65	0.000407	0.67	217.39	139.97	0.08
Placer Trib	43.0000	Max WS	142.02	100.19	104.17		104.28	0.006415	2.57	55.29	22.71	0.29
Placer Trib	42	Max WS	156.13	100.80	103.46		103.47	0.000672	0.78	285.53	187.31	0.10
Placer Trib	41.12*	Max WS	156.17	100.52	103.40		103.41	0.000723	0.87	289.84	217.31	0.10
Placer Trib	40.24*	Max WS	156.23	100.24	103.33		103.34	0.000847	1.00	283.56	259.02	0.11
Placer Trib	39.36*	Max WS	156.29	99.96	103.25		103.26	0.001035	1.17	263.44	294.40	0.12
Placer Trib	38.48*	Max WS	156.36	99.68	103.15		103.17	0.001201	1.32	229.20	304.36	0.13
Placer Trib	37.6	Max WS	156.44	99.40	103.07		103.08	0.000830	1.15	218.41	192.47	0.11
Placer Trib	36.6*	Max WS	156.42	99.30	102.99		103.00	0.000808	1.10	257.78	203.01	0.11
Placer Trib	35.6	Max WS	156.40	99.20	102.94		102.94	0.000277	0.62	388.06	203.55	0.06
Placer Trib	34.6*	Max WS	156.39	99.30	102.87		102.88	0.000895	1.10	238.37	169.32	0.12
Placer Trib	33.6*	Max WS	156.39	99.40	102.62		102.67	0.003705	2.07	111.89	142.57	0.23
Placer Trib	32.6	Max WS	156.39	99.50	102.23		102.28	0.004256	1.95	115.78	114.65	0.24
Placer Trib	31.6*	Max WS	156.49	98.95	101.68		101.76	0.006550	2.28	94.74	145.60	0.29
Placer Trib	30.6	Max WS	156.48	98.40	101.37		101.37	0.000698	0.75	304.36	232.59	0.10
Placer Trib	29.7*	Max WS	156.90	97.98	101.28		101.29	0.001263	1.01	234.91	214.45	0.13
Placer Trib	29.1		Lat Struct									
Placer Trib	28.8*	Max WS	160.04	97.56	101.09		101.11	0.002688	1.43	161.60	182.95	0.19
Placer Trib	27.9*	Max WS	160.01	97.14	100.62		100.68	0.007377	2.01	101.07	164.09	0.30
Placer Trib	27*	Max WS	159.83	96.72	100.19		100.20	0.003285	1.10	185.99	221.67	0.19
Placer Trib	26.1	Max WS	159.71	96.30	100.04		100.04	0.000373	0.35	398.17	263.39	0.06
Placer Trib	25.2*	Max WS	162.16	96.23	99.98		99.99	0.000851	0.73	281.87	249.89	0.10
Placer Trib	24.3*	Max WS	162.09	96.15	99.89		99.90	0.001089	0.99	225.98	235.08	0.12
Placer Trib	23.4*	Max WS	162.06	96.07	99.81		99.82	0.000678	0.88	227.24	181.74	0.10
Placer Trib	22.5	Max WS	162.03	96.00	99.77		99.78	0.000361	0.71	274.69	142.73	0.07
Placer Trib	21.6*	Max WS	162.02	95.65	99.72		99.73	0.000736	0.88	216.79	159.55	0.10
Placer Trib	20.7	Max WS	161.98	95.30	99.58		99.60	0.002211	1.24	137.54	106.63	0.17
Placer Trib	19.8*	Max WS	161.94	95.10	99.42		99.43	0.001475	1.02	161.33	108.60	0.14
Placer Trib	18.9	Max WS	161.91	94.90	99.30		99.31	0.001254	0.91	181.72	148.96	0.13
Placer Trib	17.92*	Max WS	169.45	94.60	99.19		99.20	0.000990	0.92	191.00	130.55	0.11
Placer Trib	16.94*	Max WS	169.39	94.30	99.10		99.11	0.000815	0.93	194.27	125.85	0.11
Placer Trib	15.96*	Max WS	169.34	94.00	99.02		99.04	0.000771	0.99	195.67	148.74	0.11
Placer Trib	14.98*	Max WS	169.30	93.70	98.96		98.97	0.000584	0.93	298.08	319.12	0.09
Placer Trib	14	Max WS	169.27	93.40	98.93		98.93	0.000213	0.58	522.83	363.93	0.06
Placer Trib	13.075*	Max WS	169.27	93.70	98.89		98.90	0.000446	0.85	375.07	316.13	0.08
Placer Trib	12.15*	Max WS	169.27	94.00	98.82		98.84	0.000954	1.22	247.03	266.71	0.12
Placer Trib	11.225*	Max WS	169.22	94.30	98.69		98.72	0.001699	1.57	145.57	150.86	0.16
Placer Trib	10.3	Max WS	169.06	94.60	98.48		98.53	0.002493	1.78	115.83	70.72	0.19
Placer Trib	9.525*	Max WS	168.70	94.10	98.30		98.34	0.002424	1.66	127.07	104.45	0.19
Placer Trib	8.75*	Max WS	167.88	93.60	98.11		98.15	0.002506	1.58	134.26	138.88	0.19
Placer Trib	7.975*	Max WS	166.62	93.10	97.95		97.97	0.002022	1.32	164.71	149.68	0.16
Placer Trib	7.2	Max WS	165.40	92.60	97.85		97.86	0.000881	0.87	256.48	201.70	0.11
Placer Trib	6.3333*	Max WS	164.09	92.17	97.79		97.79	0.000586	0.83	310.72	282.98	0.09
Placer Trib	5.46659*	Max WS	163.33	91.73	97.75		97.76	0.000268	0.66	401.69	281.15	0.06
Placer Trib	4.5999	Max WS	162.80	91.30	97.73		97.74	0.000154	0.57	466.44	258.03	0.05
Placer Trib	3.6666*	Max WS	162.17	91.07	97.72		97.72	0.000161	0.61	437.62	273.94	0.05
Placer Trib	2.7333*	Max WS	161.50	90.83	97.70		97.71	0.000162	0.63	401.30	281.02	0.05
Placer Trib	1.8	Max WS	160.95	90.60	97.69		97.69	0.000139	0.60	385.10	239.23	0.05
Placer Trib	0.9*	Max WS	160.60	90.55	97.68		97.68	0.000045	0.35	711.16	379.35	0.03
Placer Trib	0	Max WS	160.57	90.50	97.68		97.68	0.000041	0.34	659.55	263.58	0.03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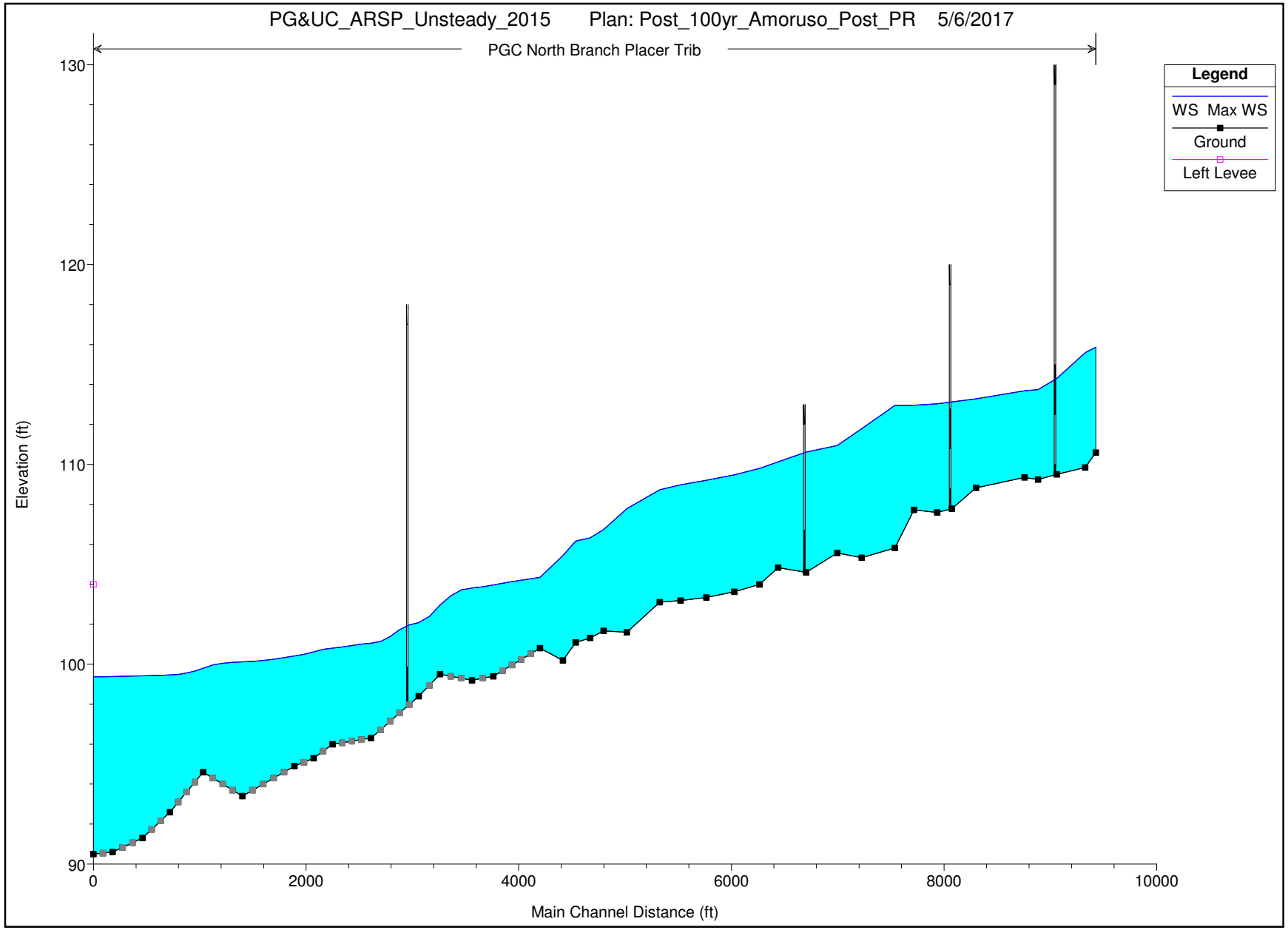
UC Main1
UC Trib1
UC Main2
UC TRIB2
UC Main3
UC Trib4
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
120
110
100
90
80
70
0
5000
10000
15000
20000
25000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PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
130
120
110
100
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main	21550	Max WS	108.36	116.98	118.31		118.38	0.004321	2.17	59.45	108.55	0.38
Main	21500	Max WS	24.83	116.48	118.20		118.21	0.000167	0.45	67.84	112.25	0.08
Main	21450	Max WS	24.80	116.27	118.20		118.20	0.000052	0.28	107.89	160.24	0.04
Main	21396.29	Max WS	24.82	116.23	118.20		118.20	0.000037	0.24	145.72	205.35	0.04
Main	21246.12	Max WS	25.17	116.44	118.20		118.20	0.000003	0.07	404.35	339.96	0.01
Main	21100	Max WS	27.55	114.56	118.20		118.20	0.000002	0.10	498.87	288.98	0.01
Main	21037.73	Max WS	44.08	114.34	118.20		118.20	0.000006	0.17	475.09	305.68	0.02
Main	20950.06	Max WS	44.33	114.81	118.19		118.19	0.000003	0.11	603.89	325.69	0.01
Main	20867	Max WS	44.56	114.33	118.19		118.19	0.000003	0.11	621.88	317.02	0.01
Main	20700	Max WS	44.53	113.19	118.15		118.21	0.000459	1.92	23.17	195.43	0.16
Main	20600		Culvert									
Main	20550	Max WS	42.67	113.12	115.92		116.08	0.002767	3.27	13.06	242.00	0.36
Main	20500	Max WS	42.62	113.75	115.88		115.89	0.000070	0.39	184.01	238.27	0.05
Main	20450	Max WS	42.69	113.69	115.88		115.88	0.000029	0.26	252.77	247.30	0.03
Main	20400	Max WS	71.11	113.39	115.88		115.88	0.000070	0.46	252.30	231.63	0.06
Main	20351.92	Max WS	71.21	113.17	115.88		115.88	0.000026	0.30	348.99	234.44	0.03
Main	20300	Max WS	71.31	113.10	115.88		115.88	0.000020	0.26	333.83	184.84	0.03
Main	20250	Max WS	71.43	113.18	115.87		115.87	0.000035	0.36	298.61	184.14	0.04
Main	20200	Max WS	71.54	112.96	115.87		115.87	0.000032	0.35	304.05	180.92	0.04
Main	20050	Max WS	73.62	112.55	115.87		115.87	0.000011	0.23	443.05	199.94	0.02
Main	19950	Max WS	73.75	112.56	115.87		115.87	0.000007	0.18	597.75	269.04	0.02
Main	19900	Max WS	73.93	112.05	115.87		115.87	0.000004	0.15	704.06	278.03	0.01
Main	19852.97	Max WS	114.91	111.94	115.72		116.13	0.004125	5.11	22.47	288.16	0.47
Main	19700		Culvert									
Main	19600	Max WS	114.91	111.31	113.31	113.57	114.74	0.033829	9.61	11.95	230.60	1.20
Main	19550	Max WS	114.93	111.01	112.44		112.46	0.001139	1.23	133.27	224.43	0.20
Main	19500	Max WS	117.26	111.18	112.40		112.42	0.000866	1.03	169.66	292.92	0.17
Main	19450	Max WS	117.16	111.38	112.34		112.36	0.001830	1.22	144.36	316.00	0.24
Main	19400	Max WS	117.09	111.08	112.28		112.29	0.001045	1.02	203.89	402.08	0.19
Main	19150	Max WS	117.05	110.58	112.07		112.08	0.000848	1.15	192.39	315.68	0.18
Main	19050	Max WS	118.69	110.39	111.97		111.99	0.001343	1.37	131.95	287.55	0.22
Main	19000	Max WS	118.67	110.49	111.92		111.94	0.000849	1.01	173.48	278.48	0.17
Main	18950	Max WS	118.46	110.54	111.85		111.87	0.001770	1.32	119.56	244.47	0.24
Main	18900	Max WS	118.30	110.53	111.79		111.80	0.001171	1.09	147.32	237.94	0.20
Main	18850	Max WS	117.99	110.49	111.72		111.74	0.001624	1.27	136.03	289.47	0.23
Main	18800	Max WS	126.69	110.40	111.67		111.68	0.000757	0.94	204.18	336.26	0.16
Main	18750	Max WS	126.15	110.03	111.64		111.65	0.000500	0.87	233.37	392.17	0.14
Main	18700	Max WS	127.55	109.89	111.62		111.63	0.000310	0.72	295.07	469.04	0.11
Main	18650	Max WS	127.28	109.86	111.61		111.61	0.000292	0.62	303.27	419.58	0.10
Main	18397.57	Max WS	126.63	109.41	111.55		111.56	0.000171	0.64	338.95	289.17	0.08
Main	18200	Max WS	127.44	109.70	110.98		110.99	0.000965	0.86	169.98	194.25	0.17
Main	18050	Max WS	129.27	109.24	110.57		110.62	0.004541	2.31	87.63	152.02	0.40
Main	17955.7	Max WS	129.32	108.94	110.29		110.31	0.001937	1.48	135.30	198.09	0.26
Main	17750	Max WS	130.46	108.17	109.87		109.91	0.002235	1.68	98.12	228.99	0.28
Main	17700	Max WS	130.49	108.29	109.72		109.77	0.003584	1.71	80.50	173.77	0.34
Main	17650	Max WS	130.35	107.99	109.54		109.59	0.003793	1.85	74.62	174.99	0.35
Main	17640.*	Max WS	132.52	108.01	109.51		109.55	0.003556	1.83	90.90	190.56	0.34
Main	17630.*	Max WS	132.51	108.02	109.46		109.52	0.004552	2.11	80.66	185.66	0.39
Main	17620.*	Max WS	132.48	108.04	109.39		109.47	0.005788	2.38	72.22	164.24	0.44
Main	17610.*	Max WS	132.28	108.05	109.33		109.41	0.007030	2.62	69.80	160.61	0.48
Main	17600	Max WS	131.69	108.07	109.28		109.34	0.006170	2.48	79.76	167.99	0.45
Trib2b	3000	Max WS	27.50	104.27	106.66		106.66	0.000002	0.09	418.02	233.20	0.01
Trib2b	2950	Max WS	27.55	104.12	106.66		106.66	0.000002	0.08	424.18	211.35	0.01
Trib2b	2900	Max WS	27.69	103.98	106.66		106.66	0.000001	0.07	509.54	249.47	0.01
Trib2b	2850	Max WS	27.88	103.49	106.66		106.66	0.000001	0.07	486.65	222.32	0.01
Trib2b	2800	Max WS	28.08	103.81	106.66		106.66	0.000002	0.08	466.78	203.16	0.01
Trib2b	2750	Max WS	28.29	103.83	106.66		106.66	0.000002	0.09	364.62	149.67	0.01
Trib2b	2700	Max WS	28.47	104.08	106.62		106.64	0.006864	1.19	23.93	83.05	0.39
Trib2b	2500		Culvert									
Trib2b	2200	Max WS	27.41	102.69	103.86		104.17	0.017162	4.42	6.20	98.73	0.77
Trib2b	2150	Max WS	37.91	102.52	103.56		103.56	0.000243	0.37	101.24	168.10	0.08
Trib2b	2100	Max WS	37.43	102.50	103.55		103.55	0.000232	0.38	104.53	205.99	0.08
Trib2b	2050	Max WS	36.86	102.30	103.54		103.54	0.000242	0.38	115.95	231.23	0.08
Trib2b	2000	Max WS	131.40	102.16	103.31		103.36	0.007453	1.87	70.34	216.11	0.45
Trib2b	1950	Max WS	131.35	101.98	103.05		103.09	0.005231	1.91	94.38	216.16	0.40
Trib2b	1887.66	Max WS	131.17	101.86	102.68		102.73	0.007509	1.91	84.88	197.66	0.46
Trib2b	1800	Max WS	130.61	101.14	102.27		102.29	0.003240	1.28	114.68	199.55	0.30
Trib2b	1750	Max WS	129.32	101.12	102.11		102.14	0.003040	1.27	107.70	226.41	0.29
Trib2b	1587.06	Max WS	127.07	100.52	101.85		101.86	0.000428	0.65	201.83	254.67	0.12
Trib2b	1547.11	Max WS	126.93	100.38	101.82		101.83	0.000793	0.89	177.87	266.55	0.16
Trib2b	1494.66	Max WS	128.91	100.39	101.76		101.77	0.001754	1.02	134.12	257.28	0.23
Trib2b	1450	Max WS	128.71	100.48	101.67		101.70	0.001936	1.20	118.50	202.52	0.24
Trib2b	1400	Max WS	128.78	100.35	101.50		101.54	0.005362	1.93	98.58	229.50	0.40
Trib2b	1350	Max WS	127.10	100.19	101.22		101.25	0.006281	1.49	85.62	203.91	0.40
Trib2b	1300	Max WS	124.89	99.63	101.07		101.08	0.000623	0.71	176.80	228.16	0.14
Trib2b	1250	Max WS	124.54	99.24	101.05		101.06	0.000342	0.67	212.86	264.63	0.11

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1200	Max WS	129.09	99.73	101.02		101.03	0.000687	0.73	177.87	231.59	0.15
Trib2b	1064.85	Max WS	128.62	99.70	100.92		100.93	0.000852	0.85	179.74	255.17	0.16
Trib2b	1050	Max WS	128.54	99.74	100.90		100.91	0.001111	0.91	166.19	259.61	0.18
Trib2b	1000	Max WS	128.31	99.49	100.69		100.75	0.006265	1.98	71.88	259.75	0.43
Trib2b	950	Max WS	127.92	99.47	100.51		100.53	0.002513	1.33	129.75	275.23	0.28
Trib2b	902.71	Max WS	127.18	99.46	100.40		100.42	0.002267	1.12	125.37	319.30	0.25
Trib2b	715.36	Max WS	122.66	99.00	100.07		100.09	0.001375	0.86	146.40	314.22	0.20
Trib2b	339.81	Max WS	25.99	97.12	99.73		99.73	0.000031	0.21	180.31	235.01	0.03
Trib2b	106.24	Max WS	25.96	95.53	99.72		99.72	0.000024	0.25	138.57	131.68	0.03
Trib4	2100	Max WS	96.17	110.56	113.44		113.44	0.000011	0.17	557.32	290.99	0.02
Trib4	2050	Max WS	97.11	110.63	113.44		113.44	0.000013	0.22	536.39	272.47	0.02
Trib4	1950	Max WS	97.25	110.57	113.44		113.44	0.000010	0.20	602.34	293.75	0.02
Trib4	1900	Max WS	103.07	110.36	113.44		113.44	0.000006	0.16	701.00	297.77	0.02
Trib4	1850	Max WS	103.50	110.06	113.44		113.44	0.000007	0.17	656.73	263.90	0.02
Trib4	1800	Max WS	103.61	110.02	113.44		113.44	0.000008	0.19	619.13	251.77	0.02
Trib4	1747.14	Max WS	103.85	109.80	113.44		113.44	0.000008	0.19	620.94	243.12	0.02
Trib4	1700	Max WS	104.21	109.83	113.44		113.44	0.000007	0.18	629.89	240.01	0.02
Trib4	1650	Max WS	104.31	109.73	113.44		113.44	0.000005	0.15	724.44	256.88	0.02
Trib4	1600	Max WS	112.58	109.88	113.44		113.44	0.000006	0.17	726.50	272.18	0.02
Trib4	1550	Max WS	112.69	109.54	113.44		113.44	0.000005	0.16	835.27	292.15	0.02
Trib4	1400	Max WS	113.42	109.60	113.44		113.44	0.000008	0.22	767.75	310.56	0.02
Trib4	1350	Max WS	113.58	108.96	113.44		113.44	0.000004	0.16	931.38	336.73	0.01
Trib4	1300	Max WS	113.82	108.83	113.44		113.44	0.000003	0.13	1108.50	366.66	0.01
Trib4	1250	Max WS	113.80	108.93	113.40		113.52	0.001060	2.88	39.50	312.64	0.24
Trib4	1000		Culvert									
Trib4	900	Max WS	113.80	108.64	110.37	110.38	111.23	0.025256	7.46	15.25	290.81	1.01
Trib4	850	Max WS	126.57	108.45	109.64		109.70	0.005490	2.15	89.42	277.08	0.42
Trib4	800	Max WS	128.11	108.03	109.52		109.54	0.001455	1.36	131.49	271.88	0.23
Trib4	750	Max WS	126.72	108.34	109.44		109.46	0.002616	1.37	138.17	312.73	0.28
Trib4	700	Max WS	125.32	108.43	109.40		109.40	0.000495	0.68	243.30	316.29	0.13
Trib4	650	Max WS	123.66	107.75	109.36		109.37	0.001173	1.12	153.86	286.67	0.20
Trib4	600	Max WS	122.53	107.89	109.33		109.34	0.000512	0.91	238.38	329.11	0.14
Trib4	550	Max WS	121.01	107.93	109.30		109.31	0.000712	1.02	216.31	337.89	0.16
Trib4	540.*	Max WS	117.00	107.93	109.30		109.30	0.000398	0.76	253.59	324.93	0.12
Trib4	530.*	Max WS	116.42	107.93	109.29		109.30	0.000380	0.74	248.41	302.04	0.12
Trib4	520.*	Max WS	116.33	107.92	109.29		109.29	0.000370	0.72	243.26	279.93	0.12
Trib4	510.*	Max WS	116.31	107.92	109.29		109.29	0.000325	0.67	275.60	335.66	0.11
Trib4	500	Max WS	116.04	107.92	109.28		109.29	0.000810	1.05	202.36	322.61	0.17
Trib2a	6650	Max WS	358.31	100.64	107.12		107.12	0.000138	0.92	616.24	254.14	0.08
Trib2a	6592.43	Max WS	357.42	100.72	107.11		107.12	0.000075	0.76	765.54	272.76	0.06
Trib2a	6400	Max WS	355.65	100.73	107.11		107.11	0.000033	0.46	921.85	299.96	0.04
Trib2a	6350	Max WS	381.88	100.73	107.10		107.11	0.000033	0.50	1055.40	329.75	0.04
Trib2a	6300	Max WS	382.03	100.73	107.10		107.10	0.000036	0.50	1008.67	332.23	0.04
Trib2a	6200	Max WS	381.68	100.78	107.10		107.10	0.000063	0.71	936.83	348.74	0.06
Trib2a	6150	Max WS	386.34	100.34	107.09		107.10	0.000124	1.04	721.44	362.36	0.08
Trib2a	6100	Max WS	386.04	100.13	107.09		107.09	0.000105	0.97	790.37	380.26	0.08
Trib2a	6050	Max WS	386.21	100.45	107.08		107.09	0.000086	0.85	831.72	396.00	0.07
Trib2a	6000	Max WS	386.36	100.10	107.08		107.08	0.000063	0.77	871.19	364.82	0.06
Trib2a	5950	Max WS	386.27	100.55	107.08		107.08	0.000054	0.67	923.56	369.24	0.05
Trib2a	5905.86	Max WS	386.62	100.10	107.07		107.08	0.000043	0.61	986.18	321.53	0.05
Trib2a	5850	Max WS	386.46	100.12	107.07		107.08	0.000021	0.43	1376.73	403.93	0.03
Trib2a	5800	Max WS	386.78	100.06	107.07		107.07	0.000017	0.42	1532.02	420.02	0.03
Trib2a	5750	Max WS	386.82	100.02	107.07		107.07	0.000014	0.37	1574.58	413.69	0.03
Trib2a	5647.95	Max WS	387.16	99.94	107.07		107.07	0.000025	0.48	970.00	295.68	0.04
Trib2a	5200		Culvert									
Trib2a	5150	Max WS	385.91	99.55	103.65		103.67	0.000925	1.74	412.90	350.07	0.20
Trib2a	5100	Max WS	385.88	99.45	103.61		103.63	0.000845	1.78	441.39	379.87	0.19
Trib2a	5050	Max WS	393.68	99.42	103.58		103.59	0.000550	1.44	492.28	365.83	0.15
Trib2a	5000	Max WS	400.28	99.45	103.55		103.56	0.000556	1.55	509.22	373.23	0.16
Trib2a	4896.6	Max WS	400.64	99.08	103.49		103.50	0.000610	1.64	482.96	364.29	0.17
Trib2a	4817.5	Max WS	401.03	99.31	103.38		103.44	0.001311	2.06	280.84	434.01	0.24
Trib2a	4750	Max WS	401.29	97.98	103.19		103.35	0.003048	3.44	200.79	423.03	0.37
Trib2a	4700	Max WS	401.63	98.48	103.11		103.19	0.002168	2.70	288.23	440.95	0.31
Trib2a	4650	Max WS	401.93	98.29	102.87	102.03	103.08	0.004699	3.97	180.00	429.48	0.45
Trib2a	4600	Max WS	401.47	98.92	102.57	102.57	102.84	0.007926	5.01	166.13	363.76	0.58
Trib2a	4550	Max WS	401.12	97.96	102.40		102.48	0.003022	3.30	276.16	385.40	0.36
Trib2a	4500	Max WS	401.23	98.15	102.33		102.36	0.001153	2.13	402.95	376.66	0.23
Trib2a	4450	Max WS	401.36	97.30	102.28		102.30	0.000962	1.93	395.43	353.45	0.21
Trib2a	4400	Max WS	401.59	98.06	102.21		102.25	0.001499	1.93	344.88	364.22	0.25
Trib2a	4250.25	Max WS	401.71	96.55	101.74		101.93	0.004460	3.62	130.55	231.45	0.43
Trib2a	4200	Max WS	401.56	96.59	101.68		101.73	0.002236	1.99	266.94	256.97	0.29
Trib2a	4150	Max WS	401.08	97.16	101.59		101.63	0.001714	1.90	307.04	275.99	0.26
Trib2a	4100	Max WS	400.29	97.05	101.51		101.55	0.001834	1.97	293.47	271.14	0.27
Trib2a	4050	Max WS	400.99	96.37	101.42		101.46	0.001556	2.31	323.56	284.58	0.26
Trib2a	3900	Max WS	401.46	95.95	101.22		101.25	0.001316	2.29	371.26	337.86	0.23
Trib2a	3850	Max WS	401.36	96.20	101.17		101.19	0.000982	2.18	402.15	341.88	0.21

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2a	3784.11	Max WS	399.14	96.57	101.08		101.12	0.001668	2.12	334.37	346.36	0.26
Trib2a	3350	Max WS	398.32	95.27	100.68		100.70	0.000527	1.42	485.77	329.95	0.15
Trib2a	3214.64	Max WS	400.36	96.42	100.51		100.58	0.001596	2.18	259.15	330.26	0.26
Trib2a	3100	Max WS	400.53	95.40	100.33		100.39	0.001839	2.60	269.62	275.86	0.28
Trib2a	3090.*	Max WS	400.58	95.27	100.31		100.37	0.001745	2.61	275.35	279.57	0.28
Trib2a	3080.*	Max WS	400.53	95.14	100.29		100.36	0.001653	2.60	281.21	281.85	0.27
Trib2a	3070.*	Max WS	400.60	95.02	100.28		100.34	0.001582	2.60	286.70	285.99	0.27
Trib2a	3060.*	Max WS	400.59	94.89	100.26		100.32	0.001509	2.60	293.34	301.71	0.26
Trib2a	3050	Max WS	400.61	94.76	100.24		100.31	0.001692	2.79	279.67	329.29	0.28
Trib2a	3000	Max WS	400.82	95.44	100.19		100.22	0.001293	2.25	334.66	276.70	0.24
Trib2a	2750	Max WS	171.49	95.06	99.72		99.73	0.000425	1.35	253.65	223.94	0.14
TRIB2	2409.07	Max WS	197.34	93.51	99.72		99.72	0.000090	0.63	559.02	417.19	0.06
TRIB2	2299.16	Max WS	193.70	91.10	99.71	93.96	99.72	0.000034	0.50	693.80	396.15	0.04
TRIB2	2200		Inl Struct									
TRIB2	2147.44	Max WS	193.39	92.44	99.69		99.69	0.000028	0.45	782.97	363.55	0.04
TRIB2	2078.76	Max WS	193.02	92.22	99.69		99.69	0.000010	0.24	1037.27	441.20	0.02
TRIB2	1707.37	Max WS	194.71	92.46	99.68		99.68	0.000015	0.30	1007.13	588.59	0.03
TRIB2	1601.61	Max WS	194.64	92.48	99.68		99.68	0.000015	0.31	1099.16	919.57	0.03
TRIB2	1548.15	Max WS	194.66	92.39	99.68		99.68	0.000014	0.30	1253.30	798.74	0.03
TRIB2	1500	Max WS	194.65	91.91	99.68		99.68	0.000008	0.21	1462.15	734.81	0.02
TRIB2	1450	Max WS	194.62	91.87	99.68		99.68	0.000008	0.21	1429.89	748.25	0.02
TRIB2	1350	Max WS	196.10	92.83	99.68		99.68	0.000008	0.25	1330.38	737.24	0.02
TRIB2	1150	Max WS	196.45	92.45	99.68		99.68	0.000004	0.18	1773.38	588.77	0.01
TRIB2	1006.62	Max WS	196.66	93.17	99.68		99.68	0.000007	0.23	1453.12	553.11	0.02
TRIB2	961.42	Max WS	196.74	91.98	99.68		99.68	0.000007	0.23	1374.11	503.74	0.02
TRIB2	848.73	Max WS	197.04	91.79	99.68		99.68	0.000004	0.18	1688.36	528.45	0.01
TRIB2	752.77	Max WS	197.23	91.40	99.68		99.68	0.000005	0.19	1709.21	572.01	0.02
TRIB2	700	Max WS	197.34	90.92	99.68		99.68	0.000004	0.19	1759.62	611.88	0.02
TRIB2	650	Max WS	197.42	91.12	99.68		99.68	0.000002	0.13	2484.87	664.34	0.01
TRIB2	600	Max WS	197.45	92.50	99.68		99.68	0.000002	0.13	2571.47	696.06	0.01
TRIB2	443.45	Max WS	200.31	92.33	99.67		99.68	0.000002	0.16	2125.78	594.22	0.01
TRIB2	200		Culvert									
TRIB2	80	Max WS	195.66	91.00	95.15		95.17	0.001080	1.82	234.40	350.84	0.21
TRIB2	70	Max WS	195.54	91.00	95.13		95.16	0.001126	1.85	230.35	350.22	0.22
Main3	17447.12	Max WS	247.80	107.81	109.28		109.28	0.000304	0.64	600.79	689.20	0.10
Main3	17437.7*	Max WS	247.80	107.67	109.28		109.28	0.000341	0.71	567.36	688.40	0.11
Main3	17428.3*	Max WS	247.80	107.52	109.27		109.28	0.000363	0.76	544.90	715.91	0.12
Main3	17418.9*	Max WS	247.79	107.38	109.27		109.27	0.000357	0.77	540.82	703.92	0.12
Main3	17409.5*	Max WS	247.79	107.23	109.27		109.27	0.000309	0.74	547.95	675.02	0.11
Main3	17400.1*	Max WS	247.80	107.08	109.26	108.18	109.27	0.000242	0.68	594.37	715.24	0.10
Main3	17400		Inl Struct									
Main3	17390.78	Max WS	247.45	106.94	109.03		109.05	0.000977	1.27	219.00	691.69	0.19
Main3	17350	Max WS	247.35	106.91	108.96		109.00	0.001983	1.86	220.44	625.12	0.27
Main3	17239.4	Max WS	247.36	106.54	108.79		108.82	0.001632	1.80	251.70	523.11	0.25
Main3	16882.6	Max WS	246.69	106.24	108.32		108.34	0.001358	1.78	236.19	265.46	0.24
Main3	16650	Max WS	245.28	106.39	108.08		108.09	0.000843	1.15	340.46	432.79	0.18
Main3	16536.56	Max WS	246.14	106.27	108.01		108.02	0.000380	0.77	468.92	467.64	0.12
Main3	15950	Max WS	246.42	104.49	107.73		107.74	0.000600	1.11	407.99	501.42	0.15
Main3	15556.6	Max WS	247.07	104.62	107.41		107.43	0.001054	1.62	237.25	207.86	0.21
Main3	15479	Max WS	250.82	104.11	107.31		107.34	0.001426	1.99	231.16	316.38	0.24
Main3	15270.69	Max WS	260.25	104.25	107.04		107.05	0.001337	1.39	256.31	265.45	0.22
Main3	15063.95	Max WS	262.92	102.46	106.77		106.81	0.001086	2.05	234.17	305.73	0.22
Main3	14955.43	Max WS	264.17	103.59	106.58		106.64	0.002248	2.06	190.19	274.55	0.29
Main3	14788.2	Max WS	214.59	101.86	106.34		106.35	0.000916	1.28	275.13	359.39	0.18
Main3	14628.77	Max WS	212.37	102.21	106.23		106.24	0.000490	1.19	353.53	366.67	0.14
Main3	14541.77	Max WS	210.92	102.08	106.20		106.21	0.000287	0.91	391.84	322.02	0.11
Main3	14280.86	Max WS	416.41	100.65	106.00		106.03	0.001039	2.02	378.90	256.92	0.20
Main3	14234.63	Max WS	416.29	100.96	105.96		105.98	0.000928	1.52	361.06	216.44	0.19
Main3	14185.8	Max WS	458.54	100.28	105.90		105.93	0.000893	1.70	345.21	156.47	0.19
Main3	14016.19	Max WS	446.28	101.50	105.52		105.64	0.002576	2.80	164.03	108.51	0.33
Main3	13950	Max WS	466.41	101.08	105.45		105.50	0.001442	2.52	362.74	338.41	0.26
Main3	13850	Max WS	459.37	100.53	105.34		105.37	0.001042	2.15	403.14	460.54	0.22
Main3	13750	Max WS	455.88	98.79	105.27		105.30	0.000461	1.74	476.86	470.32	0.15
Main3	13600	Max WS	455.69	99.49	105.10		105.16	0.001428	2.67	298.85	441.89	0.26
Main3	13450	Max WS	449.46	99.56	104.93		104.96	0.001131	2.24	424.74	625.94	0.22
Main3	13391.27	Max WS	446.90	99.51	104.79		104.87	0.002480	3.17	263.69	499.58	0.33
Main3	13266.46	Max WS	437.42	98.98	104.62		104.65	0.000809	2.25	412.48	306.95	0.19
Main3	13150	Max WS	310.49	98.95	104.50		104.53	0.000750	2.07	320.39	365.86	0.18
Main3	12950	Max WS	307.33	98.54	104.41		104.42	0.000202	1.08	564.01	378.25	0.10
Main3	12900	Max WS	307.39	97.80	104.41		104.41	0.000106	0.84	630.76	353.04	0.07
Main3	12850	Max WS	307.11	97.94	104.40		104.41	0.000210	1.08	516.59	331.25	0.10
Main3	12700	Max WS	306.26	99.10	104.36		104.37	0.000268	1.14	510.24	371.43	0.11
Main3	12393.1	Max WS	304.77	97.00	104.28		104.29	0.000243	1.16	485.55	522.94	0.11
Main3	12350	Max WS	304.69	96.55	104.28		104.29	0.000119	0.82	610.25	535.33	0.07
Main3	12150	Max WS	304.59	97.28	104.25		104.26	0.000156	1.09	664.90	622.52	0.09
Main3	12100	Max WS	312.12	97.22	104.24		104.25	0.000208	1.18	638.76	598.41	0.10

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	12050	Max WS	312.12	96.90	104.23		104.24	0.000214	1.14	595.10	576.59	0.10
Main3	11896.14	Max WS	312.06	96.27	104.20		104.21	0.000143	0.83	479.84	541.13	0.08
Main3	11700	Max WS	312.37	97.61	104.19		104.20	0.000023	0.43	1305.29	532.60	0.03
Main3	11600	Max WS	312.69	97.58	104.19		104.19	0.000043	0.57	1046.74	476.38	0.05
Main3	11346.39	Max WS	313.17	96.94	104.18		104.18	0.000041	0.59	931.75	383.59	0.05
Main3	11100		Culvert									
Main3	11000	Max WS	283.93	95.56	101.54		101.60	0.001001	2.09	206.26	194.97	0.21
Main3	10950	Max WS	275.67	96.78	101.46		101.54	0.001559	2.46	172.54	221.23	0.26
Main3	10850	Max WS	271.93	96.17	101.40		101.42	0.000409	1.40	343.85	283.43	0.14
Main3	10800	Max WS	271.43	95.97	101.38		101.40	0.000416	1.43	328.75	276.88	0.14
Main3	10650	Max WS	269.46	95.97	101.34		101.35	0.000145	0.87	471.37	302.48	0.08
Main3	10600	Max WS	269.46	96.78	101.34		101.35	0.000158	0.86	495.20	374.18	0.09
Main3	10496.09	Max WS	268.70	95.06	101.32		101.33	0.000154	0.87	572.19	441.55	0.09
Main3	10323.48	Max WS	267.83	94.27	101.30		101.31	0.000126	0.83	570.61	378.46	0.08
Main3	10150	Max WS	266.98	94.92	101.27		101.28	0.000157	0.98	480.26	335.72	0.09
Main3	10089.9	Max WS	266.72	94.80	101.26		101.27	0.000263	1.16	408.43	380.88	0.11
Main3	10050	Max WS	266.21	94.29	101.25		101.26	0.000247	1.16	394.26	412.26	0.11
Main3	10000	Max WS	266.10	94.56	101.24		101.25	0.000144	0.89	532.57	390.35	0.08
Main3	9869.95	Max WS	266.13	94.14	101.23		101.24	0.000046	0.63	942.26	595.31	0.05
Main3	9595.54	Max WS	265.99	94.94	101.21		101.22	0.000087	0.73	664.07	594.09	0.07
Main3	9343.2	Max WS	266.10	94.38	101.20		101.20	0.000063	0.67	798.43	433.94	0.06
Main3	9300	Max WS	266.12	93.82	101.19		101.20	0.000064	0.72	806.55	465.15	0.06
Main3	9100	Max WS	268.06	94.32	101.19		101.19	0.000030	0.45	952.56	375.63	0.04
Main3	9000	Max WS	269.01	94.38	101.18		101.18	0.000022	0.41	962.05	316.31	0.03
Main3	8500		Culvert									
Main3	8350	Max WS	249.02	92.98	98.90		98.90	0.000065	0.65	708.01	352.59	0.06
Main3	8162.22	Max WS	248.72	93.75	98.88		98.89	0.000101	0.69	584.03	329.27	0.07
Main3	7850.11	Max WS	248.71	93.09	98.86		98.87	0.000041	0.48	884.76	443.67	0.05
Main3	7633.01	Max WS	250.02	91.62	98.86		98.86	0.000025	0.47	1014.07	442.88	0.04
Main3	7536.49	Max WS	251.15	91.92	98.86		98.86	0.000012	0.28	1472.52	609.09	0.02
Main3	7500	Max WS	253.78	92.94	98.86		98.86	0.000016	0.33	1176.91	490.13	0.03
Main3	7429.50*	Max WS	254.87	92.68	98.85		98.85	0.000035	0.48	863.77	391.32	0.04
Main3	7359.01	Max WS	255.68	92.42	98.74		98.93	0.001565	3.47	74.13	312.41	0.28
Main3	7000		Culvert									
Main3	6910.56	Max WS	246.88	90.51	96.79		96.95	0.001235	3.19	77.33	305.02	0.26
Main3	6872.46	Max WS	247.80	91.27	96.83		96.84	0.000202	1.02	464.47	305.62	0.10
Main3	6795.89	Max WS	248.27	91.48	96.82		96.83	0.000189	0.96	478.42	307.95	0.09
Main3	6671.06	Max WS	271.13	91.24	95.13	95.32	95.65	0.020842	5.98	65.85	289.17	0.87
Trib1	1500	Max WS	337.69	91.00	93.14		93.55	0.014455	5.18	65.25	42.29	0.73
Trib1	1450	Max WS	337.51	91.00	92.81		92.97	0.007835	3.24	104.06	88.14	0.53
Trib1	1400	Max WS	338.00	90.50	92.59		92.68	0.003911	2.79	153.52	127.83	0.39
Trib1	1350	Max WS	338.53	90.50	92.47		92.52	0.002197	1.99	194.55	158.38	0.29
Trib1	1300	Max WS	339.27	90.50	92.35		92.41	0.002349	1.83	188.10	164.26	0.29
Trib1	1250	Max WS	340.36	90.54	92.19		92.26	0.003440	2.15	165.81	158.59	0.35
Trib1	1200	Max WS	340.81	90.27	91.92		92.04	0.005780	2.94	135.52	142.91	0.46
Trib1	1150	Max WS	340.40	90.13	91.72		91.80	0.003561	2.30	154.86	149.62	0.36
Trib1	1100	Max WS	335.83	90.10	91.56		91.63	0.003246	2.09	166.26	165.75	0.34
Trib1	1050	Max WS	332.24	90.06	91.42		91.48	0.002737	1.91	187.75	191.02	0.31
Trib1	1004.24	Max WS	331.55	89.67	91.35		91.38	0.001260	1.41	279.74	364.18	0.22
Trib1	920.64	Max WS	332.92	88.86	91.31		91.31	0.000111	0.57	765.51	501.65	0.07
Trib1	800	Max WS	421.01	88.71	91.30		91.30	0.000065	0.45	954.21	475.44	0.05
Trib1	750	Max WS	460.71	88.77	91.29		91.30	0.000124	0.60	793.71	422.48	0.07
Trib1	650	Max WS	460.10	88.80	91.15		91.20	0.002293	2.25	321.10	433.98	0.30
Trib1	603.8	Max WS	286.72	88.51	90.98		91.03	0.001605	1.83	177.80	195.73	0.25
Trib1	550	Max WS	252.12	88.68	90.93		90.96	0.000807	1.37	207.68	144.81	0.18
Trib1	504.41	Max WS	244.67	88.43	90.92		90.93	0.000366	0.97	267.67	164.90	0.12
Trib1	478.55	Max WS	249.38	88.39	90.91		90.92	0.000276	0.83	304.88	175.19	0.11
Main2	6100	Max WS	466.49	89.62	95.13		95.16	0.001200	1.88	368.87	319.26	0.22
Main2	5995.41	Max WS	466.46	89.33	95.08		95.08	0.000249	1.03	778.16	452.55	0.10
Main2	5852.28	Max WS	466.62	89.05	95.05		95.05	0.000197	0.96	819.26	421.81	0.09
Main2	5700	Max WS	467.85	88.85	95.02		95.02	0.000182	0.88	907.66	559.49	0.09
Main2	5650	Max WS	467.94	89.40	95.01		95.01	0.000177	0.75	915.70	516.09	0.09
Main2	5600	Max WS	467.97	88.79	94.99		95.00	0.000337	1.17	693.38	513.95	0.12
Main2	5550	Max WS	470.07	89.09	94.97		94.98	0.000449	1.24	559.39	416.85	0.14
Main2	5500	Max WS	470.11	89.47	94.95		94.96	0.000517	1.23	546.69	346.95	0.15
Main2	5450	Max WS	470.18	90.05	94.92		94.93	0.000540	1.36	540.91	339.79	0.15
Main2	5400	Max WS	470.26	89.00	94.90		94.91	0.000330	1.40	577.57	321.71	0.13
Main2	5347.58	Max WS	470.34	89.63	94.88		94.89	0.000443	1.36	576.09	347.83	0.14
Main2	5300	Max WS	470.41	89.20	94.86		94.87	0.000388	1.22	615.97	368.38	0.13
Main2	5250	Max WS	470.48	89.77	94.84		94.85	0.000481	1.32	567.13	350.38	0.15
Main2	5200	Max WS	470.54	89.49	94.81		94.83	0.000531	1.24	536.78	324.17	0.15
Main2	5150	Max WS	470.61	88.25	94.78		94.80	0.000566	1.36	515.07	309.17	0.15
Main2	5100	Max WS	471.68	86.86	94.76		94.78	0.000289	1.62	567.42	314.08	0.12
Main2	5050	Max WS	472.76	88.33	94.26		94.93	0.010582	6.72	78.38	309.68	0.66
Main2	5000	Max WS	473.82	89.31	94.26		94.30	0.001606	2.12	368.75	360.99	0.25
Main2	4950	Max WS	473.89	89.11	94.18		94.22	0.001690	2.22	359.42	384.11	0.26

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS (Continued)

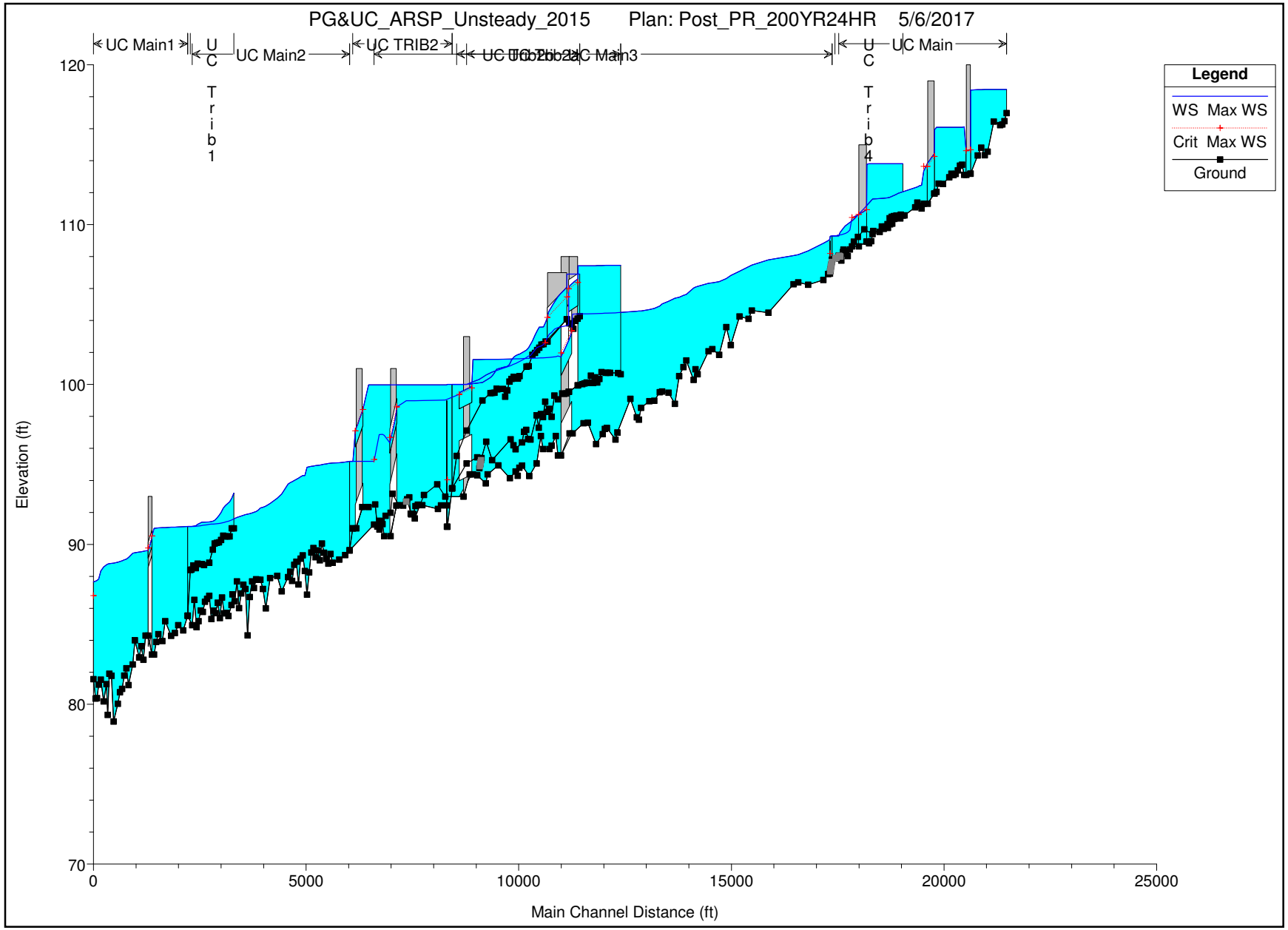
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main2	4900	Max WS	473.96	87.49	94.10		94.14	0.001560	2.13	371.15	412.59	0.25
Main2	4850	Max WS	474.02	88.91	94.02		94.06	0.001776	2.34	365.94	420.16	0.27
Main2	4800	Max WS	474.10	88.72	93.94		93.98	0.001620	2.09	399.64	416.06	0.26
Main2	4750	Max WS	474.18	87.72	93.87		93.91	0.001087	2.24	430.78	412.67	0.22
Main2	4700	Max WS	474.24	88.29	93.81		93.86	0.001197	2.19	396.51	414.30	0.23
Main2	4650	Max WS	474.31	87.95	93.72		93.79	0.001991	2.79	325.11	365.18	0.30
Main2	4504.57	Max WS	475.52	87.06	93.09		93.30	0.005769	3.87	165.32	214.34	0.48
Main2	4397.85	Max WS	475.66	88.02	92.84		92.88	0.001525	2.00	327.87	260.95	0.25
Main2	4231.14	Max WS	477.16	87.89	92.51		92.56	0.002440	2.35	324.27	331.39	0.31
Main2	4128.64	Max WS	477.30	86.00	92.34		92.37	0.001147	1.96	405.49	312.00	0.22
Main2	4061.14	Max WS	477.39	87.21	92.28		92.30	0.000963	1.70	424.42	311.81	0.20
Main2	4000	Max WS	477.48	87.79	92.22		92.24	0.000937	1.47	448.75	329.82	0.19
Main2	3950	Max WS	477.54	87.78	92.08		92.14	0.003912	2.99	303.80	382.97	0.39
Main2	3900	Max WS	477.61	87.81	91.99		92.01	0.000854	1.61	466.70	362.95	0.19
Main2	3850	Max WS	479.00	87.27	91.94		91.96	0.001075	1.95	391.89	237.25	0.21
Main2	3808.17	Max WS	479.05	87.69	91.90		91.92	0.000956	1.52	410.49	246.67	0.20
Main2	3750	Max WS	479.13	86.70	91.85		91.87	0.000710	1.44	450.09	258.21	0.17
Main2	3700	Max WS	479.20	84.31	91.83		91.84	0.000515	1.28	510.31	306.03	0.15
Main2	3650	Max WS	479.27	87.21	91.79		91.81	0.000800	1.33	463.54	310.25	0.18
Main2	3600	Max WS	479.34	87.47	91.75		91.77	0.000881	1.37	450.09	308.24	0.19
Main2	3550.1	Max WS	480.65	86.93	91.69		91.72	0.001180	1.52	393.47	288.64	0.21
Main2	3500	Max WS	480.72	86.01	91.64		91.67	0.000794	1.74	430.50	374.65	0.19
Main2	3450	Max WS	480.79	87.68	91.60		91.63	0.001103	1.89	434.20	382.54	0.21
Main2	3400	Max WS	480.82	86.44	91.53		91.57	0.001357	2.16	382.57	302.72	0.23
Main2	3344.35	Max WS	480.87	86.87	91.46		91.49	0.001182	2.00	373.52	231.53	0.22
Main2	3320.7	Max WS	480.90	86.20	91.43		91.47	0.001366	2.17	350.62	212.69	0.24
Main2	3250	Max WS	481.98	85.52	91.36		91.38	0.000930	2.03	406.10	229.40	0.20
Main2	3200	Max WS	482.05	85.71	91.32		91.34	0.000787	1.54	423.84	228.21	0.18
Main2	3150	Max WS	482.03	85.68	91.28		91.30	0.000823	1.74	409.29	218.53	0.19
Main2	3100	Max WS	482.10	86.67	91.23		91.26	0.000892	1.51	397.13	224.99	0.19
Main2	3050	Max WS	483.10	85.39	91.19		91.21	0.000854	1.57	394.56	226.89	0.19
Main2	3000	Max WS	483.12	86.35	91.16		91.18	0.000766	1.58	482.14	372.91	0.18
Main2	2950	Max WS	483.15	85.70	91.13		91.14	0.000505	1.22	583.64	371.16	0.14
Main2	2900	Max WS	483.22	85.85	91.10		91.12	0.000480	1.32	561.53	331.22	0.15
Main2	2850	Max WS	337.25	85.33	91.09		91.10	0.000290	1.15	510.66	285.68	0.11
Main2	2800	Max WS	337.45	86.78	91.07		91.08	0.000319	1.07	461.07	254.14	0.12
Main2	2750.23	Max WS	337.70	86.59	91.05		91.06	0.000516	1.38	390.84	234.08	0.15
Main2	2700	Max WS	337.70	86.41	91.03		91.04	0.000421	1.28	412.84	238.05	0.14
Main2	2650	Max WS	337.55	85.77	91.00		91.02	0.000532	1.39	386.57	237.48	0.15
Main2	2600	Max WS	337.75	85.86	90.97		90.99	0.000493	1.42	388.77	235.42	0.15
Main2	2550	Max WS	339.45	85.20	90.95		90.97	0.000452	1.31	390.25	227.54	0.14
Main2	2500	Max WS	338.98	84.82	90.94		90.95	0.000343	1.09	450.15	253.31	0.12
Main2	2450	Max WS	338.60	86.53	90.92		90.93	0.000306	1.06	496.27	291.06	0.12
Main2	2397.32	Max WS	338.31	84.95	90.91		90.92	0.000157	0.93	607.03	327.54	0.09
Main1	2291.46	Max WS	587.69	85.53	90.91		90.92	0.000234	0.89	969.94	525.70	0.10
Main1	2189.07	Max WS	586.40	84.62	90.89		90.90	0.000150	0.87	1118.22	534.95	0.08
Main1	2069.18	Max WS	586.25	84.94	90.88		90.88	0.000104	0.78	1303.52	586.69	0.07
Main1	1990.13	Max WS	588.73	84.45	90.87		90.87	0.000091	0.65	1378.35	634.94	0.06
Main1	1902.51	Max WS	588.60	84.27	90.86		90.87	0.000099	0.81	1300.62	561.63	0.07
Main1	1760.99	Max WS	588.29	85.19	90.84		90.85	0.000172	0.95	952.36	408.53	0.09
Main1	1698.99	Max WS	588.48	83.95	90.83		90.84	0.000161	1.10	967.72	386.59	0.09
Main1	1600	Max WS	588.47	84.38	90.81		90.82	0.000179	0.99	883.97	364.83	0.09
Main1	1550	Max WS	588.46	83.89	90.80		90.81	0.000197	1.13	820.36	338.17	0.10
Main1	1500	Max WS	588.48	83.11	90.79		90.80	0.000239	1.19	768.37	337.77	0.11
Main1	1400		Culvert									
Main1	1300	Max WS	587.99	84.29	89.48		89.51	0.000686	1.97	550.21	294.48	0.18
Main1	1250	Max WS	587.94	82.78	89.46		89.48	0.000467	1.54	644.29	326.62	0.15
Main1	1200	Max WS	601.98	83.63	89.43		89.45	0.000510	1.75	620.47	305.43	0.16
Main1	1150	Max WS	601.98	82.93	89.41		89.43	0.000397	1.68	646.18	287.96	0.14
Main1	1050	Max WS	602.01	84.00	89.37		89.39	0.000491	1.57	591.44	249.51	0.15
Main1	1000	Max WS	602.02	82.49	89.34		89.36	0.000497	1.74	557.58	230.39	0.15
Main1	902.45	Max WS	601.74	81.20	89.08		89.25	0.003021	4.06	222.11	106.57	0.35
Main1	850	Max WS	601.74	82.25	88.98		89.11	0.002095	3.48	254.07	128.17	0.31
Main1	800	Max WS	601.67	81.79	88.93		89.02	0.001278	3.03	341.46	163.73	0.25
Main1	750	Max WS	601.61	80.96	88.88		88.95	0.001173	2.82	358.46	182.50	0.24
Main1	700	Max WS	601.62	80.75	88.84		88.89	0.000992	2.36	397.82	200.96	0.22
Main1	650	Max WS	601.61	80.03	88.79		88.85	0.000973	2.72	403.52	210.99	0.21
Main1	550	Max WS	601.68	78.91	88.73		88.77	0.000464	1.92	544.69	256.80	0.15
Main1	500	Max WS	608.56	81.77	88.72		88.74	0.000423	1.70	584.30	249.60	0.15
Main1	450.28	Max WS	608.57	81.91	88.70		88.72	0.000297	1.47	628.46	237.37	0.13
Main1	411.53	Max WS	608.57	79.33	88.68		88.71	0.000523	1.79	535.93	232.94	0.15
Main1	381.37	Max WS	608.53	81.25	88.64		88.69	0.001122	2.43	395.76	210.43	0.23
Main1	316.15	Max WS	608.52	80.18	88.50		88.62	0.001821	3.07	285.40	170.62	0.29
Main1	250	Max WS	608.38	81.54	88.26		88.46	0.003838	3.94	218.55	163.16	0.41
Main1	200	Max WS	606.61	81.23	87.80		88.11	0.011333	4.64	152.28	142.10	0.65
Main1	161.78	Max WS	606.59	80.38	87.73		87.76	0.001535	1.98	495.00	712.81	0.25

HEC-RAS Plan: PostPR100YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	126.68	Max WS	611.30	80.35	87.69		87.72	0.001053	1.69	563.56	801.90	0.21
Main1	76.78	Max WS	625.40	81.56	87.65	86.69	87.68	0.000910	2.03	650.74	791.31	0.21

HEC-RAS Plan: Post ARPostPR100 River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	278.76	110.59	115.87		115.89	0.001547	1.72	256.59	151.42	0.16
Placer Trib	65.0000	Max WS	278.70	109.85	115.59		115.68	0.003023	2.47	150.41	136.32	0.22
Placer Trib	64.0000	Max WS	269.77	109.50	114.30		114.42	0.005910	3.08	148.25	170.42	0.29
Placer Trib	63.5		Lat Struct									
Placer Trib	63.0000	Max WS	281.77	109.24	113.75		113.76	0.000972	1.13	412.24	307.02	0.12
Placer Trib	62.0000	Max WS	309.03	109.35	113.68		113.68	0.000187	0.49	987.57	634.85	0.05
Placer Trib	61.0000	Max WS	298.69	108.83	113.28		113.29	0.000508	0.93	645.89	477.23	0.09
Placer Trib	60.0000	Max WS	296.92	107.78	113.13		113.14	0.000824	1.33	398.98	224.60	0.12
Placer Trib	59.5		Lat Struct									
Placer Trib	59.0000	Max WS	311.73	107.59	113.03		113.04	0.000620	1.06	502.14	296.52	0.10
Placer Trib	58.0000	Max WS	312.13	107.73	112.96		112.96	0.000082	0.42	1041.42	495.53	0.04
Placer Trib	57.0000	Max WS	312.95	105.82	112.95		112.95	0.000049	0.32	1387.08	478.85	0.03
Placer Trib	56.0000	Max WS	313.18	105.33	111.78		112.00	0.007127	3.97	107.92	331.39	0.32
Placer Trib	55.0000	Max WS	312.77	105.57	110.95		110.97	0.001206	1.38	332.65	298.41	0.13
Placer Trib	54.0000	Max WS	311.19	104.60	110.62		110.63	0.001056	1.31	456.28	345.58	0.12
Placer Trib	53.5		Lat Struct									
Placer Trib	53.0000	Max WS	317.81	104.84	110.13		110.17	0.002430	2.05	257.71	175.86	0.19
Placer Trib	52.0000	Max WS	318.01	103.99	109.80		109.83	0.001412	1.55	288.11	155.53	0.15
Placer Trib	51.0000	Max WS	318.45	103.62	109.48		109.50	0.001380	1.55	332.01	243.50	0.15
Placer Trib	50.0000	Max WS	318.68	103.34	109.20		109.22	0.000807	1.34	400.21	185.09	0.11
Placer Trib	49.0000	Max WS	319.01	103.19	108.98		109.00	0.001022	1.42	436.07	334.39	0.13
Placer Trib	48.0000	Max WS	319.44	103.11	108.74		108.77	0.001345	1.52	301.43	244.40	0.14
Placer Trib	47.0000	Max WS	320.29	101.60	107.78		107.88	0.004482	2.57	125.10	323.63	0.26
Placer Trib	46.0000	Max WS	321.14	101.67	106.74		106.86	0.005007	3.20	144.82	168.72	0.28
Placer Trib	45.0000	Max WS	321.65	101.32	106.33		106.37	0.002400	1.98	273.96	186.15	0.19
Placer Trib	44.0000	Max WS	323.12	101.09	106.17		106.17	0.000273	0.76	553.37	228.76	0.07
Placer Trib	43.0000	Max WS	331.02	100.19	105.44		105.65	0.010319	3.72	93.14	53.09	0.38
Placer Trib	42	Max WS	365.70	100.80	104.34		104.36	0.000845	1.11	466.98	247.86	0.11
Placer Trib	41.12*	Max WS	365.90	100.52	104.27		104.28	0.000810	1.14	501.55	272.96	0.11
Placer Trib	40.24*	Max WS	366.05	100.24	104.20		104.21	0.000812	1.19	526.25	302.02	0.11
Placer Trib	39.36*	Max WS	366.28	99.96	104.13		104.14	0.000844	1.27	539.32	333.00	0.12
Placer Trib	38.48*	Max WS	366.49	99.68	104.05		104.07	0.000904	1.37	539.15	366.17	0.12
Placer Trib	37.6	Max WS	366.72	99.40	103.97		103.98	0.000990	1.48	523.73	400.46	0.13
Placer Trib	36.6*	Max WS	366.65	99.30	103.88		103.89	0.000883	1.36	545.44	359.15	0.12
Placer Trib	35.6	Max WS	366.60	99.20	103.81		103.82	0.000451	0.94	568.58	208.15	0.09
Placer Trib	34.6*	Max WS	366.58	99.30	103.72		103.74	0.001243	1.54	442.69	272.58	0.14
Placer Trib	33.6*	Max WS	366.57	99.40	103.43		103.50	0.004078	2.62	264.82	255.58	0.25
Placer Trib	32.6	Max WS	366.57	99.50	102.97		103.04	0.005128	2.62	209.69	141.75	0.28
Placer Trib	31.6*	Max WS	366.95	98.95	102.40		102.48	0.006224	2.75	215.21	189.44	0.30
Placer Trib	30.6	Max WS	366.88	98.40	102.08		102.09	0.000973	1.10	478.13	250.63	0.12
Placer Trib	29.7*	Max WS	367.81	97.98	101.96		101.98	0.001622	1.41	389.34	235.59	0.15
Placer Trib	29.1		Lat Struct									
Placer Trib	28.8*	Max WS	374.93	97.56	101.73		101.77	0.003290	1.93	297.50	260.27	0.22
Placer Trib	27.9*	Max WS	373.97	97.14	101.38		101.42	0.004400	2.06	301.49	337.32	0.24
Placer Trib	27*	Max WS	373.04	96.72	101.13		101.15	0.001571	1.16	434.33	333.77	0.14
Placer Trib	26.1	Max WS	372.74	96.30	101.05		101.06	0.000439	0.61	738.26	386.13	0.08
Placer Trib	25.2*	Max WS	378.34	96.23	101.00		101.01	0.000631	0.88	604.02	364.68	0.10
Placer Trib	24.3*	Max WS	378.12	96.15	100.93		100.95	0.000818	1.13	511.06	316.70	0.11
Placer Trib	23.4*	Max WS	377.78	96.07	100.86		100.88	0.000720	1.15	465.47	250.05	0.11
Placer Trib	22.5	Max WS	377.58	96.00	100.81		100.82	0.000545	1.07	454.90	192.97	0.10
Placer Trib	21.6*	Max WS	377.32	95.65	100.74		100.76	0.000821	1.19	443.44	302.97	0.11
Placer Trib	20.7	Max WS	377.02	95.30	100.62		100.65	0.001731	1.51	353.75	339.26	0.16
Placer Trib	19.8*	Max WS	376.55	95.10	100.49		100.51	0.001198	1.27	411.24	411.53	0.13
Placer Trib	18.9	Max WS	376.34	94.90	100.41		100.42	0.000799	1.03	526.19	475.80	0.11
Placer Trib	17.92*	Max WS	391.12	94.60	100.33		100.35	0.000784	1.11	509.35	414.68	0.11
Placer Trib	16.94*	Max WS	390.84	94.30	100.25		100.27	0.000766	1.18	493.13	391.38	0.11
Placer Trib	15.96*	Max WS	390.60	94.00	100.19		100.20	0.000638	1.14	591.74	481.16	0.10
Placer Trib	14.98*	Max WS	390.51	93.70	100.14		100.15	0.000370	0.92	771.07	472.24	0.08
Placer Trib	14	Max WS	390.47	93.40	100.12		100.12	0.000184	0.66	1007.19	461.93	0.06
Placer Trib	13.075*	Max WS	390.47	93.70	100.10		100.10	0.000329	0.90	780.38	390.55	0.07
Placer Trib	12.15*	Max WS	390.47	94.00	100.05		100.06	0.000576	1.18	590.31	298.56	0.10
Placer Trib	11.225*	Max WS	390.45	94.30	99.97		99.99	0.001078	1.58	430.24	244.92	0.14
Placer Trib	10.3	Max WS	390.38	94.60	99.80		99.85	0.002138	2.15	289.55	187.94	0.19
Placer Trib	9.525*	Max WS	390.21	94.10	99.66		99.70	0.001699	1.86	328.82	213.94	0.17
Placer Trib	8.75*	Max WS	390.09	93.60	99.56		99.58	0.001143	1.48	415.88	249.19	0.14
Placer Trib	7.975*	Max WS	389.87	93.10	99.50		99.51	0.000720	1.15	593.61	402.77	0.11
Placer Trib	7.2	Max WS	389.78	92.60	99.46		99.47	0.000271	0.69	925.60	492.84	0.07
Placer Trib	6.3333*	Max WS	389.63	92.17	99.44		99.45	0.000195	0.67	973.08	443.70	0.06
Placer Trib	5.46659*	Max WS	389.53	91.73	99.43		99.43	0.000155	0.66	993.74	397.28	0.05
Placer Trib	4.5999	Max WS	389.20	91.30	99.42		99.42	0.000135	0.68	984.46	353.39	0.05
Placer Trib	3.6666*	Max WS	389.04	91.07	99.40		99.41	0.000131	0.69	1013.17	396.21	0.05
Placer Trib	2.7333*	Max WS	389.07	90.83	99.39		99.40	0.000126	0.69	1036.80	435.64	0.05
Placer Trib	1.8	Max WS	388.55	90.60	99.38		99.38	0.000119	0.68	1051.34	466.18	0.05
Placer Trib	0.9*	Max WS	388.28	90.55	99.37		99.38	0.000051	0.45	1465.02	484.41	0.03
Placer Trib	0	Max WS	388.33	90.50	99.37		99.37	0.000058	0.49	1128.15	284.94	0.03


PG&UC_ARSP_Unsteady_2015 Plan: Post_PR_200YR24HR 5/6/2017
UC Main1
UC Trib1
UC Main2
UC TRIB2
UC Main3
UC Trib4
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
120
110
100
90
80
70
0
5000
10000
15000
20000
25000

HEC-RAS Plan: PostPR200YR24HR Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main	21550	Max WS	25.64	116.98	118.46		118.46	0.000138	0.43	81.01	163.75	0.07
Main	21500	Max WS	25.30	116.48	118.46		118.46	0.000074	0.35	99.46	148.71	0.05
Main	21450	Max WS	25.28	116.27	118.45		118.46	0.000025	0.22	150.51	174.29	0.03
Main	21396.29	Max WS	25.36	116.23	118.45		118.45	0.000017	0.18	200.42	220.97	0.03
Main	21246.12	Max WS	25.75	116.44	118.45		118.45	0.000002	0.06	492.89	346.27	0.01
Main	21100	Max WS	28.05	114.56	118.45		118.45	0.000001	0.09	574.30	298.14	0.01
Main	21037.73	Max WS	45.04	114.34	118.45		118.45	0.000004	0.14	554.39	310.74	0.01
Main	20950.06	Max WS	45.26	114.81	118.45		118.45	0.000002	0.10	688.03	327.60	0.01
Main	20867	Max WS	45.51	114.33	118.45		118.45	0.000002	0.10	703.85	319.39	0.01
Main	20700	Max WS	45.50	113.19	118.41		118.47	0.000398	1.86	24.48	200.56	0.15
Main	20600		Culvert									
Main	20550	Max WS	42.98	113.12	116.12		116.27	0.002178	3.05	14.10	242.29	0.32
Main	20500	Max WS	42.92	113.75	116.10		116.10	0.000037	0.31	235.54	245.29	0.04
Main	20450	Max WS	43.03	113.69	116.10		116.10	0.000017	0.22	306.30	253.63	0.03
Main	20400	Max WS	73.72	113.39	116.09		116.09	0.000046	0.39	302.98	238.44	0.05
Main	20351.92	Max WS	73.81	113.17	116.09		116.09	0.000020	0.28	399.78	236.00	0.03
Main	20300	Max WS	73.94	113.10	116.09		116.09	0.000015	0.24	375.39	199.93	0.03
Main	20250	Max WS	74.07	113.18	116.09		116.09	0.000026	0.33	339.02	189.77	0.04
Main	20200	Max WS	74.18	112.96	116.09		116.09	0.000025	0.33	344.03	188.34	0.03
Main	20050	Max WS	76.65	112.55	116.09		116.09	0.000009	0.22	487.10	205.58	0.02
Main	19950	Max WS	76.83	112.56	116.09		116.09	0.000005	0.17	656.97	275.34	0.02
Main	19900	Max WS	76.85	112.05	116.09		116.09	0.000004	0.15	765.09	283.34	0.01
Main	19852.97	Max WS	121.02	111.94	115.95		116.35	0.003759	5.08	23.84	292.25	0.45
Main	19700		Culvert									
Main	19600	Max WS	121.02	111.31	113.35	113.65	114.88	0.034811	9.90	12.22	231.53	1.22
Main	19550	Max WS	121.07	111.01	112.47		112.49	0.001152	1.26	138.40	225.83	0.20
Main	19500	Max WS	123.64	111.18	112.43		112.44	0.000869	1.04	176.26	293.38	0.17
Main	19450	Max WS	123.60	111.38	112.37		112.38	0.001786	1.23	152.11	319.24	0.24
Main	19400	Max WS	123.55	111.08	112.31		112.31	0.000997	1.01	214.61	403.34	0.18
Main	19150	Max WS	123.58	110.58	112.10		112.11	0.000827	1.16	201.77	317.83	0.18
Main	19050	Max WS	125.52	110.39	112.00		112.02	0.001314	1.37	139.99	291.00	0.22
Main	19000	Max WS	125.53	110.49	111.95		111.97	0.000832	1.02	182.00	280.40	0.17
Main	18950	Max WS	125.41	110.54	111.89		111.91	0.001689	1.30	128.48	246.91	0.24
Main	18900	Max WS	125.36	110.53	111.83		111.84	0.001111	1.09	156.78	240.86	0.19
Main	18850	Max WS	125.24	110.49	111.76		111.78	0.001476	1.25	148.22	293.78	0.22
Main	18800	Max WS	135.84	110.40	111.71		111.72	0.000710	0.94	219.27	337.27	0.16
Main	18750	Max WS	135.40	110.03	111.68		111.69	0.000473	0.87	251.60	393.78	0.13
Main	18700	Max WS	137.12	109.89	111.67		111.67	0.000297	0.72	317.13	469.70	0.11
Main	18650	Max WS	136.86	109.86	111.65		111.66	0.000279	0.62	323.30	422.01	0.10
Main	18397.57	Max WS	136.26	109.41	111.60		111.60	0.000174	0.65	353.02	289.74	0.08
Main	18200	Max WS	137.11	109.70	111.02		111.03	0.000980	0.88	177.09	195.31	0.18
Main	18050	Max WS	139.31	109.24	110.61		110.66	0.004461	2.35	93.23	153.92	0.39
Main	17955.7	Max WS	139.36	108.94	110.33		110.35	0.001888	1.50	143.31	199.25	0.26
Main	17750	Max WS	140.54	108.17	109.91		109.95	0.002224	1.72	106.69	231.69	0.28
Main	17700	Max WS	140.57	108.29	109.76		109.81	0.003584	1.76	85.02	177.86	0.34
Main	17650	Max WS	140.40	107.99	109.57		109.62	0.003979	1.92	77.77	186.50	0.36
Main	17640.*	Max WS	143.05	108.01	109.54		109.59	0.003628	1.89	96.76	205.52	0.35
Main	17630.*	Max WS	143.05	108.02	109.49		109.55	0.004673	2.18	86.42	202.58	0.39
Main	17620.*	Max WS	143.04	108.04	109.42		109.50	0.006018	2.47	76.30	170.13	0.45
Main	17610.*	Max WS	142.93	108.05	109.35		109.44	0.007494	2.74	72.93	164.13	0.50
Main	17600	Max WS	142.48	108.07	109.29		109.36	0.006739	2.61	81.89	170.48	0.47
Trib2b	3000	Max WS	28.99	104.27	106.91		106.91	0.000002	0.08	477.14	234.34	0.01
Trib2b	2950	Max WS	28.99	104.12	106.91		106.91	0.000001	0.07	477.80	212.73	0.01
Trib2b	2900	Max WS	29.16	103.98	106.91		106.91	0.000001	0.07	572.75	250.43	0.01
Trib2b	2850	Max WS	29.45	103.49	106.91		106.91	0.000001	0.07	540.63	228.24	0.01
Trib2b	2800	Max WS	29.60	103.81	106.91		106.91	0.000001	0.08	518.64	206.92	0.01
Trib2b	2750	Max WS	29.84	103.83	106.91		106.91	0.000002	0.09	402.63	150.92	0.01
Trib2b	2700	Max WS	30.06	104.08	106.89		106.90	0.000838	0.64	47.27	86.71	0.15
Trib2b	2500		Culvert									
Trib2b	2200	Max WS	27.46	102.69	103.90		104.18	0.015381	4.28	6.41	98.96	0.73
Trib2b	2150	Max WS	42.02	102.52	103.61		103.61	0.000235	0.39	109.41	174.65	0.08
Trib2b	2100	Max WS	41.77	102.50	103.60		103.60	0.000225	0.39	114.81	221.52	0.08
Trib2b	2050	Max WS	40.91	102.30	103.59		103.59	0.000227	0.39	127.44	238.55	0.08
Trib2b	2000	Max WS	146.68	102.16	103.35		103.41	0.007544	1.93	78.40	226.25	0.46
Trib2b	1950	Max WS	146.58	101.98	103.08		103.13	0.005251	1.97	101.94	217.05	0.40
Trib2b	1887.66	Max WS	146.39	101.86	102.72		102.77	0.007356	1.97	91.96	198.57	0.46
Trib2b	1800	Max WS	145.63	101.14	102.30		102.33	0.003285	1.34	122.15	204.83	0.31
Trib2b	1750	Max WS	144.16	101.12	102.15		102.18	0.003000	1.32	116.69	231.93	0.29
Trib2b	1587.06	Max WS	141.98	100.52	101.90		101.91	0.000451	0.69	213.88	261.89	0.12
Trib2b	1547.11	Max WS	141.88	100.38	101.87		101.88	0.000823	0.94	190.11	269.16	0.17
Trib2b	1494.66	Max WS	144.03	100.39	101.80		101.82	0.001736	1.06	145.16	259.76	0.23
Trib2b	1450	Max WS	143.97	100.48	101.71		101.74	0.002026	1.27	126.37	210.10	0.25
Trib2b	1400	Max WS	143.87	100.35	101.53		101.57	0.005609	2.03	104.94	231.36	0.41
Trib2b	1350	Max WS	141.76	100.19	101.26		101.29	0.005872	1.52	93.72	209.39	0.39
Trib2b	1300	Max WS	139.53	99.63	101.13		101.13	0.000626	0.74	189.43	231.15	0.14
Trib2b	1250	Max WS	139.13	99.24	101.10		101.11	0.000356	0.71	227.40	267.15	0.11

HEC-RAS Plan: PostPR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1200	Max WS	144.31	99.73	101.08		101.09	0.000707	0.76	190.52	237.62	0.15
Trib2b	1064.85	Max WS	143.70	99.70	100.97		100.98	0.000863	0.89	192.37	259.61	0.17
Trib2b	1050	Max WS	143.66	99.74	100.96		100.97	0.001107	0.95	178.80	265.74	0.19
Trib2b	1000	Max WS	143.40	99.49	100.73		100.79	0.006310	2.05	78.62	271.85	0.43
Trib2b	950	Max WS	142.78	99.47	100.55		100.57	0.002584	1.40	138.71	281.77	0.28
Trib2b	902.71	Max WS	141.83	99.46	100.44		100.46	0.002273	1.17	135.04	324.73	0.26
Trib2b	715.36	Max WS	136.03	99.00	100.12		100.13	0.001290	0.88	159.73	322.81	0.19
Trib2b	339.81	Max WS	28.47	97.12	100.01		100.01	0.000015	0.17	254.57	277.27	0.02
Trib2b	106.24	Max WS	28.45	95.53	100.00		100.01	0.000016	0.22	177.07	150.20	0.03
Trib4	2100	Max WS	102.07	110.56	113.81		113.82	0.000007	0.16	665.99	294.67	0.02
Trib4	2050	Max WS	102.27	110.63	113.81		113.81	0.000009	0.20	638.28	276.38	0.02
Trib4	1950	Max WS	102.49	110.57	113.81		113.81	0.000007	0.18	711.89	295.91	0.02
Trib4	1900	Max WS	108.94	110.36	113.81		113.81	0.000004	0.15	812.27	301.09	0.01
Trib4	1850	Max WS	109.46	110.06	113.81		113.81	0.000005	0.16	755.41	267.04	0.02
Trib4	1800	Max WS	109.63	110.02	113.81		113.81	0.000006	0.17	713.10	253.68	0.02
Trib4	1747.14	Max WS	109.90	109.80	113.81		113.81	0.000006	0.18	711.53	244.18	0.02
Trib4	1700	Max WS	109.92	109.83	113.81		113.81	0.000005	0.17	719.47	241.76	0.02
Trib4	1650	Max WS	110.15	109.73	113.81		113.81	0.000004	0.14	820.32	258.72	0.01
Trib4	1600	Max WS	119.41	109.88	113.81		113.81	0.000005	0.16	828.16	274.20	0.02
Trib4	1550	Max WS	119.84	109.54	113.81		113.81	0.000003	0.15	944.34	294.10	0.01
Trib4	1400	Max WS	120.46	109.60	113.81		113.81	0.000006	0.20	883.72	312.50	0.02
Trib4	1350	Max WS	120.67	108.96	113.81		113.81	0.000003	0.15	1057.38	339.94	0.01
Trib4	1300	Max WS	120.94	108.83	113.81		113.81	0.000002	0.12	1245.58	369.58	0.01
Trib4	1250	Max WS	120.92	108.93	113.77		113.90	0.000909	2.82	42.90	316.41	0.23
Trib4	1000		Culvert									
Trib4	900	Max WS	120.92	108.64	110.41	110.44	111.34	0.026080	7.72	15.67	293.23	1.03
Trib4	850	Max WS	120.92	108.45	109.66		109.70	0.004476	1.97	94.14	277.67	0.38
Trib4	800	Max WS	122.65	108.03	109.53		109.55	0.001267	1.28	134.01	274.49	0.21
Trib4	750	Max WS	122.58	108.34	109.45		109.47	0.002210	1.28	143.15	313.27	0.26
Trib4	700	Max WS	122.50	108.43	109.41		109.42	0.000443	0.65	248.75	317.92	0.12
Trib4	650	Max WS	122.39	107.75	109.37		109.39	0.001086	1.08	157.34	287.95	0.19
Trib4	600	Max WS	122.30	107.89	109.34		109.35	0.000483	0.89	242.76	329.16	0.13
Trib4	550	Max WS	122.12	107.93	109.32		109.32	0.000686	1.01	220.40	338.57	0.16
Trib4	540.*	Max WS	124.45	107.93	109.31		109.32	0.000425	0.79	258.64	326.90	0.12
Trib4	530.*	Max WS	124.36	107.93	109.31		109.31	0.000410	0.77	253.10	302.96	0.12
Trib4	520.*	Max WS	124.36	107.92	109.31		109.31	0.000401	0.76	247.53	281.18	0.12
Trib4	510.*	Max WS	124.24	107.92	109.30		109.31	0.000351	0.71	280.65	337.36	0.11
Trib4	500	Max WS	124.21	107.92	109.29		109.30	0.000867	1.10	207.04	323.79	0.18
Trib2a	6650	Max WS	390.02	100.64	107.46		107.47	0.000118	0.90	709.79	288.62	0.08
Trib2a	6592.43	Max WS	390.01	100.72	107.46		107.46	0.000066	0.74	866.09	307.29	0.06
Trib2a	6400	Max WS	388.99	100.73	107.45		107.46	0.000029	0.46	1026.25	301.50	0.04
Trib2a	6350	Max WS	417.23	100.73	107.45		107.45	0.000029	0.49	1170.21	335.61	0.04
Trib2a	6300	Max WS	417.40	100.73	107.45		107.45	0.000033	0.51	1127.06	361.80	0.04
Trib2a	6200	Max WS	417.12	100.78	107.45		107.45	0.000056	0.71	1066.69	391.54	0.06
Trib2a	6150	Max WS	423.03	100.34	107.44		107.45	0.000098	0.97	854.49	398.34	0.07
Trib2a	6100	Max WS	423.18	100.13	107.44		107.44	0.000084	0.91	929.93	415.63	0.07
Trib2a	6050	Max WS	423.34	100.45	107.43		107.44	0.000070	0.80	976.78	430.32	0.06
Trib2a	6000	Max WS	423.15	100.10	107.43		107.43	0.000063	0.81	1011.07	405.48	0.06
Trib2a	5950	Max WS	423.33	100.55	107.43		107.43	0.000057	0.72	1060.01	418.31	0.06
Trib2a	5905.86	Max WS	423.18	100.10	107.43		107.43	0.000037	0.60	1100.58	329.60	0.05
Trib2a	5850	Max WS	423.08	100.12	107.43		107.43	0.000019	0.43	1524.05	434.77	0.03
Trib2a	5800	Max WS	423.25	100.06	107.42		107.43	0.000016	0.43	1685.12	451.33	0.03
Trib2a	5750	Max WS	423.41	100.02	107.42		107.42	0.000014	0.38	1726.16	448.58	0.03
Trib2a	5647.95	Max WS	423.74	99.94	107.42		107.42	0.000023	0.49	1079.88	329.81	0.04
Trib2a	5200		Culvert									
Trib2a	5150	Max WS	423.02	99.55	103.73		103.75	0.000922	1.78	439.10	351.45	0.20
Trib2a	5100	Max WS	423.28	99.45	103.68		103.70	0.000842	1.81	469.95	381.68	0.19
Trib2a	5050	Max WS	431.98	99.42	103.65		103.67	0.000585	1.51	519.75	373.72	0.16
Trib2a	5000	Max WS	439.61	99.45	103.62		103.64	0.000576	1.60	536.53	376.35	0.16
Trib2a	4896.6	Max WS	440.17	99.08	103.56		103.57	0.000636	1.70	509.04	382.47	0.17
Trib2a	4817.5	Max WS	440.64	99.31	103.45		103.51	0.001345	2.12	310.29	437.34	0.24
Trib2a	4750	Max WS	441.02	97.98	103.25		103.41	0.003167	3.55	223.13	423.15	0.38
Trib2a	4700	Max WS	441.35	98.48	103.17		103.24	0.002226	2.77	310.79	441.84	0.31
Trib2a	4650	Max WS	441.54	98.29	102.93		103.13	0.004666	4.02	205.45	430.83	0.45
Trib2a	4600	Max WS	441.16	98.92	102.65	102.61	102.89	0.007273	4.90	193.83	379.19	0.56
Trib2a	4550	Max WS	440.77	97.96	102.48		102.56	0.002917	3.31	307.92	411.00	0.36
Trib2a	4500	Max WS	440.86	98.15	102.41		102.44	0.001124	2.15	434.05	381.80	0.22
Trib2a	4450	Max WS	440.97	97.30	102.36		102.39	0.000958	1.97	424.84	358.66	0.21
Trib2a	4400	Max WS	441.33	98.06	102.29		102.33	0.001433	1.95	375.58	368.73	0.24
Trib2a	4250.25	Max WS	441.25	96.55	101.81		102.02	0.004626	3.77	142.88	237.90	0.44
Trib2a	4200	Max WS	441.05	96.59	101.76		101.81	0.002172	2.03	287.65	260.14	0.29
Trib2a	4150	Max WS	440.52	97.16	101.68		101.71	0.001671	1.93	330.00	278.47	0.26
Trib2a	4100	Max WS	439.67	97.05	101.59		101.63	0.001787	2.01	316.13	274.27	0.27
Trib2a	4050	Max WS	441.85	96.37	101.51		101.55	0.001537	2.35	347.96	287.42	0.26
Trib2a	3900	Max WS	439.95	95.95	101.31		101.34	0.001236	2.27	403.41	338.95	0.23
Trib2a	3850	Max WS	439.68	96.20	101.26		101.29	0.000933	2.16	435.81	343.01	0.21

HEC-RAS Plan: PostPR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2a	3784.11	Max WS	439.33	96.57	101.18		101.22	0.001529	2.10	368.29	347.37	0.25
Trib2a	3350	Max WS	438.96	95.27	100.77		100.79	0.000536	1.47	514.80	330.52	0.15
Trib2a	3214.64	Max WS	441.25	96.42	100.60		100.66	0.001585	2.23	286.80	332.10	0.26
Trib2a	3100	Max WS	441.60	95.40	100.41		100.48	0.001946	2.74	293.57	289.87	0.29
Trib2a	3090.*	Max WS	441.63	95.27	100.39		100.46	0.001841	2.73	299.30	290.94	0.29
Trib2a	3080.*	Max WS	441.68	95.14	100.38		100.44	0.001750	2.73	305.04	293.31	0.28
Trib2a	3070.*	Max WS	441.71	95.02	100.36		100.43	0.001677	2.73	310.56	297.20	0.28
Trib2a	3060.*	Max WS	441.74	94.89	100.34		100.41	0.001601	2.72	317.52	324.99	0.27
Trib2a	3050	Max WS	441.79	94.76	100.32		100.40	0.001762	2.90	305.02	346.27	0.29
Trib2a	3000	Max WS	442.00	95.44	100.27		100.31	0.001316	2.31	357.54	288.20	0.24
Trib2a	2750	Max WS	175.47	95.06	100.00		100.01	0.000234	1.06	317.66	224.35	0.10
TRIB2	2409.07	Max WS	204.04	93.51	100.00		100.01	0.000059	0.54	681.64	482.43	0.05
TRIB2	2299.16	Max WS	203.64	91.10	100.00	94.04	100.00	0.000026	0.46	814.00	430.39	0.04
TRIB2	2200		Inl Struct									
TRIB2	2147.44	Max WS	201.72	92.44	99.98		99.98	0.000021	0.41	899.41	421.73	0.03
TRIB2	2078.76	Max WS	201.59	92.22	99.98		99.98	0.000008	0.22	1167.34	449.51	0.02
TRIB2	1707.37	Max WS	202.23	92.46	99.98		99.98	0.000013	0.29	1171.57	634.61	0.03
TRIB2	1601.61	Max WS	202.45	92.48	99.97		99.97	0.000013	0.30	1366.26	929.72	0.03
TRIB2	1548.15	Max WS	202.37	92.39	99.97		99.97	0.000010	0.26	1493.44	861.39	0.02
TRIB2	1500	Max WS	202.59	91.91	99.97		99.97	0.000007	0.21	1652.36	774.70	0.02
TRIB2	1450	Max WS	202.55	91.87	99.97		99.97	0.000007	0.21	1614.69	808.04	0.02
TRIB2	1350	Max WS	204.35	92.83	99.97		99.97	0.000006	0.23	1548.05	745.47	0.02
TRIB2	1150	Max WS	204.83	92.45	99.97		99.97	0.000003	0.17	1947.33	595.42	0.01
TRIB2	1006.62	Max WS	205.17	93.17	99.97		99.97	0.000005	0.21	1616.52	558.54	0.02
TRIB2	961.42	Max WS	205.21	91.98	99.97		99.97	0.000006	0.21	1522.62	506.44	0.02
TRIB2	848.73	Max WS	205.51	91.79	99.97		99.97	0.000003	0.17	1843.90	529.18	0.01
TRIB2	752.77	Max WS	205.80	91.40	99.97		99.97	0.000004	0.18	1877.61	572.72	0.01
TRIB2	700	Max WS	205.92	90.92	99.97		99.97	0.000003	0.17	1939.74	612.34	0.01
TRIB2	650	Max WS	206.10	91.12	99.97		99.97	0.000001	0.12	2680.42	664.80	0.01
TRIB2	600	Max WS	206.26	92.50	99.97		99.97	0.000001	0.12	2776.42	696.92	0.01
TRIB2	443.45	Max WS	209.38	92.33	99.97		99.97	0.000002	0.15	2300.67	594.31	0.01
TRIB2	200		Culvert									
TRIB2	80	Max WS	204.44	91.00	95.21		95.23	0.000948	1.73	255.90	354.14	0.20
TRIB2	70	Max WS	204.17	91.00	95.20		95.22	0.000979	1.75	252.46	353.61	0.20
Main3	17447.12	Max WS	266.68	107.81	109.29		109.30	0.000334	0.68	610.79	690.73	0.11
Main3	17437.7*	Max WS	266.68	107.67	109.29		109.29	0.000375	0.75	577.08	689.92	0.12
Main3	17428.3*	Max WS	266.67	107.52	109.29		109.29	0.000400	0.80	554.81	719.69	0.12
Main3	17418.9*	Max WS	266.67	107.38	109.28		109.29	0.000393	0.82	550.25	704.33	0.12
Main3	17409.5*	Max WS	266.66	107.23	109.28		109.28	0.000341	0.79	556.79	675.45	0.11
Main3	17400.1*	Max WS	266.67	107.08	109.28	108.20	109.28	0.000269	0.72	603.53	715.77	0.10
Main3	17400		Inl Struct									
Main3	17390.78	Max WS	266.39	106.94	109.06		109.09	0.001034	1.33	226.56	696.32	0.20
Main3	17350	Max WS	266.19	106.91	109.00		109.04	0.001933	1.86	244.33	630.97	0.27
Main3	17239.4	Max WS	266.16	106.54	108.83		108.87	0.001566	1.80	273.63	529.23	0.25
Main3	16882.6	Max WS	265.33	106.24	108.36		108.39	0.001372	1.82	248.36	270.50	0.24
Main3	16650	Max WS	263.67	106.39	108.13		108.14	0.000823	1.17	362.25	442.20	0.18
Main3	16536.56	Max WS	264.40	106.27	108.06		108.07	0.000376	0.79	493.02	471.93	0.12
Main3	15950	Max WS	264.78	104.49	107.79		107.80	0.000572	1.11	436.17	505.10	0.15
Main3	15556.6	Max WS	265.79	104.62	107.46		107.49	0.001068	1.66	248.65	211.83	0.21
Main3	15479	Max WS	269.89	104.11	107.37		107.40	0.001425	2.02	243.34	318.15	0.25
Main3	15270.69	Max WS	280.08	104.25	107.09		107.11	0.001328	1.42	269.73	269.41	0.22
Main3	15063.95	Max WS	283.08	102.46	106.82		106.86	0.001200	2.18	245.15	309.11	0.23
Main3	14955.43	Max WS	284.24	103.59	106.63		106.68	0.002260	2.11	202.36	279.72	0.29
Main3	14788.2	Max WS	238.05	101.86	106.44		106.45	0.000788	1.24	313.05	365.22	0.17
Main3	14628.77	Max WS	236.24	102.21	106.35		106.36	0.000433	1.16	397.55	374.56	0.13
Main3	14541.77	Max WS	234.45	102.08	106.32		106.33	0.000265	0.91	431.06	323.68	0.11
Main3	14280.86	Max WS	464.24	100.65	106.13		106.16	0.000992	2.01	412.50	257.34	0.20
Main3	14234.63	Max WS	464.22	100.96	106.09		106.11	0.000900	1.56	389.66	216.88	0.19
Main3	14185.8	Max WS	509.65	100.28	106.03		106.06	0.000917	1.77	365.70	157.02	0.20
Main3	14016.19	Max WS	496.52	101.50	105.64		105.77	0.002677	2.95	176.82	119.50	0.34
Main3	13950	Max WS	519.08	101.08	105.57		105.62	0.001394	2.55	403.76	348.21	0.26
Main3	13850	Max WS	513.75	100.53	105.46		105.50	0.001020	2.19	444.29	492.18	0.22
Main3	13750	Max WS	509.45	98.79	105.39		105.42	0.000489	1.82	510.86	489.23	0.16
Main3	13600	Max WS	507.37	99.49	105.21		105.27	0.001474	2.77	320.13	453.87	0.26
Main3	13450	Max WS	497.99	99.56	105.04		105.07	0.001084	2.24	464.41	644.09	0.22
Main3	13391.27	Max WS	491.25	99.51	104.91		104.99	0.002309	3.14	294.80	517.00	0.32
Main3	13266.46	Max WS	484.31	98.98	104.76		104.79	0.000781	2.26	454.12	314.90	0.19
Main3	13150	Max WS	335.45	98.95	104.68		104.72	0.000929	2.37	369.54	446.76	0.21
Main3	12950	Max WS	332.51	98.54	104.60		104.60	0.000170	1.02	633.66	381.28	0.09
Main3	12900	Max WS	332.46	97.80	104.59		104.60	0.000095	0.82	696.00	356.23	0.07
Main3	12850	Max WS	332.06	97.94	104.58		104.59	0.000180	1.03	578.28	335.50	0.09
Main3	12700	Max WS	331.62	99.10	104.55		104.56	0.000216	1.07	581.48	372.61	0.10
Main3	12393.1	Max WS	330.49	97.00	104.49		104.50	0.000200	1.09	551.91	551.46	0.10
Main3	12350	Max WS	330.56	96.55	104.49		104.49	0.000104	0.80	708.73	542.08	0.07
Main3	12150	Max WS	330.67	97.28	104.46		104.47	0.000118	0.98	797.15	625.68	0.08
Main3	12100	Max WS	339.55	97.22	104.46		104.46	0.000153	1.04	767.20	603.10	0.09

HEC-RAS Plan: PostPR200YR24HR Profile: Max WS (Continued)

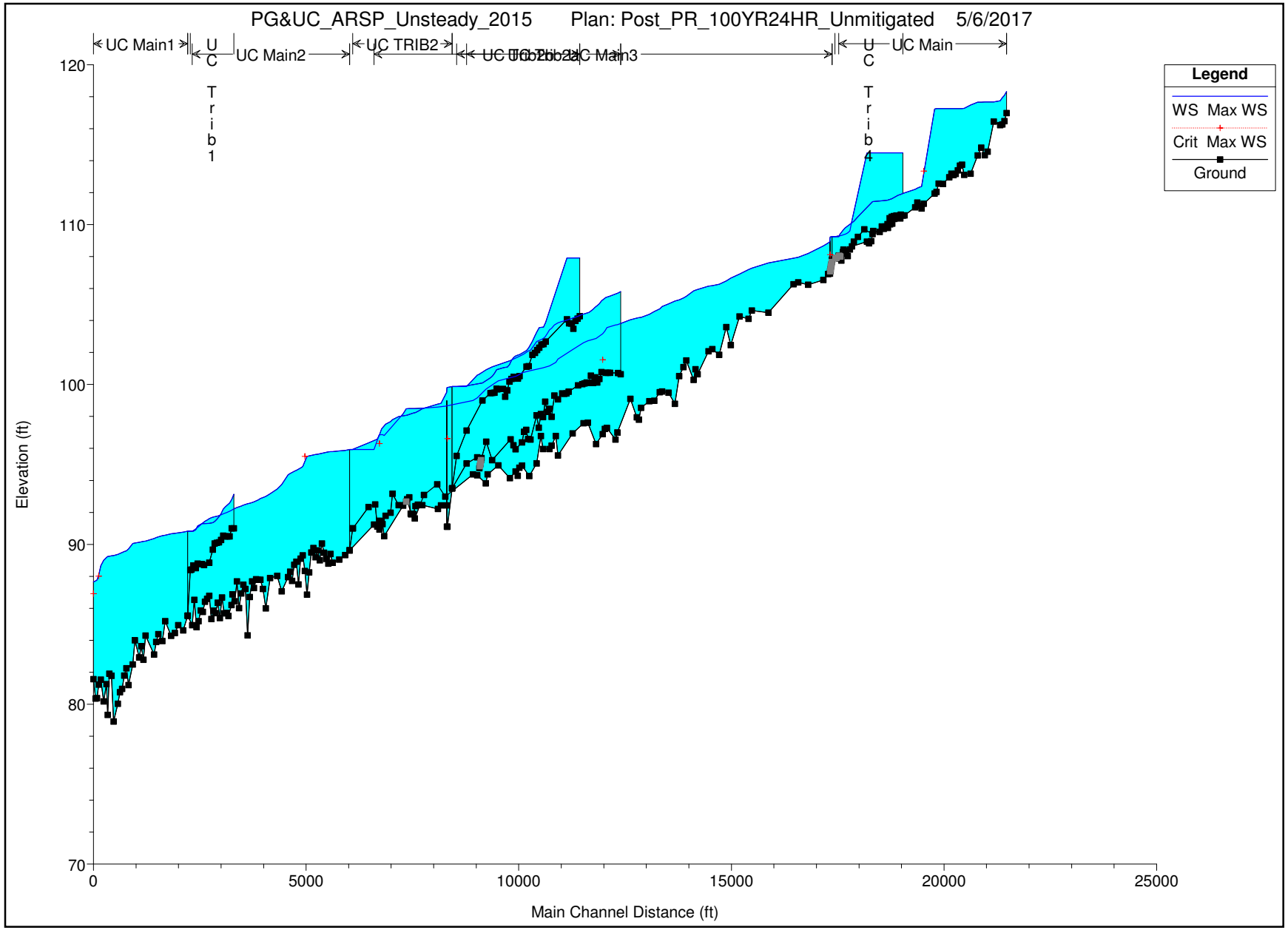
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	12050	Max WS	339.52	96.90	104.45		104.46	0.000159	1.02	721.01	584.52	0.09
Main3	11896.14	Max WS	339.70	96.27	104.43		104.44	0.000119	0.79	601.52	550.71	0.08
Main3	11700	Max WS	339.99	97.61	104.42		104.42	0.000021	0.43	1425.72	539.74	0.03
Main3	11600	Max WS	340.30	97.58	104.41		104.42	0.000038	0.56	1154.65	482.71	0.04
Main3	11346.39	Max WS	340.84	96.94	104.40		104.41	0.000038	0.59	1019.08	388.94	0.05
Main3	11100		Culvert									
Main3	11000	Max WS	290.61	95.56	101.78		101.82	0.000685	1.82	254.12	210.02	0.18
Main3	10950	Max WS	286.08	96.78	101.74		101.79	0.000927	2.03	236.61	239.70	0.21
Main3	10850	Max WS	283.86	96.17	101.70		101.71	0.000259	1.18	430.36	293.51	0.11
Main3	10800	Max WS	283.94	95.97	101.69		101.70	0.000258	1.20	415.10	280.96	0.11
Main3	10650	Max WS	282.79	95.97	101.67		101.67	0.000101	0.78	572.98	327.88	0.07
Main3	10600	Max WS	282.29	96.78	101.66		101.67	0.000101	0.73	618.36	386.20	0.07
Main3	10496.09	Max WS	281.84	95.06	101.65		101.66	0.000093	0.72	720.27	463.27	0.07
Main3	10323.48	Max WS	281.44	94.27	101.64		101.64	0.000084	0.72	710.64	444.83	0.06
Main3	10150	Max WS	281.04	94.92	101.62		101.63	0.000120	0.91	597.84	472.92	0.08
Main3	10089.9	Max WS	280.72	94.80	101.61		101.62	0.000155	0.95	530.86	428.62	0.09
Main3	10050	Max WS	280.65	94.29	101.60		101.61	0.000159	0.99	550.69	477.61	0.09
Main3	10000	Max WS	280.77	94.56	101.60		101.60	0.000087	0.74	672.92	396.94	0.07
Main3	9869.95	Max WS	280.52	94.14	101.59		101.60	0.000029	0.53	1160.33	614.08	0.04
Main3	9595.54	Max WS	280.65	94.94	101.58		101.59	0.000055	0.62	902.98	667.23	0.05
Main3	9343.2	Max WS	280.69	94.38	101.57		101.57	0.000041	0.57	964.45	451.97	0.05
Main3	9300	Max WS	280.77	93.82	101.57		101.57	0.000042	0.61	984.78	477.75	0.05
Main3	9100	Max WS	282.78	94.32	101.56		101.56	0.000022	0.41	1094.70	376.83	0.03
Main3	9000	Max WS	283.79	94.38	101.56		101.56	0.000017	0.38	1081.80	316.73	0.03
Main3	8500		Culvert									
Main3	8350	Max WS	280.40	92.98	99.03		99.04	0.000068	0.68	754.92	353.68	0.06
Main3	8162.22	Max WS	280.39	93.75	99.02		99.02	0.000104	0.72	627.60	330.34	0.07
Main3	7850.11	Max WS	280.61	93.09	99.00		99.00	0.000043	0.50	943.15	445.06	0.05
Main3	7633.01	Max WS	282.61	91.62	98.99		98.99	0.000027	0.50	1072.13	443.59	0.04
Main3	7536.49	Max WS	283.68	91.92	98.99		98.99	0.000013	0.30	1552.34	610.42	0.03
Main3	7500	Max WS	287.90	92.94	98.99		98.99	0.000018	0.36	1241.06	490.85	0.03
Main3	7429.50*	Max WS	289.02	92.68	98.98		98.99	0.000041	0.53	917.55	432.56	0.05
Main3	7359.01	Max WS	290.00	92.42	98.85		99.08	0.001863	3.84	75.88	312.74	0.31
Main3	7000		Culvert									
Main3	6910.56	Max WS	252.18	90.51	96.83		96.99	0.001254	3.23	77.97	306.47	0.26
Main3	6872.46	Max WS	253.14	91.27	96.87		96.88	0.000196	1.01	477.01	307.34	0.10
Main3	6795.89	Max WS	253.85	91.48	96.86		96.87	0.000183	0.95	491.18	308.84	0.09
Main3	6671.06	Max WS	287.13	91.24	95.20	95.31	95.63	0.017577	5.65	83.86	296.12	0.80
Trib1	1500	Max WS	375.09	91.00	93.21		93.68	0.015434	5.49	68.38	42.64	0.76
Trib1	1450	Max WS	374.93	91.00	92.88		93.06	0.007922	3.39	110.66	88.50	0.53
Trib1	1400	Max WS	376.09	90.50	92.66		92.77	0.004003	2.91	163.45	128.17	0.40
Trib1	1350	Max WS	376.32	90.50	92.54		92.60	0.002252	2.09	206.63	158.58	0.30
Trib1	1300	Max WS	377.33	90.50	92.43		92.49	0.002378	1.91	200.43	166.27	0.30
Trib1	1250	Max WS	378.36	90.54	92.27		92.34	0.003449	2.24	177.44	160.02	0.35
Trib1	1200	Max WS	378.96	90.27	91.99		92.12	0.005734	3.04	146.19	143.18	0.46
Trib1	1150	Max WS	378.11	90.13	91.79		91.88	0.003582	2.39	166.29	152.95	0.37
Trib1	1100	Max WS	372.65	90.10	91.64		91.71	0.003215	2.17	179.10	171.26	0.34
Trib1	1050	Max WS	367.55	90.06	91.50		91.56	0.002621	1.96	203.46	191.36	0.31
Trib1	1004.24	Max WS	365.86	89.67	91.44		91.47	0.001170	1.42	312.13	364.51	0.21
Trib1	920.64	Max WS	366.60	88.86	91.40		91.41	0.000113	0.59	812.06	501.85	0.07
Trib1	800	Max WS	463.70	88.71	91.39		91.39	0.000069	0.48	998.32	479.51	0.06
Trib1	750	Max WS	507.16	88.77	91.38		91.39	0.000130	0.63	832.67	425.57	0.08
Trib1	650	Max WS	495.10	88.80	91.26		91.31	0.001876	2.13	369.25	436.56	0.28
Trib1	603.8	Max WS	282.90	88.51	91.16		91.20	0.001058	1.60	202.38	205.27	0.21
Trib1	550	Max WS	263.62	88.68	91.13		91.15	0.000599	1.27	236.51	148.30	0.16
Trib1	504.41	Max WS	259.14	88.43	91.12		91.13	0.000288	0.92	301.35	169.77	0.11
Trib1	478.55	Max WS	265.46	88.39	91.11		91.12	0.000222	0.80	340.76	179.42	0.10
Main2	6100	Max WS	491.29	89.62	95.20		95.23	0.001187	1.89	383.36	323.00	0.22
Main2	5995.41	Max WS	491.25	89.33	95.14		95.15	0.000247	1.03	807.21	453.10	0.10
Main2	5852.28	Max WS	491.45	89.05	95.11		95.12	0.000197	0.97	846.32	421.93	0.09
Main2	5700	Max WS	492.70	88.85	95.08		95.09	0.000195	0.92	942.69	562.81	0.09
Main2	5650	Max WS	492.76	89.40	95.07		95.08	0.000175	0.76	948.89	518.23	0.09
Main2	5600	Max WS	492.82	88.79	95.06		95.07	0.000330	1.18	726.43	516.69	0.12
Main2	5550	Max WS	494.91	89.09	95.04		95.05	0.000445	1.26	582.76	428.37	0.14
Main2	5500	Max WS	494.98	89.47	95.01		95.03	0.000508	1.24	569.04	348.09	0.15
Main2	5450	Max WS	495.05	90.05	94.99		95.00	0.000530	1.37	563.00	341.95	0.15
Main2	5400	Max WS	495.12	89.00	94.96		94.98	0.000331	1.42	598.51	323.21	0.13
Main2	5347.58	Max WS	495.19	89.63	94.94		94.96	0.000437	1.37	598.77	349.58	0.14
Main2	5300	Max WS	495.26	89.20	94.93		94.94	0.000383	1.23	640.08	369.92	0.13
Main2	5250	Max WS	495.34	89.77	94.90		94.92	0.000477	1.34	590.14	351.76	0.15
Main2	5200	Max WS	495.41	89.49	94.88		94.89	0.000522	1.25	557.67	326.39	0.15
Main2	5150	Max WS	495.49	88.25	94.85		94.87	0.000557	1.37	535.64	309.85	0.15
Main2	5100	Max WS	496.55	86.86	94.82		94.85	0.000293	1.64	588.35	314.80	0.12
Main2	5050	Max WS	497.64	88.33	94.31		95.02	0.011105	6.93	80.35	314.54	0.68
Main2	5000	Max WS	498.70	89.31	94.31		94.35	0.001603	2.14	381.91	363.38	0.25
Main2	4950	Max WS	498.78	89.11	94.22		94.27	0.001680	2.24	373.12	386.24	0.26

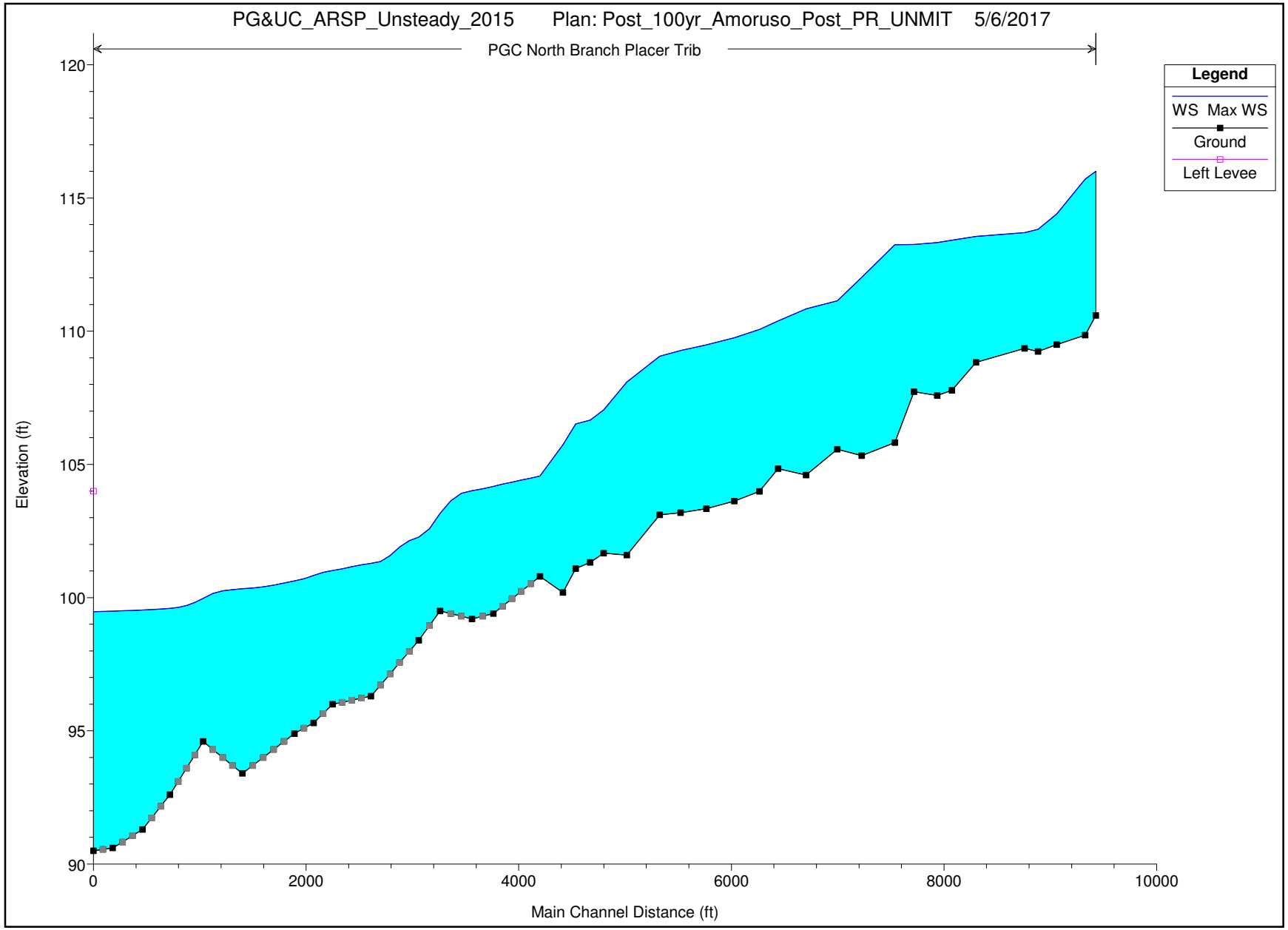
HEC-RAS Plan: PostPR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main2	4900	Max WS	498.85	87.49	94.15		94.19	0.001550	2.15	385.11	414.91	0.25
Main2	4850	Max WS	498.92	88.91	94.06		94.11	0.001740	2.34	384.57	421.79	0.27
Main2	4800	Max WS	499.00	88.72	93.99		94.02	0.001578	2.10	418.64	418.95	0.26
Main2	4750	Max WS	499.07	87.72	93.92		93.96	0.001082	2.26	450.19	416.82	0.22
Main2	4700	Max WS	499.13	88.29	93.86		93.91	0.001183	2.20	415.98	416.67	0.23
Main2	4650	Max WS	499.21	87.95	93.77		93.84	0.001944	2.79	342.89	367.03	0.30
Main2	4504.57	Max WS	500.42	87.06	93.14		93.35	0.005731	3.89	175.72	216.17	0.48
Main2	4397.85	Max WS	500.56	88.02	92.88		92.92	0.001538	2.04	339.72	264.81	0.25
Main2	4231.14	Max WS	502.03	87.89	92.56		92.60	0.002382	2.36	339.88	338.12	0.31
Main2	4128.64	Max WS	502.14	86.00	92.39		92.42	0.001144	1.98	420.70	313.80	0.22
Main2	4061.14	Max WS	502.23	87.21	92.33		92.35	0.000969	1.73	439.56	315.68	0.20
Main2	4000	Max WS	502.23	87.79	92.27		92.29	0.000939	1.49	464.57	332.77	0.19
Main2	3950	Max WS	502.09	87.78	92.13		92.20	0.003524	2.90	326.49	385.63	0.37
Main2	3900	Max WS	501.80	87.81	92.06		92.08	0.000825	1.61	491.09	380.55	0.19
Main2	3850	Max WS	503.18	87.27	92.00		92.03	0.001049	1.96	407.72	237.79	0.21
Main2	3808.17	Max WS	503.16	87.69	91.96		91.99	0.000926	1.53	427.18	246.95	0.19
Main2	3750	Max WS	503.19	86.70	91.92		91.94	0.000693	1.45	468.10	266.12	0.17
Main2	3700	Max WS	503.18	84.31	91.90		91.91	0.000504	1.29	531.57	307.88	0.15
Main2	3650	Max WS	503.19	87.21	91.86		91.88	0.000767	1.33	485.40	312.93	0.17
Main2	3600	Max WS	503.20	87.47	91.82		91.84	0.000839	1.37	472.33	311.28	0.18
Main2	3550.1	Max WS	504.54	86.93	91.77		91.79	0.001117	1.52	415.05	293.39	0.21
Main2	3500	Max WS	504.42	86.01	91.72		91.75	0.000756	1.73	459.90	391.12	0.18
Main2	3450	Max WS	504.33	87.68	91.68		91.70	0.001016	1.84	465.14	387.63	0.21
Main2	3400	Max WS	504.06	86.44	91.62		91.65	0.001247	2.10	408.52	309.96	0.22
Main2	3344.35	Max WS	503.85	86.87	91.55		91.58	0.001101	1.98	394.49	243.40	0.22
Main2	3320.7	Max WS	503.77	86.20	91.52		91.55	0.001264	2.14	369.92	213.07	0.23
Main2	3250	Max WS	504.74	85.52	91.45		91.48	0.000864	1.99	428.23	229.82	0.19
Main2	3200	Max WS	504.75	85.71	91.42		91.44	0.000729	1.53	446.40	228.65	0.18
Main2	3150	Max WS	504.71	85.68	91.38		91.40	0.000763	1.72	431.55	219.26	0.18
Main2	3100	Max WS	504.79	86.67	91.34		91.36	0.000817	1.50	421.17	231.59	0.18
Main2	3050	Max WS	360.97	85.39	91.31		91.32	0.000390	1.10	422.86	236.40	0.13
Main2	3000	Max WS	361.27	86.35	91.30		91.31	0.000324	1.07	535.37	384.67	0.12
Main2	2950	Max WS	361.72	85.70	91.29		91.29	0.000212	0.82	641.50	373.81	0.09
Main2	2900	Max WS	361.80	85.85	91.27		91.28	0.000202	0.89	618.42	336.91	0.10
Main2	2850	Max WS	362.05	85.33	91.26		91.27	0.000251	1.11	560.24	288.08	0.10
Main2	2800	Max WS	362.37	86.78	91.25		91.26	0.000277	1.04	505.73	257.20	0.11
Main2	2750.23	Max WS	362.20	86.59	91.23		91.24	0.000433	1.33	432.72	236.00	0.14
Main2	2700	Max WS	362.30	86.41	91.21		91.22	0.000356	1.23	456.27	239.84	0.13
Main2	2650	Max WS	362.04	85.77	91.19		91.20	0.000437	1.32	430.94	238.96	0.14
Main2	2600	Max WS	361.97	85.86	91.17		91.18	0.000407	1.35	433.92	237.60	0.14
Main2	2550	Max WS	364.01	85.20	91.15		91.16	0.000375	1.25	434.78	229.48	0.13
Main2	2500	Max WS	363.19	84.82	91.13		91.14	0.000283	1.04	500.44	255.28	0.11
Main2	2450	Max WS	363.04	86.53	91.12		91.13	0.000248	1.00	554.85	293.46	0.11
Main2	2397.32	Max WS	362.42	84.95	91.11		91.12	0.000133	0.89	673.56	329.84	0.08
Main1	2291.46	Max WS	627.67	85.53	91.11		91.12	0.000194	0.86	1077.16	536.07	0.09
Main1	2189.07	Max WS	626.71	84.62	91.10		91.10	0.000128	0.84	1228.59	539.46	0.08
Main1	2069.18	Max WS	626.47	84.94	91.09		91.09	0.000091	0.75	1426.01	594.57	0.07
Main1	1990.13	Max WS	629.76	84.45	91.08		91.08	0.000079	0.63	1512.79	655.90	0.06
Main1	1902.51	Max WS	629.68	84.27	91.07		91.08	0.000087	0.79	1418.92	568.65	0.07
Main1	1760.99	Max WS	629.63	85.19	91.05		91.06	0.000150	0.93	1039.39	412.64	0.09
Main1	1698.99	Max WS	629.59	83.95	91.04		91.05	0.000143	1.06	1050.50	390.43	0.08
Main1	1600	Max WS	629.63	84.38	91.03		91.04	0.000163	0.98	961.48	367.72	0.09
Main1	1550	Max WS	629.65	83.89	91.02		91.03	0.000183	1.13	889.44	340.84	0.10
Main1	1500	Max WS	629.67	83.11	91.01		91.02	0.000218	1.17	840.20	338.83	0.10
Main1	1400		Culvert									
Main1	1300	Max WS	629.42	84.29	89.59		89.61	0.000665	1.97	581.02	295.12	0.18
Main1	1250	Max WS	629.48	82.78	89.57		89.58	0.000455	1.55	678.72	327.11	0.14
Main1	1200	Max WS	645.16	83.63	89.54		89.56	0.000501	1.76	652.80	306.04	0.16
Main1	1150	Max WS	645.17	82.93	89.52		89.54	0.000397	1.70	676.69	288.60	0.14
Main1	1050	Max WS	645.16	84.00	89.47		89.49	0.000491	1.60	617.89	250.46	0.15
Main1	1000	Max WS	645.18	82.49	89.45		89.47	0.000500	1.77	581.99	230.91	0.15
Main1	902.45	Max WS	645.00	81.20	89.17		89.35	0.003079	4.14	232.42	106.97	0.36
Main1	850	Max WS	644.95	82.25	89.07		89.21	0.002139	3.57	266.17	132.35	0.32
Main1	800	Max WS	644.89	81.79	89.03		89.11	0.001302	3.10	356.67	164.61	0.25
Main1	750	Max WS	644.95	80.96	88.97		89.05	0.001192	2.88	375.24	183.15	0.24
Main1	700	Max WS	644.91	80.75	88.93		88.99	0.001003	2.41	416.27	201.80	0.22
Main1	650	Max WS	644.96	80.03	88.88		88.94	0.000992	2.78	422.78	212.85	0.22
Main1	550	Max WS	644.99	78.91	88.82		88.86	0.000481	1.97	567.92	260.75	0.15
Main1	500	Max WS	652.75	81.77	88.81		88.83	0.000439	1.76	606.57	252.42	0.15
Main1	450.28	Max WS	652.76	81.91	88.79		88.81	0.000310	1.52	649.40	237.84	0.13
Main1	411.53	Max WS	652.80	79.33	88.77		88.80	0.000539	1.84	556.24	233.37	0.16
Main1	381.37	Max WS	652.81	81.25	88.72		88.78	0.001142	2.49	413.89	212.14	0.23
Main1	316.15	Max WS	652.80	80.18	88.58		88.70	0.001874	3.17	299.17	172.88	0.29
Main1	250	Max WS	652.63	81.54	88.33		88.54	0.003913	4.04	230.26	165.52	0.42
Main1	200	Max WS	650.95	81.23	87.83		88.17	0.012326	4.89	155.90	159.19	0.68
Main1	161.78	Max WS	650.92	80.38	87.74		87.78	0.001717	2.09	503.28	735.43	0.26

HEC-RAS Plan: PostPR200YR24HR Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main1	126.68	Max WS	656.29	80.35	87.70		87.73	0.001194	1.80	567.03	802.71	0.22
Main1	76.78	Max WS	672.15	81.56	87.65	86.79	87.68	0.001051	2.18	650.74	791.31	0.22


PG&UC_ARSP_Unsteady_2015 Plan: Post_PR_100YR24HR_Unmitigated 5/6/2017
UC Main1
UC Main2
UC TRIB2
UC Main3
UC Main
Legend
WS Max WS
Crit Max WS
Ground
Elevation (ft)
Main Channel Distance (ft)
120
110
100
90
80
70
0
5000
10000
15000
20000
25000


PG&UC_ARSP_Unsteady_2015 Plan: Post_100yr_Amoruso_Post_PR_UNMIT 5/6/2017
PGC North Branch Placer Trib
Legend
WS Max WS
Ground
Left Levee
Elevation (ft)
120
115
110
105
100
95
90
0
2000
4000
6000
8000
10000
Main Channel Distance (ft)

HEC-RAS Plan: PostPR100YRUNMIT Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main	21550	Max WS	110.95	116.98	118.32		118.39	0.004332	2.19	60.76	114.14	0.38
Main	21500	Max WS	110.22	116.48	118.09		118.17	0.005086	2.33	55.93	104.81	0.41
Main	21450	Max WS	110.09	116.27	117.94		117.99	0.002532	1.70	69.02	136.47	0.29
Main	21396.29	Max WS	76.09	116.23	117.76		117.79	0.002297	1.42	65.80	164.96	0.27
Main	21246.12	Max WS	47.30	116.44	117.68		117.68	0.000055	0.22	240.18	304.62	0.04
Main	21100	Max WS	50.03	114.56	117.67		117.67	0.000017	0.25	352.00	261.99	0.03
Main	21037.73	Max WS	77.97	114.34	117.67		117.67	0.000061	0.46	318.08	277.91	0.05
Main	20950.06	Max WS	78.01	114.81	117.67		117.67	0.000027	0.28	432.80	321.65	0.03
Main	20867	Max WS	77.78	114.33	117.66		117.66	0.000023	0.28	455.12	312.08	0.03
Main	20700	Max WS	62.78	113.19	117.48		117.63	0.001535	3.17	19.82	186.92	0.28
Main	20550	Max WS	57.82	113.12	117.28		117.41	0.001253	2.91	19.88	245.81	0.26
Main	20500	Max WS	57.63	113.75	117.27		117.27	0.000006	0.17	534.41	258.37	0.02
Main	20450	Max WS	57.74	113.69	117.27		117.27	0.000004	0.14	622.40	277.78	0.01
Main	20400	Max WS	74.64	113.39	117.26		117.27	0.000007	0.20	583.91	244.12	0.02
Main	20351.92	Max WS	74.67	113.17	117.26		117.26	0.000004	0.16	677.92	238.43	0.01
Main	20300	Max WS	74.78	113.10	117.26		117.26	0.000004	0.15	625.01	223.27	0.01
Main	20250	Max WS	74.89	113.18	117.26		117.26	0.000006	0.20	581.43	225.10	0.02
Main	20200	Max WS	74.95	112.96	117.26		117.26	0.000006	0.20	588.67	227.66	0.02
Main	20050	Max WS	76.42	112.55	117.26		117.26	0.000003	0.15	746.93	235.77	0.01
Main	19950	Max WS	76.56	112.56	117.26		117.26	0.000002	0.11	1001.13	308.86	0.01
Main	19900	Max WS	76.64	112.05	117.26		117.26	0.000001	0.10	1115.18	311.62	0.01
Main	19852.97	Max WS	98.66	111.94	117.22		117.38	0.000988	3.13	31.48	315.12	0.24
Main	19600	Max WS	98.51	111.31	113.18	113.35	114.39	0.031012	8.81	11.18	227.96	1.14
Main	19550	Max WS	98.53	111.01	112.38		112.40	0.001096	1.17	119.16	220.44	0.20
Main	19500	Max WS	99.95	111.18	112.34		112.35	0.000838	0.97	152.04	291.59	0.17
Main	19450	Max WS	99.94	111.38	112.28		112.29	0.001907	1.18	124.50	307.56	0.24
Main	19400	Max WS	99.93	111.08	112.21		112.22	0.001174	1.03	176.34	398.85	0.19
Main	19150	Max WS	99.99	110.58	111.99		112.00	0.000905	1.14	167.45	306.40	0.18
Main	19050	Max WS	101.15	110.39	111.88		111.91	0.001440	1.35	109.68	277.90	0.22
Main	19000	Max WS	101.16	110.49	111.84		111.85	0.000932	1.00	149.22	272.89	0.18
Main	18950	Max WS	101.18	110.54	111.76		111.79	0.001952	1.33	97.98	238.44	0.25
Main	18900	Max WS	101.19	110.53	111.70		111.71	0.001298	1.07	126.14	231.25	0.20
Main	18850	Max WS	101.18	110.49	111.62		111.64	0.002043	1.33	108.63	279.55	0.26
Main	18800	Max WS	106.76	110.40	111.57		111.58	0.000873	0.94	170.72	330.29	0.17
Main	18750	Max WS	106.40	110.03	111.54		111.54	0.000562	0.88	193.79	387.48	0.14
Main	18700	Max WS	107.60	109.89	111.52		111.52	0.000345	0.73	246.68	467.85	0.11
Main	18650	Max WS	107.46	109.86	111.50		111.51	0.000328	0.61	259.36	414.38	0.11
Main	18397.57	Max WS	107.27	109.41	111.44		111.44	0.000168	0.61	307.18	288.00	0.08
Main	18200	Max WS	108.00	109.70	110.91		110.92	0.000916	0.80	155.67	192.10	0.17
Main	18050	Max WS	109.26	109.24	110.50		110.55	0.004607	2.22	76.82	148.29	0.39
Main	17955.7	Max WS	109.32	108.94	110.21		110.23	0.002018	1.43	119.51	195.77	0.26
Main	17750	Max WS	110.46	108.17	109.79		109.83	0.002147	1.57	82.64	218.08	0.27
Main	17700	Max WS	110.48	108.29	109.65		109.69	0.003567	1.61	71.37	164.09	0.33
Main	17650	Max WS	110.38	107.99	109.48		109.52	0.003508	1.69	68.61	168.44	0.33
Main	17640.*	Max WS	111.76	108.01	109.45		109.49	0.003369	1.70	79.91	160.41	0.33
Main	17630.*	Max WS	111.76	108.02	109.39		109.45	0.004363	1.97	69.98	162.33	0.37
Main	17620.*	Max WS	111.66	108.04	109.34		109.41	0.005316	2.19	63.90	146.62	0.41
Main	17610.*	Max WS	111.51	108.05	109.28		109.36	0.006244	2.39	62.85	149.01	0.45
Main	17600	Max WS	103.38	108.07	109.25		109.29	0.004462	2.06	75.08	162.62	0.38
Trib2b	3000	Max WS	15.50	104.27	107.91		107.91	0.000000	0.03	712.50	238.83	0.00
Trib2b	2950	Max WS	15.51	104.12	107.91		107.91	0.000000	0.03	692.14	218.22	0.00
Trib2b	2900	Max WS	15.64	103.98	107.91		107.91	0.000000	0.03	825.99	288.69	0.00
Trib2b	2850	Max WS	15.83	103.49	107.91		107.91	0.000000	0.03	814.92	343.56	0.00
Trib2b	2800	Max WS	16.04	103.81	107.91		107.91	0.000000	0.03	770.32	305.69	0.00
Trib2b	2750	Max WS	16.18	103.83	107.91		107.91	0.000000	0.04	615.13	269.46	0.00
Trib2b	2700	Max WS	16.36	104.08	107.91		107.91	0.000005	0.09	225.46	262.29	0.01
Trib2b	2200	Max WS	25.70	102.69	103.89		104.14	0.013844	4.04	6.36	98.91	0.69
Trib2b	2150	Max WS	43.31	102.52	103.59		103.59	0.000278	0.41	105.73	171.44	0.09
Trib2b	2100	Max WS	43.22	102.50	103.57		103.58	0.000271	0.42	109.71	212.21	0.09
Trib2b	2050	Max WS	42.26	102.30	103.56		103.56	0.000279	0.42	121.31	234.67	0.09
Trib2b	2000	Max WS	138.43	102.16	103.33		103.38	0.007578	1.90	73.50	221.89	0.46
Trib2b	1950	Max WS	138.34	101.98	103.06		103.11	0.005249	1.94	97.84	216.56	0.40
Trib2b	1887.66	Max WS	138.20	101.86	102.70		102.75	0.007449	1.94	88.13	198.08	0.46
Trib2b	1800	Max WS	137.57	101.14	102.28		102.30	0.003271	1.31	118.06	201.95	0.30
Trib2b	1750	Max WS	136.26	101.12	102.13		102.15	0.003038	1.29	111.71	229.38	0.29
Trib2b	1587.06	Max WS	133.60	100.52	101.87		101.88	0.000438	0.67	207.21	257.55	0.12
Trib2b	1547.11	Max WS	133.53	100.38	101.85		101.86	0.000806	0.91	183.37	267.86	0.16
Trib2b	1494.66	Max WS	135.61	100.39	101.78		101.79	0.001745	1.04	139.10	258.40	0.23
Trib2b	1450	Max WS	135.55	100.48	101.69		101.71	0.001977	1.24	122.06	206.07	0.25
Trib2b	1400	Max WS	135.33	100.35	101.51		101.55	0.005439	1.97	101.59	230.38	0.41
Trib2b	1350	Max WS	133.44	100.19	101.23		101.27	0.006136	1.50	88.94	206.17	0.40
Trib2b	1300	Max WS	130.98	99.63	101.09		101.10	0.000625	0.72	182.02	229.40	0.14
Trib2b	1250	Max WS	130.55	99.24	101.07		101.08	0.000348	0.68	218.88	265.67	0.11
Trib2b	1200	Max WS	135.34	99.73	101.04		101.05	0.000693	0.74	183.10	233.52	0.15
Trib2b	1064.85	Max WS	134.75	99.70	100.94		100.95	0.000857	0.87	184.90	256.99	0.17
Trib2b	1050	Max WS	134.70	99.74	100.93		100.94	0.001110	0.93	171.32	262.19	0.19

HEC-RAS Plan: PostPR100YRUNMIT Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2b	1000	Max WS	134.46	99.49	100.71		100.77	0.006298	2.01	74.59	265.50	0.43
Trib2b	950	Max WS	133.97	99.47	100.53		100.55	0.002545	1.36	133.29	277.18	0.28
Trib2b	902.71	Max WS	133.02	99.46	100.42		100.44	0.002275	1.14	129.16	321.43	0.26
Trib2b	715.36	Max WS	127.10	99.00	100.10		100.11	0.001297	0.86	152.65	318.26	0.19
Trib2b	339.81	Max WS	71.81	97.12	99.91		99.91	0.000130	0.48	227.92	270.09	0.07
Trib2b	106.24	Max WS	71.79	95.53	99.88		99.88	0.000132	0.61	159.88	140.00	0.07
Trib4	2100	Max WS	75.32	110.56	114.49		114.49	0.000002	0.09	867.32	301.33	0.01
Trib4	2050	Max WS	75.17	110.63	114.49		114.49	0.000002	0.11	827.49	283.48	0.01
Trib4	1950	Max WS	75.48	110.57	114.49		114.49	0.000002	0.10	913.41	300.01	0.01
Trib4	1900	Max WS	79.81	110.36	114.49		114.49	0.000001	0.09	1017.93	306.89	0.01
Trib4	1850	Max WS	79.88	110.06	114.49		114.49	0.000001	0.09	937.96	272.43	0.01
Trib4	1800	Max WS	79.94	110.02	114.49		114.49	0.000002	0.10	885.97	257.10	0.01
Trib4	1747.14	Max WS	79.89	109.80	114.49		114.49	0.000002	0.11	877.54	246.11	0.01
Trib4	1700	Max WS	79.67	109.83	114.49		114.49	0.000001	0.10	884.42	245.37	0.01
Trib4	1650	Max WS	79.23	109.73	114.49		114.49	0.000001	0.09	996.80	262.08	0.01
Trib4	1600	Max WS	84.91	109.88	114.49		114.49	0.000001	0.09	1015.29	277.82	0.01
Trib4	1550	Max WS	83.64	109.54	114.49		114.49	0.000001	0.08	1145.11	297.74	0.01
Trib4	1400	Max WS	83.30	109.60	114.49		114.49	0.000001	0.11	1097.45	316.97	0.01
Trib4	1350	Max WS	81.14	108.96	114.49		114.49	0.000001	0.08	1290.40	345.52	0.01
Trib4	1300	Max WS	77.32	108.83	114.49		114.49	0.000001	0.07	1498.94	374.92	0.01
Trib4	1250	Max WS	74.94	108.93	114.48		114.51	0.000221	1.52	49.24	318.84	0.11
Trib4	900	Max WS	87.44	108.64	110.27		110.84	0.018117	6.08	14.39	285.76	0.85
Trib4	850	Max WS	117.34	108.45	109.60		109.66	0.006043	2.19	79.41	275.81	0.43
Trib4	800	Max WS	120.92	108.03	109.49		109.51	0.001436	1.33	126.63	266.80	0.22
Trib4	750	Max WS	118.70	108.34	109.40		109.42	0.002905	1.40	127.22	311.53	0.30
Trib4	700	Max WS	116.55	108.43	109.36		109.37	0.000491	0.66	232.19	312.95	0.13
Trib4	650	Max WS	113.57	107.75	109.32		109.34	0.001175	1.09	143.61	282.89	0.20
Trib4	600	Max WS	112.33	107.89	109.30		109.30	0.000494	0.88	227.48	327.36	0.14
Trib4	550	Max WS	110.20	107.93	109.27		109.28	0.000688	0.99	205.19	336.03	0.16
Trib4	540.*	Max WS	108.65	107.93	109.27		109.27	0.000389	0.74	243.19	321.30	0.12
Trib4	530.*	Max WS	105.63	107.93	109.26		109.26	0.000354	0.70	238.50	300.06	0.11
Trib4	520.*	Max WS	105.26	107.92	109.26		109.26	0.000339	0.68	234.13	277.24	0.11
Trib4	510.*	Max WS	104.06	107.92	109.25		109.26	0.000294	0.63	264.59	331.91	0.10
Trib4	500	Max WS	103.86	107.92	109.25		109.25	0.000758	1.00	191.97	320.15	0.16
Trib2a	6650	Max WS	621.99	100.64	105.82		105.94	0.003913	3.72	288.91	248.80	0.41
Trib2a	6592.43	Max WS	619.18	100.72	105.72		105.77	0.001443	2.57	412.68	247.73	0.26
Trib2a	6400	Max WS	615.65	100.73	105.53		105.56	0.000715	1.51	463.66	241.70	0.18
Trib2a	6350	Max WS	663.51	100.73	105.49		105.52	0.000677	1.66	545.64	273.82	0.18
Trib2a	6300	Max WS	662.72	100.73	105.44		105.48	0.000928	1.82	483.89	289.07	0.21
Trib2a	6200	Max WS	661.57	100.78	105.23		105.32	0.002824	3.40	343.78	288.10	0.36
Trib2a	6150	Max WS	668.39	100.34	105.05		105.17	0.003033	3.60	281.47	154.25	0.37
Trib2a	6100	Max WS	667.10	100.13	104.94		105.03	0.002465	3.27	315.81	166.38	0.34
Trib2a	6050	Max WS	664.99	100.45	104.83		104.91	0.002372	2.95	322.68	168.72	0.32
Trib2a	6000	Max WS	662.65	100.10	104.70		104.79	0.002486	3.32	321.41	179.90	0.33
Trib2a	5950	Max WS	659.24	100.55	104.59		104.66	0.002441	2.78	334.74	188.71	0.32
Trib2a	5905.86	Max WS	656.46	100.10	104.51		104.57	0.001710	2.38	378.60	195.98	0.27
Trib2a	5850	Max WS	655.07	100.12	104.46		104.49	0.000950	1.75	537.37	305.33	0.20
Trib2a	5800	Max WS	654.55	100.06	104.43		104.45	0.000760	1.86	605.76	338.76	0.19
Trib2a	5750	Max WS	653.70	100.02	104.40		104.41	0.000579	1.45	649.00	335.65	0.16
Trib2a	5647.95	Max WS	652.16	99.94	104.28		104.33	0.001181	1.91	371.84	193.09	0.23
Trib2a	5150	Max WS	646.95	99.55	104.06		104.09	0.001030	2.04	558.44	357.64	0.22
Trib2a	5100	Max WS	646.40	99.45	104.02		104.04	0.000944	2.06	597.82	390.19	0.21
Trib2a	5050	Max WS	656.17	99.42	103.98		104.00	0.000733	1.82	645.18	393.58	0.18
Trib2a	5000	Max WS	665.68	99.45	103.94		103.96	0.000751	1.96	659.55	405.39	0.19
Trib2a	4896.6	Max WS	665.51	99.08	103.86		103.88	0.000862	2.10	633.37	429.59	0.20
Trib2a	4817.5	Max WS	665.27	99.31	103.72		103.80	0.001620	2.51	431.45	450.59	0.27
Trib2a	4750	Max WS	664.48	97.98	103.51		103.68	0.003390	3.91	337.19	423.98	0.40
Trib2a	4700	Max WS	664.16	98.48	103.41		103.50	0.002449	3.10	420.49	444.70	0.33
Trib2a	4650	Max WS	661.65	98.29	103.19		103.37	0.004573	4.25	318.67	438.41	0.45
Trib2a	4600	Max WS	657.38	98.92	102.99		103.14	0.005029	4.46	336.44	438.67	0.48
Trib2a	4550	Max WS	655.14	97.96	102.86		102.92	0.002103	3.07	466.69	424.34	0.31
Trib2a	4500	Max WS	654.61	98.15	102.80		102.83	0.001030	2.24	587.60	405.56	0.22
Trib2a	4450	Max WS	654.44	97.30	102.75		102.78	0.000941	2.13	569.31	377.88	0.21
Trib2a	4400	Max WS	654.37	98.06	102.69		102.73	0.001207	2.02	525.92	383.53	0.23
Trib2a	4250.25	Max WS	649.94	96.55	102.14		102.40	0.005233	4.40	215.78	255.46	0.48
Trib2a	4200	Max WS	648.68	96.59	102.10		102.15	0.002136	2.30	377.12	274.06	0.29
Trib2a	4150	Max WS	646.28	97.16	102.01		102.06	0.001691	2.19	424.96	288.24	0.27
Trib2a	4100	Max WS	643.71	97.05	101.92		101.97	0.001793	2.26	410.24	286.11	0.27
Trib2a	4050	Max WS	644.59	96.37	101.84		101.89	0.001598	2.59	446.10	303.34	0.27
Trib2a	3900	Max WS	636.00	95.95	101.64		101.68	0.001227	2.42	515.78	342.44	0.23
Trib2a	3850	Max WS	634.66	96.20	101.59		101.62	0.000978	2.35	549.05	346.85	0.21
Trib2a	3784.11	Max WS	630.56	96.57	101.51		101.55	0.001408	2.21	482.64	350.51	0.25
Trib2a	3350	Max WS	622.62	95.27	101.10		101.12	0.000595	1.66	623.26	332.64	0.17
Trib2a	3214.64	Max WS	624.10	96.42	100.92		100.99	0.001518	2.39	396.63	335.85	0.26
Trib2a	3100	Max WS	623.48	95.40	100.74		100.81	0.001866	2.89	389.12	307.68	0.29
Trib2a	3090.*	Max WS	623.68	95.27	100.72		100.79	0.001788	2.90	395.27	313.43	0.29

HEC-RAS Plan: PostPR100YRUNMIT Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Trib2a	3080.*	Max WS	623.61	95.14	100.70		100.77	0.001721	2.91	402.74	330.32	0.28
Trib2a	3070.*	Max WS	623.54	95.02	100.69		100.76	0.001652	2.90	410.97	348.99	0.28
Trib2a	3060.*	Max WS	623.59	94.89	100.67		100.74	0.001580	2.89	420.01	368.80	0.27
Trib2a	3050	Max WS	623.36	94.76	100.65		100.73	0.001704	3.04	408.36	382.09	0.29
Trib2a	3000	Max WS	623.57	95.44	100.59		100.64	0.001437	2.59	456.51	314.83	0.26
Trib2a	2750	Max WS	622.78	95.06	99.88		100.01	0.003858	4.20	289.44	224.19	0.42
TRIB2	2409.07	Max WS	694.49	93.51	99.88		99.91	0.000821	1.97	623.96	449.47	0.20
TRIB2	2299.16	Max WS	694.43	91.10	99.82	96.62	99.84	0.000381	1.70	735.67	414.35	0.14
TRIB2	2200		Inl Struct									
TRIB2	2147.44	Max WS	683.50	92.44	98.82		98.87	0.001282	2.69	498.52	311.99	0.24
TRIB2	2078.76	Max WS	681.02	92.22	98.78		98.80	0.000377	1.22	667.65	390.45	0.13
TRIB2	1707.37	Max WS	676.96	92.46	98.48		98.52	0.001199	2.02	521.21	385.40	0.23
TRIB2	1601.61	Max WS	672.75	92.48	98.32		98.37	0.001702	2.53	495.29	420.33	0.27
TRIB2	1548.15	Max WS	671.28	92.39	98.25		98.28	0.001381	2.23	550.51	417.05	0.24
TRIB2	1500	Max WS	670.86	91.91	98.21		98.23	0.000657	1.39	720.76	434.25	0.16
TRIB2	1450	Max WS	669.90	91.87	98.17		98.19	0.000888	1.53	648.90	458.69	0.19
TRIB2	1350	Max WS	671.27	92.83	98.09		98.11	0.000769	1.86	628.55	498.25	0.19
TRIB2	1150	Max WS	671.39	92.45	97.99		98.00	0.000341	1.33	834.68	501.24	0.13
TRIB2	1006.62	Max WS	672.34	93.17	97.80		97.87	0.001831	2.64	466.60	481.81	0.29
TRIB2	961.42	Max WS	672.26	91.98	97.69		97.78	0.002556	2.88	390.80	483.26	0.33
TRIB2	848.73	Max WS	673.27	91.79	97.52		97.56	0.001163	2.04	583.62	491.53	0.23
TRIB2	752.77	Max WS	673.94	91.40	97.22		97.35	0.004618	3.86	363.73	515.99	0.44
TRIB2	700	Max WS	670.53	90.92	96.86	96.31	97.26	0.010170	5.16	147.64	521.75	0.64
TRIB2	650	Max WS	664.70	91.12	96.59		96.62	0.001652	2.40	558.26	583.98	0.27
TRIB2	600	Max WS	663.59	92.50	96.52		96.56	0.001069	2.00	591.00	522.83	0.22
TRIB2	443.45	Max WS	664.92	92.33	96.35		96.39	0.001132	2.09	497.55	312.67	0.23
TRIB2	80	Max WS	638.13	91.00	95.95		95.99	0.001220	2.36	535.52	394.48	0.24
TRIB2	70	Max WS	616.78	91.00	95.93		95.96	0.001205	2.33	525.26	393.07	0.23
Main3	17447.12	Max WS	207.24	107.81	109.25		109.25	0.000239	0.56	578.57	686.12	0.09
Main3	17437.7*	Max WS	207.36	107.67	109.24		109.25	0.000269	0.62	545.66	685.07	0.10
Main3	17428.3*	Max WS	207.23	107.52	109.24		109.24	0.000285	0.66	522.97	708.32	0.10
Main3	17418.9*	Max WS	207.21	107.38	109.24		109.24	0.000281	0.68	519.71	703.35	0.10
Main3	17409.5*	Max WS	207.13	107.23	109.24		109.24	0.000240	0.65	528.18	674.05	0.10
Main3	17400.1*	Max WS	207.16	107.08	109.23	108.12	109.24	0.000186	0.59	573.79	713.35	0.08
Main3	17400		Inl Struct									
Main3	17390.78	Max WS	206.15	106.94	108.91		108.94	0.000950	1.18	192.47	612.18	0.19
Main3	17350	Max WS	205.62	106.91	108.84		108.88	0.001984	1.75	173.67	572.87	0.27
Main3	17239.4	Max WS	200.62	106.54	108.67		108.70	0.001445	1.61	203.56	506.12	0.24
Main3	16882.6	Max WS	201.09	106.24	108.19		108.22	0.001330	1.68	204.54	251.76	0.23
Main3	16650	Max WS	201.07	106.39	107.96		107.97	0.000871	1.10	290.79	410.54	0.18
Main3	16536.56	Max WS	202.11	106.27	107.89		107.90	0.000375	0.72	413.87	455.97	0.12
Main3	15950	Max WS	202.07	104.49	107.60		107.61	0.000661	1.10	342.43	492.75	0.16
Main3	15556.6	Max WS	202.79	104.62	107.28		107.30	0.000987	1.49	210.24	199.20	0.20
Main3	15479	Max WS	206.14	104.11	107.18		107.21	0.001423	1.90	201.54	312.02	0.24
Main3	15270.69	Max WS	214.78	104.25	106.90		106.92	0.001382	1.31	223.26	251.71	0.22
Main3	15063.95	Max WS	217.29	102.46	106.65		106.69	0.000993	1.90	206.07	289.13	0.21
Main3	14955.43	Max WS	180.66	103.59	106.47		106.51	0.001538	1.63	160.05	261.31	0.24
Main3	14788.2	Max WS	182.19	101.86	106.27		106.29	0.000827	1.18	253.32	356.04	0.17
Main3	14628.77	Max WS	187.41	102.21	106.18		106.18	0.000456	1.12	332.18	362.86	0.14
Main3	14541.77	Max WS	186.43	102.08	106.15		106.15	0.000259	0.85	373.79	321.41	0.10
Main3	14280.86	Max WS	394.61	100.65	105.95		105.97	0.001050	2.01	364.69	256.74	0.20
Main3	14234.63	Max WS	394.64	100.96	105.90		105.92	0.000931	1.49	349.12	216.26	0.19
Main3	14185.8	Max WS	406.05	100.28	105.85		105.88	0.000750	1.54	337.94	156.27	0.18
Main3	14016.19	Max WS	403.34	101.50	105.51		105.61	0.002135	2.54	163.03	107.52	0.30
Main3	13950	Max WS	431.06	101.08	105.41		105.46	0.001339	2.41	349.46	335.41	0.25
Main3	13850	Max WS	417.14	100.53	105.29		105.32	0.000947	2.03	388.13	449.95	0.21
Main3	13750	Max WS	413.95	98.79	105.22		105.24	0.000407	1.62	463.39	463.35	0.14
Main3	13600	Max WS	436.49	99.49	105.05		105.10	0.001431	2.64	289.02	393.77	0.26
Main3	13450	Max WS	432.42	99.56	104.88		104.91	0.001189	2.27	405.61	612.05	0.22
Main3	13391.27	Max WS	428.98	99.51	104.73		104.82	0.002581	3.19	249.82	490.97	0.33
Main3	13266.46	Max WS	422.83	98.98	104.56		104.59	0.000849	2.28	393.50	303.21	0.20
Main3	13150	Max WS	420.13	98.95	104.39		104.45	0.001724	3.08	293.82	350.35	0.28
Main3	12950	Max WS	405.88	98.54	104.19		104.21	0.000537	1.69	482.40	369.99	0.16
Main3	12900	Max WS	396.09	97.80	104.18		104.19	0.000250	1.25	550.78	350.12	0.11
Main3	12850	Max WS	385.42	97.94	104.16		104.18	0.000507	1.60	437.91	317.23	0.15
Main3	12700	Max WS	385.68	99.10	104.04		104.07	0.000868	1.92	392.50	369.49	0.20
Main3	12393.1	Max WS	376.52	97.00	103.74		103.80	0.001140	2.26	313.55	452.87	0.23
Main3	12350	Max WS	370.17	96.55	103.73		103.74	0.000427	1.40	454.97	466.69	0.14
Main3	12150	Max WS	384.65	97.28	103.56		103.63	0.000939	2.41	260.58	585.50	0.21
Main3	12100	Max WS	424.24	97.22	103.34		103.59	0.003909	4.36	162.68	508.53	0.42
Main3	12050	Max WS	420.20	96.90	103.17	101.55	103.39	0.003773	3.86	132.18	405.71	0.41
Main3	11896.14	Max WS	415.11	96.27	102.87		102.94	0.001588	2.01	206.12	361.54	0.25
Main3	11700	Max WS	413.64	97.61	102.73		102.74	0.000316	1.25	603.77	471.16	0.12
Main3	11600	Max WS	411.51	97.58	102.61		102.66	0.001479	2.56	345.73	415.22	0.26
Main3	11346.39	Max WS	406.46	96.94	102.18		102.28	0.001858	2.81	230.58	312.38	0.29
Main3	11000	Max WS	400.91	95.56	101.58		101.69	0.001851	2.87	214.13	196.57	0.29

HEC-RAS Plan: PostPR100YRUNMIT Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main3	10950	Max WS	396.88	96.78	101.38		101.58	0.003837	3.79	155.52	216.81	0.41
Main3	10850	Max WS	393.54	96.17	101.23		101.28	0.001201	2.31	295.89	279.58	0.23
Main3	10800	Max WS	394.94	95.97	101.16		101.23	0.001383	2.49	267.53	273.77	0.25
Main3	10650	Max WS	388.63	95.97	101.05		101.07	0.000484	1.50	384.25	284.97	0.15
Main3	10600	Max WS	388.41	96.78	101.02		101.05	0.000582	1.52	384.26	324.96	0.16
Main3	10496.09	Max WS	387.74	95.06	100.96		100.98	0.000668	1.68	419.48	374.22	0.17
Main3	10323.48	Max WS	387.14	94.27	100.85		100.88	0.000557	1.60	414.58	330.04	0.16
Main3	10150	Max WS	386.72	94.92	100.74		100.77	0.000698	1.86	341.49	236.42	0.18
Main3	10089.9	Max WS	385.82	94.80	100.62		100.72	0.001959	2.74	208.62	283.39	0.30
Main3	10050	Max WS	385.33	94.29	100.58		100.64	0.001327	2.32	226.37	273.94	0.24
Main3	10000	Max WS	384.63	94.56	100.51		100.58	0.001386	2.35	249.06	379.57	0.25
Main3	9869.95	Max WS	384.30	94.14	100.42		100.44	0.000449	1.76	474.11	561.00	0.15
Main3	9595.54	Max WS	384.94	94.94	100.23		100.27	0.000885	1.90	315.00	288.36	0.20
Main3	9343.2	Max WS	385.80	94.38	99.79		99.89	0.002517	3.24	220.97	351.05	0.33
Main3	9300	Max WS	385.70	93.82	99.69		99.80	0.002275	3.35	213.14	336.87	0.32
Main3	9100	Max WS	376.21	94.32	99.16		99.26	0.003108	2.90	211.13	317.67	0.36
Main3	9000	Max WS	362.28	94.38	99.00		99.04	0.001082	1.83	277.00	310.32	0.22
Main3	8350	Max WS	342.78	92.98	98.64		98.64	0.000188	1.06	615.26	350.36	0.10
Main3	8162.22	Max WS	341.63	93.75	98.58		98.60	0.000326	1.16	486.06	325.49	0.12
Main3	7850.11	Max WS	340.98	93.09	98.52		98.52	0.000135	0.82	732.26	439.96	0.08
Main3	7633.01	Max WS	345.11	91.62	98.50		98.50	0.000078	0.79	854.84	441.09	0.06
Main3	7536.49	Max WS	346.15	91.92	98.49		98.49	0.000037	0.46	1252.22	605.39	0.04
Main3	7500	Max WS	359.00	92.94	98.49		98.49	0.000052	0.56	998.58	488.05	0.05
Main3	7429.50*	Max WS	361.47	92.68	98.48		98.49	0.000116	0.81	722.30	376.29	0.08
Main3	7359.01	Max WS	362.47	92.42	98.16		98.65	0.004888	5.62	64.88	310.19	0.49
Main3	6910.56	Max WS	248.37	90.51	96.81		96.97	0.001229	3.20	77.72	305.93	0.26
Main3	6872.46	Max WS	249.71	91.27	96.86		96.87	0.000196	1.01	472.08	306.66	0.10
Main3	6795.89	Max WS	250.09	91.48	96.84		96.85	0.000183	0.94	486.22	308.55	0.09
Main3	6671.06	Max WS	285.25	91.24	95.93		95.95	0.000984	1.73	314.93	331.19	0.20
Trib1	1500	Max WS	338.09	91.00	93.14		93.55	0.014465	5.18	65.29	42.30	0.73
Trib1	1450	Max WS	337.93	91.00	92.81		92.97	0.007832	3.24	104.15	88.15	0.53
Trib1	1400	Max WS	338.43	90.50	92.59		92.68	0.003910	2.79	153.67	127.84	0.39
Trib1	1350	Max WS	338.99	90.50	92.47		92.52	0.002197	1.99	194.73	158.38	0.29
Trib1	1300	Max WS	339.74	90.50	92.36		92.41	0.002348	1.83	188.29	164.29	0.29
Trib1	1250	Max WS	340.85	90.54	92.19		92.26	0.003438	2.15	165.99	158.62	0.35
Trib1	1200	Max WS	341.32	90.27	91.92		92.04	0.005776	2.94	135.69	142.92	0.46
Trib1	1150	Max WS	340.68	90.13	91.72		91.80	0.003553	2.29	155.07	149.68	0.36
Trib1	1100	Max WS	336.17	90.10	91.56		91.63	0.003236	2.09	166.54	165.87	0.34
Trib1	1050	Max WS	333.28	90.06	91.42		91.48	0.002738	1.91	188.11	191.03	0.31
Trib1	1004.24	Max WS	333.06	89.67	91.35		91.38	0.001265	1.42	280.40	364.19	0.22
Trib1	920.64	Max WS	334.51	88.86	91.31		91.32	0.000112	0.57	766.34	501.65	0.07
Trib1	800	Max WS	422.93	88.71	91.30		91.30	0.000066	0.45	954.95	475.51	0.05
Trib1	750	Max WS	462.92	88.77	91.29		91.30	0.000125	0.60	794.33	422.54	0.07
Trib1	650	Max WS	465.26	88.80	91.14		91.20	0.002356	2.28	320.47	433.96	0.31
Trib1	603.8	Max WS	464.86	88.51	90.92		91.05	0.004912	3.12	169.07	192.44	0.44
Trib1	550	Max WS	73.47	88.68	90.82		90.82	0.000087	0.43	191.87	142.86	0.06
Trib1	504.41	Max WS	73.43	88.43	90.82		90.82	0.000039	0.31	251.99	162.32	0.04
Trib1	478.55	Max WS	75.69	88.39	90.82		90.82	0.000030	0.27	289.06	173.33	0.04
Main2	6100	Max WS	902.03	89.62	95.93		95.97	0.001189	2.26	607.02	341.10	0.23
Main2	5995.41	Max WS	899.77	89.33	95.88		95.89	0.000279	1.26	1147.17	472.02	0.11
Main2	5852.28	Max WS	898.99	89.05	95.84		95.85	0.000241	1.23	1155.11	450.15	0.11
Main2	5700	Max WS	900.73	88.85	95.81		95.81	0.000211	1.10	1358.76	587.92	0.10
Main2	5650	Max WS	899.40	89.40	95.80		95.80	0.000203	0.97	1343.06	568.74	0.10
Main2	5600	Max WS	898.59	88.79	95.78		95.79	0.000326	1.35	1104.59	532.30	0.12
Main2	5550	Max WS	903.57	89.09	95.75		95.77	0.000571	1.68	871.95	444.53	0.16
Main2	5500	Max WS	903.31	89.47	95.72		95.74	0.000553	1.56	820.36	360.70	0.16
Main2	5450	Max WS	902.80	90.05	95.69		95.71	0.000577	1.69	820.68	375.74	0.17
Main2	5400	Max WS	902.78	89.00	95.66		95.69	0.000433	1.82	831.07	339.50	0.15
Main2	5347.58	Max WS	902.84	89.63	95.64		95.66	0.000504	1.70	849.40	367.45	0.16
Main2	5300	Max WS	902.94	89.20	95.62		95.64	0.000452	1.55	902.59	398.23	0.15
Main2	5250	Max WS	903.22	89.77	95.60		95.62	0.000540	1.66	838.41	369.82	0.16
Main2	5200	Max WS	903.32	89.49	95.56		95.59	0.000596	1.57	777.31	363.29	0.16
Main2	5150	Max WS	903.57	88.25	95.53		95.56	0.000638	1.71	747.80	311.65	0.17
Main2	5100	Max WS	904.89	86.86	95.50		95.54	0.000423	2.13	802.39	391.41	0.15
Main2	5050	Max WS	906.39	88.33	95.20	95.50	96.09	0.012301	8.40	204.41	396.12	0.74
Main2	5000	Max WS	907.32	89.31	94.86		94.91	0.001677	2.54	571.17	396.60	0.27
Main2	4950	Max WS	907.44	89.11	94.78		94.83	0.001619	2.55	595.10	409.13	0.27
Main2	4900	Max WS	907.58	87.49	94.71		94.75	0.001487	2.44	620.32	434.39	0.25
Main2	4850	Max WS	907.73	88.91	94.63		94.68	0.001517	2.53	634.61	457.21	0.26
Main2	4800	Max WS	907.94	88.72	94.56		94.61	0.001349	2.28	671.56	449.92	0.25
Main2	4750	Max WS	908.22	87.72	94.50		94.55	0.001091	2.54	703.06	445.08	0.23
Main2	4700	Max WS	908.50	88.29	94.44		94.49	0.001161	2.48	668.87	446.09	0.24
Main2	4650	Max WS	908.80	87.95	94.36		94.43	0.001777	3.03	570.20	406.83	0.29
Main2	4504.57	Max WS	908.70	87.06	93.74		93.93	0.005501	4.15	317.86	278.29	0.48
Main2	4397.85	Max WS	907.08	88.02	93.46		93.52	0.001715	2.55	532.12	365.49	0.28
Main2	4231.14	Max WS	906.98	87.89	93.16		93.21	0.002012	2.63	558.47	390.91	0.30

HEC-RAS Plan: PostPR100YRUNMIT Profile: Max WS (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main2	4128.64	Max WS	905.42	86.00	93.01		93.05	0.001230	2.37	621.18	345.66	0.23
Main2	4061.14	Max WS	904.93	87.21	92.93		92.97	0.001097	2.16	641.91	353.10	0.22
Main2	4000	Max WS	904.24	87.79	92.87		92.90	0.001045	1.90	681.02	408.22	0.21
Main2	3950	Max WS	903.38	87.78	92.78		92.83	0.002091	2.72	590.25	445.79	0.30
Main2	3900	Max WS	902.78	87.81	92.72		92.75	0.000780	1.86	789.56	474.09	0.19
Main2	3850	Max WS	905.07	87.27	92.66		92.70	0.001200	2.38	580.52	302.24	0.23
Main2	3808.17	Max WS	904.88	87.69	92.61		92.65	0.001044	1.97	597.93	302.98	0.22
Main2	3750	Max WS	904.34	86.70	92.57		92.60	0.000821	1.87	663.13	316.97	0.19
Main2	3700	Max WS	904.21	84.31	92.54		92.56	0.000633	1.69	738.56	346.35	0.17
Main2	3650	Max WS	904.35	87.21	92.50		92.53	0.000852	1.72	698.45	359.00	0.19
Main2	3600	Max WS	904.23	87.47	92.45		92.48	0.000927	1.77	684.86	418.72	0.20
Main2	3550.1	Max WS	906.85	86.93	92.40		92.44	0.001154	1.91	661.77	516.09	0.22
Main2	3500	Max WS	906.62	86.01	92.35		92.39	0.000803	2.04	742.19	464.92	0.20
Main2	3450	Max WS	906.58	87.68	92.31		92.34	0.000981	2.10	729.95	437.77	0.21
Main2	3400	Max WS	906.44	86.44	92.24		92.29	0.001303	2.47	610.78	353.15	0.24
Main2	3344.35	Max WS	906.14	86.87	92.17		92.21	0.001317	2.49	555.34	271.89	0.25
Main2	3320.7	Max WS	906.17	86.20	92.12		92.18	0.001571	2.73	501.84	237.89	0.26
Main2	3250	Max WS	907.80	85.52	92.04		92.08	0.001177	2.59	563.05	232.37	0.23
Main2	3200	Max WS	907.33	85.71	91.98		92.03	0.001026	2.09	577.05	231.15	0.22
Main2	3150	Max WS	907.26	85.68	91.93		91.98	0.001121	2.35	556.08	238.64	0.23
Main2	3100	Max WS	906.90	86.67	91.87		91.92	0.001178	2.10	550.43	254.41	0.23
Main2	3050	Max WS	908.57	85.39	91.81		91.86	0.001172	2.18	556.78	295.67	0.23
Main2	3000	Max WS	908.31	86.35	91.78		91.81	0.000889	1.99	722.01	391.63	0.20
Main2	2950	Max WS	908.57	85.70	91.75		91.77	0.000647	1.62	817.36	393.14	0.17
Main2	2900	Max WS	908.54	85.85	91.71		91.74	0.000660	1.78	766.72	345.15	0.18
Main2	2850	Max WS	908.45	85.33	91.67		91.70	0.000880	2.23	677.66	295.00	0.20
Main2	2800	Max WS	908.44	86.78	91.61		91.65	0.001031	2.18	599.77	263.38	0.22
Main2	2750.23	Max WS	908.05	86.59	91.53		91.59	0.001697	2.81	503.76	239.26	0.28
Main2	2700	Max WS	907.51	86.41	91.45		91.51	0.001553	2.71	513.59	242.78	0.27
Main2	2650	Max WS	906.44	85.77	91.34		91.42	0.002112	3.02	468.69	240.20	0.31
Main2	2600	Max WS	904.37	85.86	91.23		91.31	0.002301	3.26	448.40	238.34	0.33
Main2	2550	Max WS	902.14	85.20	91.10		91.19	0.002482	3.18	424.28	229.02	0.34
Main2	2500	Max WS	898.76	84.82	91.00		91.07	0.002143	2.76	467.42	253.99	0.31
Main2	2450	Max WS	893.66	86.53	90.90		90.97	0.002208	2.83	490.51	290.83	0.32
Main2	2397.32	Max WS	888.36	84.95	90.82		90.88	0.001247	2.58	577.35	326.50	0.25
Main1	2291.46	Max WS	964.14	85.53	90.82		90.84	0.000736	1.54	922.34	523.03	0.18
Main1	2189.07	Max WS	963.34	84.62	90.76		90.78	0.000492	1.54	1048.43	530.61	0.15
Main1	2069.18	Max WS	961.57	84.94	90.71		90.73	0.000354	1.39	1207.91	581.63	0.13
Main1	1990.13	Max WS	963.16	84.45	90.69		90.70	0.000314	1.17	1264.88	616.81	0.12
Main1	1902.51	Max WS	962.38	84.27	90.66		90.67	0.000348	1.48	1187.22	554.69	0.13
Main1	1760.99	Max WS	962.06	85.19	90.58		90.60	0.000663	1.77	846.01	402.85	0.18
Main1	1698.99	Max WS	961.31	83.95	90.54		90.56	0.000623	2.07	855.85	381.51	0.17
Main1	1600	Max WS	961.01	84.38	90.47		90.50	0.000748	1.89	765.94	358.79	0.19
Main1	1550	Max WS	961.09	83.89	90.42		90.46	0.000846	2.19	702.54	331.46	0.20
Main1	1500	Max WS	960.71	83.11	90.37		90.41	0.001121	2.38	639.39	330.83	0.23
Main1	1300	Max WS	959.91	84.29	90.20		90.23	0.000660	2.18	763.00	298.02	0.18
Main1	1250	Max WS	959.96	82.78	90.18		90.20	0.000466	1.74	880.46	329.57	0.15
Main1	1200	Max WS	964.43	83.63	90.15		90.18	0.000505	1.95	841.78	309.39	0.16
Main1	1150	Max WS	964.38	82.93	90.13		90.16	0.000432	1.93	854.54	292.19	0.15
Main1	1050	Max WS	964.28	84.00	90.08		90.11	0.000546	1.87	771.25	255.82	0.16
Main1	1000	Max WS	963.91	82.49	90.05		90.08	0.000574	2.07	721.65	233.80	0.17
Main1	902.45	Max WS	963.82	81.20	89.71		89.95	0.003627	4.85	291.44	112.01	0.39
Main1	850	Max WS	963.76	82.25	89.60		89.78	0.002560	4.25	338.01	139.09	0.35
Main1	800	Max WS	963.86	81.79	89.55		89.66	0.001559	3.65	444.07	167.42	0.28
Main1	750	Max WS	961.81	80.96	89.49		89.59	0.001414	3.37	470.50	186.77	0.27
Main1	700	Max WS	960.68	80.75	89.44		89.51	0.001193	2.86	520.65	211.14	0.24
Main1	650	Max WS	960.08	80.03	89.37		89.46	0.001283	3.36	532.90	249.09	0.25
Main1	550	Max WS	961.56	78.91	89.30		89.35	0.000642	2.42	700.40	288.00	0.18
Main1	500	Max WS	956.58	81.77	89.28		89.32	0.000577	2.16	730.42	272.56	0.18
Main1	450.28	Max WS	953.56	81.91	89.26		89.29	0.000410	1.87	761.50	240.34	0.15
Main1	411.53	Max WS	947.78	79.33	89.23		89.27	0.000665	2.19	664.85	235.70	0.18
Main1	381.37	Max WS	938.97	81.25	89.18		89.26	0.001299	2.88	513.37	221.79	0.25
Main1	316.15	Max WS	935.20	80.18	89.00		89.16	0.002235	3.72	374.85	186.47	0.33
Main1	250	Max WS	934.00	81.54	88.66		88.93	0.004740	4.78	286.54	175.66	0.47
Main1	200	Max WS	964.23	81.23	88.07	88.01	88.58	0.016010	6.09	202.32	213.59	0.79
Main1	161.78	Max WS	787.99	80.38	87.77		87.83	0.002295	2.44	529.17	774.87	0.30
Main1	126.68	Max WS	783.46	80.35	87.71		87.76	0.001621	2.12	577.21	805.07	0.26
Main1	76.78	Max WS	797.94	81.56	87.65	86.91	87.70	0.001481	2.58	650.74	791.31	0.26

HEC-RAS Plan: Post ARPostPRUNM River: PGC North Branch Reach: Placer Trib Profile: Max WS

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Placer Trib	66.0000	Max WS	309.79	110.59	116.00		116.03	0.001786	1.89	279.07	177.56	0.17
Placer Trib	65.0000	Max WS	309.75	109.85	115.71		115.80	0.003221	2.60	168.27	178.53	0.23
Placer Trib	64.0000	Max WS	309.19	109.50	114.40		114.53	0.006632	3.33	165.48	185.26	0.31
Placer Trib	63.0000	Max WS	416.44	109.24	113.82		113.84	0.001855	1.58	434.22	311.90	0.16
Placer Trib	62.0000	Max WS	351.56	109.35	113.70		113.70	0.000232	0.55	1001.23	635.83	0.06
Placer Trib	61.0000	Max WS	352.70	108.83	113.55		113.56	0.000412	0.88	776.87	484.38	0.08
Placer Trib	60.0000	Max WS	352.40	107.78	113.41		113.43	0.000780	1.35	466.44	248.67	0.11
Placer Trib	59.0000	Max WS	367.22	107.59	113.32		113.33	0.000569	1.07	592.97	320.85	0.09
Placer Trib	58.0000	Max WS	367.72	107.73	113.26		113.26	0.000080	0.43	1190.27	501.18	0.04
Placer Trib	57.0000	Max WS	368.58	105.82	113.25		113.25	0.000050	0.33	1530.27	479.91	0.03
Placer Trib	56.0000	Max WS	369.51	105.33	112.02		112.25	0.007492	4.20	131.08	383.89	0.33
Placer Trib	55.0000	Max WS	369.96	105.57	111.14		111.16	0.001086	1.36	446.02	311.50	0.13
Placer Trib	54.0000	Max WS	372.94	104.60	110.84		110.85	0.000972	1.31	533.28	350.67	0.12
Placer Trib	53.0000	Max WS	379.91	104.84	110.38		110.43	0.002274	2.07	302.12	177.58	0.19
Placer Trib	52.0000	Max WS	380.12	103.99	110.06		110.09	0.001418	1.63	334.39	194.24	0.15
Placer Trib	51.0000	Max WS	380.76	103.62	109.75		109.78	0.001276	1.56	403.79	289.00	0.14
Placer Trib	50.0000	Max WS	381.28	103.34	109.49		109.50	0.000820	1.41	454.39	193.87	0.11
Placer Trib	49.0000	Max WS	381.83	103.19	109.28		109.29	0.000948	1.43	542.95	373.92	0.12
Placer Trib	48.0000	Max WS	382.46	103.11	109.06		109.09	0.001181	1.52	392.17	307.37	0.14
Placer Trib	47.0000	Max WS	383.54	101.60	108.09		108.21	0.004679	2.79	139.10	331.60	0.27
Placer Trib	46.0000	Max WS	384.40	101.67	107.04		107.17	0.004983	3.35	169.30	177.63	0.28
Placer Trib	45.0000	Max WS	384.94	101.32	106.66		106.70	0.002003	1.92	338.26	196.87	0.18
Placer Trib	44.0000	Max WS	386.88	101.09	106.52		106.53	0.000267	0.80	635.98	233.13	0.07
Placer Trib	43.0000	Max WS	397.11	100.19	105.74		105.98	0.011104	3.95	113.07	93.48	0.40
Placer Trib	42	Max WS	439.21	100.80	104.56		104.57	0.000903	1.20	521.77	257.83	0.12
Placer Trib	41.12*	Max WS	439.48	100.52	104.49		104.50	0.000855	1.22	560.43	281.81	0.12
Placer Trib	40.24*	Max WS	439.84	100.24	104.41		104.42	0.000843	1.27	590.26	309.75	0.12
Placer Trib	39.36*	Max WS	440.18	99.96	104.34		104.35	0.000862	1.33	609.06	340.87	0.12
Placer Trib	38.48*	Max WS	440.52	99.68	104.26		104.27	0.000905	1.42	615.42	373.56	0.12
Placer Trib	37.6	Max WS	440.87	99.40	104.17		104.19	0.000972	1.52	607.58	407.77	0.13
Placer Trib	36.6*	Max WS	440.83	99.30	104.08		104.10	0.000885	1.41	620.90	366.77	0.12
Placer Trib	35.6	Max WS	440.82	99.20	104.02		104.02	0.000518	1.05	611.08	209.19	0.09
Placer Trib	34.6*	Max WS	440.80	99.30	103.92		103.94	0.001314	1.64	497.59	285.64	0.15
Placer Trib	33.6*	Max WS	440.78	99.40	103.63		103.70	0.003917	2.67	319.02	277.88	0.25
Placer Trib	32.6	Max WS	440.78	99.50	103.16		103.24	0.005360	2.80	237.20	145.71	0.29
Placer Trib	31.6*	Max WS	441.53	98.95	102.59		102.67	0.006089	2.85	251.46	196.16	0.30
Placer Trib	30.6	Max WS	445.97	98.40	102.27		102.29	0.001064	1.20	525.68	252.05	0.13
Placer Trib	29.7*	Max WS	447.43	97.98	102.14		102.16	0.001760	1.53	431.41	238.03	0.16
Placer Trib	28.8*	Max WS	447.27	97.56	101.90		101.94	0.003328	2.03	344.27	295.73	0.22
Placer Trib	27.9*	Max WS	446.47	97.14	101.58		101.62	0.003900	2.05	370.95	362.93	0.23
Placer Trib	27*	Max WS	445.64	96.72	101.36		101.37	0.001449	1.19	516.91	398.46	0.14
Placer Trib	26.1	Max WS	445.28	96.30	101.28		101.29	0.000435	0.65	829.42	410.06	0.08
Placer Trib	25.2*	Max WS	452.25	96.23	101.23		101.24	0.000671	0.96	690.11	383.79	0.10
Placer Trib	24.3*	Max WS	452.04	96.15	101.16		101.17	0.000830	1.19	584.62	330.77	0.11
Placer Trib	23.4*	Max WS	451.50	96.07	101.08		101.10	0.000780	1.25	522.41	264.38	0.11
Placer Trib	22.5	Max WS	451.33	96.00	101.02		101.04	0.000623	1.18	497.24	202.46	0.10
Placer Trib	21.6*	Max WS	450.88	95.65	100.95		100.97	0.000881	1.28	511.88	349.33	0.12
Placer Trib	20.7	Max WS	450.22	95.30	100.83		100.86	0.001685	1.56	429.85	380.06	0.16
Placer Trib	19.8*	Max WS	449.61	95.10	100.71		100.73	0.001173	1.32	505.98	477.92	0.13
Placer Trib	18.9	Max WS	449.20	94.90	100.63		100.64	0.000773	1.06	634.19	516.54	0.11
Placer Trib	17.92*	Max WS	468.21	94.60	100.55		100.56	0.000791	1.16	602.73	443.03	0.11
Placer Trib	16.94*	Max WS	467.56	94.30	100.47		100.49	0.000794	1.25	584.53	456.45	0.11
Placer Trib	15.96*	Max WS	466.93	94.00	100.40		100.42	0.000636	1.18	696.50	493.03	0.10
Placer Trib	14.98*	Max WS	466.58	93.70	100.36		100.36	0.000383	0.97	872.15	478.20	0.08
Placer Trib	14	Max WS	466.41	93.40	100.33		100.34	0.000201	0.71	1105.01	465.31	0.06
Placer Trib	13.075*	Max WS	466.28	93.70	100.30		100.31	0.000355	0.96	862.36	397.05	0.08
Placer Trib	12.15*	Max WS	466.18	94.00	100.25		100.27	0.000645	1.29	654.50	327.02	0.11
Placer Trib	11.225*	Max WS	465.94	94.30	100.16		100.19	0.001172	1.70	478.68	250.99	0.14
Placer Trib	10.3	Max WS	465.30	94.60	99.97		100.03	0.002380	2.33	323.28	194.12	0.20
Placer Trib	9.525*	Max WS	464.70	94.10	99.82		99.86	0.001922	2.03	363.32	219.70	0.18
Placer Trib	8.75*	Max WS	464.16	93.60	99.70		99.73	0.001329	1.64	452.52	259.71	0.15
Placer Trib	7.975*	Max WS	463.80	93.10	99.63		99.65	0.000807	1.25	648.36	407.16	0.11
Placer Trib	7.2	Max WS	463.77	92.60	99.59		99.60	0.000314	0.76	990.42	497.03	0.07
Placer Trib	6.3333*	Max WS	463.65	92.17	99.57		99.58	0.000235	0.75	1029.89	447.96	0.06
Placer Trib	5.46659*	Max WS	463.56	91.73	99.55		99.56	0.000191	0.75	1043.30	401.44	0.06
Placer Trib	4.5999	Max WS	463.57	91.30	99.54		99.54	0.000170	0.77	1027.48	357.87	0.06
Placer Trib	3.6666*	Max WS	463.57	91.07	99.52		99.53	0.000165	0.78	1060.14	400.84	0.06
Placer Trib	2.7333*	Max WS	463.57	90.83	99.51		99.51	0.000158	0.78	1086.97	438.14	0.05
Placer Trib	1.8	Max WS	463.54	90.60	99.49		99.50	0.000150	0.77	1103.56	467.41	0.05
Placer Trib	0.9*	Max WS	463.52	90.55	99.48		99.49	0.000066	0.52	1518.72	489.61	0.04
Placer Trib	0	Max WS	463.50	90.50	99.48		99.48	0.000076	0.57	1159.11	285.81	0.04

Appendix E
XPStorm Pipe Data and Results

XPStorm Results
10-Year

Name	Scenario	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
University Creek																		
Link88	10yr	PRD001A	PRD001X	90.62	90.50	0.11	3.00	1	113	0.015	33.34	98.60	98.50	92.99	92.38	92.99	92.88	2.66
Link90	10yr	PRD000A	PRD000X	87.02	86.90	0.11	3.00	1	107	0.015	18.56	95.00	94.90	88.74	88.28	88.74	88.60	2.74
Link167	10yr	PRD002A	PRD002X	86.69	86.60	0.08	4.00	1	107	0.015	17.35	95.70	95.60	88.20	87.82	88.20	88.08	2.87
Link168	10yr	PRD003A	PRD003X	89.14	89.00	0.11	3.00	1	125	0.015	26.84	97.10	97.00	91.26	90.67	91.26	91.09	2.74
Link169	10yr	PRD011A	PRD011X	89.19	89.00	0.13	2.50	1	144	0.015	12.83	96.70	96.50	90.77	90.20	90.77	90.46	2.63
Link170	10yr	PRD012A	PRD012X	89.20	89.00	0.13	2.50	1	153	0.015	9.42	96.70	96.50	90.55	90.02	90.55	90.22	2.62
Link171	10yr	PRD013A	PRD013X	90.22	90.10	0.11	3.00	1	113	0.015	18.94	98.20	98.10	91.97	91.49	91.97	91.82	2.66
Link172	10yr	PRD014A	PRD014X	92.19	92.00	0.11	3.00	1	176	0.015	21.28	100.20	100.00	94.15	93.48	94.15	93.80	2.69
Link173	10yr	PRD023A	PRD023X	94.29	94.00	0.18	2.00	1	163	0.015	9.67	101.30	101.00	95.81	95.11	95.81	95.35	2.63
Link174	10yr	PRD024A	PRD024X	94.48	94.30	0.13	2.50	1	141	0.015	14.59	102.00	101.80	96.17	95.59	96.17	95.87	2.59
Link175	10yr	PRD025A	PRD025X	94.81	94.70	0.11	3.00	1	100	0.015	14.30	102.80	102.70	96.30	95.90	96.35	96.18	2.71
Link176	10yr	OFF016A	PRD025B	96.48	96.22	0.13	2.50	1	200	0.015	5.39	104.00	103.70	97.62	97.38	97.62	97.47	2.61
Link177	10yr	PRD025B	PRD025A	96.22	95.31	0.13	2.50	1	700	0.015	5.30	103.70	102.80	97.38	96.30	97.47	96.35	2.61
Link178	10yr	PRD037A	PRD037X	95.19	95.00	0.25	1.50	1	75	0.015	7.25	101.70	101.50	96.59	96.04	96.59	96.34	2.59
Link179	10yr	PRD028A	PRD028X	96.24	96.00	0.18	2.00	1	133	0.015	8.01	103.20	103.00	97.57	97.01	97.57	97.22	2.65
Link180	10yr	PRD027A	PRD027X	96.13	95.90	0.18	2.00	1	129	0.015	9.39	103.10	102.90	97.58	96.99	97.58	97.24	2.64
Link181	10yr	PRD026A	PRD026X	93.10	93.00	0.11	3.00	1	88	0.015	21.71	101.10	101.00	94.92	94.50	94.92	94.88	2.76
Link182	10yr	PRD015A	PRD015X	93.37	93.30	0.06	5.50	2	117	0.015	110.08	103.90	103.80	95.77	95.32	96.01	95.82	3.00
Link183	10yr	PRD008A	PRD008X	89.39	89.20	0.13	2.50	1	146	0.015	16.10	96.90	96.70	91.18	90.55	91.18	90.86	2.61
Link184	10yr	PRD021A	PRD020A	94.49	93.89	0.06	5.00	1	1000	0.015	28.62	104.50	103.90	97.28	96.94	97.28	97.02	2.82
Link185	10yr	PRD020A	PRD019B	93.89	93.53	0.06	5.00	1	600	0.015	47.22	103.90	103.50	96.94	96.39	97.02	96.59	2.82
Link186	10yr	PRD019B	PRD019A	93.53	92.99	0.06	5.00	1	900	0.015	44.60	103.50	103.00	96.39	94.90	96.59	95.15	2.82
Link187	10yr	PRD019A	PRD019X	92.49	92.40	0.06	5.50	1	147	0.015	53.40	103.00	102.90	94.90	94.39	95.15	94.85	3.03
Link188	10yr	PRD015B	PRD015A	93.91	93.37	0.06	5.50	2	900	0.015	104.12	104.40	103.90	96.94	95.77	97.15	96.01	3.00
Link189	10yr	PRD016A	PRD015B	94.27	93.91	0.06	5.50	2	600	0.015	106.19	104.80	104.40	97.46	96.94	97.62	97.15	3.00
Link190	10yr	PRD010A	PRD016A	94.75	94.27	0.06	5.50	2	800	0.015	94.29	105.30	104.80	97.94	97.46	98.67	97.62	3.00
Link191	10yr	PRD017A	PRD010A	96.29	96.25	0.08	4.00	1	50	0.015	39.21	105.30	105.30	98.39	98.12	98.51	98.67	2.80
Link192	10yr	PRD010B	PRD010A	95.85	95.25	0.06	5.00	2	1000	0.015	54.82	105.90	105.30	98.45	97.94	98.80	98.67	2.82
Link193	10yr	PRD022A	PRD010B	98.90	97.85	0.11	3.00	1	950	0.015	7.26	106.90	105.90	100.22	98.70	100.22	98.80	2.72
Link194	10yr	OFF001A	PRD101B	99.77	99.57	0.13	2.50	1	150	0.015	3.96	107.30	107.10	100.65	100.42	100.65	100.49	2.64
Link195	10yr	PRD101B	PRD101A	99.57	98.53	0.13	2.50	1	800	0.015	2.87	107.10	106.00	100.42	99.08	100.49	99.15	2.61
Link196	10yr	PRD101A	PRD010B	96.03	95.85	0.06	5.00	1	300	0.015	50.60	106.00	105.90	98.90	98.45	99.15	98.80	2.82
Link197	10yr	PRD018A	PRD017A	97.01	96.29	0.08	4.00	1	900	0.015	19.28	106.00	105.30	99.14	98.39	99.14	98.51	2.80
Link199	10yr	PRD007A	PRD009A	92.37	91.69	0.08	4.00	1	850	0.015	21.25	101.40	100.70	94.63	93.91	94.63	94.04	2.80
Link200	10yr	PRD009A	PRD005A	91.69	91.57	0.08	4.00	1	150	0.015	35.76	100.70	100.60	93.91	93.35	94.04	93.76	2.80
Link201	10yr	PRD005A	PRD005X	91.07	91.00	0.07	4.50	1	100	0.015	40.05	100.60	100.50	93.23	92.82	93.76	93.28	2.84
Link202	10yr	PRD006A	PRD004B	96.24	95.57	0.07	4.50	1	950	0.015	37.31	105.70	105.10	99.05	97.79	99.05	97.99	2.85
Link203	10yr	PRD004A	PRD004X	95.06	95.00	0.06	5.00	1	103	0.015	65.39	105.10	105.00	97.73	97.28	98.10	97.88	2.77
Link204	10yr	PRD034A	PRD034X	97.87	97.70	0.18	2.00	1	92	0.015	8.57	104.90	104.70	99.19	98.74	99.19	98.99	2.68
Link205	10yr	PRD035A	PRD035X	98.63	98.50	0.13	2.50	1	97	0.015	20.66	106.10	106.00	100.59	100.04	100.59	100.46	2.65

XPStorm Results
10-Year

Name	Scenario	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link206	10yr	PRD036A	PRD036X	98.60	98.50	0.13	2.50	1	80	0.015	29.11	106.10	106.00	100.96	100.34	100.96	100.94	2.56
Link207	10yr	PRD041A	PRD041X	97.51	97.40	0.11	3.00	1	99	0.015	15.26	105.50	105.40	99.05	98.65	99.05	98.93	2.73
Link208	10yr	PRD042A	PRD042X	102.13	102.00	0.13	2.50	1	100	0.015	23.21	109.60	109.50	104.24	103.64	104.24	104.09	2.61
Link209	10yr	PRD061A	PRD061X	104.15	104.00	0.13	2.50	1	114	0.015	23.78	111.70	111.50	106.33	105.66	106.33	106.11	2.63
Link210	10yr	PRD062A	PRD062X	105.14	105.00	0.13	2.50	1	111	0.015	16.86	112.60	112.50	106.92	106.39	106.92	106.72	2.57
Link211	10yr	PRD046A	PRD046X	102.19	102.00	0.18	2.00	1	106	0.015	9.14	109.20	109.00	103.58	103.08	103.58	103.33	2.64
Link212	10yr	PRD045A	PRD045X	101.15	101.00	0.13	2.50	1	116	0.015	19.29	108.70	108.50	103.08	102.49	103.08	102.86	2.60
Link213	10yr	PRD043A	PRD043X	101.71	101.50	0.18	2.00	1	115	0.015	13.19	108.70	108.50	103.47	102.81	103.47	103.14	2.67
Link214	10yr	PRD044A	PRD044X	101.26	101.00	0.18	2.00	1	143	0.015	9.98	108.30	108.00	102.78	102.13	102.78	102.38	2.66
Link215	10yr	PRD033A	PRD032A	104.72	104.06	0.06	5.50	1	1100	0.015	58.11	115.20	114.60	108.05	106.75	108.05	107.00	3.00
Link217	10yr	PRD032A	PRD032X	104.06	104.00	0.06	5.50	1	101	0.015	71.72	114.60	114.50	106.75	106.32	107.00	106.94	2.99
Link218	10yr	PRD031A	PRD031X	103.15	103.00	0.18	2.00	1	81	0.015	8.33	110.20	110.00	104.43	104.03	104.43	104.28	2.69
Link219	10yr	PRD030A	PRD030X	103.65	103.50	0.13	2.50	1	119	0.015	19.13	111.20	111.00	105.58	104.98	105.58	105.35	2.57
Link220	10yr	PRD029A	PRD029X	97.63	97.50	0.13	2.50	1	103	0.015	25.46	105.10	105.00	99.88	99.22	99.88	99.71	2.57
Link221	10yr	OFF003A	PRD099A	106.51	105.85	0.06	5.00	2	1100	0.015	59.15	116.50	115.90	108.96	107.94	108.96	108.09	2.82
Link222	10yr	PRD099A	PRD100A	104.85	104.65	0.05	6.00	2	400	0.015	103.41	115.90	115.70	107.94	107.62	108.09	107.81	2.90
Link223	10yr	PRD100A	PRD100X	104.65	104.50	0.05	6.00	2	300	0.015	146.44	115.70	115.50	107.62	106.78	107.81	107.24	2.90
Link224	10yr	OFF004A	PRD098B	112.34	112.23	0.07	4.50	1	150	0.015	38.84	121.80	121.70	114.95	114.73	116.57	114.99	2.90
Link225	10yr	PRD098B	PRD098A	112.23	112.07	0.07	4.50	1	225	0.015	38.86	121.70	121.60	114.73	114.30	114.99	114.59	2.86
Link226	10yr	PRD098A	PRD098X	112.07	112.00	0.07	4.50	1	100	0.015	42.74	121.60	121.50	114.30	113.88	114.59	114.36	2.84
Link227	10yr	PRD076A	PRD076X	111.62	111.50	0.13	2.50	1	96	0.015	28.23	119.10	119.00	114.01	113.31	114.01	113.87	2.56
Link228	10yr	PRD064A	PRD064X	111.60	111.50	0.09	3.50	1	107	0.015	56.03	120.10	120.00	114.49	113.84	114.50	114.55	2.77
Link229	10yr	PRD077A	PRD077X	109.80	109.70	0.11	3.00	1	92	0.015	38.07	117.80	117.70	112.29	111.71	112.29	112.31	2.70
Link230	10yr	PRD072A	PRD072X	110.68	110.50	0.18	2.00	1	101	0.015	8.37	117.70	117.50	112.00	111.53	112.00	111.77	2.63
Link231	10yr	PRD073A	PRD073X	110.18	110.00	0.18	2.00	1	102	0.015	7.92	117.20	117.00	111.46	111.00	111.46	111.23	2.62
Link232	10yr	PRD060A	PRD060X	108.55	108.40	0.18	2.00	1	82	0.015	10.67	115.60	115.40	110.03	109.57	110.02	109.87	2.67
Link233	10yr	PRD074A	PRD074X	112.17	112.00	0.18	2.00	1	96	0.015	13.32	119.20	119.00	113.90	113.31	113.90	113.66	2.63
Link234	10yr	PRD075A	PRD075X	113.18	113.00	0.18	2.00	1	102	0.015	10.32	120.20	120.00	114.67	114.15	114.67	114.43	2.62
Link235	10yr	PRD071A	PRD071X	111.56	111.50	0.06	5.00	1	103	0.015	85.22	121.60	121.50	114.61	114.12	114.93	114.86	2.77
Link236	10yr	PRD070A	PRD070X	110.70	110.50	0.18	2.00	1	111	0.015	9.24	117.70	117.50	112.11	111.59	112.11	111.84	2.65
Link237	10yr	PRD069A	PRD069X	110.14	110.00	0.18	2.00	1	80	0.015	9.08	117.10	117.00	111.49	111.08	111.49	111.34	2.61
Link238	10yr	PRD068A	PRD068X	108.88	108.70	0.18	2.00	1	99	0.015	14.65	115.90	115.70	110.73	110.08	110.73	110.46	2.66
Link239	10yr	PRD065A	PRD065X	106.90	106.80	0.09	3.50	1	108	0.015	53.22	115.40	115.30	109.72	109.08	109.72	109.75	2.76
Link240	10yr	PRD059A	PRD059X	108.21	108.00	0.18	2.00	1	117	0.015	9.16	115.20	115.00	109.62	109.08	109.62	109.33	2.64
Link241	10yr	PRD058A	PRD058X	107.20	107.00	0.18	2.00	1	113	0.015	11.01	114.20	114.00	108.77	108.19	108.77	108.48	2.63
Link242	10yr	PRD057A	PRD057X	110.16	110.00	0.13	2.50	1	121	0.015	16.99	117.70	117.50	111.96	111.39	111.96	111.73	2.63
Link243	10yr	PRD056A	PRD056X	111.30	111.00	0.25	1.50	1	119	0.015	5.43	117.80	117.50	112.52	111.90	112.52	112.11	2.59
Link244	10yr	PRD055A	PRD055X	103.55	103.40	0.11	3.00	1	135	0.015	29.05	111.60	111.40	105.79	105.14	105.79	105.58	2.73
Link245	10yr	PRD054A	PRD053A	103.86	103.68	0.13	2.50	1	138	0.015	10.89	111.40	111.20	105.55	105.32	105.55	105.47	2.62
Link246	10yr	PRD053A	PRD053X	103.18	103.00	0.11	3.00	1	163	0.015	25.77	111.20	111.00	105.32	104.64	105.47	105.01	2.72
Link247	10yr	PRD049A	PRD049X	104.12	104.00	0.09	3.50	1	128	0.015	51.82	112.60	112.50	106.96	106.25	106.96	106.88	2.77

XPStorm Results
10-Year

Name	Scenario	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link248	10yr	PRD082A	PRD081A	108.52	108.18	0.09	3.50	1	375	0.015	11.72	117.00	116.70	110.01	109.22	110.01	109.37	2.73
Link249	10yr	PRD081A	PRD067A	106.68	106.30	0.06	5.00	1	625	0.015	21.02	116.70	116.30	109.16	108.88	109.37	108.94	2.83
Link250	10yr	PRD080A	PRD052A	106.29	106.20	0.06	5.00	2	150	0.015	69.83	116.30	116.20	108.88	108.76	109.21	108.93	2.82
Link251	10yr	PRD052A	PRD051A	105.70	105.38	0.06	5.50	2	525	0.015	102.40	116.20	115.90	108.76	108.26	108.93	108.48	3.02
Link252	10yr	PRD051A	PRD066A	104.88	104.62	0.05	6.00	2	525	0.015	126.20	115.90	115.60	108.26	107.74	108.48	107.98	2.89
Link253	10yr	PRD050A	PRD050X	104.58	104.50	0.05	6.00	2	155	0.015	176.29	115.60	115.50	107.60	107.02	108.05	107.64	2.95
Link254	10yr	PRD079A	PRD080A	107.49	107.29	0.08	4.00	1	250	0.015	29.48	116.50	116.30	109.64	108.90	109.64	109.21	2.80
Link274	10yr	PRD083A	PRD084A	113.69	113.35	0.09	3.50	1	375	0.015	24.11	122.20	121.90	115.93	115.28	115.93	115.50	2.73
Link275	10yr	PRD084A	PRD085A	112.35	112.24	0.07	4.50	1	150	0.015	42.07	121.90	121.70	115.28	115.09	115.50	115.32	2.90
Link276	10yr	PRD085A	PRD071A	111.74	111.56	0.06	5.00	1	300	0.015	62.32	121.70	121.60	115.09	114.61	115.32	114.93	2.82
Link277	10yr	PRD087A	PRD087X	113.57	113.50	0.08	4.00	1	84	0.015	13.66	122.60	122.50	114.89	114.58	114.89	114.81	2.86
Link278	10yr	PRD088A	PRD088B	113.26	113.08	0.08	4.00	1	225	0.015	36.69	122.30	122.10	115.76	115.24	115.91	115.56	2.80
Link279	10yr	PRD090A	PRD088A	114.46	113.76	0.09	3.50	1	775	0.015	19.66	123.00	122.30	116.65	115.76	116.65	115.91	2.72
Link280	10yr	PRD086A	PRD086X	115.18	115.00	0.18	2.00	1	100	0.015	14.31	122.20	122.00	117.00	116.36	117.00	116.74	2.65
Link281	10yr	PRD093A	PRD092A	117.91	117.37	0.09	3.50	1	600	0.015	16.84	126.40	125.90	119.81	118.88	119.81	119.04	2.72
Link282	10yr	PRD092A	PRD091A	116.37	116.02	0.07	4.50	1	500	0.015	27.85	125.90	125.50	118.88	118.50	119.04	118.64	2.84
Link283	10yr	PRD091A	PRD089A	115.52	115.22	0.06	5.00	1	500	0.015	38.98	125.50	125.20	118.50	118.12	118.64	118.28	2.82
Link284	10yr	PRD089A	PRD094A	115.22	115.05	0.06	5.00	1	275	0.015	51.36	125.20	125.10	118.12	117.67	118.28	117.98	2.86
Link285	10yr	PRD094A	PRD094X	115.05	115.00	0.06	5.00	1	75	0.015	67.36	125.10	125.00	117.67	117.31	117.98	117.98	2.97
Link286	10yr	PRD905A	PRD906A	122.11	121.67	0.11	3.00	1	400	0.015	9.25	130.10	129.70	123.76	123.50	123.76	123.58	2.71
Link287	10yr	PRD906A	PRD096B	121.67	121.34	0.11	3.00	1	300	0.015	16.80	129.70	129.30	123.50	122.71	123.58	122.90	2.71
Link288	10yr	PRD096B	PRD096A	120.84	119.76	0.09	3.50	1	1200	0.015	13.17	129.30	128.30	122.71	121.82	122.90	121.91	2.72
Link289	10yr	PRD096A	PRD097A	119.26	119.12	0.08	4.00	1	175	0.015	45.55	128.30	128.10	121.82	121.14	121.91	121.61	2.80
Link290	10yr	PRD097A	PRD097X	118.12	118.00	0.06	5.00	1	200	0.015	72.05	128.10	128.00	121.12	120.40	121.61	120.96	2.82
Link291	10yr	OFF006A	PRD097A	119.28	119.12	0.08	4.00	1	200	0.015	17.21	128.30	128.10	121.27	121.12	121.31	121.61	2.80
Link292	10yr	PRD095A	PRD095X	119.10	119.00	0.08	4.00	1	122	0.015	69.51	128.10	128.00	122.19	121.52	122.19	122.25	2.84
Link293	10yr	PRD078A	PRD078X	119.17	119.00	0.13	2.50	1	129	0.015	17.03	126.70	126.50	120.99	120.40	120.99	120.72	2.63
Link299	10yr	PRD063A	PRD063X	104.62	104.50	0.06	5.00	1	200	0.015	87.50	114.60	114.50	107.97	107.15	107.97	107.80	2.82
Link300	10yr	PRD047A	PRD047X	104.60	104.50	0.08	4.00	1	119	0.015	30.63	113.60	113.50	106.61	106.14	106.61	106.53	2.87
Link301	10yr	OFF002A	OFF002X	106.50	106.00	0.11	3.00	1	450	0.015	11.24	114.50	114.00	108.05	107.06	108.05	107.22	2.73
Link318	10yr	OFF002X	OFF002P1	104.30	103.80	0.18	2.00	1	310	0.200	10.92	114.00	111.80	106.12	105.14	107.22	105.15	0.31
Link302	10yr	PRD038A	PRD038X	100.19	100.00	0.18	2.00	1	104	0.015	7.31	107.20	107.00	101.42	100.96	101.42	101.18	2.67
Link303	10yr	PRD039A	PRD039X	101.07	101.00	0.07	4.50	1	100	0.015	82.17	110.60	110.50	104.19	103.65	104.96	104.44	2.84
Link304	10yr	PRD040A	PRD040X	100.70	100.60	0.11	3.00	1	93	0.015	41.35	108.70	108.60	103.32	102.69	103.32	103.34	2.68
Link305	10yr	OFF017A	PRD048A	101.76	101.64	0.08	4.00	1	155	0.015	46.38	110.80	110.60	104.92	104.64	104.92	104.94	2.76
Link306	10yr	PRD048A	PRD039B	101.64	101.61	0.08	4.00	1	35	0.015	67.05	110.60	110.60	104.64	104.48	104.94	105.17	2.90
Link307	10yr	PRD039B	PRD039A	101.61	101.57	0.08	4.00	1	50	0.015	67.18	110.60	110.60	104.48	104.19	105.17	104.96	2.80
Link308	10yr	PRD066A	PRD050A	104.62	104.58	0.05	6.00	2	70	0.015	159.69	115.60	115.60	107.74	107.60	107.98	108.05	3.10
Link309	10yr	PRD067A	PRD080A	106.30	106.29	0.06	5.00	2	20	0.015	34.88	116.30	116.30	108.88	108.88	108.94	109.21	2.57
Link310	10yr	OFF005A	OFF018A	130.00	125.00	0.59	2.00	1	852	0.200	12.37	135.00	130.00	131.53	125.70	131.53	125.70	0.61
Link311	10yr	OFF018A	OFF004A	125.00	115.57	0.60	2.00	1	1569	0.015	36.87	130.00	121.80	125.70	116.27	125.70	116.57	8.21

XPStorm Results
10-Year

Name	Scenario	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link312	10yr	OFF007A	OFF006A	119.80	119.28	0.08	4.00	1	650	0.015	10.28	128.80	128.30	121.53	121.27	121.53	121.31	2.80
Link316	10yr	PRD088B	PRD088X	113.08	113.00	0.08	4.00	1	100	0.015	36.70	122.10	122.00	115.24	114.80	115.56	115.26	2.80
Link317	10yr	PRD004B	PRD004A	95.57	95.56	0.07	4.50	1	20	0.015	38.76	105.10	105.10	97.79	97.73	97.99	98.10	2.40
Link319	10yr	OFF002P1	OFF002P2	103.80	103.67	0.11	2.00	2	130	0.015	10.65	111.80	111.70	105.14	104.99	105.15	105.07	1.97
Link320	10yr	OFF002P2	OFF002P3	103.67	103.41	0.11	2.00	2	240	0.015	10.64	111.70	111.40	104.99	104.66	105.07	104.76	2.05
Link321	10yr	OFF002P3	OFF002P4	103.41	103.09	0.11	2.00	2	290	0.015	10.64	111.40	111.10	104.66	104.14	104.76	104.24	2.07
Link322	10yr	OFF002P4	OFF002P4X	103.09	103.00	0.11	2.00	2	80	0.015	10.63	111.10	111.00	104.14	103.81	104.24	103.98	2.09
Orchard Creek																		
Link297	10yr	PRD904A	PRD903A	127.78	127.62	0.08	4.00	1	200	0.015	52.81	136.80	136.60	130.69	129.98	130.69	130.46	2.80
Link298	10yr	PRD903A	Basin	126.62	126.50	0.06	5.00	1	200	0.015	107.15	136.60	136.50	129.98	129.64	130.46	129.74	2.82
Spillway	10yr	Basin	PRD903X								0.00	136.50	136.50	-9.00E+99	-9.00E+99	129.74	129.45	0.00
Bottom	10yr	Basin	PRD903X								7.32	136.50	136.50	129.64	127.84	129.74	129.45	0.48
Lower	10yr	Basin	PRD903X								4.36	136.50	136.50	129.64	128.83	129.74	129.45	0.48
Upper	10yr	Basin	PRD903X								3.37	136.50	136.50	129.64	129.37	129.74	129.45	0.48
Upper2	10yr	Basin	PRD903X								0.00	136.50	136.50	-9.00E+99	-9.00E+99	129.74	129.45	0.48
Link326	10yr	PRD903X	Node511	126.50	126.48	0.11	3.00	1	20	0.015	15.05	136.50	134.50	127.84	127.72	129.45	128.10	2.59
North Branch Placer Tributary																		
Link255	10yr	PRD300A	PRD300X	110.14	110.00	0.18	2.00	1	75	0.015	16.79	117.10	117.00	112.10	111.48	112.10	111.95	2.70
Link256	10yr	PRD302A	PRD302X	112.14	112.00	0.18	2.00	1	75	0.015	6.28	119.10	119.00	113.24	112.89	113.24	113.10	2.70
Link257	10yr	PRD303A	PRD301B	113.38	113.16	0.11	3.00	1	200	0.015	17.36	121.40	121.20	115.33	114.97	115.33	115.34	2.71
Link259	10yr	PRD301B	PRD301X	112.16	112.00	0.08	4.00	1	200	0.015	52.10	121.20	121.00	114.97	114.17	115.34	114.67	2.80
Link258	10yr	PRD301A	PRD301B	112.74	112.66	0.09	3.50	1	87	0.015	35.78	121.20	121.20	115.22	114.97	115.22	115.34	2.75
Link260	10yr	PRD507A	PRD506A	108.33	107.85	0.06	5.00	1	800	0.015	24.36	118.30	117.90	110.44	109.30	110.44	109.46	2.82
Link261	10yr	PRD506A	PRD502A	107.35	106.81	0.06	5.50	2	900	0.015	39.70	117.90	117.30	109.30	108.65	109.46	110.54	3.00
Link262	10yr	PRD502A	PRD501A	106.31	106.06	0.05	6.00	2	500	0.015	66.69	117.30	117.10	108.65	108.14	110.54	108.31	2.90
Link263	10yr	PRD501A	PRD501X	106.06	106.00	0.05	6.00	2	126	0.015	84.20	117.10	117.00	108.14	107.72	108.31	108.10	2.83
Link264	10yr	PRD500A	PRD502A	110.72	109.81	0.13	2.50	1	700	0.015	3.90	118.20	117.30	111.71	110.46	111.71	110.54	2.61
Link265	10yr	PRD503A	PRD503X	108.16	108.00	0.13	2.50	1	124	0.015	14.65	115.70	115.50	109.83	109.29	109.83	109.58	2.60
Link266	10yr	PRD504A	PRD504X	107.19	107.00	0.18	2.00	1	106	0.015	6.27	114.20	114.00	108.33	107.89	108.33	108.08	2.64
Link267	10yr	PRD505A	PRD505X	107.08	107.00	0.09	3.50	1	90	0.015	20.83	115.60	115.50	108.78	108.40	108.78	108.73	2.70
Link268	10yr	PRD508A	PRD509A	118.78	118.24	0.08	4.00	1	675	0.015	16.51	127.80	127.20	120.59	119.46	120.59	119.78	2.80
Link269	10yr	PRD509A	PRD510B	116.74	116.32	0.06	5.50	2	700	0.015	87.63	127.20	126.80	119.46	118.90	119.78	119.07	3.00
Link270	10yr	PRD510B	PRD510A	116.32	115.55	0.06	5.50	2	1275	0.015	72.19	126.80	126.10	118.90	117.38	119.07	117.57	3.01
Link271	10yr	PRD510A	PRD510X	115.05	115.00	0.05	6.00	2	100	0.015	113.06	126.10	126.00	117.38	117.00	117.57	117.50	2.90
Link272	10yr	PRD512A	PRD511A	118.44	117.86	0.07	4.50	1	825	0.015	31.23	127.90	127.40	120.94	119.77	120.94	119.96	2.84
Link273	10yr	PRD511A	PRD509A	116.86	116.74	0.06	5.50	1	200	0.015	58.76	127.40	127.20	119.77	119.46	119.96	119.78	3.00
Link294	10yr	PRD902A	PRD900A	124.40	123.59	0.07	4.50	2	1150	0.015	49.74	133.90	133.10	126.83	126.06	126.83	127.01	2.84
Link295	10yr	PRD900A	PRD900X	123.09	123.00	0.06	5.00	2	150	0.015	149.91	133.10	133.00	126.06	125.45	127.01	126.07	2.82
Link296	10yr	PRD901A	PRD900A	125.31	125.09	0.11	3.00	2	200	0.015	48.26	133.30	133.10	127.43	126.67	127.44	127.01	2.71

XPStorm Results
100-Year

Name	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
University Creek																	
Link88	PRD001A	PRD001X	90.62	90.50	0.11	3.00	1.00	113	0.015	80.92	98.60	98.50	95.49	93.27	95.49	95.31	2.66
Link90	PRD000A	PRD000X	87.02	86.90	0.11	3.00	1.00	107	0.015	47.12	95.00	94.90	89.94	89.14	89.94	89.87	2.74
Link167	PRD002A	PRD002X	86.69	86.60	0.08	4.00	1.00	107	0.015	41.46	95.70	95.60	90.02	88.79	90.02	89.22	2.87
Link168	PRD003A	PRD003X	89.14	89.00	0.11	3.00	1.00	125	0.015	62.92	97.10	97.00	93.03	91.55	93.03	92.80	2.74
Link169	PRD011A	PRD011X	89.19	89.00	0.13	2.50	1.00	144	0.015	33.83	96.70	96.50	92.29	90.98	92.29	91.72	2.63
Link170	PRD012A	PRD012X	89.20	89.00	0.13	2.50	1.00	153	0.015	25.09	96.70	96.50	92.29	91.00	92.29	91.40	2.62
Link171	PRD013A	PRD013X	90.22	90.10	0.11	3.00	1.00	113	0.015	46.25	98.20	98.10	93.14	92.31	93.14	93.02	2.66
Link172	PRD014A	PRD014X	92.19	92.00	0.11	3.00	1.00	176	0.015	54.84	100.20	100.00	96.01	94.40	96.01	95.36	2.69
Link173	PRD023A	PRD023X	94.29	94.00	0.18	2.00	1.00	163	0.015	25.58	101.30	101.00	98.51	95.77	98.52	96.80	2.63
Link174	PRD024A	PRD024X	94.48	94.30	0.13	2.50	1.00	141	0.015	38.44	102.00	101.80	98.02	96.39	98.02	97.36	2.59
Link175	PRD025A	PRD025X	94.81	94.70	0.11	3.00	1.00	100	0.015	47.92	102.80	102.70	97.72	96.95	98.05	97.71	2.71
Link176	OFF016A	PRD025B	96.48	96.22	0.13	2.50	1.00	200	0.015	23.92	104.00	103.70	101.93	100.96	101.87	101.25	2.61
Link177	PRD025B	PRD025A	96.22	95.31	0.13	2.50	1.00	700	0.015	23.95	103.70	102.80	100.96	97.72	101.25	98.05	2.61
Link178	PRD037A	PRD037X	95.19	95.00	0.25	1.50	1.00	75	0.015	16.54	101.70	101.50	98.85	96.43	98.85	97.77	2.59
Link179	PRD028A	PRD028X	96.24	96.00	0.18	2.00	1.00	133	0.015	20.10	103.20	103.00	98.99	97.61	98.99	98.26	2.65
Link180	PRD027A	PRD027X	96.13	95.90	0.18	2.00	1.00	129	0.015	23.97	103.10	102.90	99.55	97.63	99.56	98.54	2.64
Link181	PRD026A	PRD026X	93.10	93.00	0.11	3.00	1.00	88	0.015	53.97	101.10	101.00	96.22	95.39	96.22	96.29	2.76
Link182	PRD015A	PRD015X	93.37	93.30	0.06	5.50	2.00	117	0.015	257.49	103.90	103.80	97.03	96.45	97.51	97.40	3.00
Link183	PRD008A	PRD008X	89.39	89.20	0.13	2.50	1.00	146	0.015	39.83	96.90	96.70	93.14	91.32	93.14	92.36	2.61
Link184	PRD021A	PRD020A	94.49	93.89	0.06	5.00	1.00	1000	0.015	63.38	104.50	103.90	101.16	100.09	101.16	100.23	2.82
Link185	PRD020A	PRD019B	93.89	93.53	0.06	5.00	1.00	600	0.015	115.51	103.90	103.50	100.09	98.75	100.23	99.21	2.82
Link186	PRD019B	PRD019A	93.53	92.99	0.06	5.00	1.00	900	0.015	109.18	103.50	103.00	98.75	96.33	99.21	96.82	2.82
Link187	PRD019A	PRD019X	92.49	92.40	0.06	5.50	1.00	147	0.015	134.63	103.00	102.90	96.33	95.63	96.82	96.56	3.03
Link188	PRD015B	PRD015A	93.91	93.37	0.06	5.50	2.00	900	0.015	241.92	104.40	103.90	98.84	97.03	99.24	97.51	3.00
Link189	PRD016A	PRD015B	94.27	93.91	0.06	5.50	2.00	600	0.015	243.45	104.80	104.40	99.87	98.84	100.15	99.24	3.00
Link190	PRD010A	PRD016A	94.75	94.27	0.06	5.50	2.00	800	0.015	207.83	105.30	104.80	100.84	99.87	101.15	100.15	3.00
Link191	PRD017A	PRD010A	96.29	96.25	0.08	4.00	1.00	50	0.015	101.53	105.30	105.30	100.93	100.84	101.01	101.15	2.80
Link192	PRD010B	PRD010A	95.85	95.25	0.06	5.00	2.00	1000	0.015	120.65	105.90	105.30	101.49	100.84	101.84	101.15	2.82
Link193	PRD022A	PRD010B	98.90	97.85	0.11	3.00	1.00	950	0.015	26.41	106.90	105.90	103.70	101.49	103.70	101.84	2.72
Link194	OFF001A	PRD101B	99.77	99.57	0.13	2.50	1.00	150	0.015	13.42	107.30	107.10	103.75	103.52	103.74	103.61	2.64
Link195	PRD101B	PRD101A	99.57	98.53	0.13	2.50	1.00	800	0.015	13.27	107.10	106.00	103.52	102.01	103.61	102.11	2.61
Link196	PRD101A	PRD010B	96.03	95.85	0.06	5.00	1.00	300	0.015	101.64	106.00	105.90	102.01	101.49	102.11	101.84	2.82
Link197	PRD018A	PRD017A	97.01	96.29	0.08	4.00	1.00	900	0.015	49.90	106.00	105.30	101.37	100.93	101.37	101.01	2.80
Link199	PRD007A	PRD009A	92.37	91.69	0.08	4.00	1.00	850	0.015	56.40	101.40	100.70	97.77	95.80	97.77	96.10	2.80
Link200	PRD009A	PRD005A	91.69	91.57	0.08	4.00	1.00	150	0.015	96.29	100.70	100.60	95.80	94.81	96.10	95.73	2.80
Link201	PRD005A	PRD005X	91.07	91.00	0.07	4.50	1.00	100	0.015	115.70	100.60	100.50	94.81	94.16	95.73	95.24	2.84
Link202	PRD006A	PRD004B	96.24	95.57	0.07	4.50	1.00	950	0.015	89.93	105.70	105.10	102.29	99.44	102.29	99.94	2.85

XPStorm Results
100-Year

Name	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link203	PRD004A	PRD004X	95.06	95.00	0.06	5.00	1.00	103	0.015	163.95	105.10	105.00	99.37	98.67	99.99	100.00	2.77
Link204	PRD034A	PRD034X	97.87	97.70	0.18	2.00	1.00	92	0.015	20.56	104.90	104.70	100.32	99.33	100.32	99.98	2.68
Link205	PRD035A	PRD035X	98.63	98.50	0.13	2.50	1.00	97	0.015	51.89	106.10	106.00	102.87	100.82	102.88	102.55	2.65
Link206	PRD036A	PRD036X	98.60	98.50	0.13	2.50	1.00	80	0.015	67.87	106.10	106.00	103.93	101.00	103.94	103.93	2.56
Link207	PRD041A	PRD041X	97.51	97.40	0.11	3.00	1.00	99	0.015	38.41	105.50	105.40	101.52	99.68	101.52	100.22	2.73
Link208	PRD042A	PRD042X	102.13	102.00	0.13	2.50	1.00	100	0.015	52.73	109.60	109.50	106.50	104.32	106.50	106.11	2.61
Link209	PRD061A	PRD061X	104.15	104.00	0.13	2.50	1.00	114	0.015	53.21	111.70	111.50	108.87	106.33	108.88	108.15	2.63
Link210	PRD062A	PRD062X	105.14	105.00	0.13	2.50	1.00	111	0.015	36.65	112.60	112.50	108.22	107.05	108.22	107.90	2.57
Link211	PRD046A	PRD046X	102.19	102.00	0.18	2.00	1.00	106	0.015	18.59	109.20	109.00	104.49	103.55	104.49	104.07	2.64
Link212	PRD045A	PRD045X	101.15	101.00	0.13	2.50	1.00	116	0.015	39.54	108.70	108.50	104.53	103.12	104.54	104.14	2.60
Link213	PRD043A	PRD043X	101.71	101.50	0.18	2.00	1.00	115	0.015	26.96	108.70	108.50	105.45	103.30	105.45	104.45	2.67
Link214	PRD044A	PRD044X	101.26	101.00	0.18	2.00	1.00	143	0.015	20.58	108.30	108.00	104.17	102.63	104.17	103.31	2.66
Link215	PRD033A	PRD032A	104.72	104.06	0.06	5.50	1.00	1100	0.015	131.66	115.20	114.60	110.63	108.25	110.62	108.72	3.00
Link217	PRD032A	PRD032X	104.06	104.00	0.06	5.50	1.00	101	0.015	170.63	114.60	114.50	108.25	107.65	108.72	108.89	2.99
Link218	PRD031A	PRD031X	103.15	103.00	0.18	2.00	1.00	81	0.015	16.53	110.20	110.00	105.11	104.47	105.11	104.92	2.69
Link219	PRD030A	PRD030X	103.65	103.50	0.13	2.50	1.00	119	0.015	42.95	111.20	111.00	107.42	105.69	107.43	106.89	2.57
Link220	PRD029A	PRD029X	97.63	97.50	0.13	2.50	1.00	103	0.015	58.24	105.10	105.00	102.62	99.88	102.63	102.04	2.57
Link221	OFF003A	PRD099A	106.51	105.85	0.06	5.00	2.00	1100	0.015	228.50	116.50	115.90	113.28	110.56	113.28	111.05	2.82
Link222	PRD099A	PRD100A	104.85	104.65	0.05	6.00	2.00	400	0.015	323.44	115.90	115.70	110.56	109.78	111.05	110.32	2.90
Link223	PRD100A	PRD100X	104.65	104.50	0.05	6.00	2.00	300	0.015	415.48	115.70	115.50	109.78	108.44	110.32	109.51	2.90
Link224	OFF004A	PRD098B	112.34	112.23	0.07	4.50	1.00	150	0.015	140.27	121.80	121.70	118.76	117.75	119.05	118.95	2.90
Link225	PRD098B	PRD098A	112.23	112.07	0.07	4.50	1.00	225	0.015	140.28	121.70	121.60	117.75	116.35	118.95	117.51	2.86
Link226	PRD098A	PRD098X	112.07	112.00	0.07	4.50	1.00	100	0.015	147.34	121.60	121.50	116.35	115.56	117.51	116.98	2.84
Link227	PRD076A	PRD076X	111.62	111.50	0.13	2.50	1.00	96	0.015	61.19	119.10	119.00	116.71	113.91	116.72	116.30	2.56
Link228	PRD064A	PRD064X	111.60	111.50	0.09	3.50	1.00	107	0.015	120.20	120.10	120.00	116.77	114.74	116.77	117.17	2.77
Link229	PRD077A	PRD077X	109.80	109.70	0.11	3.00	1.00	92	0.015	82.70	117.80	117.70	114.37	112.49	114.38	114.61	2.70
Link230	PRD072A	PRD072X	110.68	110.50	0.18	2.00	1.00	101	0.015	19.98	117.70	117.50	113.15	112.11	113.14	112.73	2.63
Link231	PRD073A	PRD073X	110.18	110.00	0.18	2.00	1.00	102	0.015	19.27	117.20	117.00	112.55	111.58	112.55	112.13	2.62
Link232	PRD060A	PRD060X	108.55	108.40	0.18	2.00	1.00	82	0.015	25.64	115.60	115.40	111.57	110.18	111.58	111.22	2.67
Link233	PRD074A	PRD074X	112.17	112.00	0.18	2.00	1.00	96	0.015	32.55	119.20	119.00	116.49	113.89	116.49	115.54	2.63
Link234	PRD075A	PRD075X	113.18	113.00	0.18	2.00	1.00	102	0.015	25.29	120.20	120.00	116.45	114.77	116.46	115.78	2.62
Link235	PRD071A	PRD071X	111.56	111.50	0.06	5.00	1.00	103	0.015	205.27	121.60	121.50	116.50	115.58	117.31	117.34	2.77
Link236	PRD070A	PRD070X	110.70	110.50	0.18	2.00	1.00	111	0.015	21.73	117.70	117.50	113.51	112.17	113.50	112.92	2.65
Link237	PRD069A	PRD069X	110.14	110.00	0.18	2.00	1.00	80	0.015	21.20	117.10	117.00	112.56	111.65	112.56	112.33	2.61
Link238	PRD068A	PRD068X	108.88	108.70	0.18	2.00	1.00	99	0.015	33.27	115.90	115.70	113.40	110.60	113.41	112.32	2.66
Link239	PRD065A	PRD065X	106.90	106.80	0.09	3.50	1.00	108	0.015	120.69	115.40	115.30	112.13	110.05	112.14	112.49	2.76
Link240	PRD059A	PRD059X	108.21	108.00	0.18	2.00	1.00	117	0.015	22.10	115.20	115.00	111.14	109.68	111.14	110.46	2.64
Link241	PRD058A	PRD058X	107.20	107.00	0.18	2.00	1.00	113	0.015	25.73	114.20	114.00	110.71	108.78	110.72	109.82	2.63

XPStorm Results
100-Year

Name	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link242	PRD057A	PRD057X	110.16	110.00	0.13	2.50	1.00	121	0.015	39.05	117.70	117.50	113.55	112.11	113.55	113.11	2.63
Link243	PRD056A	PRD056X	111.30	111.00	0.25	1.50	1.00	119	0.015	12.96	117.80	117.50	114.71	112.35	114.71	113.18	2.59
Link244	PRD055A	PRD055X	103.55	103.40	0.11	3.00	1.00	135	0.015	66.78	111.60	111.40	107.82	106.01	107.83	107.41	2.73
Link245	PRD054A	PRD053A	103.86	103.68	0.13	2.50	1.00	138	0.015	25.18	111.40	111.20	108.06	107.34	108.06	107.74	2.62
Link246	PRD053A	PRD053X	103.18	103.00	0.11	3.00	1.00	163	0.015	61.32	111.20	111.00	107.34	105.52	107.74	106.71	2.72
Link247	PRD049A	PRD049X	104.12	104.00	0.09	3.50	1.00	128	0.015	123.81	112.60	112.50	109.85	107.26	109.85	109.83	2.77
Link248	PRD082A	PRD081A	108.52	108.18	0.09	3.50	1.00	375	0.015	27.23	117.00	116.70	113.69	112.84	113.63	112.95	2.73
Link249	PRD081A	PRD067A	106.68	106.30	0.06	5.00	1.00	625	0.015	54.48	116.70	116.30	112.84	112.02	112.95	112.12	2.83
Link250	PRD080A	PRD052A	106.29	106.20	0.06	5.00	2.00	150	0.015	167.30	116.30	116.20	112.00	111.81	112.30	112.04	2.82
Link251	PRD052A	PRD051A	105.70	105.38	0.06	5.50	2.00	525	0.015	249.58	116.20	115.90	111.81	110.88	112.04	111.28	3.02
Link252	PRD051A	PRD066A	104.88	104.62	0.05	6.00	2.00	525	0.015	324.43	115.90	115.60	110.88	109.75	111.28	110.26	2.89
Link253	PRD050A	PRD050X	104.58	104.50	0.05	6.00	2.00	155	0.015	454.75	115.60	115.50	109.50	108.63	110.46	109.98	2.95
Link254	PRD079A	PRD080A	107.49	107.29	0.08	4.00	1.00	250	0.015	70.87	116.50	116.30	112.52	112.00	112.51	112.30	2.80
Link274	PRD083A	PRD084A	113.69	113.35	0.09	3.50	1.00	375	0.015	57.92	122.20	121.90	119.98	118.51	119.98	118.89	2.73
Link275	PRD084A	PRD085A	112.35	112.24	0.07	4.50	1.00	150	0.015	101.19	121.90	121.70	118.51	117.73	118.89	118.35	2.90
Link276	PRD085A	PRD071A	111.74	111.56	0.06	5.00	1.00	300	0.015	147.43	121.70	121.60	117.73	116.50	118.35	117.31	2.82
Link277	PRD087A	PRD087X	113.57	113.50	0.08	4.00	1.00	84	0.015	28.05	122.60	122.50	115.99	115.87	116.00	116.07	2.86
Link278	PRD088A	PRD088B	113.26	113.08	0.08	4.00	1.00	225	0.015	89.48	122.30	122.10	117.76	116.58	118.13	117.31	2.80
Link279	PRD090A	PRD088A	114.46	113.76	0.09	3.50	1.00	775	0.015	49.64	123.00	122.30	121.03	117.76	120.97	118.13	2.72
Link280	PRD086A	PRD086X	115.18	115.00	0.18	2.00	1.00	100	0.015	27.89	122.20	122.00	118.81	116.82	118.81	118.05	2.65
Link281	PRD093A	PRD092A	117.91	117.37	0.09	3.50	1.00	600	0.015	31.99	126.40	125.90	121.88	121.30	121.88	121.43	2.72
Link282	PRD092A	PRD091A	116.37	116.02	0.07	4.50	1.00	500	0.015	59.35	125.90	125.50	121.30	120.65	121.43	120.84	2.84
Link283	PRD091A	PRD089A	115.52	115.22	0.06	5.00	1.00	500	0.015	87.89	125.50	125.20	120.65	119.85	120.84	120.13	2.82
Link284	PRD089A	PRD094A	115.22	115.05	0.06	5.00	1.00	275	0.015	116.93	125.20	125.10	119.85	119.06	120.13	119.66	2.86
Link285	PRD094A	PRD094X	115.05	115.00	0.06	5.00	1.00	75	0.015	153.20	125.10	125.00	119.06	118.55	119.66	119.86	2.97
Link286	PRD905A	PRD906A	122.11	121.67	0.11	3.00	1.00	400	0.015	17.99	130.10	129.70	125.10	125.04	125.09	125.07	2.71
Link287	PRD906A	PRD096B	121.67	121.34	0.11	3.00	1.00	300	0.015	33.57	129.70	129.30	125.04	124.68	125.07	124.79	2.71
Link288	PRD096B	PRD096A	120.84	119.76	0.09	3.50	1.00	1200	0.015	20.91	129.30	128.30	124.68	123.96	124.79	124.02	2.72
Link289	PRD096A	PRD097A	119.26	119.12	0.08	4.00	1.00	175	0.015	90.77	128.30	128.10	123.96	123.22	124.02	123.87	2.80
Link290	PRD097A	PRD097X	118.12	118.00	0.06	5.00	1.00	200	0.015	178.37	128.10	128.00	123.22	121.82	123.87	123.13	2.82
Link291	OFF006A	PRD097A	119.28	119.12	0.08	4.00	1.00	200	0.015	68.83	128.30	128.10	123.77	123.22	123.92	123.87	2.80
Link292	PRD095A	PRD095X	119.10	119.00	0.08	4.00	1.00	122	0.015	151.36	128.10	128.00	124.43	122.60	124.43	124.87	2.84
Link293	PRD078A	PRD078X	119.17	119.00	0.13	2.50	1.00	129	0.015	36.06	126.70	126.50	122.35	121.04	122.35	121.89	2.63
Link299	PRD063A	PRD063X	104.62	104.50	0.06	5.00	1.00	200	0.015	190.73	114.60	114.50	110.00	108.45	110.00	109.88	2.82
Link300	PRD047A	PRD047X	104.60	104.50	0.08	4.00	1.00	119	0.015	65.62	113.60	113.50	108.94	107.16	108.94	107.80	2.87
Link301	OFF002A	OFF002X	106.50	106.00	0.11	3.00	1.00	450	0.015	50.62	114.50	114.00	111.81	108.31	111.81	109.13	2.73
Link318	OFF002X	OFF002P1	104.30	103.80	0.18	2.00	1.00	310	0.200	42.49	114.00	111.80	107.85	107.72	109.13	107.72	0.31
Link302	PRD038A	PRD038X	100.19	100.00	0.18	2.00	1.00	104	0.015	17.82	107.20	107.00	102.40	101.52	102.40	102.00	2.67

XPStorm Results
100-Year

Name	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link303	PRD039A	PRD039X	101.07	101.00	0.07	4.50	1.00	100	0.015	193.81	110.60	110.50	106.20	104.99	108.63	107.13	2.84
Link304	PRD040A	PRD040X	100.70	100.60	0.11	3.00	1.00	93	0.015	102.38	108.70	108.60	106.53	103.60	106.54	106.82	2.68
Link305	OFF017A	PRD048A	101.76	101.64	0.08	4.00	1.00	155	0.015	108.15	110.80	110.60	108.81	107.60	108.82	108.74	2.76
Link306	PRD048A	PRD039B	101.64	101.61	0.08	4.00	1.00	35	0.015	158.57	110.60	110.60	107.60	107.02	108.74	109.48	2.90
Link307	PRD039B	PRD039A	101.61	101.57	0.08	4.00	1.00	50	0.015	158.73	110.60	110.60	107.02	106.20	109.48	108.63	2.80
Link308	PRD066A	PRD050A	104.62	104.58	0.05	6.00	2.00	70	0.015	404.91	115.60	115.60	109.75	109.50	110.26	110.46	3.10
Link309	PRD067A	PRD080A	106.30	106.29	0.06	5.00	2.00	20	0.015	89.22	116.30	116.30	112.02	112.00	112.12	112.30	2.57
Link310	OFF005A	OFF018A	130.00	125.00	0.59	2.00	1.00	852	0.200	46.14	135.00	130.00	132.59	126.29	132.59	126.30	0.61
Link311	OFF018A	OFF004A	125.00	115.57	0.60	2.00	1.00	1569	0.015	146.60	130.00	121.80	126.29	118.76	126.30	119.05	8.21
Link312	OFF007A	OFF006A	119.80	119.28	0.08	4.00	1.00	650	0.015	42.82	128.80	128.30	124.46	123.77	124.46	123.92	2.80
Link316	PRD088B	PRD088X	113.08	113.00	0.08	4.00	1.00	100	0.015	89.79	122.10	122.00	116.58	115.87	117.31	116.84	2.80
Link317	PRD004B	PRD004A	95.57	95.56	0.07	4.50	1.00	20	0.015	93.32	105.10	105.10	99.44	99.37	99.94	99.99	2.40
Link319	OFF002P1	OFF002P2	103.80	103.67	0.11	2.00	2.00	130	0.015	26.36	111.80	111.70	107.72	107.14	107.72	107.41	1.97
Link320	OFF002P2	OFF002P3	103.67	103.41	0.11	2.00	2.00	240	0.015	26.36	111.70	111.40	107.14	106.06	107.41	106.33	2.05
Link321	OFF002P3	OFF002P4	103.41	103.09	0.11	2.00	2.00	290	0.015	26.36	111.40	111.10	106.06	104.80	106.33	105.07	2.07
Link322	OFF002P4	OFF002P4X	103.09	103.00	0.11	2.00	2.00	80	0.015	26.36	111.10	111.00	104.80	104.31	105.07	104.65	2.09
Orchard Creek																	
Link297	PRD904A	PRD903A	127.78	127.62	0.08	4.00	1.00	200	0.015	114.60	136.80	136.60	133.87	132.16	133.89	133.41	2.80
Link298	PRD903A	Basin	126.62	126.50	0.06	5.00	1.00	200	0.015	232.75	136.60	136.50	132.16	131.50	133.41	132.12	2.82
Spillway	Basin	PRD903X								0.00	136.50	136.50	-9.00E+99	-9.00E+99	132.12	130.97	0.00
Bottom	Basin	PRD903X								8.97	136.50	136.50	131.50	128.76	132.12	130.97	0.48
Lower	Basin	PRD903X								7.67	136.50	136.50	131.50	128.91	132.12	130.97	0.48
Upper	Basin	PRD903X								14.17	136.50	136.50	131.50	129.99	132.12	130.97	0.48
Upper2	Basin	PRD903X								11.12	136.50	136.50	131.50	130.74	132.12	130.97	0.48
Link326	PRD903X	Node511	126.50	126.48	0.11	3.00	1.00	20	0.015	41.79	136.50	134.50	128.76	128.58	130.97	129.43	2.59
North Branch Placer Tributary																	
Link255	PRD300A	PRD300X	110.14	110.00	0.18	2.00	1.00	75	0.015	42.82	117.10	117.00	115.55	112.00	115.57	114.83	2.70
Link256	PRD302A	PRD302X	112.14	112.00	0.18	2.00	1.00	75	0.015	25.04	119.10	119.00	114.99	113.76	114.99	114.76	2.70
Link257	PRD303A	PRD301B	113.38	113.16	0.11	3.00	1.00	200	0.015	42.58	121.40	121.20	118.65	117.56	118.67	118.79	2.71
Link259	PRD301B	PRD301X	112.16	112.00	0.08	4.00	1.00	200	0.015	129.15	121.20	121.00	117.56	115.40	118.79	117.06	2.80
Link258	PRD301A	PRD301B	112.74	112.66	0.09	3.50	1.00	87	0.015	86.53	121.20	121.20	118.44	117.56	118.44	118.79	2.75
Link260	PRD507A	PRD506A	108.33	107.85	0.06	5.00	1.00	800	0.015	62.54	118.30	117.90	111.79	110.61	111.79	110.90	2.82
Link261	PRD506A	PRD502A	107.35	106.81	0.06	5.50	2.00	900	0.015	96.26	117.90	117.30	110.61	109.98	110.90	111.11	3.00
Link262	PRD502A	PRD501A	106.31	106.06	0.05	6.00	2.00	500	0.015	166.78	117.30	117.10	109.98	109.24	111.11	109.58	2.90
Link263	PRD501A	PRD501X	106.06	106.00	0.05	6.00	2.00	126	0.015	203.98	117.10	117.00	109.24	108.72	109.58	109.44	2.83
Link264	PRD500A	PRD502A	110.72	109.81	0.13	2.50	1.00	700	0.015	11.61	118.20	117.30	112.52	110.95	112.52	111.11	2.61
Link265	PRD503A	PRD503X	108.16	108.00	0.13	2.50	1.00	124	0.015	34.58	115.70	115.50	111.16	110.00	111.16	110.74	2.60
Link266	PRD504A	PRD504X	107.19	107.00	0.18	2.00	1.00	106	0.015	15.33	114.20	114.00	110.46	109.80	110.46	110.17	2.64

XPStorm Results
100-Year

Name	US Node Name	DS Node Name	US Invert Elevation ft	DS Invert Elevation ft	Conduit Slope (%)	Diameter (Height) ft	Number of Barrels	Length ft	Roughness	Max Flow cfs	US Rim Elevation ft	DS Rim Elevation ft	Maximum Water Elevation (US) ft	Maximum Water Elevation (DS) ft	EGL Elevation (US) ft	EGL Elevation (DS) ft	Design Velocity ft/s
Link267	PRD505A	PRD505X	107.08	107.00	0.09	3.50	1.00	90	0.015	49.85	115.60	115.50	110.89	110.59	110.90	110.98	2.70
Link268	PRD508A	PRD509A	118.78	118.24	0.08	4.00	1.00	675	0.015	40.26	127.80	127.20	122.31	121.79	122.31	122.28	2.80
Link269	PRD509A	PRD510B	116.74	116.32	0.06	5.50	2.00	700	0.015	200.20	127.20	126.80	121.79	121.19	122.28	121.46	3.00
Link270	PRD510B	PRD510A	116.32	115.55	0.06	5.50	2.00	1275	0.015	193.71	126.80	126.10	121.19	119.53	121.46	119.84	3.01
Link271	PRD510A	PRD510X	115.05	115.00	0.05	6.00	2.00	100	0.015	294.08	126.10	126.00	119.53	119.28	119.84	119.94	2.90
Link272	PRD512A	PRD511A	118.44	117.86	0.07	4.50	1.00	825	0.015	70.81	127.90	127.40	123.52	122.10	123.52	122.39	2.84
Link273	PRD511A	PRD509A	116.86	116.74	0.06	5.50	1.00	200	0.015	134.58	127.40	127.20	122.10	121.79	122.39	122.28	3.00
Link294	PRD902A	PRD900A	124.40	123.59	0.07	4.50	2.00	1150	0.015	118.63	133.90	133.10	131.80	129.37	131.78	130.23	2.84
Link295	PRD900A	PRD900X	123.09	123.00	0.06	5.00	2.00	150	0.015	393.95	133.10	133.00	129.37	128.19	130.23	129.69	2.82
Link296	PRD901A	PRD900A	125.31	125.09	0.11	3.00	2.00	200	0.015	107.59	133.30	133.10	131.20	129.37	131.20	130.23	2.71

Appendix F
Storm Water Quality
Data and Results

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	LDR w/o LID		LDR w/LID		LDR w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		0		0		0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	1,020	22514	1,020	22514
	n_d	*number of new deciduous trees*			1,020		1,020	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	5,271,139	355802	5,271,139	355802
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	7,107,250	479739
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**378,316**		**858,055**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**5,044,211**		**11,440,736**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**LDR w/o LID**	**LDR w/LID**	**LDR w/LID and Swale**
[1]Total impervious area requiring treatment	7,107,250	7,107,250	7,107,250
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	7,107,250	2,063,039	0
[3]Additional pervious area draining to BMP (ft^2)	10,660,900	10,660,900	10,660,900
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.40	0.16	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	384,976	111,748	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	33	10	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	LDR-A w/o LID		LDR-A w/LID		LDR-A w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		0		0		0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	360	7946	360	7946
	n_d	*number of new deciduous trees*			360		360	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	1,623,475	109585	1,623,475	109585
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	2,282,544	154072
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**117,531**		**271,602**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**1,567,076**		**3,621,365**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**LDR-A w/o LID**	**LDR-A w/LID**	**LDR-A w/LID Swale**
[1]Total impervious area requiring treatment	2,282,544	2,282,544	2,282,544
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	2,282,544	715,469	0
[3]Additional pervious area draining to BMP (ft^2)	3,423,816	3,423,816	3,423,816
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.40	0.17	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	123,638	38,755	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	10.567	3.312	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	MDR w/o LID		MDR w/LID		MDR w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	529	11676	529	11676
	n_d	*number of new deciduous trees*			529		529	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	1,701,453	114848	1,701,453	114848
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	2,881,494	194501
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**126,524**		**321,025**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**1,686,992**		**4,280,337**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**MDR w/o LID**	**MDR w/LID**	**MDR w/LID Swale**
[1]Total impervious area requiring treatment	2,881,494	2,881,494	2,881,494
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	2,881,494	1,194,502	0
[3]Additional pervious area draining to BMP (ft^2)	2,881,494	2,881,494	2,881,494
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.50	0.29	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	156,081	64,702	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	13.340	5.530	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	HDR w/o LID		HDR w/LID		HDR w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	77	1700	77	1700
	n_d	*number of new deciduous trees*			77		77	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	1,531,308	103363	1,531,308	103363
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	2,633,202	177741
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**105,063**		**282,804**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**1,400,838**		**3,770,720**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**HDR w/o LID**	**HDR w/LID**	**HDR w/LID Swale**
[1]Total impervious area requiring treatment	2,633,202	2,633,202	2,633,202
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	2,633,202	1,232,364	0
[3]Additional pervious area draining to BMP (ft^2)	1,417,878	1,417,878	1,417,878
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.65	0.47	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	142,632	66,753	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	12.191	5.705	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Commercial w/o LID		Commercial w/LID		Commercial w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	37	817	37	817
	n_d	*number of new deciduous trees*			37		37	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	1,296,346	87503	1,296,346	87503
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	2,592,691	175007
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**88,320**		**263,327**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**1,177,600**		**3,511,022**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Comm. w/o LID**	**Comm. w/LID**	**Comm. w/LID Swale**
[1]Total impervious area requiring treatment	2,592,691	2,592,691	2,592,691
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	2592691	1415091	0
[3]Additional pervious area draining to BMP (ft^2)	648,173	648,173	648,173
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.80	0.69	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	140,437	76,651	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	12.003	6.551	0.000

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Campus Park w/o LID**	**Campus Park w/LID**	**Campus Park w/LID Swale**
[1]Total impervious area requiring treatment	12,061,111	12,061,111	12,061,111
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	12061111	7523318	0
[3]Additional pervious area draining to BMP (ft^2)	5,169,047	5,169,047	5,169,047
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.70	0.59	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	653,310	407,513	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	55.838	34.830	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Campus Park w/o LID		Campus Park w/LID		Campus Park w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	296	6533	296	6533
	n_d	*number of new deciduous trees*			296		296	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	4,945,200	333801	4,945,200	333801
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	12,061,111	814125
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**			**340,334**		**1,154,459**
[11] Effective Treated Impervious Area (ft^2)			**0**			**4,537,793**		**15,392,792**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	University w/o LID		University w/LID		University w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	377	8321	377	8321
	n_d	*number of new deciduous trees*			377		377	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	3,281,157	221478	3,281,157	221478
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	6,562,314	442956
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**			**229,799**		**672,756**
[11] Effective Treated Impervious Area (ft^2)			**0**			**3,063,992**		**8,970,075**

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Univ. w/o LID**	**Univ. w/LID**	**Univ. w/LID Swale**
[1]Total impervious area requiring treatment	6,562,314	6,562,314	6,562,314
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	6,562,314	3,498,322	0
[3]Additional pervious area draining to BMP (ft^2)	6,562,314	6,562,314	6,562,314
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.50	0.35	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	355,459	189,492	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	30.381	16.196	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Schools w/o LID		Schools w/LID		Schools w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	40	883	40	883
	n_d	*number of new deciduous trees*			40		40	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	348,480	23522	348,480	23522
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	696,960	47045
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**24,405**		**71,450**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**325,404**		**952,668**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Schools w/o LID**	**Schools w/LID**	**Schools w/LID Swale**
[1]Total impervious area requiring treatment	696,960	696,960	696,960
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	696,960	371,556	0
[3]Additional pervious area draining to BMP (ft^2)	696,960	696,960	696,960
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.50	0.35	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	37,752	20,126	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	3.227	1.720	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Public Facilities w/o LID		Public Facilities w/LID		Public Facilities w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	7	155	7	155
	n_d	*number of new deciduous trees*			7		7	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	59,895	4043	59,895	4043
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	119,790	8086
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**4,197**		**12,283**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**55,966**		**163,777**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**PF w/o LID**	**PF w/LID**	**PF w/LID Swale**
[1]Total impervious area requiring treatment	119,790	119,790	119,790
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	119,790	63,824	0
[3]Additional pervious area draining to BMP (ft^2)	119,790	119,790	119,790
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.50	0.35	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	6,489	3,457	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.555	0.295	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Park w/o LID		Park w/LID		Park w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	363	8012	363	8012
	n_d	*number of new deciduous trees*			363		363	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	158,123	10673	158,123	10673
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	158,123	10673
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**18,686**		**29,359**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**249,142**		**391,452**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Park w/o LID**	**Park w/LID**	**Park w/LID Swale**
[1]Total impervious area requiring treatment	158,123	158,123	158,123
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	158,123	0	0
[3]Additional pervious area draining to BMP (ft^2)	3,004,333	3,004,333	3,004,333
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.05	0.00	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	8,565	0	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.732	0.000	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Placer Pky w/o LID		Placer Pky w/LID		Placer Pky w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0		0		0
	n_d	*number of new deciduous trees*						
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	4,418,726	298264	4,418,726	298264
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	5,868,621	396132
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**298,264**		**694,396**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**3,976,853**		**9,258,612**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Placer Pky w/o LID**	**Placer Pky w/LID**	**Placer Pky w/LID Swale**
[1]Total impervious area requiring treatment	5,868,621	5,868,621	5,868,621
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	5,868,621	1,891,768	0
[3]Additional pervious area draining to BMP (ft^2)	1,035,639	1,035,639	1,035,639
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.85	0.65	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	317,884	102,471	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	27.170	8.758	0.000

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures			
DMA ID No.	**Major Rds w/o LID**	**Major Rds w/LID**	**Major Rds w/LID Swale**
[1]Total impervious area requiring treatment	5,868,621	5,868,621	5,868,621
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	5868621	3402891	0
[3]Additional pervious area draining to BMP (ft^2)	1,035,639	1,035,639	1,035,639
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.85	0.77	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	317,884	184,323	0
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	27.170	15.754	0.000

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	Major Roads w/o LID		Major Roads w/LID		Major Roads w/LID Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**		**Runoff Reduction (ft^3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	0	-	0	-	0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	0	0	0	0	0
	D_{pond} (ft)	*ponding depth*						
	A_{sa} (ft^2)	*soil amendment area*						
	D_{sa} (ft)	*depth of amended soil*						
	n	*porosity of amended soil*						
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		0	4,600	101534	4,600	101534
	n_d	*number of new deciduous trees*			4,600		4,600	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*						
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		0	1,235,500	83396	1,235,500	83396
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		0	0	0	0	0
	D_{res} (ft)	*depth of gravel storage layer*						
	n_{agg}	*porosity of aggregate*						
	C	*efficiency factor*						
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		0		0	5,868,621	396132
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		0	0	0	0	0
	V_a (ft^3)	*volume of each rain barrel and/or cistern*						
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No	
[10] Total Volume Reduction (ft^3)			**0**		**184,930**		**581,062**	
[11] Effective Treated Impervious Area (ft^2)			**0**		**2,465,730**		**7,747,489**	

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD000X w/LID		PRD000X w/LID and Swale		PRD001X w/LID		PRD001X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	-	-	-	-	-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	-	0	-	0	-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	35	772.5	35	772.5	133	2,935.6	133	2,935.6
	n_d	*number of new deciduous trees*	35		35		133		133	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	176,184	11,892.4	176,184	11,892.4	287,271	19,390.8	287,271	19,390.8
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-	0	-	0	-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	240,182	16,212.3		-	464,046	31,323.1
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-	0	-	0	-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No			
[10] Total Volume Reduction (ft^3)				**12,665**		**28,877**		**22,326**		**53,650**
[11] Effective Treated Impervious Area (ft^2)				**168,866**		**385,030**		**297,686**		**715,327**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD002X w/LID		PRD002X w/LID and Swale		PRD003X w/LID		PRD003X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	37	817	37	817	60	1,324	60	1,324
	n_d	*number of new deciduous trees*	37		37		60		60	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	185,286	12,507	185,286	12,507	300,196	20,263	300,196	20,263
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	252,342	17,033		-	408,767	27,592
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**13,323**		**30,357**		**21,588**		**49,179**
[11] Effective Treated Impervious Area (ft^2)				**177,647**		**404,754**		**287,834**		**655,725**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD004X w/LID		PRD004X w/LID and Swale		PRD005X w/LID		PRD005X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	397	8,763	397	8,763	96	2,119	96	2,119
	n_d	*number of new deciduous trees*	397		397		96		96	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	965,368	65,162	965,368	65,162	145,204	9,801	145,204	9,801
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	1,600,664	108,045		-	300,044	20,253
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**73,925**		**181,970**		**11,920**		**32,173**
[11] Effective Treated Impervious Area (ft^2)				**985,668**		**2,426,266**		**158,936**		**428,976**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD008X w/LID		PRD008X w/LID and Swale		PRD011X w/LID		PRD011X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	32	706	32	706	23	508	23	508
	n_d	*number of new deciduous trees*	32		32		23		23	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	160,913	10,862	160,913	10,862	114,556	7,733	114,556	7,733
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	219,462	14,814		-	156,024	10,532
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**11,568**		**26,382**		**8,240**		**18,772**
[11] Effective Treated Impervious Area (ft^2)				**154,239**		**351,755**		**109,869**		**250,291**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD012X w/LID		PRD012X w/LID and Swale		PRD013X w/LID		PRD013X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	17	375	17	375	38	839	38	839
	n_d	*number of new deciduous trees*	17		17		38		38	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	82,876	5,594	82,876	5,594	192,213	12,974	192,213	12,974
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	112,869	7,619		-	261,777	17,670
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**5,969**		**13,588**		**13,813**		**31,483**
[11] Effective Treated Impervious Area (ft^2)				**79,592**		**181,174**		**184,175**		**419,774**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD014X w/LID		PRD014X w/LID and Swale		PRD015X w/LID		PRD015X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	40	883	40	883	598	13,199	435	9,602
	n_d	*number of new deciduous trees*	40		40		598		435	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	201,087	13,573	201,087	13,573	2,314,952	156,259	2,314,952	156,259
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	273,896	18,488		-	3,442,679	232,381
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**14,456**		**32,944**		**169,459**		**398,242**
[11] Effective Treated Impervious Area (ft^2)				**192,750**		**439,257**		**2,259,448**		**5,309,888**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD019X w/LID		PRD019X w/LID and Swale		PRD023X w/LID		PRD023X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	305	6,732	305	6,732	17	375	17	375
	n_d	*number of new deciduous trees*	305		305		17		17	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	665,151	44,898	665,151	44,898	86,864	5,863	86,864	5,863
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	1,236,142	83,440		-	118,303	7,985
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**51,630**		**135,069**		**6,239**		**14,224**
[11] Effective Treated Impervious Area (ft^2)				**688,397**		**1,800,925**		**83,181**		**189,653**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD024X w/LID		PRD024X w/LID and Swale		PRD025X w/LID		PRD025X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	26	574	26	574	28	618	28	618
	n_d	*number of new deciduous trees*	26		26		28		28	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	130,538	8,811	130,538	8,811	155,692	10,509	155,692	10,509
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	177,789	12,001		-	200,975	13,566
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**9,385**		**21,386**		**11,127**		**24,693**
[11] Effective Treated Impervious Area (ft^2)				**125,136**		**285,146**		**148,363**		**329,241**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD026X w/LID		PRD026X w/LID and Swale		PRD027X w/LID		PRD027X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	58	1,280	58	1,280	24	530	24	530
	n_d	*number of new deciduous trees*	58		58		24		24	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	200,091	13,506	200,091	13,506	83,700	5,650	83,700	5,650
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	288,372	19,465		-	120,522	8,135
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**14,786**		**34,251**		**6,179**		**14,315**
[11] Effective Treated Impervious Area (ft^2)				**197,151**		**456,686**		**82,393**		**190,863**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD028X w/LID		PRD028X w/LID and Swale		PRD029X w/LID		PRD029X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	34	750	34	750	73	1,611	73	1,611
	n_d	*number of new deciduous trees*	34		34		73		73	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	61,639	4,161	61,639	4,161	231,950	15,657	231,950	15,657
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	103,380	6,978		-	393,341	26,551
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**4,911**		**11,889**		**17,268**		**43,818**
[11] Effective Treated Impervious Area (ft^2)				**65,481**		**158,523**		**230,239**		**584,246**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD030X w/LID		PRD030X w/LID and Swale					
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	12	265	12	265		-		-
	n_d	*number of new deciduous trees*	12		12					
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	163,964	11,068	163,964	11,068		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	281,105	18,975		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**11,332**		**30,307**		**-**		**-**
[11] Effective Treated Impervious Area (ft^2)				**151,099**		**404,094**		**-**		**-**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD031X w/LID		PRD031X w/LID and Swale		PRD032X w/LID		PRD032X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	-	-	-	-	-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	-	0	-	0	-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	2	44.1	2	44.1	238	5,253.3	238	5,253.3
	n_d	*number of new deciduous trees*	2		2		238		238	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	56,430	3,809.0	56,430	3,809.0	499,408	33,710.0	499,408	33,710.0
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-	0	-	0	-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	112,900	7,620.8		-	1,285,360	86,761.8
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-	0	-	0	-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					**Yes**	**X**	**No**			
[10] Total Volume Reduction (ft^3)			**3,853**		**11,474**		**38,963**		**125,725**	
[11] Effective Treated Impervious Area (ft^2)			**51,376**		**152,986**		**519,511**		**1,676,335**	

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD034X w/LID		PRD034X w/LID and Swale		PRD035X w/LID		PRD035X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	18	397	18	397	40	883	40	883
	n_d	*number of new deciduous trees*	18		18		40		40	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	90,458	6,106	90,458	6,106	198,358	13,389	198,358	13,389
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	123,196	8,316		-	272,385	18,386
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**6,503**		**14,819**		**14,272**		**32,658**
[11] Effective Treated Impervious Area (ft^2)				**86,710**		**197,586**		**190,294**		**435,441**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD036X w/LID		PRD036X w/LID and Swale		PRD037X w/LID		PRD037X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	118	2,605	118	2,605	92	2,031	92	2,031
	n_d	*number of new deciduous trees*	118		118		92		92	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	283,649	19,146	283,649	19,146	24,191	1,633	24,191	1,633
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	443,498	29,936		-	122,038	8,238
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**21,751**		**51,687**		**3,664**		**11,901**
[11] Effective Treated Impervious Area (ft^2)				**290,012**		**689,160**		**48,848**		**158,682**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD038X w/LID		PRD038X w/LID and Swale		PRD039X w/LID		PRD039X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	18	397	18	397	214	4,724	214	4,724
	n_d	*number of new deciduous trees*	18		18		214		214	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	55,508	3,747	55,508	3,747	250,816	16,930	250,816	16,930
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	94,795	6,399		-	1,626,081	109,760
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**4,144**		**10,543**		**21,654**		**131,414**
[11] Effective Treated Impervious Area (ft^2)				**55,255**		**140,570**		**288,715**		**1,752,188**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD040X w/LID		PRD040X w/LID and Swale		PRD041X w/LID		PRD041X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	53	1,170	53	1,170	30	662	30	662
	n_d	*number of new deciduous trees*	53		53		30		30	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	310,484	20,958	310,484	20,958	147,767	9,974	147,767	9,974
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	512,566	34,598		-	201,783	13,620
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**22,128**		**56,726**		**10,636**		**24,257**
[11] Effective Treated Impervious Area (ft^2)				**295,034**		**756,343**		**141,819**		**323,424**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD042X w/LID		PRD042X w/LID and Swale		PRD043X w/LID		PRD043X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	16	353	16	353	3	66	3	66
	n_d	*number of new deciduous trees*	16		16		3		3	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	143,884	9,712	143,884	9,712	93,409	6,305	93,409	6,305
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	303,976	20,518		-	186,821	12,610
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**10,065**		**30,584**		**6,371**		**18,982**
[11] Effective Treated Impervious Area (ft^2)				**134,204**		**407,783**		**84,951**		**253,090**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD044X w/LID		PRD044X w/LID and Swale		PRD045X w/LID		PRD045X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	2	44	2	44	4	88	4	88
	n_d	*number of new deciduous trees*	2		2		4		4	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	73,450	4,958	73,450	4,958	139,570	9,421	139,570	9,421
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	147,082	9,928		-	279,142	18,842
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**5,002**		**14,930**		**9,509**		**28,351**
[11] Effective Treated Impervious Area (ft^2)				**66,694**		**199,067**		**126,790**		**378,018**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD046X w/LID		PRD046X w/LID and Swale		PRD047X w/LID		PRD047X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	2	44	2	44	10	221	10	221
	n_d	*number of new deciduous trees*	2		2		10		10	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	64,347	4,343	64,347	4,343	168,952	11,404	168,952	11,404
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	128,695	8,687		-	411,898	27,803
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**4,388**		**13,074**		**11,625**		**39,428**
[11] Effective Treated Impervious Area (ft^2)				**58,501**		**174,326**		**155,000**		**525,708**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD049X w/LID		PRD049X w/LID and Swale		PRD050X w/LID		PRD050X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	204	4,503	204	4,503	738	16,290	738	16,290
	n_d	*number of new deciduous trees*	204		204		738		738	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	443,804	29,957	443,804	29,957	1,855,727	125,262	1,855,727	125,262
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	730,982	49,341		-	3,264,467	220,352
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**34,460**		**83,801**		**141,551**		**361,903**
[11] Effective Treated Impervious Area (ft^2)				**459,461**		**1,117,345**		**1,887,348**		**4,825,368**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD053X w/LID		PRD053X w/LID and Swale		PRD055X w/LID		PRD055X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	22	486	22	486	26	574	26	574
	n_d	*number of new deciduous trees*	22		22		26		26	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	192,396	12,987	192,396	12,987	223,639	15,096	223,639	15,096
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	384,792	25,973		-	447,279	30,191
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**13,472**		**39,446**		**15,670**		**45,861**
[11] Effective Treated Impervious Area (ft^2)				**179,631**		**525,944**		**208,927**		**611,478**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD056X w/LID		PRD056X w/LID and Swale		PRD057X w/LID		PRD057X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	-	-	-	-	-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	-	0	-	0	-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	4	88.3	4	88.3	15	331.1	15	331.1
	n_d	*number of new deciduous trees*	4		4		15		15	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	36,894	2,490.3	36,894	2,490.3	130,569	8,813.4	130,569	8,813.4
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-	0	-	0	-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	73,787	4,980.6		-	261,138	17,626.8
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-	0	-	0	-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					**Yes**	**X**	**No**			
[10] Total Volume Reduction (ft^3)			**2,579**		**7,559**		**9,144**		**26,771**	
[11] Effective Treated Impervious Area (ft^2)			**34,382**		**100,790**		**121,927**		**356,951**	

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD058X w/LID		PRD058X w/LID and Swale		PRD059X w/LID		PRD059X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	9	199	9	199	7	155	7	155
	n_d	*number of new deciduous trees*	9		9		7		7	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	79,784	5,385	79,784	5,385	59,299	4,003	59,299	4,003
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	159,569	10,771		-	118,597	8,005
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**5,584**		**16,355**		**4,157**		**12,162**
[11] Effective Treated Impervious Area (ft^2)				**74,454**		**218,066**		**55,429**		**162,167**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD060X w/LID		PRD060X w/LID and Swale		PRD061X w/LID		PRD061X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	8	177	8	177	102	2,251	102	2,251
	n_d	*number of new deciduous trees*	8		8		102		102	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	70,087	4,731	70,087	4,731	164,173	11,082	164,173	11,082
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	140,174	9,462		-	395,967	26,728
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**4,907**		**14,369**		**13,333**		**40,061**
[11] Effective Treated Impervious Area (ft^2)				**65,433**		**191,589**		**177,774**		**534,145**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD062X w/LID		PRD062X w/LID and Swale		PRD063X w/LID		PRD063X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	183	4,039	183	4,039	100	2,207	100	2,207
	n_d	*number of new deciduous trees*	183		183		100		100	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	106,579	7,194	106,579	7,194	579,899	39,143	579,899	39,143
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	356,659	24,074		-	1,455,065	98,217
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**11,233**		**35,308**		**41,350**		**139,567**
[11] Effective Treated Impervious Area (ft^2)				**149,778**		**470,771**		**551,339**		**1,860,898**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD064X w/LID		PRD064X w/LID and Swale		PRD065X w/LID		PRD065X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	67	1,479	67	1,479	49	1,082	49	1,082
	n_d	*number of new deciduous trees*	67		67		49		49	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	305,998	20,655	305,998	20,655	427,523	28,858	427,523	28,858
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	771,644	52,086		-	855,045	57,716
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**22,134**		**74,220**		**29,939**		**87,655**
[11] Effective Treated Impervious Area (ft^2)				**295,116**		**989,596**		**399,191**		**1,168,732**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD068X w/LID		PRD068X w/LID and Swale		PRD069X w/LID		PRD069X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	14	309	14	309	7	155	7	155
	n_d	*number of new deciduous trees*	14		14		7		7	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	118,841	8,022	118,841	8,022	64,830	4,376	64,830	4,376
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	237,683	16,044		-	129,660	8,752
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**8,331**		**24,374**		**4,531**		**13,283**
[11] Effective Treated Impervious Area (ft^2)				**111,077**		**324,992**		**60,407**		**177,101**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD070X w/LID		PRD070X w/LID and Swale		PRD071X w/LID		PRD071X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	8	177	8	177	326	7,196	326	7,196
	n_d	*number of new deciduous trees*	8		8		326		326	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	65,784	4,440	65,784	4,440	645,944	43,601	645,944	43,601
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	131,569	8,881		-	1,409,990	95,174
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**4,617**		**13,498**		**50,797**		**145,971**
[11] Effective Treated Impervious Area (ft^2)				**61,560**		**179,972**		**677,291**		**1,946,282**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD072X w/LID		PRD072X w/LID and Swale		PRD073X w/LID		PRD073X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	6	132	6	132	6	132	6	132
	n_d	*number of new deciduous trees*	6		6		6		6	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	56,084	3,786	56,084	3,786	50,385	3,401	50,385	3,401
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	112,168	7,571		-	100,770	6,802
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**3,918**		**11,489**		**3,533**		**10,335**
[11] Effective Treated Impervious Area (ft^2)				**52,241**		**153,193**		**47,112**		**137,805**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD074X w/LID		PRD074X w/LID and Swale		PRD075X w/LID		PRD075X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	9	199	9	199	7	155	7	155
	n_d	*number of new deciduous trees*	9		9		7		7	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	80,913	5,462	80,913	5,462	62,219	4,200	62,219	4,200
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	161,825	10,923		-	124,438	8,400
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**5,660**		**16,583**		**4,354**		**12,754**
[11] Effective Treated Impervious Area (ft^2)				**75,470**		**221,113**		**58,057**		**170,051**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD076X w/LID		PRD076X w/LID and Swale		PRD077X w/LID		PRD077X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	11	243	11	243	161	3,554	161	3,554
	n_d	*number of new deciduous trees*	11		11		161		161	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	175,996	11,880	175,996	11,880	223,526	15,088	223,526	15,088
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	429,199	28,971		-	626,719	42,304
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**12,123**		**41,093**		**18,642**		**60,945**
[11] Effective Treated Impervious Area (ft^2)				**161,634**		**547,913**		**248,556**		**812,603**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD078X w/LID		PRD078X w/LID and Swale		PRD086X w/LID		PRD086X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	5	110	5	110	3	66	3	66
	n_d	*number of new deciduous trees*	5		5		3		3	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	89,803	6,062	89,803	6,062	91,321	6,164	91,321	6,164
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	218,997	14,782		-	182,763	12,337
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**6,172**		**20,954**		**6,230**		**18,567**
[11] Effective Treated Impervious Area (ft^2)				**82,294**		**279,392**		**83,072**		**247,559**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD087X w/LID		PRD087X w/LID and Swale		PRD088X w/LID		PRD088X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*	-	-	-	-	-	-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*	0	-	0	-	0	-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	47	1,037.4	47	1,037.4	72	1,589.2	72	1,589.2
	n_d	*number of new deciduous trees*	47		47		72		72	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	79,570	5,371.0	79,570	5,371.0	295,020	19,913.9	295,020	19,913.9
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	192,115	12,967.8		-	602,210	40,649.2
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-	0	-	0	-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outlined in the Fact Sheets?					Yes	X	No			
[10] Total Volume Reduction (ft^3)				**6,408**		**19,376**		**21,503**		**62,152**
[11] Effective Treated Impervious Area (ft^2)				**85,445**		**258,349**		**286,708**		**828,697**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD094X w/LID		PRD094X w/LID and Swale		PRD095X w/LID		PRD095X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	257	5,673	257	5,673	29	640	29	640
	n_d	*number of new deciduous trees*	257		257		29		29	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	629,341	42,481	629,341	42,481	478,643	32,308	478,643	32,308
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	1,381,761	93,269		-	1,166,358	78,729
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**48,153**		**141,422**		**32,949**		**111,678**
[11] Effective Treated Impervious Area (ft^2)				**642,042**		**1,885,627**		**439,313**		**1,489,036**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD097X w/LID		PRD097X w/LID and Swale		PRD098X w/LID		PRD098X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	3	66	3	66	0	-	0	-
	n_d	*number of new deciduous trees*	3		3		0		0	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	1,040,669	70,245	1,040,669	70,245	238,975	16,131	238,975	16,131
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	1,659,433	112,012		-	687,252	46,390
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**70,311**		**182,323**		**16,131**		**62,520**
[11] Effective Treated Impervious Area (ft^2)				**937,485**		**2,430,975**		**215,078**		**833,604**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD100X w/LID		PRD100X w/LID and Swale		PRD300X w/LID		PRD300X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	2	44	2	44	63	1,391	63	1,391
	n_d	*number of new deciduous trees*	2		2		63		63	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	1,187,668	80,168	1,187,668	80,168	136,950	9,244	136,950	9,244
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	2,659,049	179,486		-	218,592	14,755
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**80,212**		**259,698**		**10,635**		**25,390**
[11] Effective Treated Impervious Area (ft^2)				**1,069,490**		**3,462,634**		**141,796**		**338,529**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD301X w/LID		PRD301X w/LID and Swale		PRD302X w/LID		PRD302X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	201	4,437	201	4,437	69	1,523	69	1,523
	n_d	*number of new deciduous trees*	201		201		69		69	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	397,699	26,845	397,699	26,845	25,146	1,697	25,146	1,697
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	724,754	48,921		-	55,035	3,715
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**31,281**		**80,202**		**3,220**		**6,935**
[11] Effective Treated Impervious Area (ft^2)				**417,083**		**1,069,362**		**42,938**		**92,470**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD501X w/LID		PRD501X w/LID and Swale		PRD503X w/LID		PRD503X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	426	9,403	426	9,403	44	971	44	971
	n_d	*number of new deciduous trees*	426		426		44		44	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	809,596	54,648	809,596	54,648	121,034	8,170	121,034	8,170
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	1,783,171	120,364		-	209,809	14,162
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**64,051**		**184,415**		**9,141**		**23,303**
[11] Effective Treated Impervious Area (ft^2)				**854,008**		**2,458,862**		**121,880**		**310,708**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD504X w/LID		PRD504X w/LID and Swale		PRD505X w/LID		PRD505X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	15	331	15	331	53	1,170	53	1,170
	n_d	*number of new deciduous trees*	15		15		53		53	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	47,838	3,229	47,838	3,229	164,988	11,137	164,988	11,137
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	81,044	5,470		-	280,666	18,945
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**3,560**		**9,031**		**12,307**		**31,251**
[11] Effective Treated Impervious Area (ft^2)				**47,469**		**120,408**		**164,087**		**416,687**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PRD510X w/LID		PRD510X w/LID and Swale		PRD900X w/LID		PRD900X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-		-		-
	D_{pond} (ft)	*ponding depth*								
	A_{sa} (ft^2)	*soil amendment area*								
	D_{sa} (ft)	*depth of amended soil*								
	n	*porosity of amended soil*								
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*	371	8,189	371	8,189	181	3,995	181	3,995
	n_d	*number of new deciduous trees*	371		371		181		181	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*								
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*	1,076,032	72,632	1,076,032	72,632	1,664,605	112,361	1,664,605	112,361
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-		-		-
	D_{res} (ft)	*depth of gravel storage layer*								
	n_{agg}	*porosity of aggregate*								
	C	*efficiency factor*								
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	2,666,579	179,994		-	3,187,203	215,136
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8		0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*								
[9] Do all Site Design Measures meet the design requirements outline										
[10] Total Volume Reduction (ft^3)				**80,821**		**260,815**		**116,356**		**331,492**
[11] Effective Treated Impervious Area (ft^2)				**1,077,614**		**3,477,535**		**1,551,413**		**4,419,896**

Form 3-4 Runoff Reduction Calculator for Site Design Measures on Regulated Projects

		[1]DMA ID No.	PROFF002X w/LID		PROFF002X w/LID and Swale	
Site Design Measure	**Runoff Reduction Parameters**			**Runoff Reduction (ft3)**		**Runoff Reduction (ft3)**
[2] Adjacent/On-Site Stream Setbacks and Buffers	A_{imp} (ft^2)	*impervious drainage area*		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8	
[3] Soil Quality Improvement and Maintenance	A_{pond} (ft^2)	*ponding area*		-		-
	D_{pond} (ft)	*ponding depth*				
	A_{sa} (ft^2)	*soil amendment area*				
	D_{sa} (ft)	*depth of amended soil*				
	n	*porosity of amended soil*				
[4] Tree Planting and Preservation	n_e	*number of new evergreen trees*		-	0	-
	n_d	*number of new deciduous trees*			0	
	A_{tc} (ft^2)	*canopy area of existing trees to remain on the property*				
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8	
[5] Rooftop and Impervious Area Disconnection	A_{imp} (ft^2)	*impervious drainage area*		-		-
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8	
[6] Porous Pavement	A_{res} (ft^2)	*area of gravel storage layer*		-		-
	D_{res} (ft)	*depth of gravel storage layer*				
	n_{agg}	*porosity of aggregate*				
	C	*efficiency factor*				
[7] Vegetated Swales	A_{imp} (ft^2)	*impervious drainage area*		-	101,204	6,831
	V_{85} (in)	*runoff volume from 85th percentile, 24-hour storm*	0.8		0.8	
[8] Rain Barrels and Cisterns	N	*number of rain barrels and/or cisterns*		-		-
	V_a (ft^3)	*volume of each rain barrel and/or cistern*				
[9] Do all Site Design Measures meet the design requirements outline						
[10] Total Volume Reduction (ft^3)			-		**6,831**	
[11] Effective Treated Impervious Area (ft^2)			-		**91,084**	

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures

DMA ID No.	PRD000X w/LID	PRD000X w/LID and Swale	PRD001X w/LID	PRD001X w/LID and Swale	PRD002X w/LID	PRD002X w/LID and Swale	PRD003X w/LID	PRD003X w/LID and Swale	PRD004X w/LID	PRD004X w/LID and Swale	PRD005X w/LID	PRD005X w/LID and Swale	PRD008X w/LID	PRD008X w/LID and Swale	PRD011X w/LID	PRD011X w/LID and Swale	PRD012X w/LID	PRD012X w/LID and Swale	PRD013X w/LID	PRD013X w/LID and Swale	PRD014X w/LID	PRD014X w/LID and Swale
[1]Total impervious area requiring treatment	240,182	240,182	464,046	464,046	252,342	252,342	408,859	408,859	1,600,664	1,600,664	300,044	300,044	219,462	219,462	156,024	156,024	112,869	112,869	261,777	261,777	273,896	273,896
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	71,316	-	166,360	-	74,696	-	121,025	-	614,996	-	141,108	-	65,223	-	46,155	-	33,278	-	77,602	-	81,146	-
[3]Additional pervious area draining to BMP (ft^2)	364,403	364,403	664,900	664,900	378,513	378,513	613,534	613,534	1,973,325	1,973,325	631,002	631,002	329,354	329,354	234,224	234,224	169,303	169,303	392,681	392,681	411,449	411,449
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.16	0.00	0.20	0.00	0.16	0.00	0.16	0.00	0.24	0.00	0.18	0.00	0.17	0.00	0.16	0.00	0.16	0.00	0.17	0.00	0.16	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	3,863	-	9,011	-	4,046	-	6,555	-	33,312	-	7,643	-	3,533	-	2,500	-	1,803	-	4,203	-	4,395	-
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.330	0.000	0.770	0.000	0.346	0.000	0.560	0.000	2.847	0.000	0.653	0.000	0.302	0.000	0.214	0.000	0.154	0.000	0.359	0.000	0.376	0.000

DMA ID No.	PRD015X w/LID	PRD015X w/LID and Swale	PRD019X w/LID	PRD019X w/LID and Swale	PRD023X w/LID	PRD023X w/LID and Swale	PRD024X w/LID	PRD024X w/LID and Swale	PRD025X w/LID	PRD025X w/LID and Swale	PRD026X w/LID	PRD026X w/LID and Swale	PRD027X w/LID	PRD027X w/LID and Swale	PRD028X w/LID	PRD028X w/LID and Swale	PRD029X w/LID	PRD029X w/LID and Swale	PRD030X w/LID	PRD030X w/LID and Swale		
[1]Total impervious area requiring treatment	3,442,679	3,442,679	1,236,142	1,236,142	118,303	118,303	177,789	177,789	200,975	200,975	288,372	288,372	120,522	120,522	103,380	103,380	393,341	393,341	281,105	281,105		
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	1,183,231	-	547,745	-	35,122	-	52,653	-	52,612	-	91,221	-	38,129	-	37,899	-	163,102	-	130,006	-	-	-
[3]Additional pervious area draining to BMP (ft^2)	4,212,326	4,212,326	1,386,302	1,386,302	177,512	177,512	266,847	266,847	976,065	976,065	423,943	423,943	177,832	177,832	138,180	138,180	398,229	398,229	177,361	177,361		
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.22	0.00	0.28	0.00	0.17	0.00	0.16	0.00	0.05	0.00	0.18	0.00	0.18	0.00	0.22	0.00	0.29	0.00	0.42	0.00	#DIV/0!	#DIV/0!
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	64,092	-	29,669	-	1,902	-	2,852	-	2,850	-	4,941	-	2,065	-	2,053	-	8,835	-	7,042	-	#DIV/0!	#DIV/0!
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	5.478	0.000	2.536	0.000	0.163	0.000	0.244	0.000	0.244	0.000	0.422	0.000	0.177	0.000	0.175	0.000	0.755	0.000	0.602	0.000	#DIV/0!	#DIV/0!

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures

DMA ID No.	PRD031X w/LID	PRD031X w/LID and Swale	PRD032X w/LID	PRD032X w/LID and Swale	PRD034X w/LID	PRD034X w/LID and Swale	PRD035X w/LID	PRD035X w/LID and Swale	PRD036X w/LID	PRD036X w/LID and Swale	PRD037X w/LID	PRD037X w/LID and Swale	PRD038X w/LID	PRD038X w/LID and Swale	PRD039X w/LID	PRD039X w/LID and Swale	PRD040X w/LID	PRD040X w/LID and Swale	PRD041X w/LID	PRD041X w/LID and Swale	PRD042X w/LID	PRD042X w/LID and Swale
[1]Total impervious area requiring treatment	112,900	112,900	1,285,360	1,285,360	123,196	123,196	272,385	272,385	443,498	443,498	122,038	122,038	94,795	94,795	1,626,081	1,626,081	512,566	512,566	201,783	201,783	303,976	303,976
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	61,524	-	765,849	-	36,486	-	82,091	-	153,487	-	73,191	-	39,540	-	1,337,366	-	217,533	-	59,964	-	169,772	-
[3]Additional pervious area draining to BMP (ft^2)	28,389	28,389	903,542	903,542	184,827	184,827	407,746	407,746	652,951	652,951	166,164	166,164	98,401	98,401	2,202,054	2,202,054	571,411	571,411	303,378	303,378	202,664	202,664
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.68	0.00	0.46	0.00	0.16	0.00	0.17	0.00	0.19	0.00	0.31	0.00	0.29	0.00	0.38	0.00	0.28	0.00	0.17	0.00	0.46	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	3,333	-	41,484	-	1,976	-	4,447	-	8,314	-	3,964	-	2,142	-	72,441	-	11,783	-	3,248	-	9,196	-
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.285	0.000	3.546	0.000	0.169	0.000	0.380	0.000	0.711	0.000	0.339	0.000	0.183	0.000	6.192	0.000	1.007	0.000	0.278	0.000	0.786	0.000

DMA ID No.	PRD043X w/LID	PRD043X w/LID and Swale	PRD044X w/LID	PRD044X w/LID and Swale	PRD045X w/LID	PRD045X w/LID and Swale	PRD046X w/LID	PRD046X w/LID and Swale	PRD047X w/LID	PRD047X w/LID and Swale	PRD049X w/LID	PRD049X w/LID and Swale	PRD050X w/LID	PRD050X w/LID and Swale	PRD053X w/LID	PRD053X w/LID and Swale	PRD055X w/LID	PRD055X w/LID and Swale				
[1]Total impervious area requiring treatment	186,821	186,821	147,082	147,082	279,142	279,142	128,695	128,695	411,898	411,898	730,982	730,982	3,264,467	3,264,467	384,792	384,792	447,279	447,279				
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	101,870	-	80,388	-	152,352	-	70,194	-	256,898	-	271,521	-	1,377,119	-	205,161	-	238,352	-	-	-	-	-
[3]Additional pervious area draining to BMP (ft^2)	46,758	46,758	36,747	36,747	69,820	69,820	32,174	32,174	177,145	177,145	926,541	926,541	3,937,660	3,937,660	384,792	384,792	447,279	447,279				
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.69	0.00	0.69	0.00	0.69	0.00	0.69	0.00	0.59	0.00	0.23	0.00	0.26	0.00	0.35	0.00	0.35	0.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	5,518	-	4,354	-	8,252	-	3,802	-	13,915	-	14,707	-	74,594	-	11,113	-	12,911	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.472	0.000	0.372	0.000	0.705	0.000	0.325	0.000	1.189	0.000	1.257	0.000	6.376	0.000	0.950	0.000	1.103	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures

DMA ID No.	PRD056X w/LID	PRD056X w/LID and Swale	PRD057X w/LID	PRD057X w/LID and Swale	PRD058X w/LID	PRD058X w/LID and Swale	PRD059X w/LID	PRD059X w/LID and Swale	PRD060X w/LID	PRD060X w/LID and Swale	PRD061X w/LID	PRD061X w/LID and Swale	PRD062X w/LID	PRD062X w/LID and Swale	PRD063X w/LID	PRD063X w/LID and Swale	PRD064X w/LID	PRD064X w/LID and Swale	PRD065X w/LID	PRD065X w/LID and Swale	PRD068X w/LID	PRD068X w/LID and Swale
[1]Total impervious area requiring treatment	73,787	73,787	261,138	261,138	159,569	159,569	118,597	118,597	140,174	140,174	395,967	395,967	356,659	356,659	1,455,065	1,455,065	771,644	771,644	855,045	855,045	237,683	237,683
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	39,405	-	139,211	-	85,115	-	63,168	-	74,741	-	218,193	-	206,881	-	903,726	-	476,528	-	455,854	-	126,606	-
[3]Additional pervious area draining to BMP (ft^2)	73,787	73,787	261,138	261,138	159,569	159,569	118,597	118,597	140,174	140,174	305,403	305,403	142,325	142,325	621,790	621,790	327,599	327,599	855,045	855,045	237,683	237,683
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.35	0.00	0.35	0.00	0.35	0.00	0.35	0.00	0.35	0.00	0.42	0.00	0.59	0.00	0.59	0.00	0.59	0.00	0.35	0.00	0.35	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	2,134	-	7,541	-	4,610	-	3,422	-	4,048	-	11,819	-	11,206	-	48,952	-	25,812	-	24,692	-	6,858	-
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.182	0.000	0.644	0.000	0.394	0.000	0.292	0.000	0.346	0.000	1.010	0.000	0.958	0.000	4.184	0.000	2.206	0.000	2.110	0.000	0.586	0.000

DMA ID No.	PRD069X w/LID	PRD069X w/LID and Swale	PRD070X w/LID	PRD070X w/LID and Swale	PRD071X w/LID	PRD071X w/LID and Swale	PRD072X w/LID	PRD072X w/LID and Swale	PRD073X w/LID	PRD073X w/LID and Swale	PRD074X w/LID	PRD074X w/LID and Swale	PRD075X w/LID	PRD075X w/LID and Swale	PRD076X w/LID	PRD076X w/LID and Swale	PRD077X w/LID	PRD077X w/LID and Swale	PRD078X w/LID	PRD078X w/LID and Swale	PRD086X w/LID	PRD086X w/LID and Swale
[1]Total impervious area requiring treatment	129,660	129,660	131,569	131,569	1,409,990	1,409,990	112,168	112,168	100,770	100,770	161,825	161,825	124,438	124,438	429,199	429,199	626,719	626,719	218,997	218,997	182,763	182,763
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	69,253	-	70,009	-	732,699	-	59,927	-	53,658	-	86,355	-	66,381	-	267,565	-	378,163	-	136,703	-	99,691	-
[3]Additional pervious area draining to BMP (ft^2)	129,660	129,660	131,569	131,569	957,047	957,047	112,168	112,168	100,770	100,770	161,825	161,825	124,438	124,438	183,939	183,939	263,643	263,643	93,856	93,856	47,961	47,961
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.35	0.00	0.35	0.00	0.43	0.00	0.35	0.00	0.35	0.00	0.35	0.00	0.35	0.00	0.59	0.00	0.59	0.00	0.59	0.00	0.68	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	3,751	-	3,792	-	39,688	-	3,246	-	2,906	-	4,678	-	3,596	-	14,493	-	20,484	-	7,405	-	5,400	-
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.321	0.000	0.324	0.000	3.392	0.000	0.277	0.000	0.248	0.000	0.400	0.000	0.307	0.000	1.239	0.000	1.751	0.000	0.633	0.000	0.462	0.000

Form 3-5 Computation of Water Quality Design Criteria for Stormwater Treatment and Baseline Hydromodification Measures

DMA ID No.	PRD087X w/LID	PRD087X w/LID and Swale	PRD088X w/LID	PRD088X w/LID and Swale	PRD094X w/LID	PRD094X w/LID and Swale	PRD095X w/LID	PRD095X w/LID and Swale	PRD097X w/LID	PRD097X w/LID and Swale	PRD098X w/LID	PRD098X w/LID and Swale	PRD100X[1] w/LID	PRD100X[1] w/LID and Swale	PRD300X w/LID	PRD300X w/LID and Swale	PRD301X w/LID	PRD301X w/LID and Swale	PRD302X w/LID	PRD302X w/LID and Swale	PRD501X w/LID	PRD501X w/LID and Swale
[1]Total impervious area requiring treatment	192,115	192,115	602,210	602,210	1,381,761	1,381,761	1,166,358	1,166,358	1,659,433	1,659,433	687,252	687,252	2,659,049	2,659,049	218,592	218,592	724,754	724,754	55,035	55,035	1,783,171	1,783,171
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	106,670	-	315,502	-	739,719	-	727,045	-	721,948	-	472,175	-	1,589,559	-	76,796	-	307,671	-	12,097	-	929,163	-
[3]Additional pervious area draining to BMP (ft^2)	52,193	52,193	203,845	203,845	482,421	482,421	499,401	499,401	2,099,296	2,099,296	7,064,241	7,064,241	10,943,546	10,943,546	340,887	340,887	809,668	809,668	338,808	338,808	1,411,835	1,411,835
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.67	0.00	0.61	0.00	0.61	0.00	0.59	0.00	0.26	0.00	0.06	0.00	0.13	0.00	0.18	0.00	0.28	0.00	0.03	0.00	0.40	0.00
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	5,778	-	17,090	-	40,068	-	39,382	-	39,106	-	25,576	-	86,101	-	4,160	-	16,665	-	655	-	50,330	-
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.494	0.000	1.461	0.000	3.425	0.000	3.366	0.000	3.342	0.000	2.186	0.000	7.359	0.000	0.356	0.000	1.424	0.000	0.056	0.000	4.302	0.000

DMA ID No.	PRD503X w/LID	PRD503X w/LID and Swale	PRD504X w/LID	PRD504X w/LID and Swale	PRD505X w/LID	PRD505X w/LID and Swale	PRD510X w/LID	PRD510X w/LID and Swale	PRD900X w/LID	PRD900X w/LID and Swale	OFF002X w/LID	OFF002X w/LID and Swale										
[1]Total impervious area requiring treatment	209,809	209,809	81,044	81,044	280,666	280,666	2,666,579	2,666,579	3,187,203	3,187,203	101,204	101,204		-		-		-		-		-
[2] Impervious area untreated by Site Design Measures (ft^2) *Item 1 – Form 3-4 Item 11*	87,929	-	33,575	-	116,579	-	1,588,965	-	1,635,790	-	101,204	10,120	-	-	-	-	-	-	-	-	-	-
[3]Additional pervious area draining to BMP (ft^2)	220,410	220,410	81,539	81,539	283,294	283,294	1,069,295	1,069,295	1,033,999	1,033,999	1,656,334	1,656,334		-		-		-		-		-
[4] Composite DMA Runoff Coefficient (Rc) *Enter area weighted composite runoff coefficient representing entire DMA*	0.29	0.00	0.29	0.00	0.29	0.00	0.60	0.00	0.61	0.00	0.06	0.01	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
[5] Water Quality Volume (WQV) (ft^3) *WQV = 1/12 * [Item 2 + Item 3) *Item 4] * Unit WQV*	4,763	-	1,819	-	6,315	-	86,069	-	88,605	-	5,482	548	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
[6] Water Quality Flow (WQF) (cfs) *WQF = 1/43,200 * [0.2* (Item 2 + Item 3) * Item4]*	0.407	0.000	0.155	0.000	0.540	0.000	7.356	0.000	7.573	0.000	0.469	0.047	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

1. Drainage shed PRD100X does not include the area of the landfill that retains the runoff for small events.

Swale Calculations and Results

Swale Name	Contributing Area (ac)	SWQ Flow[1] (cfs)	Slope (ft/ft)	Manning's 'n'	Depth (ft)	Side Slope (ft:ft)	Bottom Width of each bay (ft)	No. of Bays	Length (ft)	Area per Bay (ft^2)	Wetted Perimeter per Bay (ft)	Hydraulic Radius per Bay (ft)	Velocity (fps)	Contact Time (min)	Overall Bottom Width (ft)
PRD000X	13.88	0.330	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD001X	25.92	0.770	0.01	0.25	0.33	3	8	1	160	2.98	10.05	0.30	0.26	10.09	8
PRD002X	14.48	0.346	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD003X	23.47	0.560	0.01	0.25	0.33	3	6	1	160	2.32	8.05	0.29	0.26	10.29	6
PRD004X	82.05	2.847	0.01	0.25	0.33	3	10	3	165	3.64	12.05	0.30	0.27	10.28	38
PRD005X	21.37	0.653	0.01	0.25	0.33	3	7	1	160	2.65	9.05	0.29	0.26	10.18	7
PRD008X	12.6	0.302	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD011X	8.96	0.214	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD012X	6.48	0.154	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD013X	15.02	0.359	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD014X	15.73	0.376	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD015X	175.73	5.478	0.01	0.25	0.33	3	10	6	165	3.64	12.05	0.30	0.27	10.28	80
PRD019X	60.2	2.536	0.01	0.25	0.33	3	9	3	160	3.31	11.05	0.30	0.27	10.02	35
PRD023X	6.79	0.163	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD024X	10.21	0.244	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD025X	27.02	0.244	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD026X	16.35	0.422	0.01	0.25	0.33	3	5	1	155	1.99	7.05	0.28	0.26	10.11	5
PRD027X	6.85	0.177	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD028X	5.55	0.175	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD029X	18.16	0.755	0.01	0.25	0.33	3	8	1	160	2.98	10.05	0.30	0.26	10.09	8
PRD030X	10.52	0.602	0.01	0.25	0.33	3	7	1	160	2.65	9.05	0.29	0.26	10.18	7
PRD031X	3.24	0.285	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD032X	50.25	3.546	0.01	0.25	0.33	3	10	4	165	3.64	12.05	0.30	0.27	10.28	52
PRD034X	7.07	0.169	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD035X	15.61	0.380	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD036X	25.17	0.711	0.01	0.25	0.33	3	8	1	160	2.98	10.05	0.30	0.26	10.09	8
PRD037X	6.62	0.339	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD038X	4.44	0.183	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD039X	87.88	6.192	0.01	0.25	0.33	3	10	7	165	3.64	12.05	0.30	0.27	10.28	94
PRD040X	24.88	1.007	0.01	0.25	0.33	3	5	2	155	1.99	7.05	0.28	0.26	10.11	14
PRD041X	11.6	0.278	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD042X	11.63	0.786	0.01	0.25	0.33	3	8	1	160	2.98	10.05	0.30	0.26	10.09	8
PRD043X	5.36	0.472	0.01	0.25	0.33	3	5	1	155	1.99	7.05	0.28	0.26	10.11	5

Swale Calculations and Results

Swale Calculations and Results

Swale Name	Contributing Area (ac)	SWQ Flow[1] (cfs)	Slope (ft/ft)	Manning's 'n'	Depth (ft)	Side Slope (ft:ft)	Bottom Width of each bay (ft)	No. of Bays	Length (ft)	Area per Bay (ft^2)	Wetted Perimeter per Bay (ft)	Hydraulic Radius per Bay (ft)	Velocity (fps)	Contact Time (min)	Overall Bottom Width (ft)
PRD044X	4.22	0.372	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD045X	8.01	0.705	0.01	0.25	0.33	3	8	1	160	2.98	10.05	0.30	0.26	10.09	8
PRD046X	3.69	0.325	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD047X	13.52	1.189	0.01	0.25	0.33	3	6	2	160	2.32	8.05	0.29	0.26	10.29	16
PRD049X	38.05	1.257	0.01	0.25	0.33	3	7	2	160	2.65	9.05	0.29	0.26	10.18	18
PRD050X	165.34	6.376	0.01	0.25	0.33	3	10	7	165	3.64	12.05	0.30	0.27	10.28	94
PRD053X	17.67	0.950	0.01	0.25	0.33	3	10	1	165	3.64	12.05	0.30	0.27	10.28	10
PRD055X	20.54	1.103	0.01	0.25	0.33	3	6	2	160	2.32	8.05	0.29	0.26	10.29	16
PRD056X	3.39	0.182	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD057X	11.99	0.644	0.01	0.25	0.33	3	7	1	160	2.65	9.05	0.29	0.26	10.18	7
PRD058X	7.33	0.394	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD059X	5.45	0.292	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD060X	6.44	0.346	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD061X	16.1	1.010	0.01	0.25	0.33	3	5	2	155	1.99	7.05	0.28	0.26	10.11	14
PRD062X	11.46	0.958	0.01	0.25	0.33	3	10	1	165	3.64	12.05	0.30	0.27	10.28	10
PRD063X	47.68	4.184	0.01	0.25	0.33	3	9	5	160	3.31	11.05	0.30	0.27	10.02	61
PRD064X	25.24	2.206	0.01	0.25	0.33	3	8	3	160	2.98	10.05	0.30	0.26	10.09	32
PRD065X	39.26	2.110	0.01	0.25	0.33	3	8	3	160	2.98	10.05	0.30	0.26	10.09	32
PRD068X	10.91	0.586	0.01	0.25	0.33	3	6	1	160	2.32	8.05	0.29	0.26	10.29	6
PRD069X	5.95	0.321	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD070X	6.04	0.324	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD071X	54.34	3.392	0.01	0.25	0.33	3	9	4	160	3.31	11.05	0.30	0.27	10.02	48
PRD072X	5.15	0.277	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD073X	4.63	0.248	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD074X	7.43	0.400	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD075X	5.71	0.307	0.01	0.25	0.33	3	3	1	150	1.33	5.05	0.26	0.24	10.25	3
PRD076X	14.08	1.239	0.01	0.25	0.33	3	7	2	160	2.65	9.05	0.29	0.26	10.18	18
PRD077X	20.44	1.751	0.01	0.25	0.33	3	9	2	160	3.31	11.05	0.30	0.27	10.02	22
PRD078X	7.18	0.633	0.01	0.25	0.33	3	7	1	160	2.65	9.05	0.29	0.26	10.18	7
PRD086X	5.3	0.462	0.01	0.25	0.33	3	5	1	155	1.99	7.05	0.28	0.26	10.11	5
PRD087X	5.61	0.494	0.01	0.25	0.33	3	5	1	155	1.99	7.05	0.28	0.26	10.11	5
PRD088X	18.5	1.461	0.01	0.25	0.33	3	8	2	160	2.98	10.05	0.30	0.26	10.09	20
PRD094X	42.8	3.425	0.01	0.25	0.33	3	9	4	160	3.31	11.05	0.30	0.27	10.02	48
PRD095X	38.24	3.366	0.01	0.25	0.33	3	9	4	160	3.31	11.05	0.30	0.27	10.02	48

Swale Calculations and Results

Swale Calculations and Results

Swale Name	Contributing Area (ac)	SWQ Flow[1] (cfs)	Slope (ft/ft)	Manning's 'n'	Depth (ft)	Side Slope (ft:ft)	Bottom Width of each bay (ft)	No. of Bays	Length (ft)	Area per Bay (ft^2)	Wetted Perimeter per Bay (ft)	Hydraulic Radius per Bay (ft)	Velocity (fps)	Contact Time (min)	Overall Bottom Width (ft)
PRD097X	86.29	3.342	0.01	0.25	0.33	3	9	4	160	3.31	11.05	0.30	0.27	10.02	48
PRD098X	177.95	2.186	0.01	0.25	0.33	3	8	3	160	2.98	10.05	0.30	0.26	10.09	32
PRD100X	312.27	7.359	0.01	0.25	0.33	3	10	8	165	3.64	12.05	0.30	0.27	10.28	108
PRD300X	12.84	0.356	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD301X	35.23	1.424	0.01	0.25	0.33	3	8	2	160	2.98	10.05	0.30	0.26	10.09	20
PRD302X	9.04	0.056	0.01	0.25	0.33	3	0	1	110	0.34	2.05	0.17	0.18	10.25	0
PRD501X	73.35	4.302	0.01	0.25	0.33	3	9	5	160	3.31	11.05	0.30	0.27	10.02	61
PRD503X	9.88	0.407	0.01	0.25	0.33	3	4	1	155	1.66	6.05	0.27	0.25	10.30	4
PRD504X	3.73	0.155	0.01	0.25	0.33	3	2	1	145	1.00	4.05	0.25	0.23	10.34	2
PRD505X	12.95	0.540	0.01	0.25	0.33	3	6	1	160	2.32	8.05	0.29	0.26	10.29	6
PRD510X	85.76	7.356	0.01	0.25	0.33	3	10	8	165	3.64	12.05	0.30	0.27	10.28	108
PRD900X	96.91	7.573	0.01	0.25	0.33	3	10	8	165	3.64	12.05	0.30	0.27	10.28	108
OFF002X	40.35	0.469	0.01	0.25	0.33	3	5	1	155	1.99	7.05	0.28	0.26	10.11	5

1. Storm Water Quality Flow is calculated using Form 3-5 from the West Placer Storm Water Quality Manual (see "LID Results per Outfall" this appendix).

Swale Calculations and Results

Appendix G
Detention Basin
Data and Parameters

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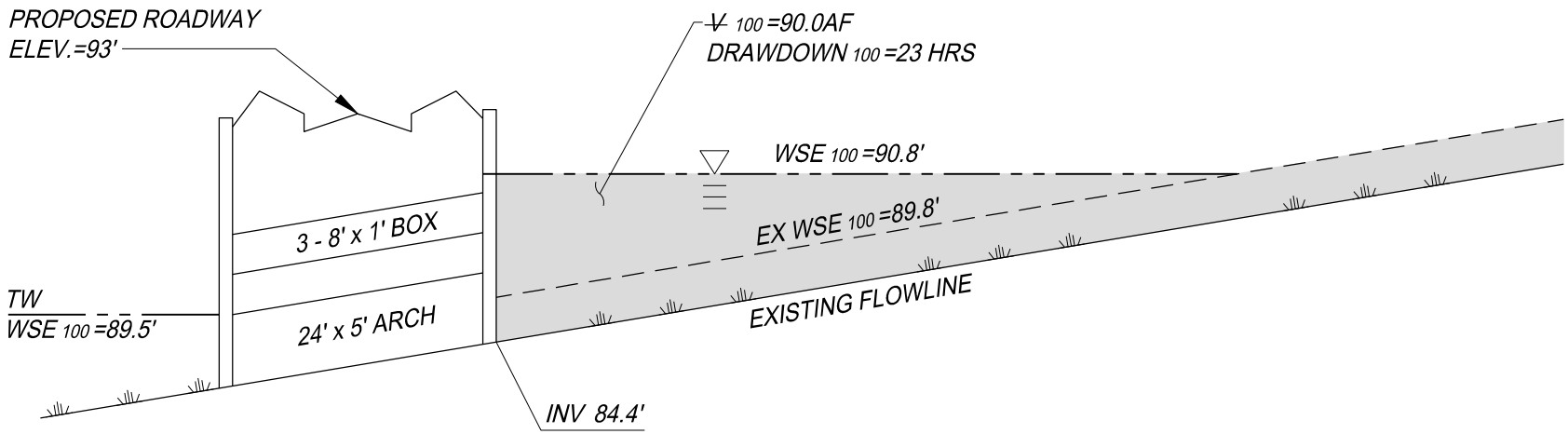

CULVERT SCHEDULE

24'W x 5'H CONSPAN ARCH @ 84.4'
3 - 8'W x 1'H BOX CULVERT @ 89.9'

Detention Basin #1
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
Not to Scale

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

California
May 2017
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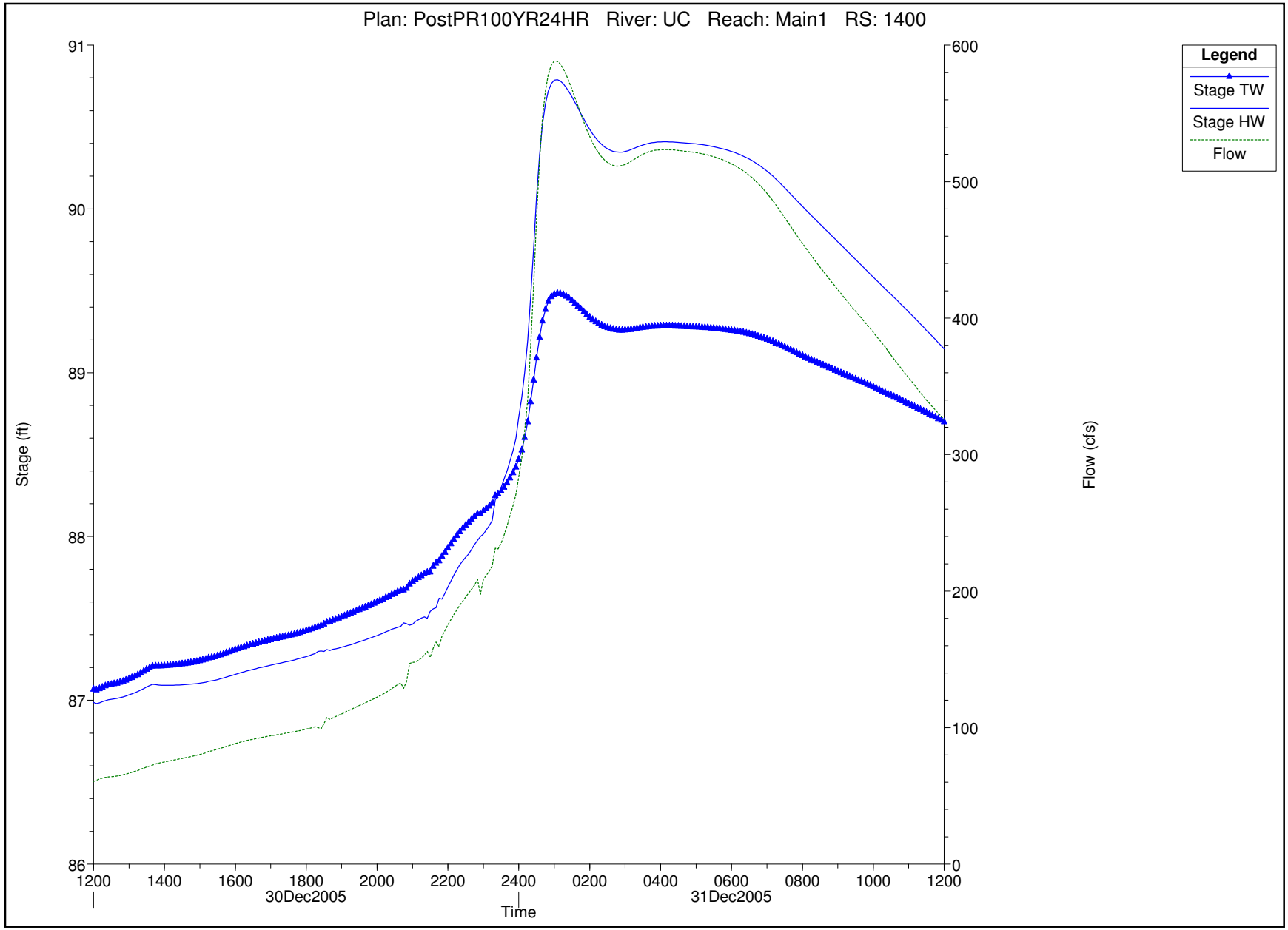
There are no xreferences in this drawing.

PRELIMINARY - Subject to Revision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Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
91
90
89
88
87
86
600
500
400
300
200
100
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#1

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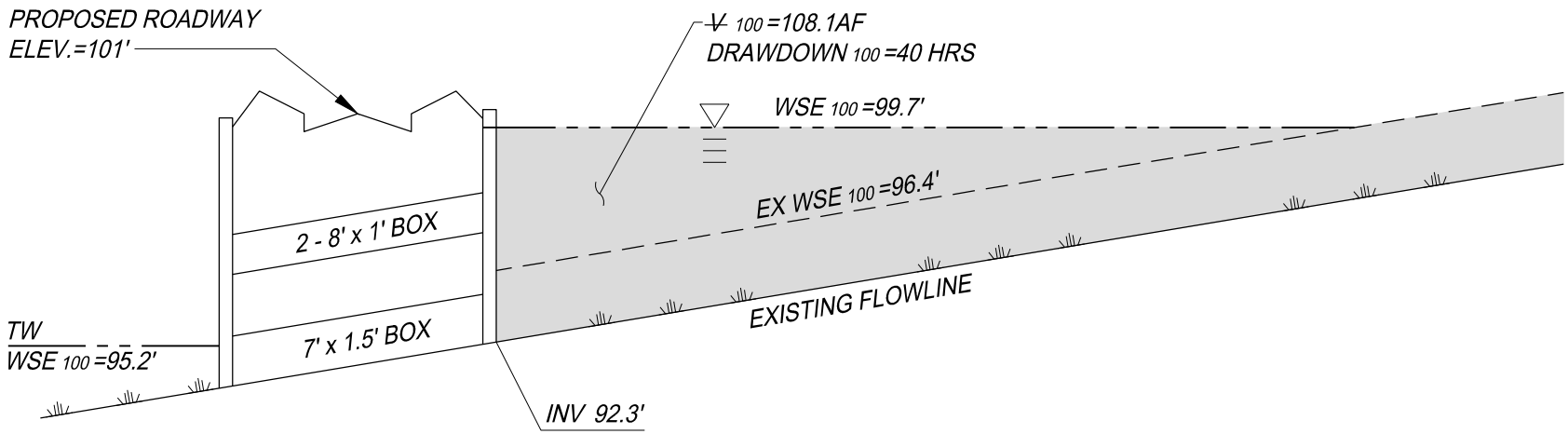

CULVERT SCHEDULE

7'W x 1.5'H BOX CULVERT @ 92.3'
2 - 8'W x 1'H BOX CULVERT @ 97.4'

Detention Basin #2
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
Not to Scale

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5-15-2017 11:37:38 rcatris P:\18458_C00\MstrPln\SD\2nd Submittal\Exhibits\DB-02.dwg
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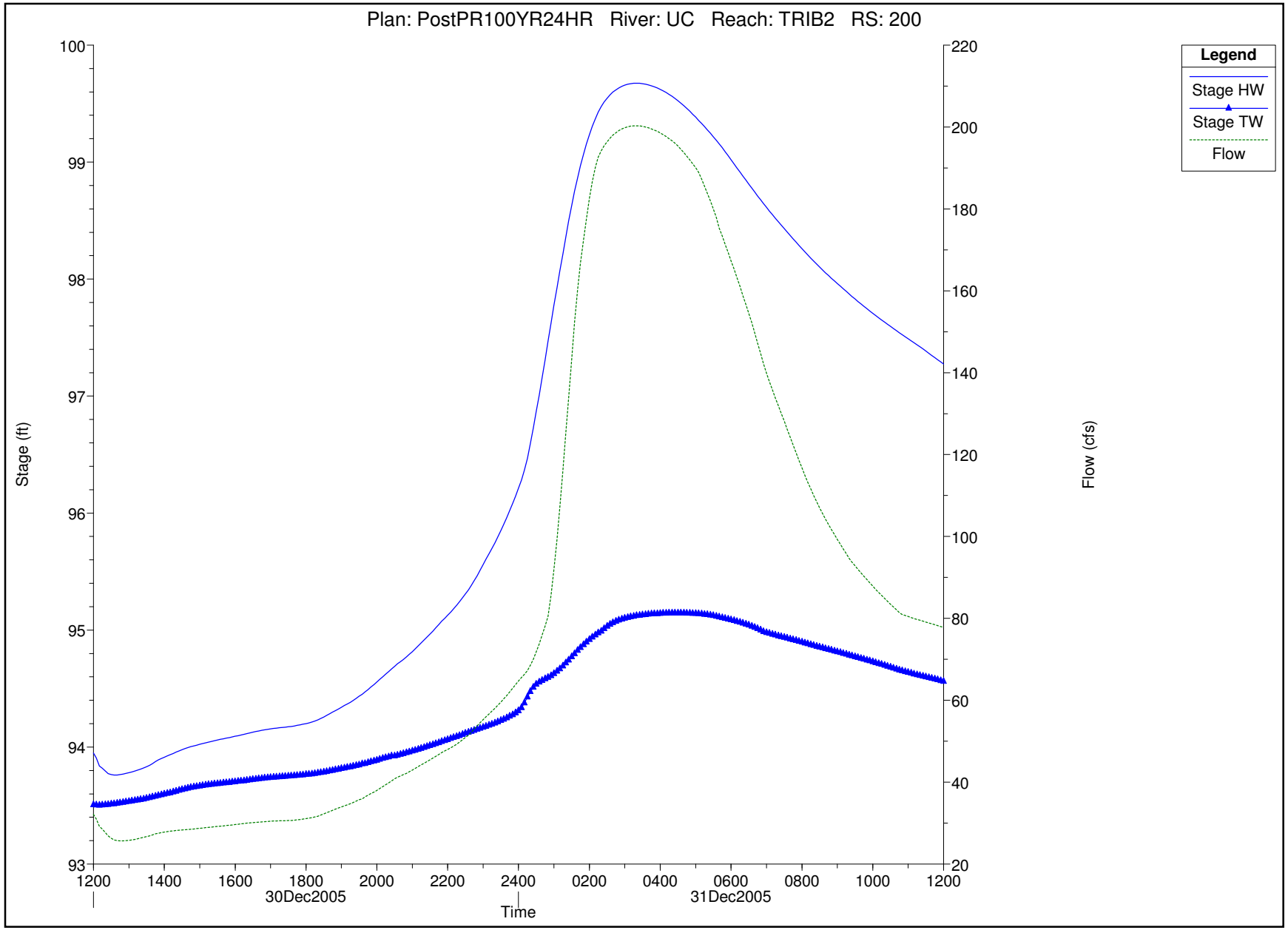
Plan: PostPR100YR24HR River: UC Reach: TRIB2 RS: 200
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
100
99
98
97
96
95
94
93
220
200
180
160
140
120
100
80
60
40
20
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200

Basin#2

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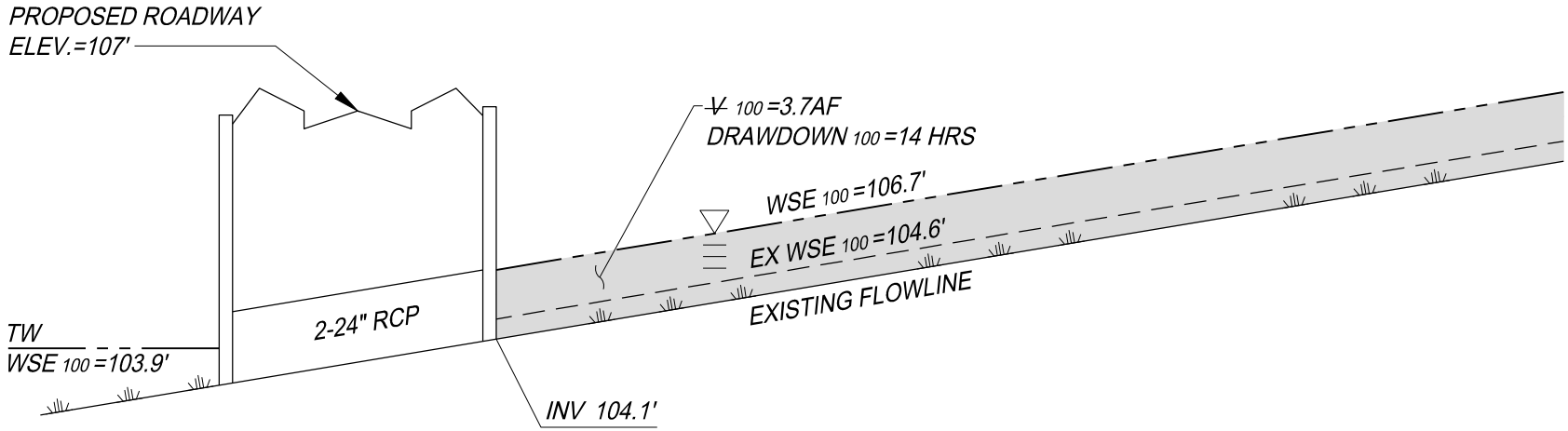

CULVERT SCHEDULE

2 - 24" DIA. @ 104.1'

Detention Basin #3
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
Not to Scale

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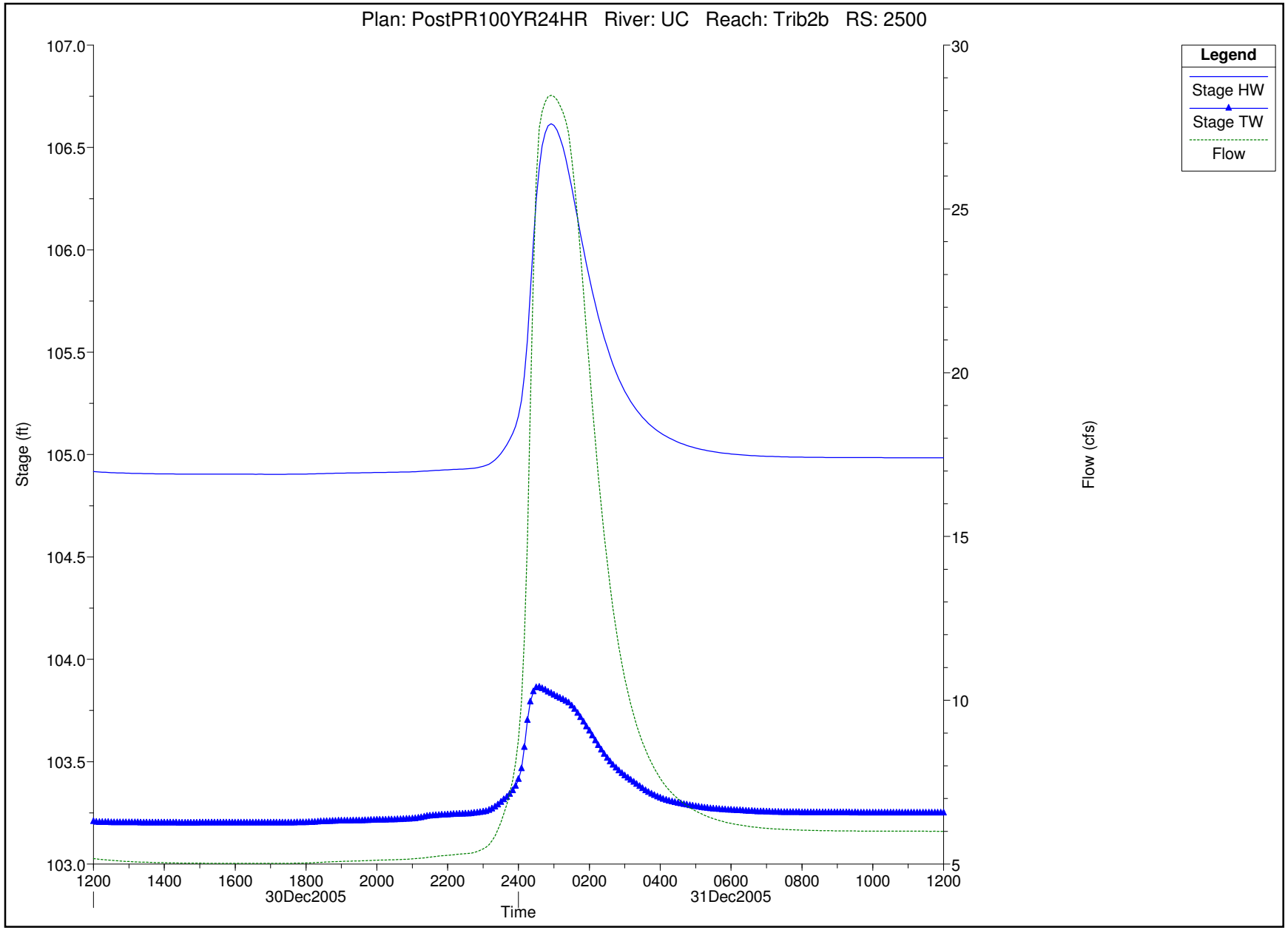
Plan: PostPR100YR24HR River: UC Reach: Trib2b RS: 2500
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
107.0
106.5
106.0
105.5
105.0
104.5
104.0
103.5
103.0
30
25
20
15
10
5
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#3

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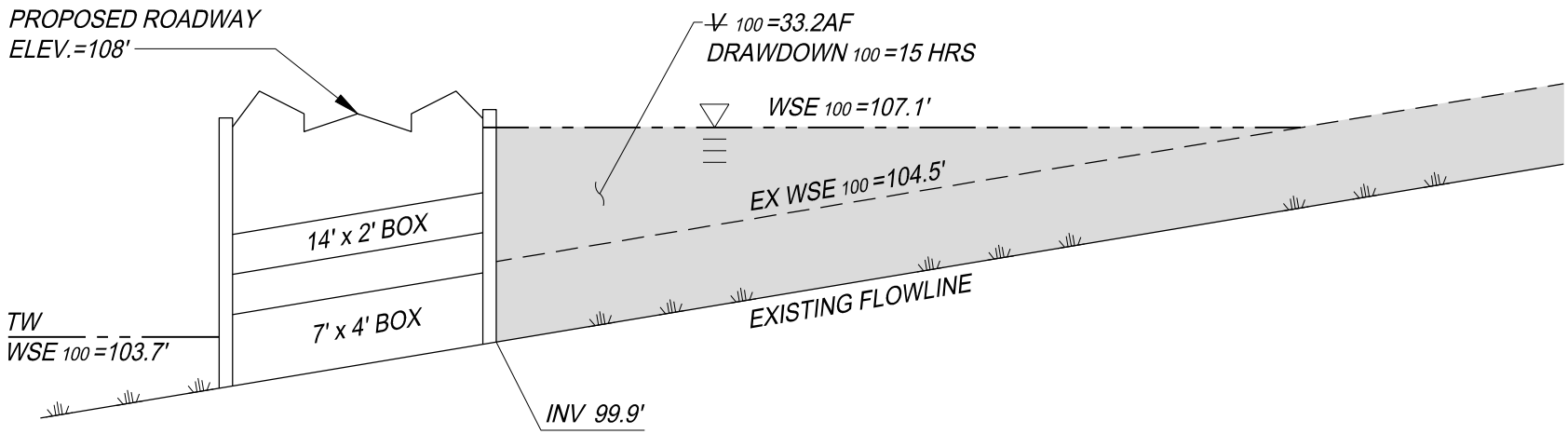

CULVERT SCHEDULE

7'W x 4'H BOX CULVERT @ 99.9'
14'W x 2'H BOX CULVERT @ 104.9'

Detention Basin #4
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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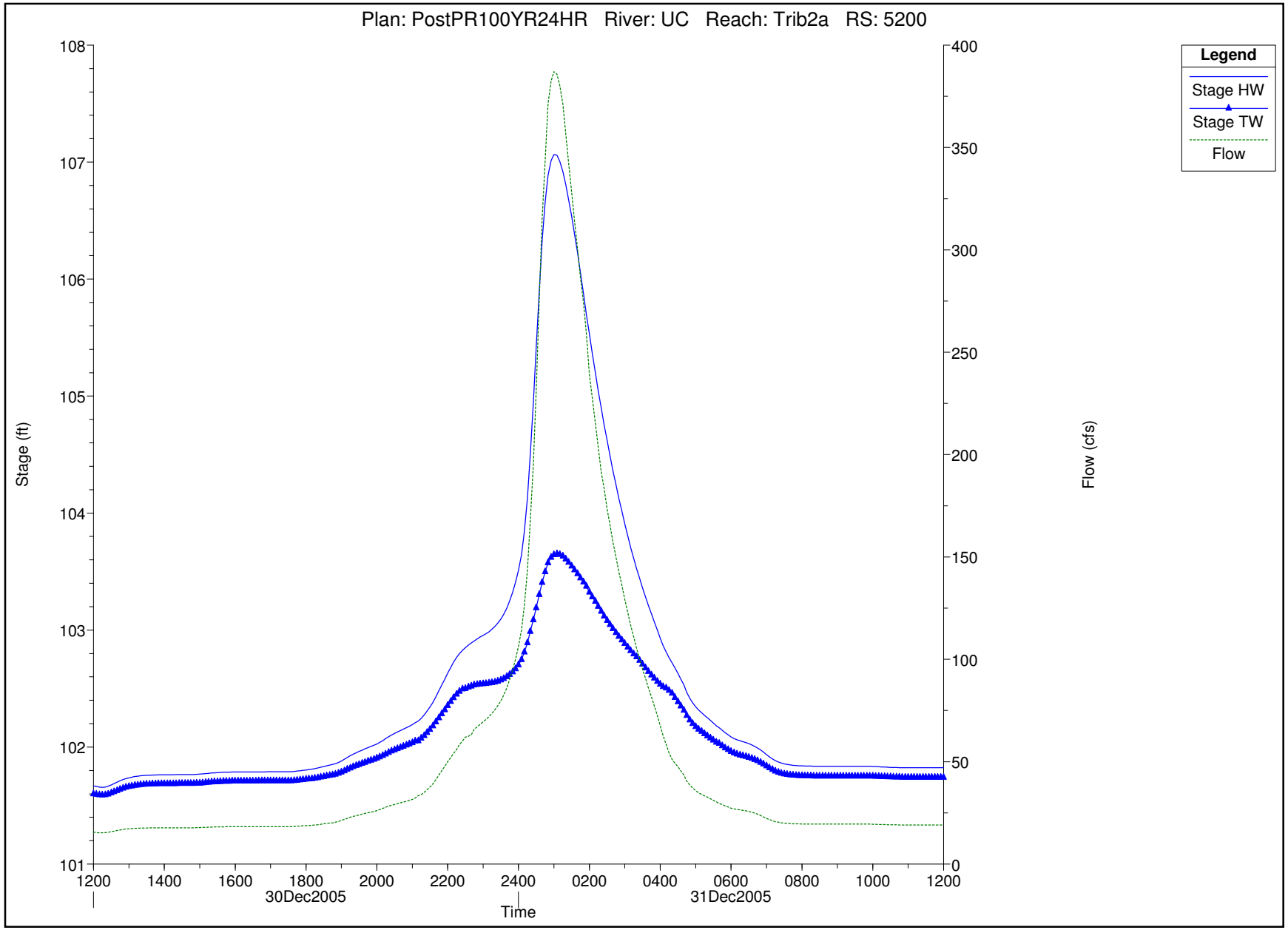
Plan: PostPR100YR24HR River: UC Reach: Trib2a RS: 5200
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
108
107
106
105
104
103
102
101
400
350
300
250
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200

Basin#4

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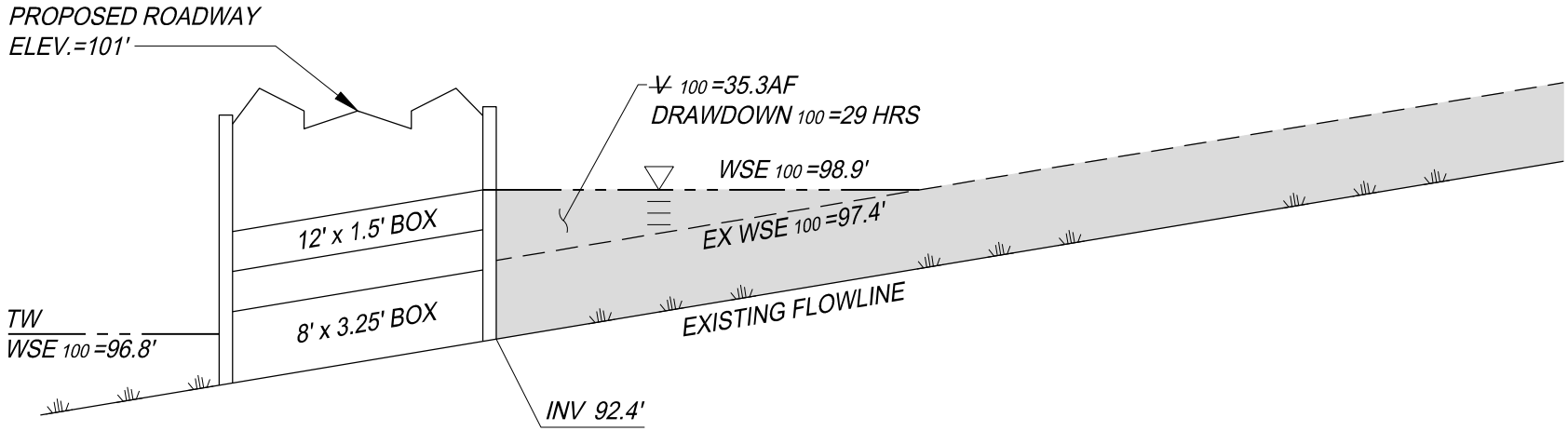

CULVERT SCHEDULE

8'W x 3.25'H BOX CULVERT @ 92.4'
12'W x 1.5'H BOX CULVERT @ 97.6'

Detention Basin #5
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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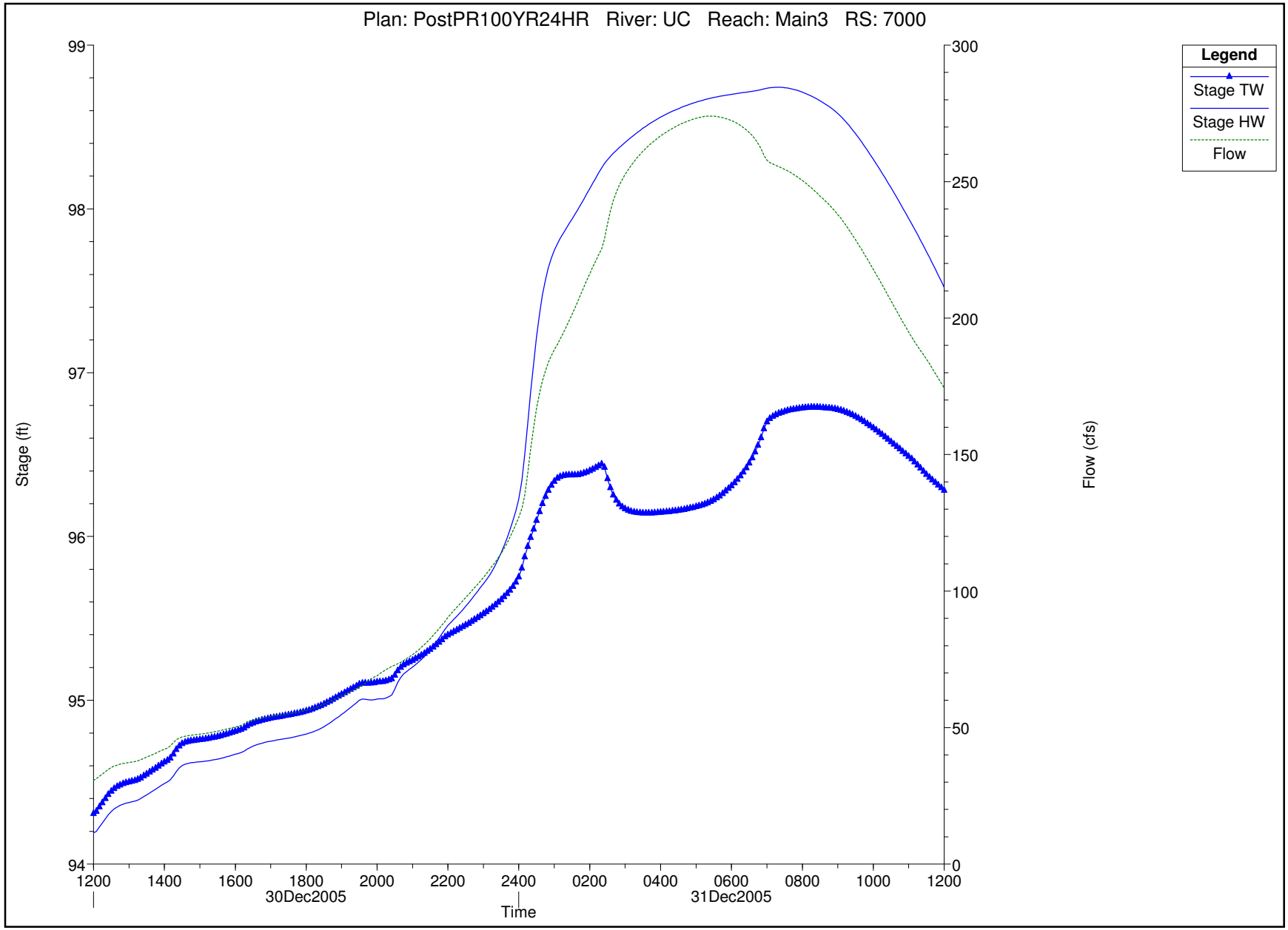
Plan: PostPR100YR24HR River: UC Reach: Main3 RS: 7000
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
99
98
97
96
95
94
300
250
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#5

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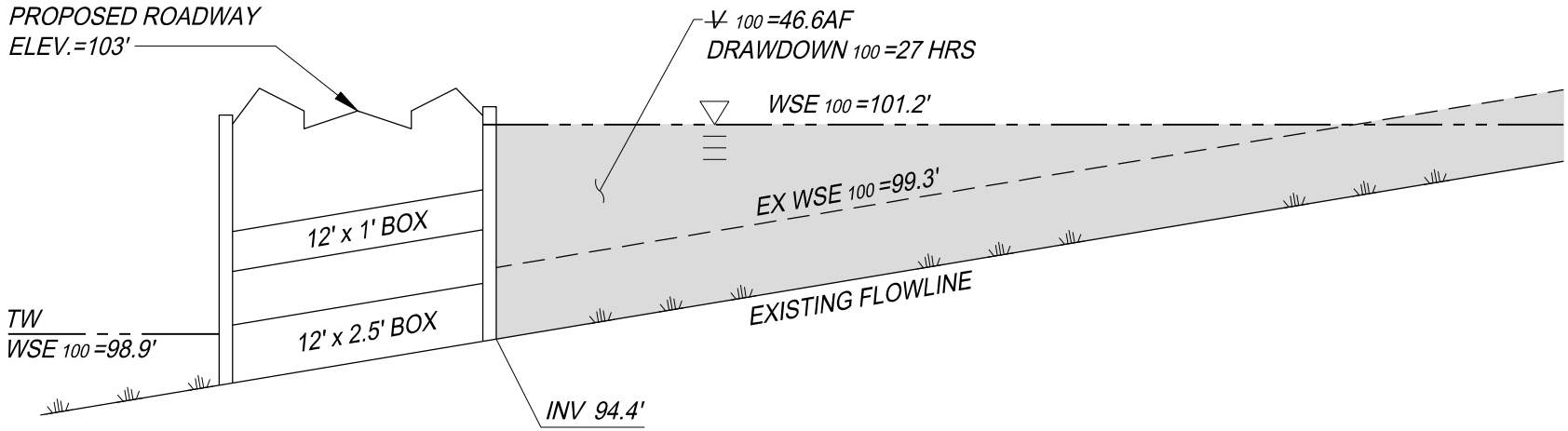

CULVERT SCHEDULE

12'W x 2.5'H BOX CULVERT @ 94.4'
12'W x 1'H BOX CULVERT @ 98.9'

Detention Basin #6
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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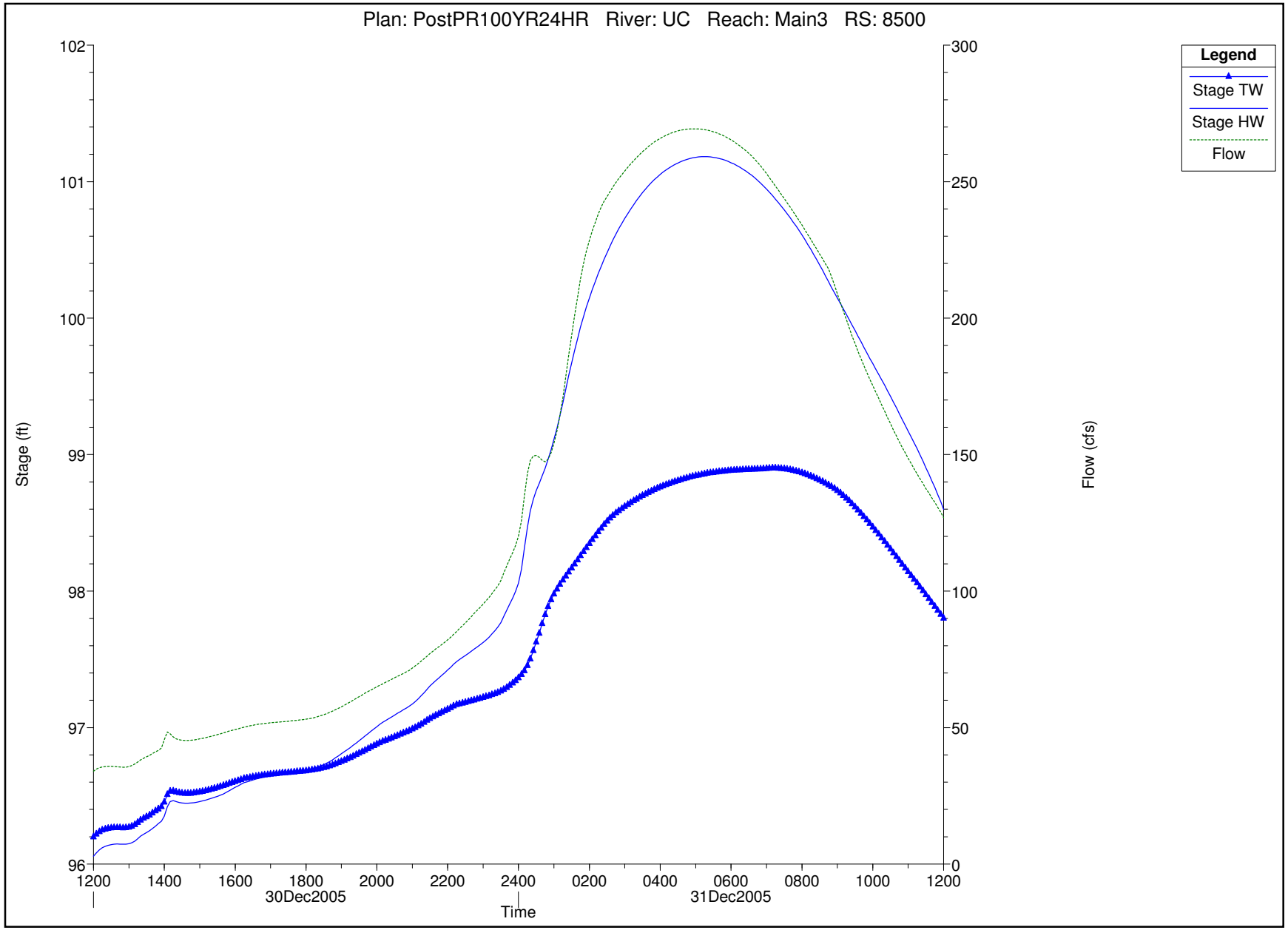
Plan: PostPR100YR24HR River: UC Reach: Main3 RS: 8500
Legend
Stage TW
Stage HW
Flow
Stage (ft)
Flow (cfs)
102
101
100
99
98
97
96
300
250
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#6

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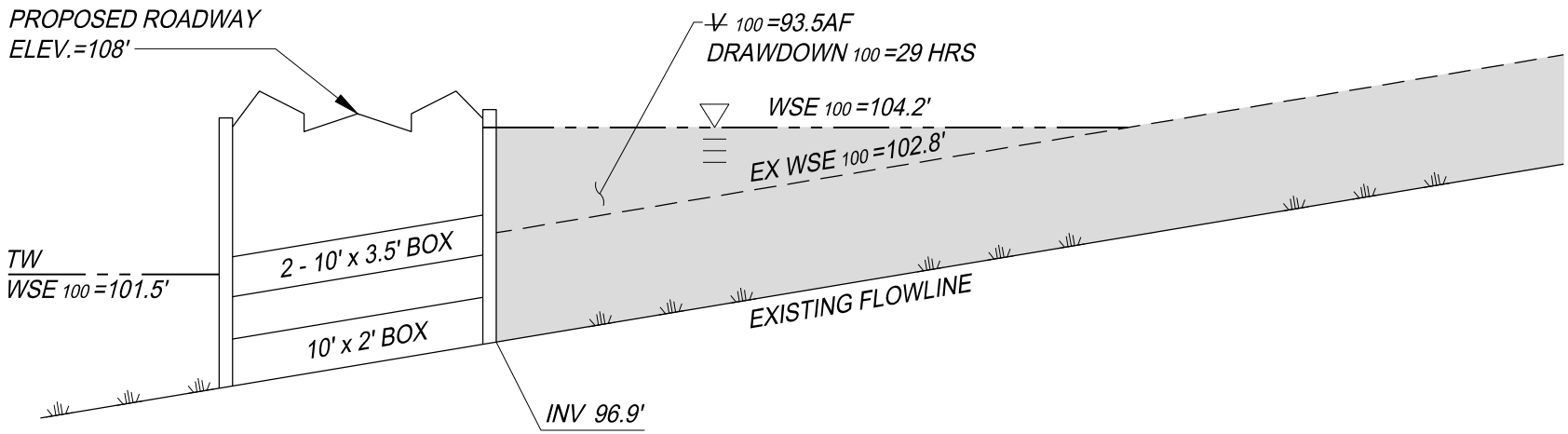

CULVERT SCHEDULE

10'W x 2'H BOX CULVERT @ 96.9'
2 - 10'W x 3.5'H BOX CULVERT @ 101.9'

Detention Basin #7
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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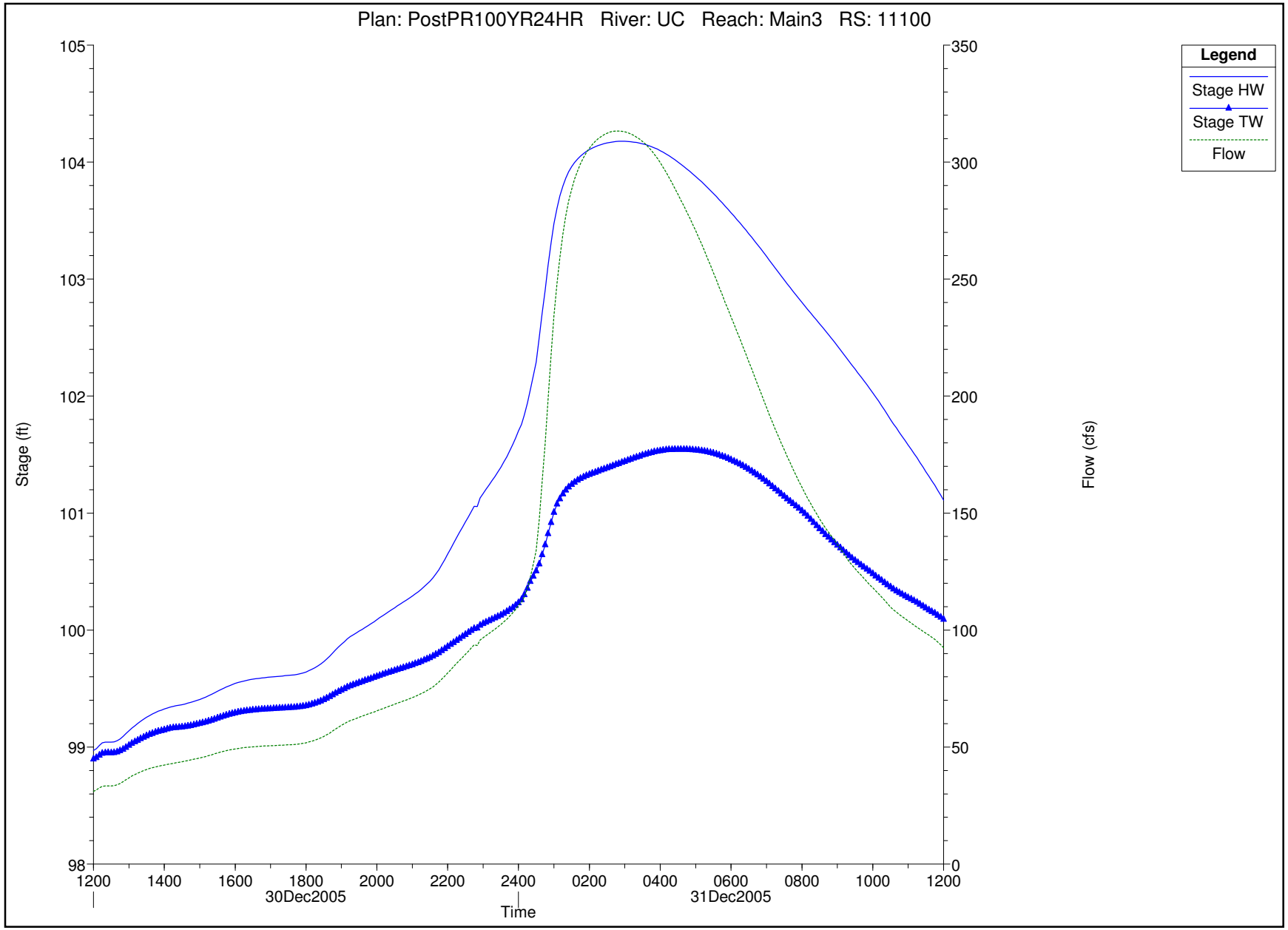
Plan: PostPR100YR24HR River: UC Reach: Main3 RS: 11100
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
105
104
103
102
101
100
99
98
350
300
250
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#7

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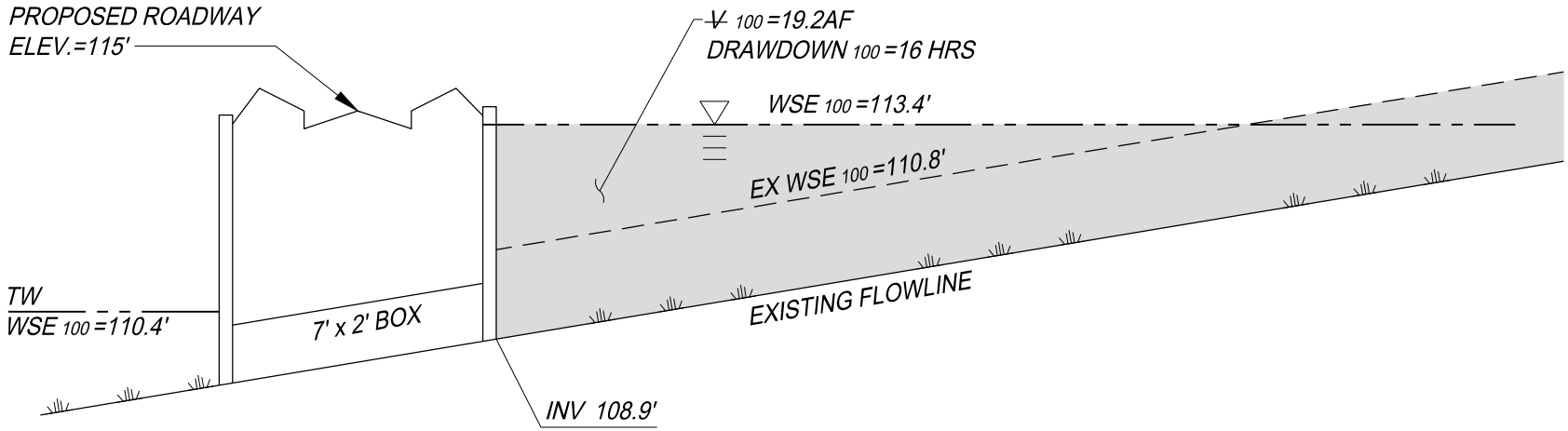

CULVERT SCHEDULE

7'W x 2'H BOX CULVERT @ 108.9'

Detention Basin #8
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
Not to Scale

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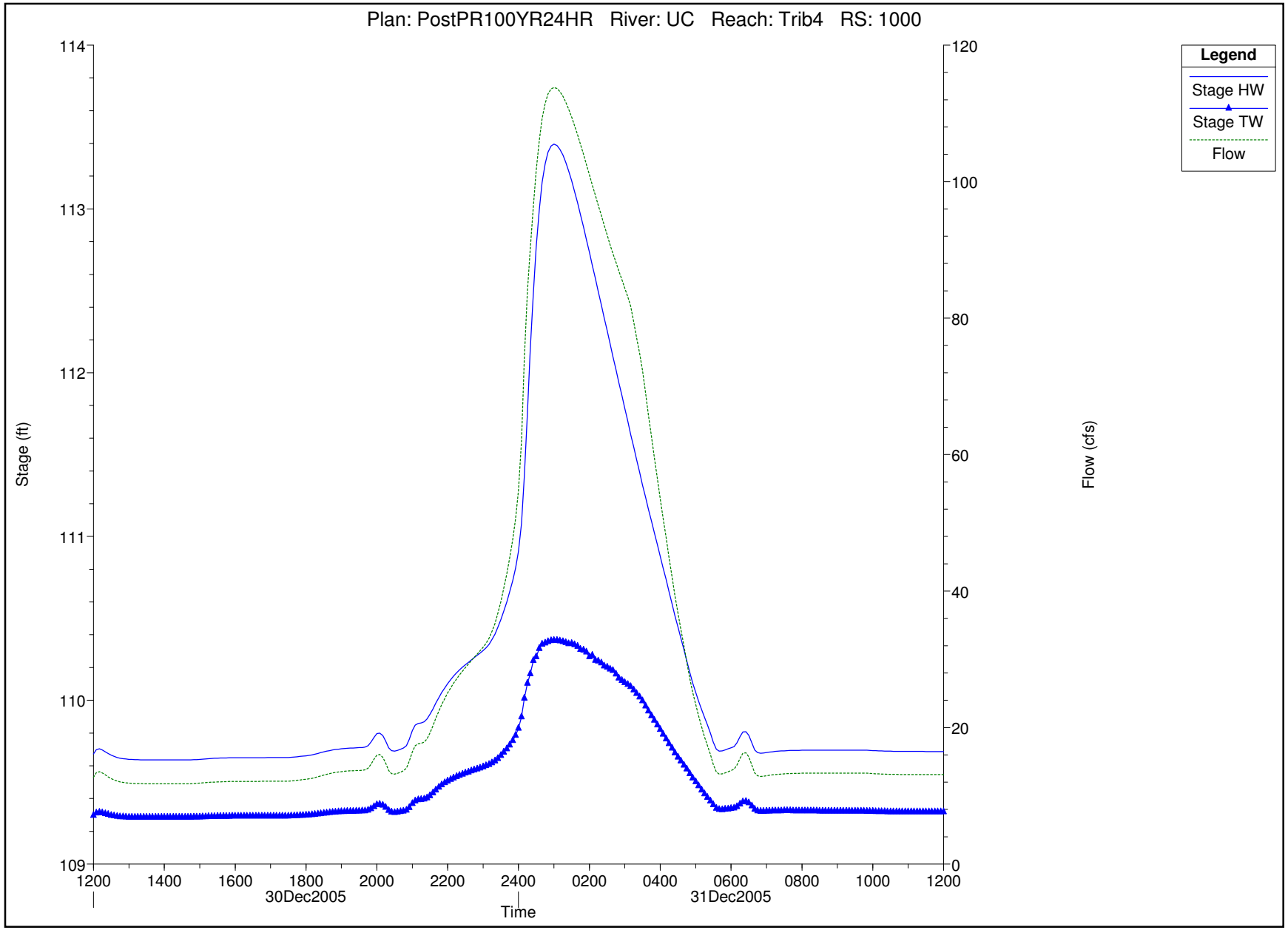
Plan: PostPR100YR24HR River: UC Reach: Trib4 RS: 1000
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
114
113
112
111
110
109
120
100
80
60
40
20
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#8

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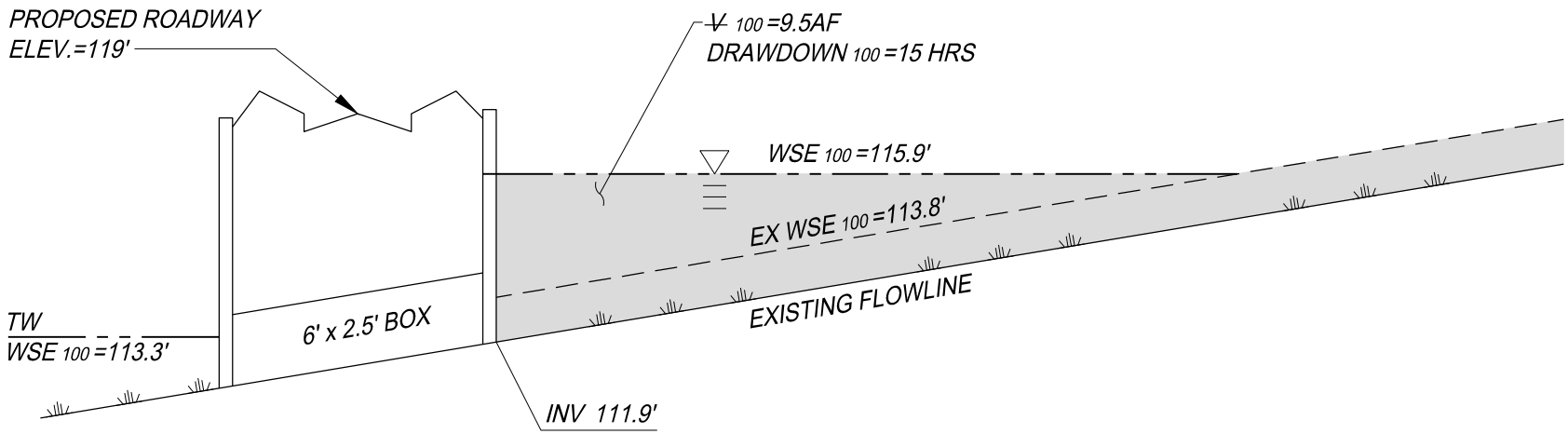

CULVERT SCHEDULE

6'W x 2.5'H BOX CULVERT @ 111.9'

Detention Basin #9
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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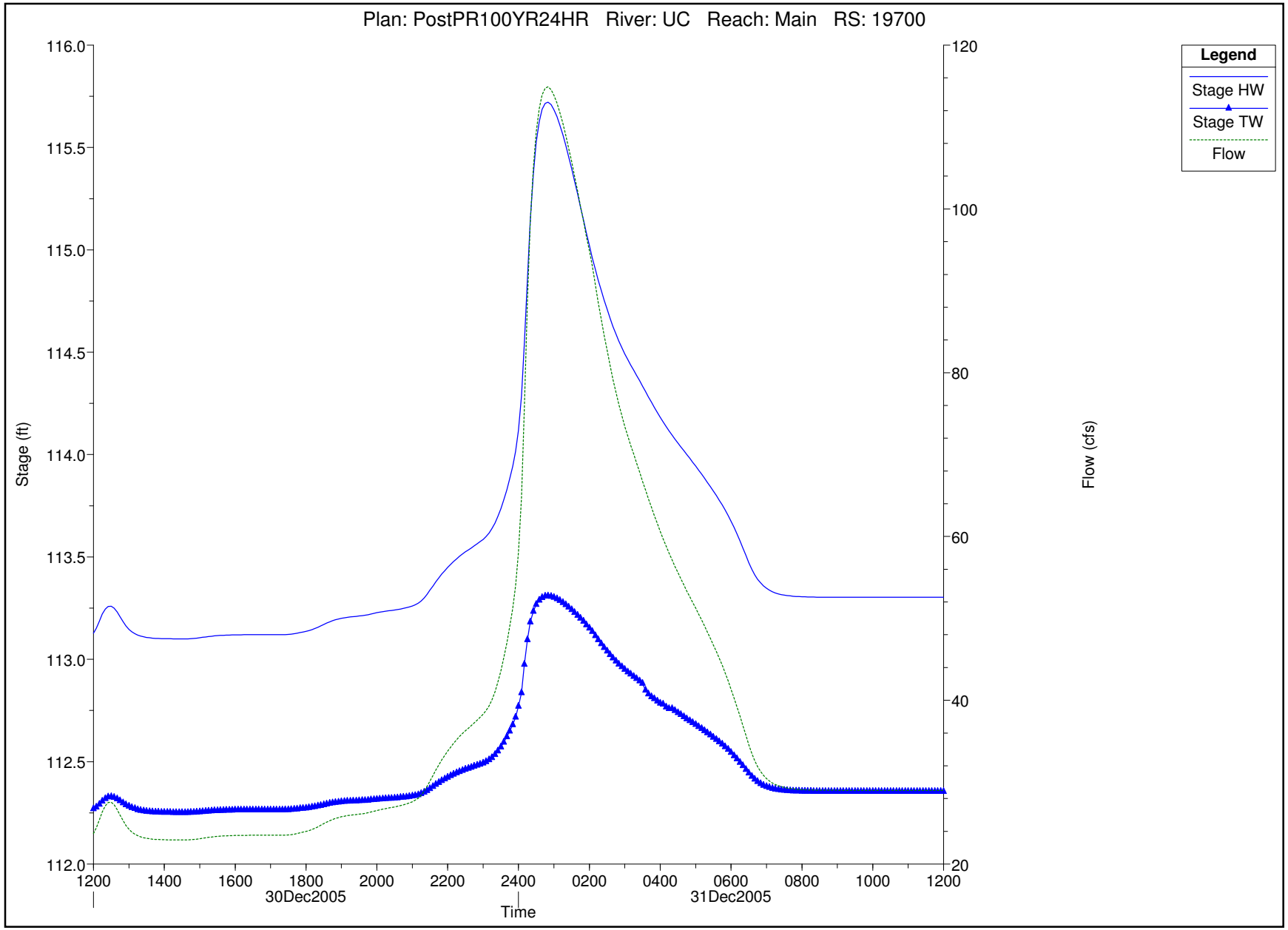
Plan: PostPR100YR24HR River: UC Reach: Main RS: 19700
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
116.0
115.5
115.0
114.5
114.0
113.5
113.0
112.5
112.0
120
100
80
60
40
20
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#9

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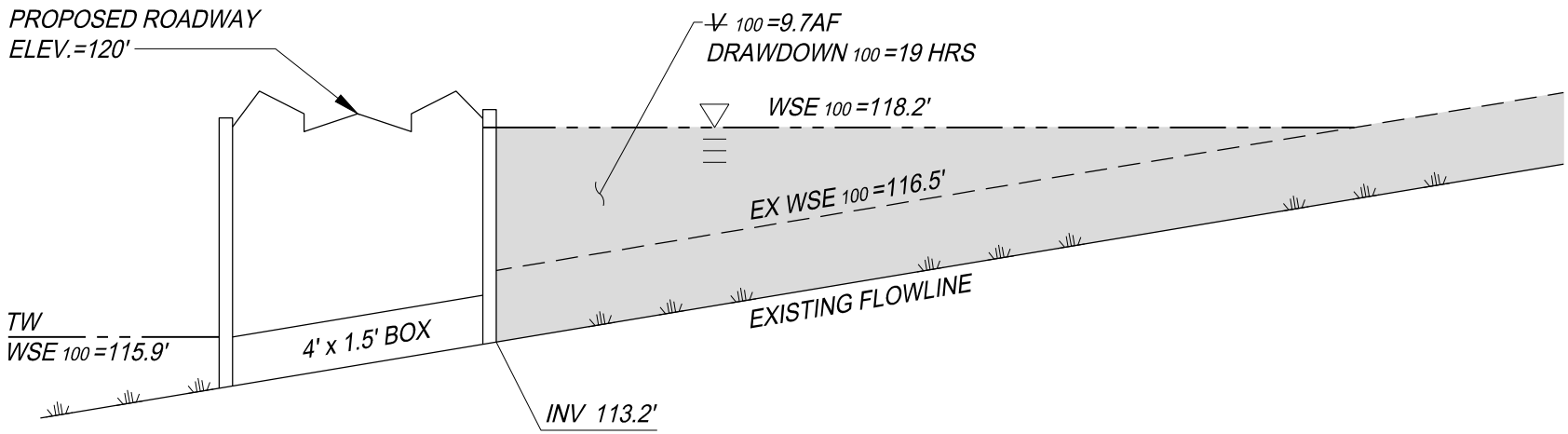

CULVERT SCHEDULE

4'W x 1.5'H BOX CULVERT @ 113.2'

Detention Basin #10
Schematic Section
Storm Drainage Master Plan

Placer Ranch

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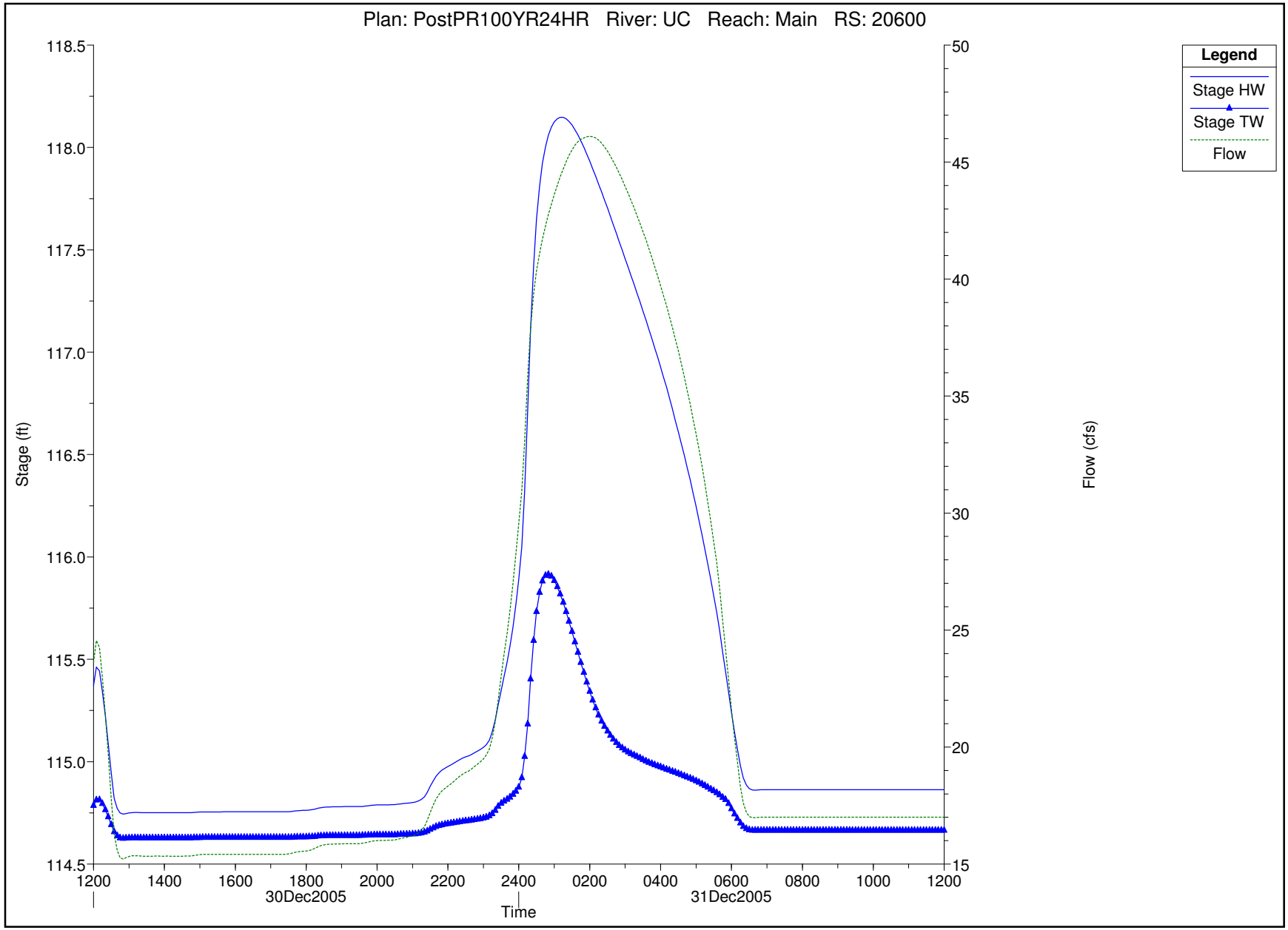
Plan: PostPR100YR24HR River: UC Reach: Main RS: 20600
Legend
Stage HW
Stage TW
Flow
Stage (ft)
Flow (cfs)
118.5
118.0
117.5
117.0
116.5
116.0
115.5
115.0
114.5
50
45
40
35
30
25
20
15
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#10

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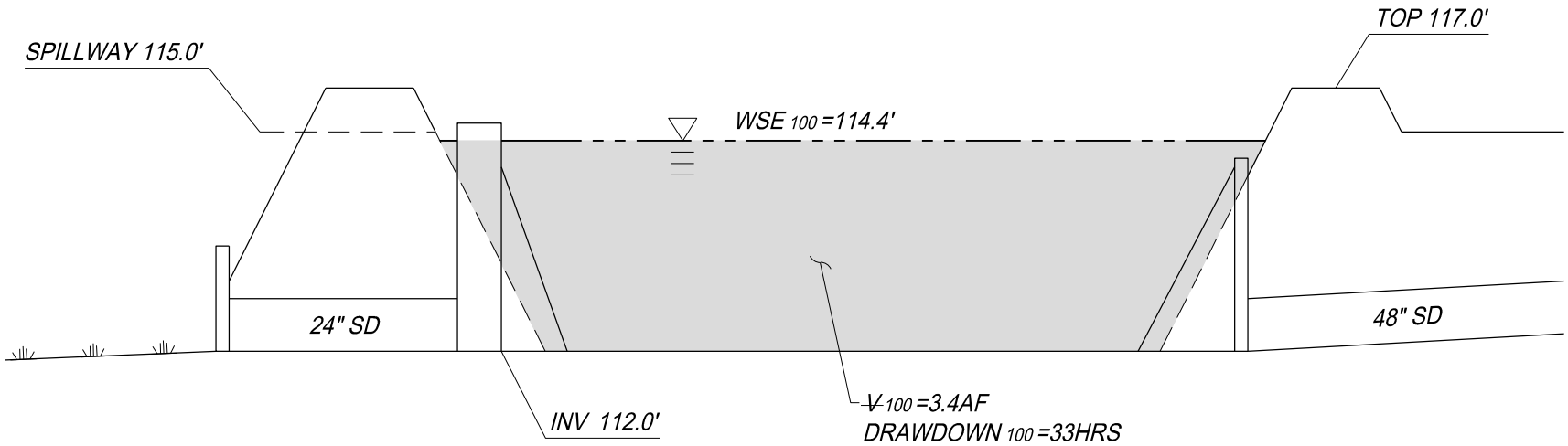

OUTLET STRUCTURE SCHEDULE
24" DIA. @ 112.0'

Detention Basin #11
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
Not to Scale

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5-11-2017 15:02:33 cgwaltney P:\18458_C00\MstrPln\SD\2nd Submittal\Exhibits\DB-11.dwg
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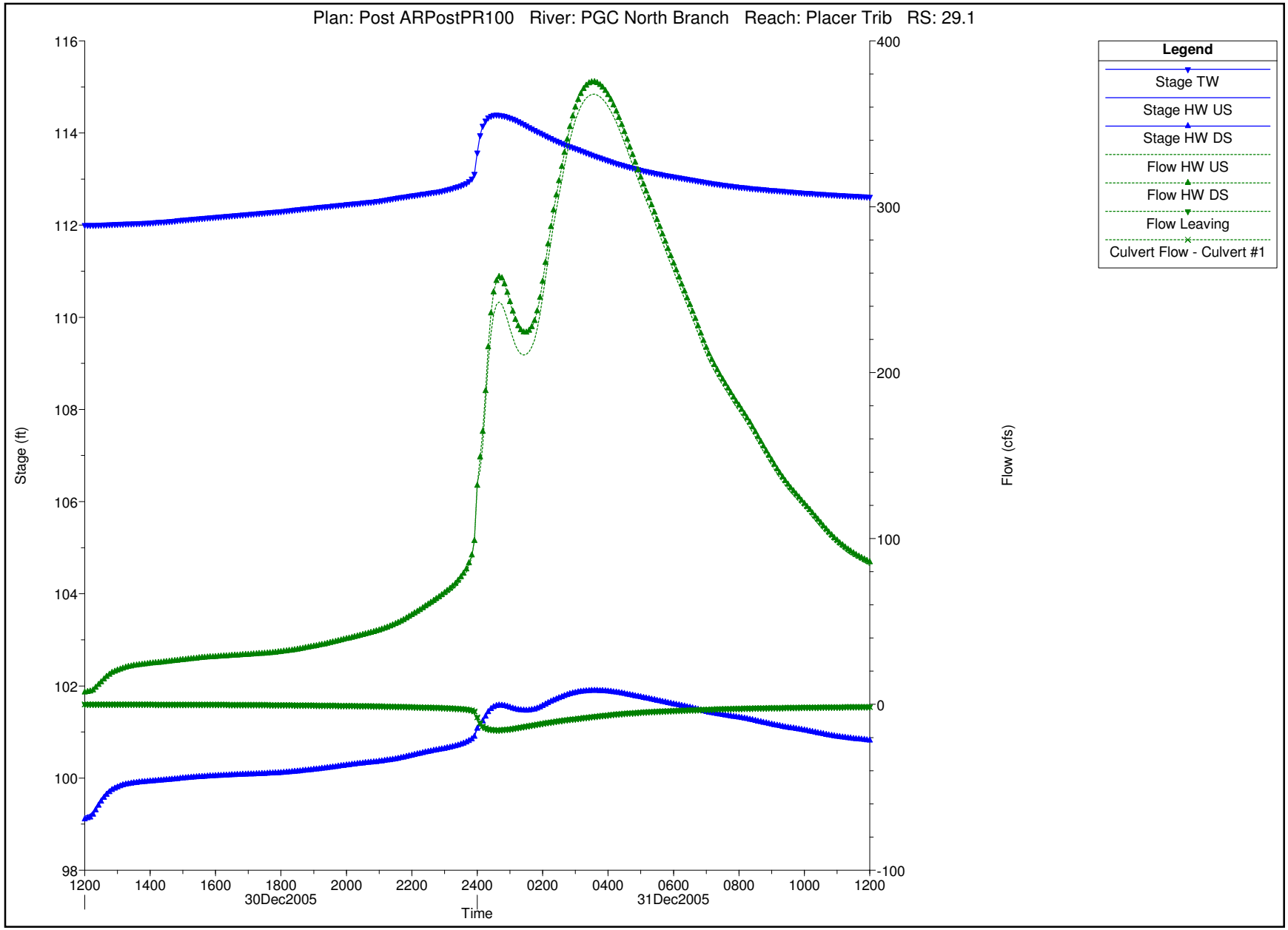
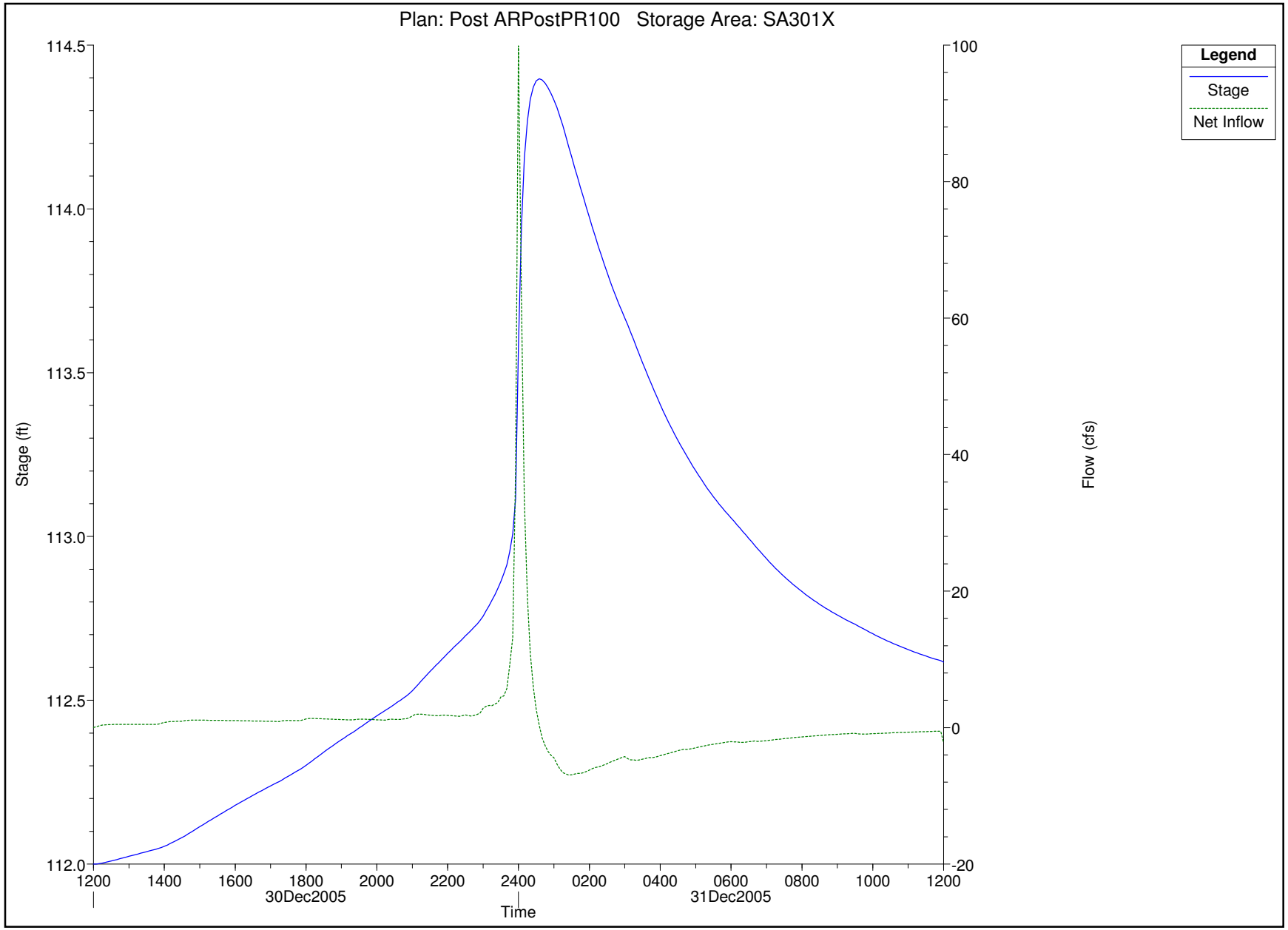

Plan: Post ARPostPR100 River: PGC North Branch Reach: Placer Trib RS: 29.1
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
Legend
Stage TW
Stage HW US
Stage HW DS
Flow HW US
Flow HW DS
Flow Leaving
Culvert Flow - Culvert #1

Basin#11


Plan: Post ARPostPR100 Storage Area: SA301X
Legend
Stage
Net Inflow
Stage (ft)
114.5
114.0
113.5
113.0
112.5
112.0
Flow (cfs)
100
80
60
40
20
0
-20
1200
1400
1600
1800
30Dec2005
2000
2200
2400
0200
0400
0600
31Dec2005
0800
1000
1200
Time

Basin#11

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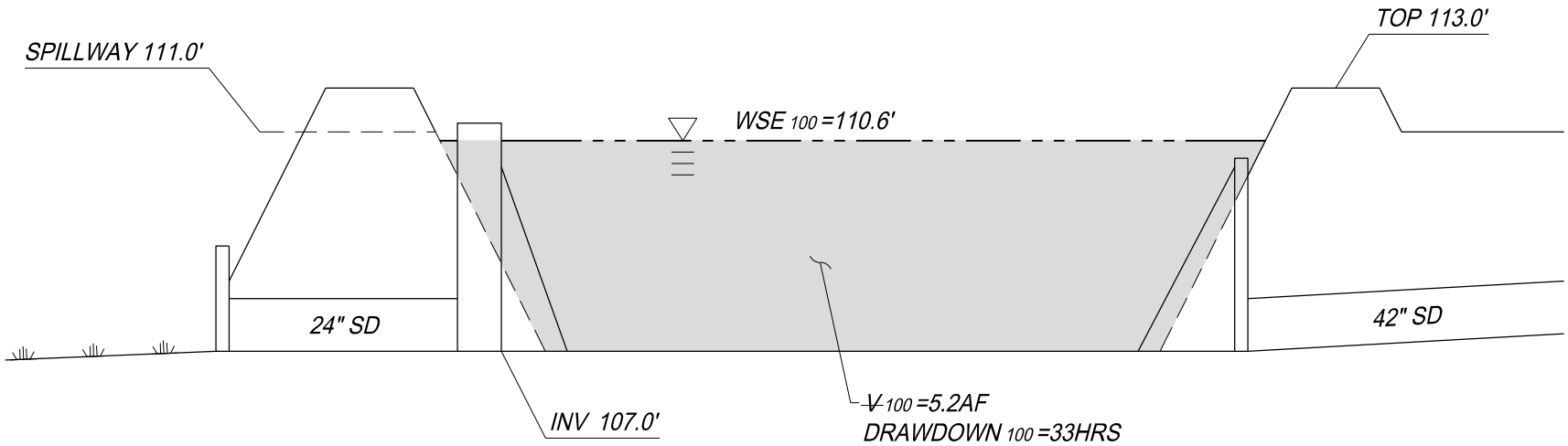

OUTLET STRUCTURE SCHEDULE
24" DIA. @ 107.0'

Detention Basin #12
Schematic Section
Storm Drainage Master Plan

Placer Ranch

Placer County
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5-11-2017 15:07:07 cgwaltney P:\18458_C00\MstrPln\SD\2nd Submittal\Exhibits\DB-12.dwg
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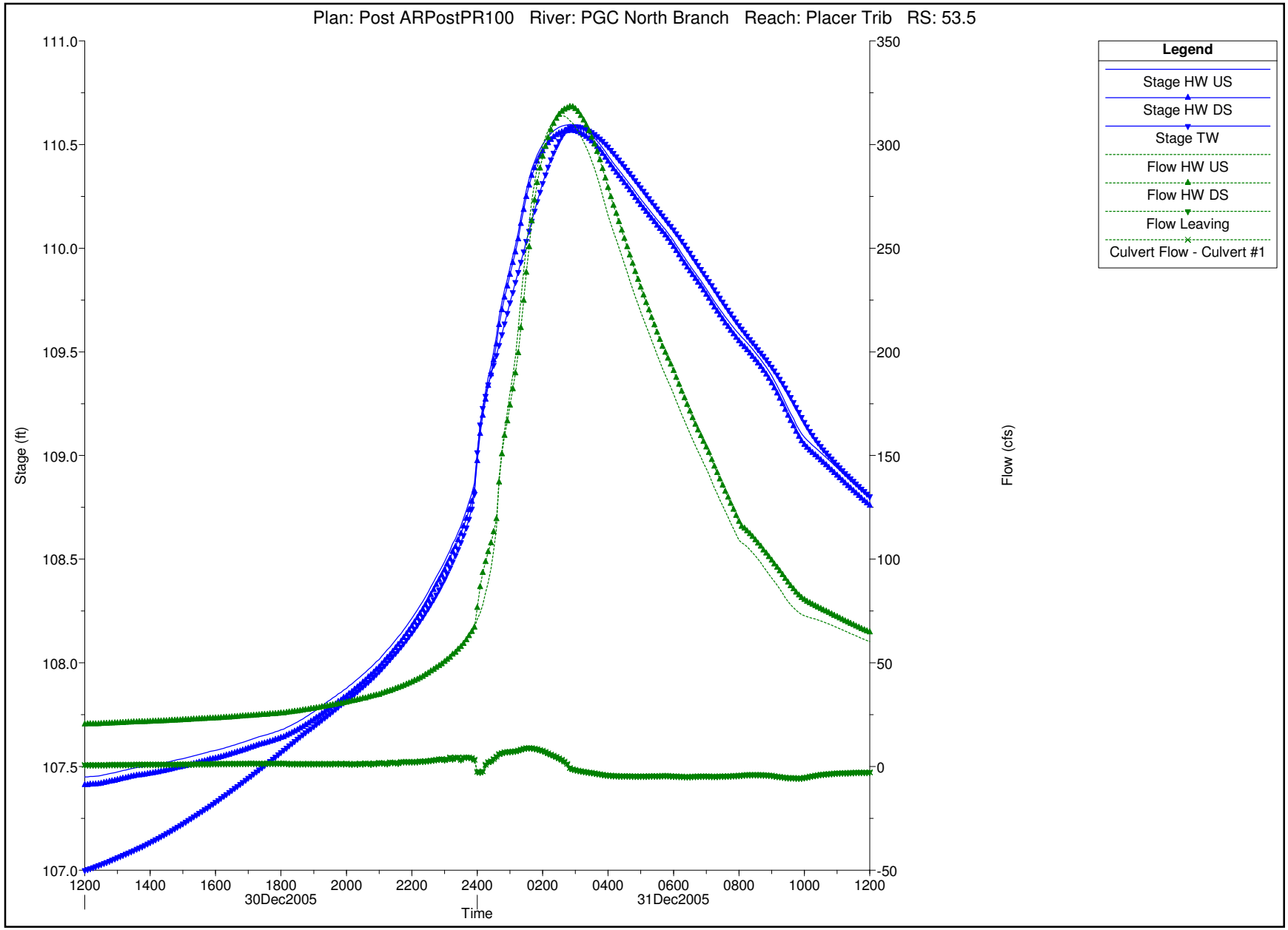
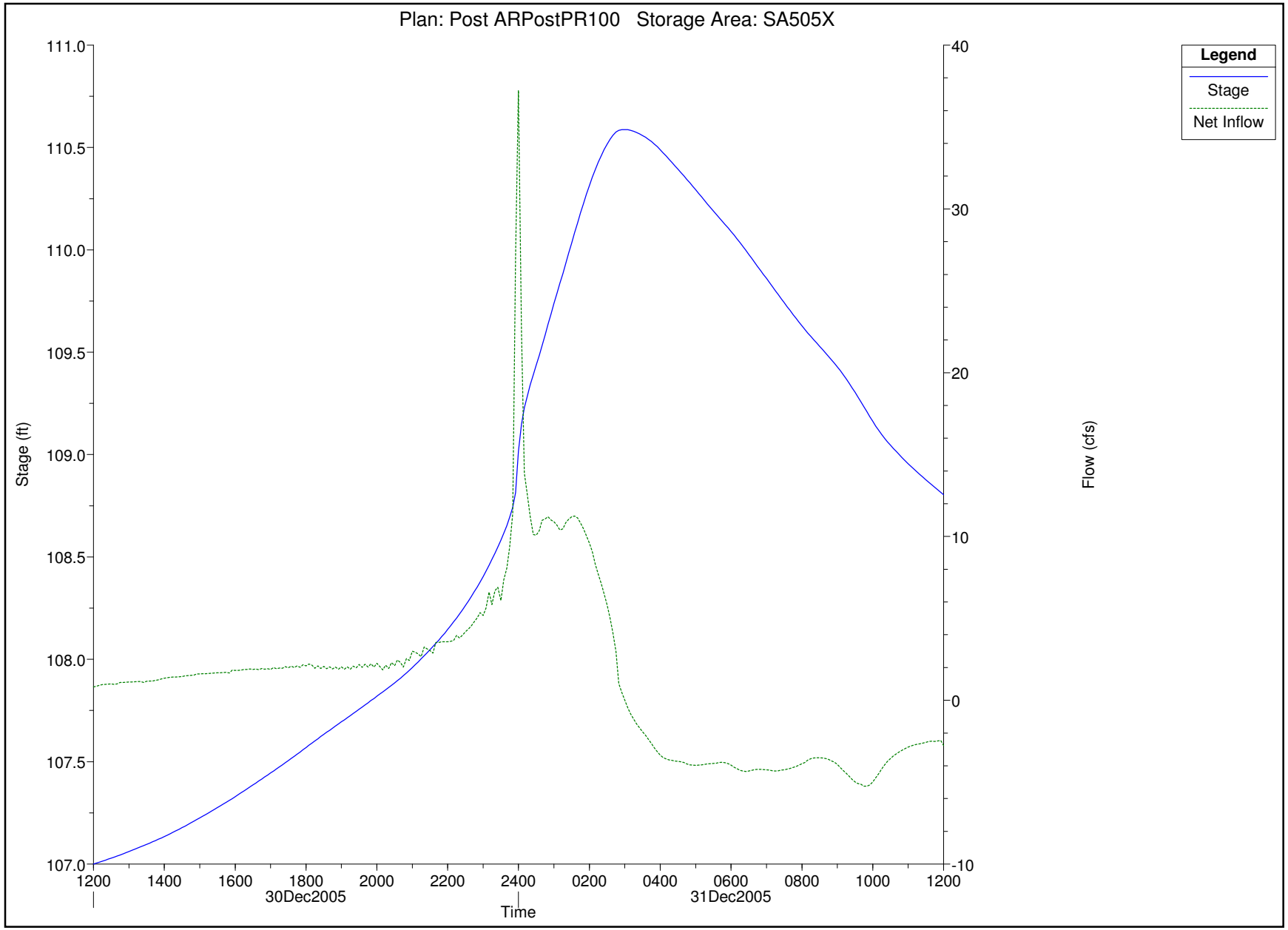

Plan: Post ARPostPR100 River: PGC North Branch Reach: Placer Trib RS: 53.5
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
Legend
Stage HW US
Stage HW DS
Stage TW
Flow HW US
Flow HW DS
Flow Leaving
Culvert Flow - Culvert #1

Basin#12


Plan: Post ARPostPR100 Storage Area: SA505X
Legend
Stage
Net Inflow
Stage (ft)
Flow (cfs)
111.0
110.5
110.0
109.5
109.0
108.5
108.0
107.5
107.0
40
30
20
10
0
-10
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#12

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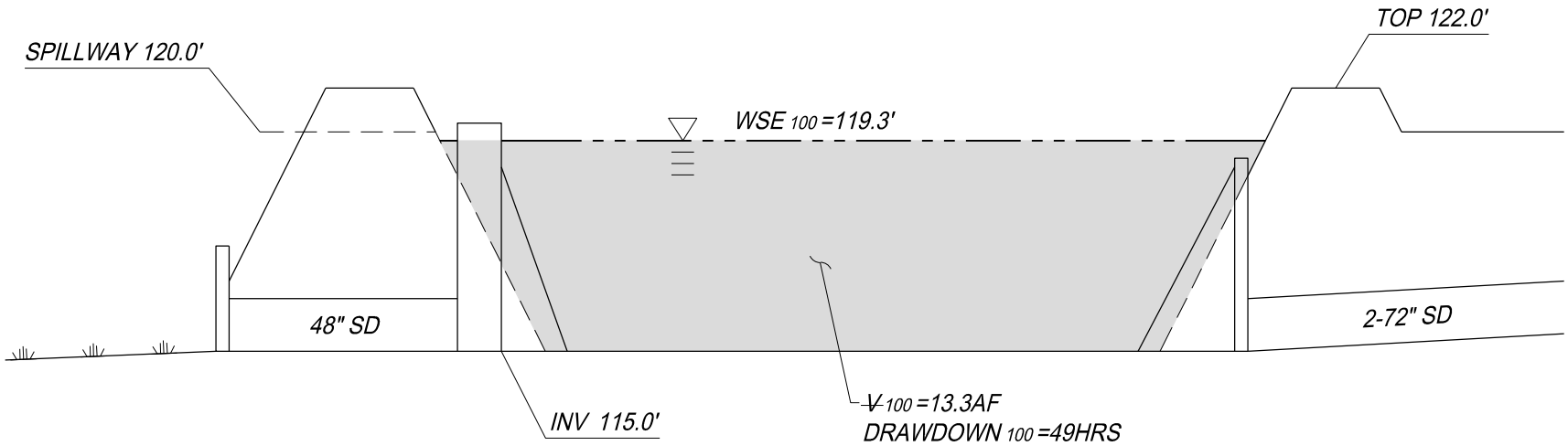

OUTLET STRUCTURE SCHEDULE
12" DIA. @ 115.0'
24" DIA. @ 118.0'

Detention Basin #13
Schematic Section
Storm Drainage Master Plan

Placer Ranch

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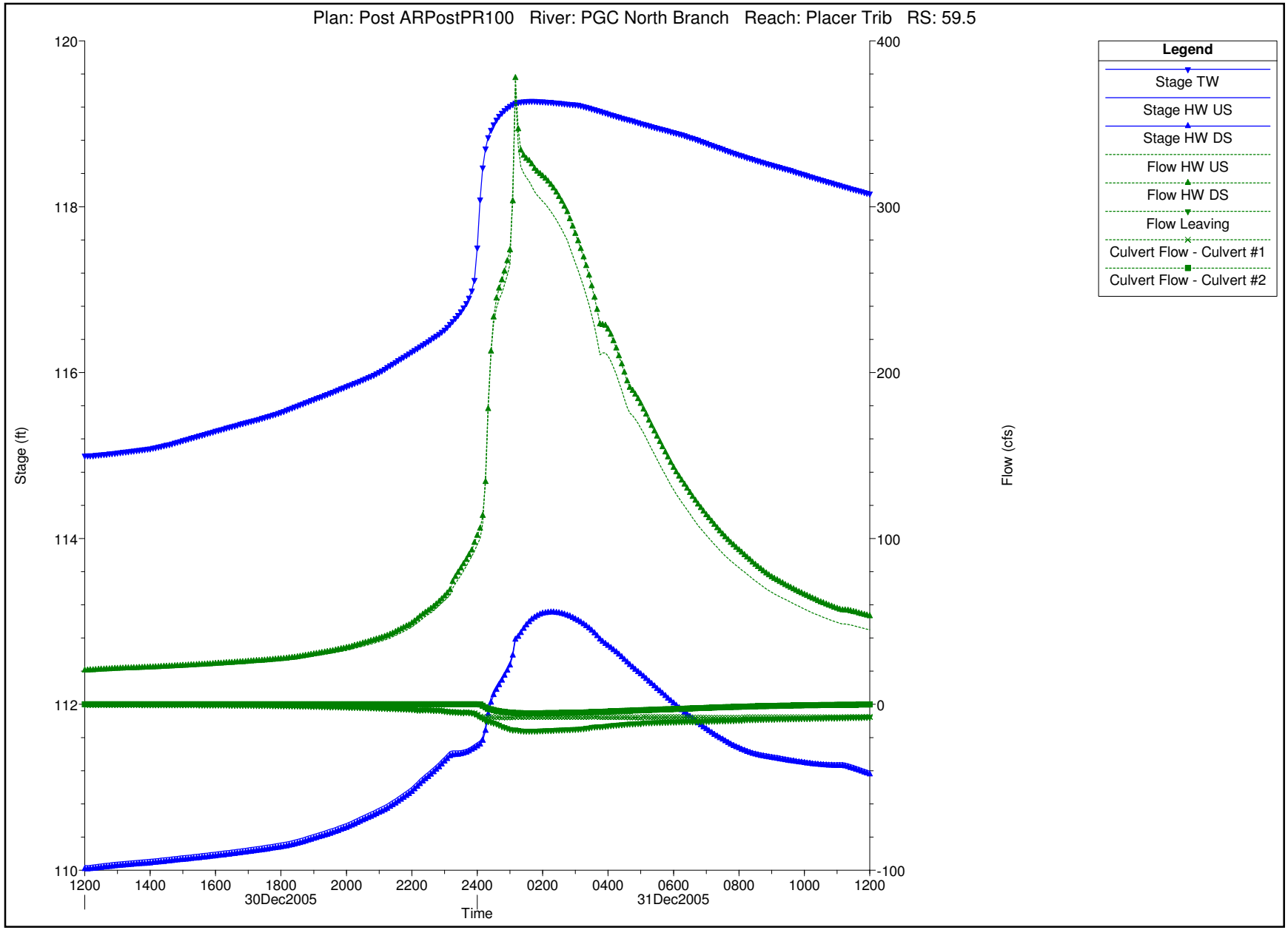
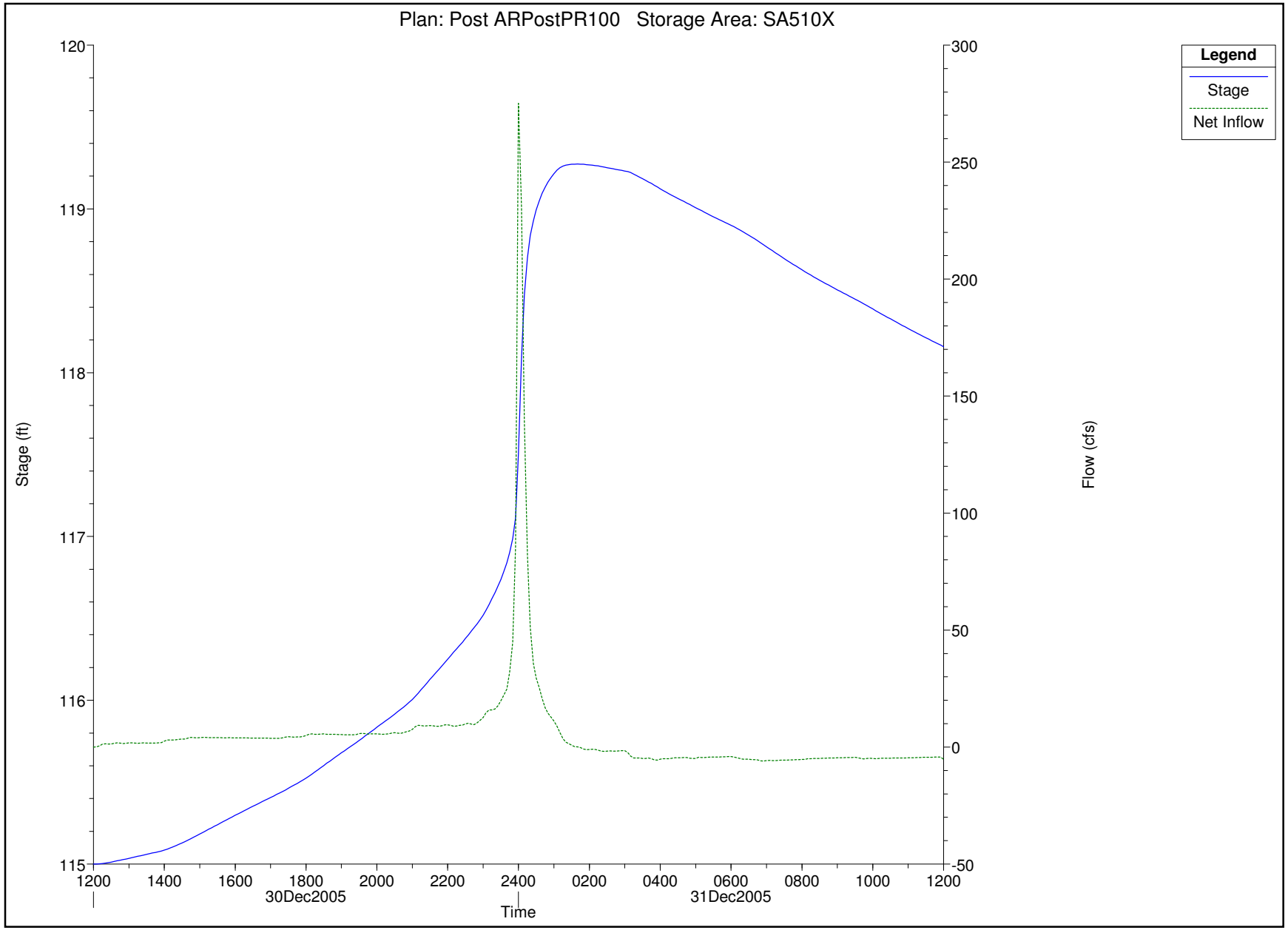

Plan: Post ARPostPR100 River: PGC North Branch Reach: Placer Trib RS: 59.5
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
Legend
Stage TW
Stage HW US
Stage HW DS
Flow HW US
Flow HW DS
Flow Leaving
Culvert Flow - Culvert #1
Culvert Flow - Culvert #2

Basin#13


Plan: Post ARPostPR100 Storage Area: SA510X
Legend
Stage
Net Inflow
Stage (ft)
Flow (cfs)
120
119
118
117
116
115
300
250
200
150
100
50
0
-50
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#13

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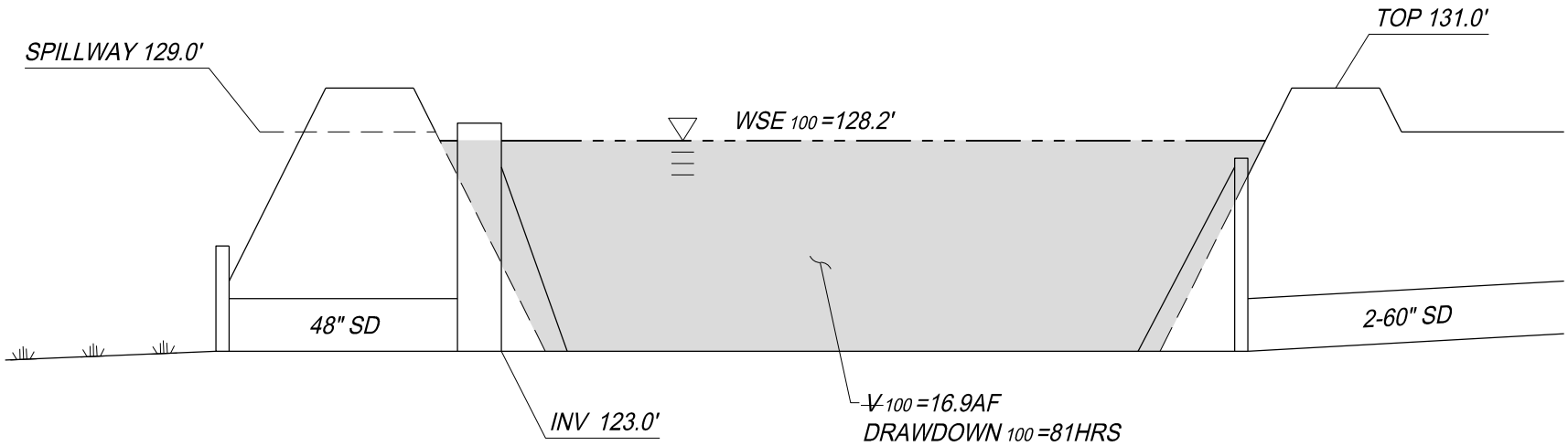


OUTLET STRUCTURE SCHEDULE
6" DIA. @ 123.0'
30" DIA. @ 126.0'

Detention Basin #14
Schematic Section
Storm Drainage Master Plan

Placer Ranch

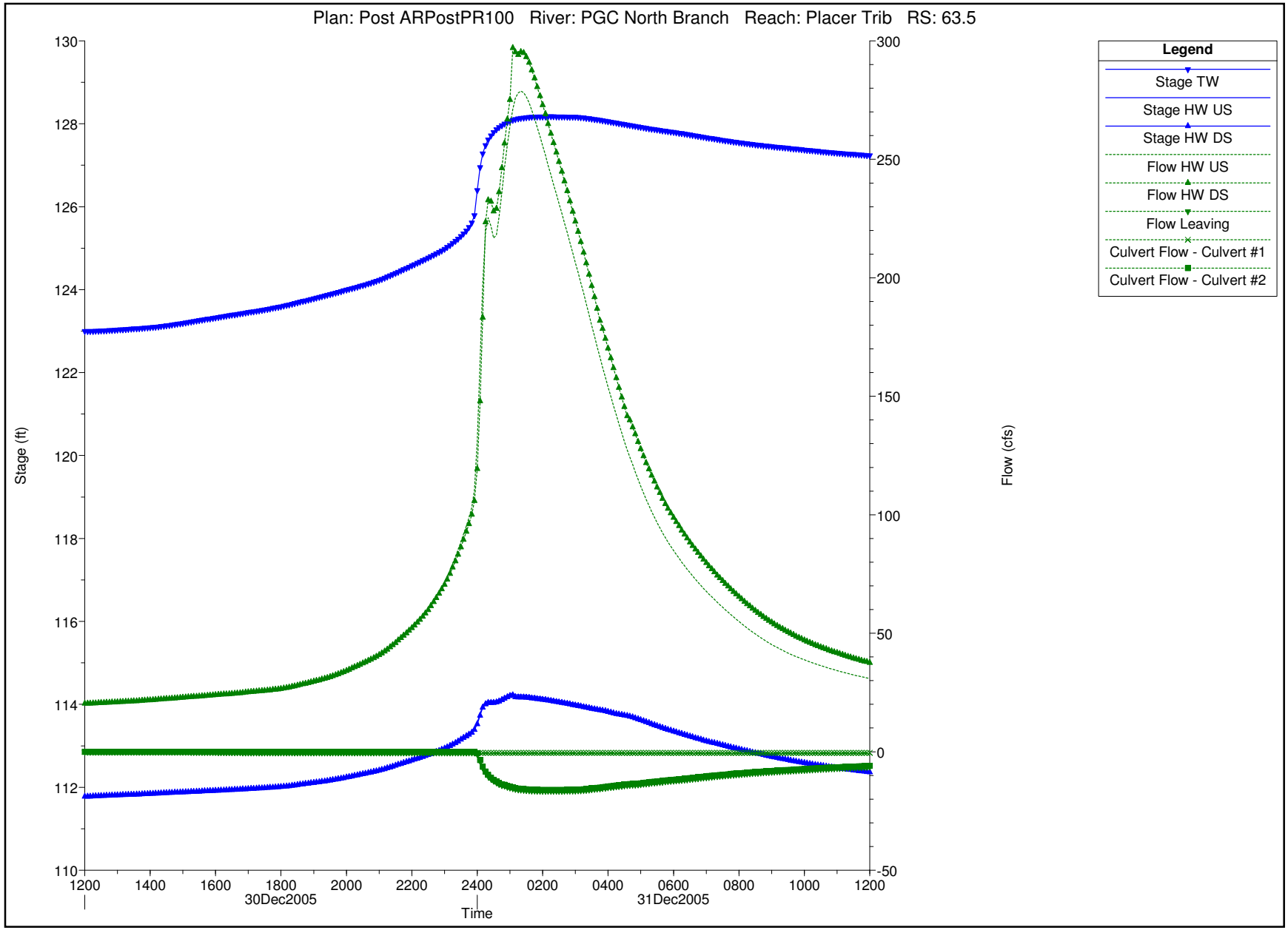
Placer County
Not to Scale

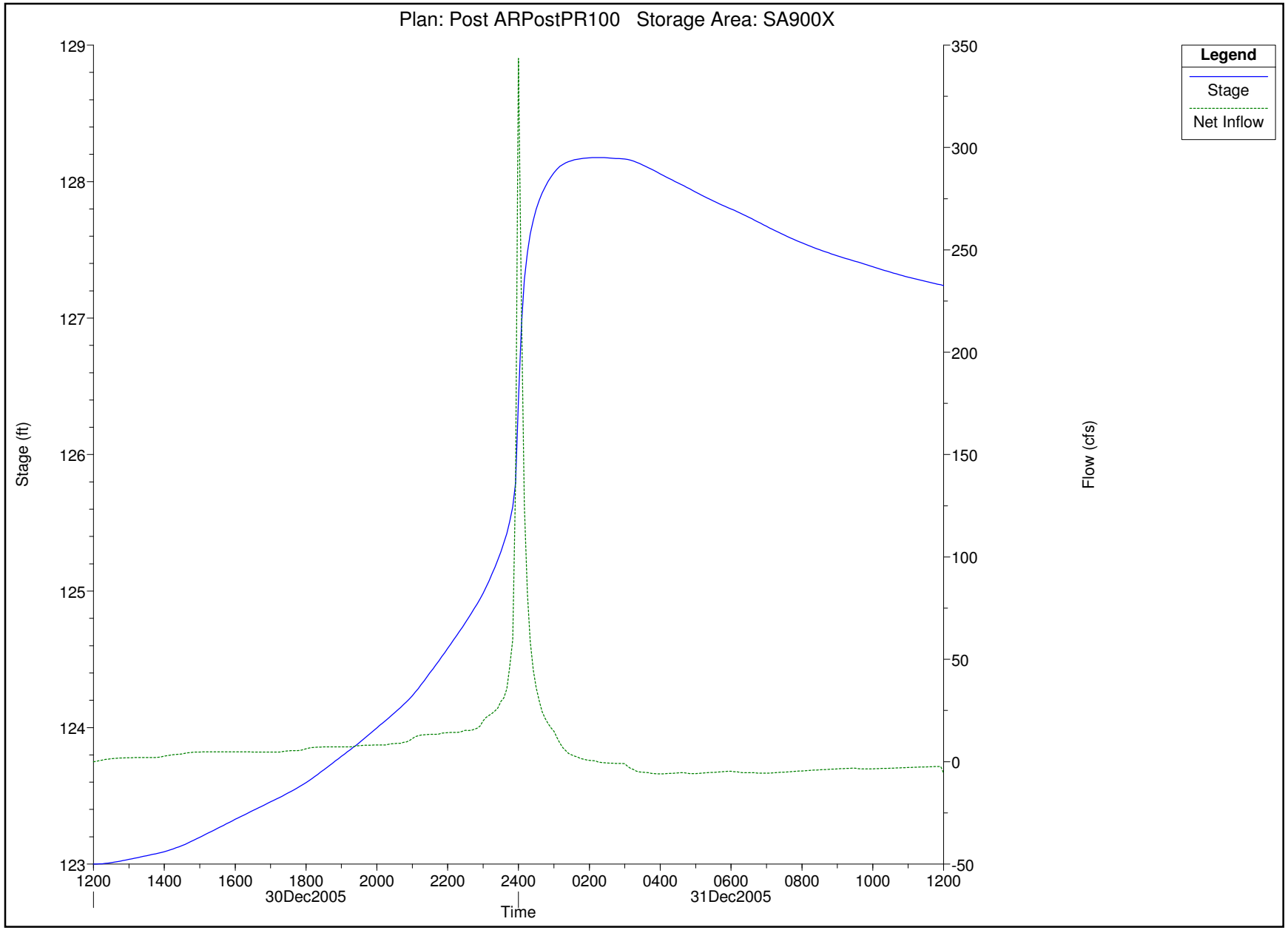
MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 773-1189

California
May 2017
18458.C00

5-11-2017 15:09:08 cgwaltney P:\18458_C00\MstrPln\SD\2nd Submittal\Exhibits\DB-14.dwg
There are no xreferences in this drawing.

PRELIMINARY - Subject to Revision


Plan: Post ARPostPR100 River: PGC North Branch Reach: Placer Trib RS: 63.5
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
Legend
Stage TW
Stage HW US
Stage HW DS
Flow HW US
Flow HW DS
Flow Leaving
Culvert Flow - Culvert #1
Culvert Flow - Culvert #2


Plan: Post ARPostPR100 Storage Area: SA900X
Legend
Stage
Net Inflow
Stage (ft)
Flow (cfs)
129
128
127
126
125
124
123
350
300
250
200
150
100
50
0
-50
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

Basin#14

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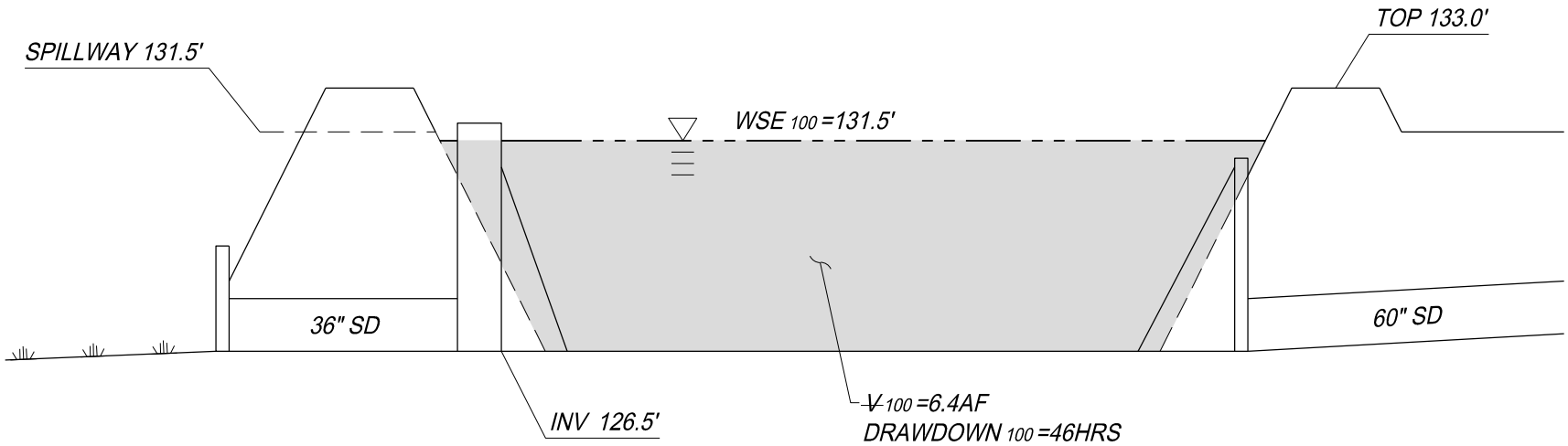


OUTLET STRUCTURE SCHEDULE
0.75'Wx1.5'H @ 126.5'
1.0'Wx1.0'H @ 128.0'
2.5'Wx1.0'H @ 129.0'
3.0'Wx1.0'H @ 130.0'
20' SPILLWAY @ 131.5'

Detention Basin #15
Schematic Section
Storm Drainage Master Plan

Placer Ranch

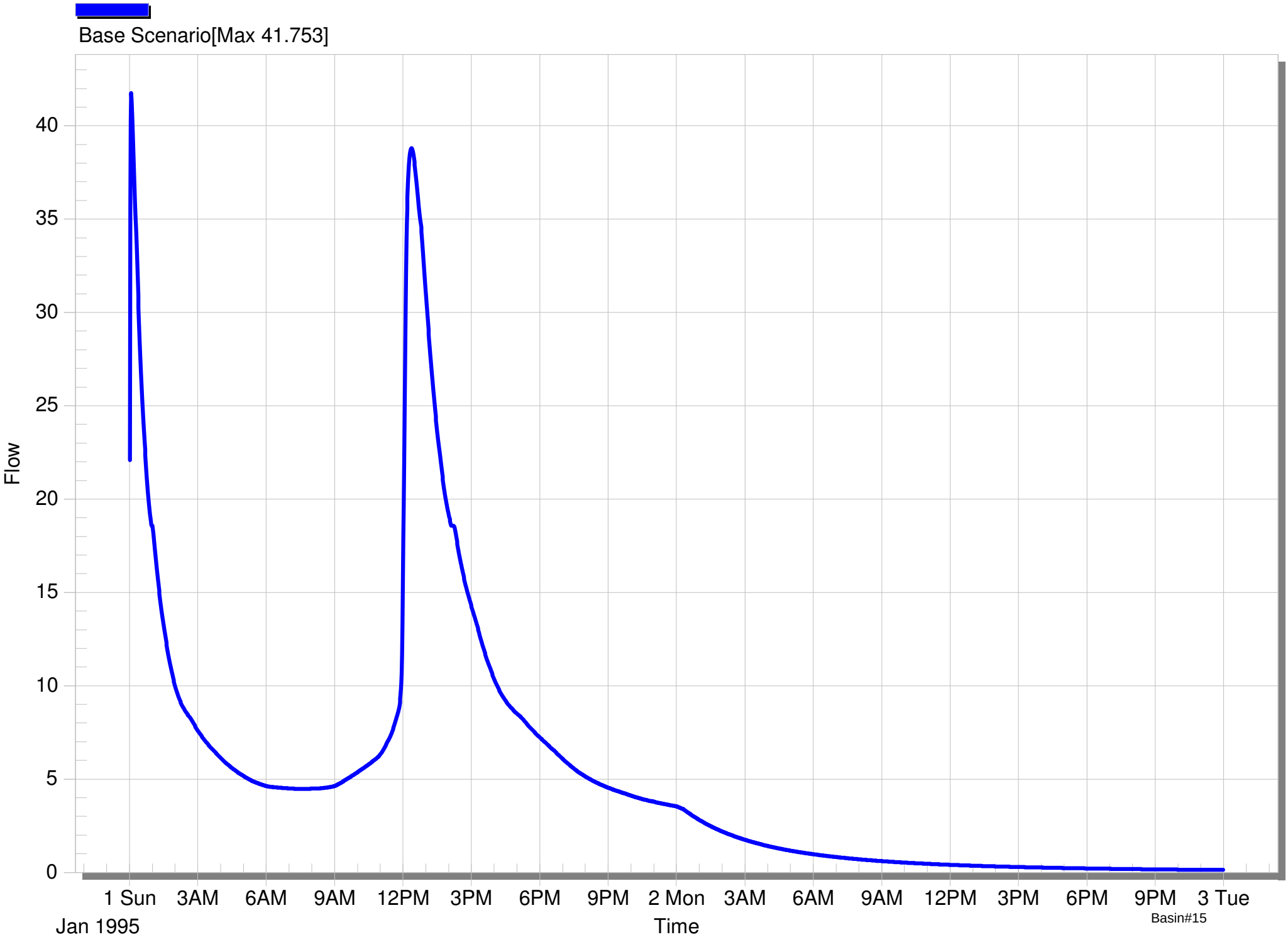
Placer County
Not to Scale

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

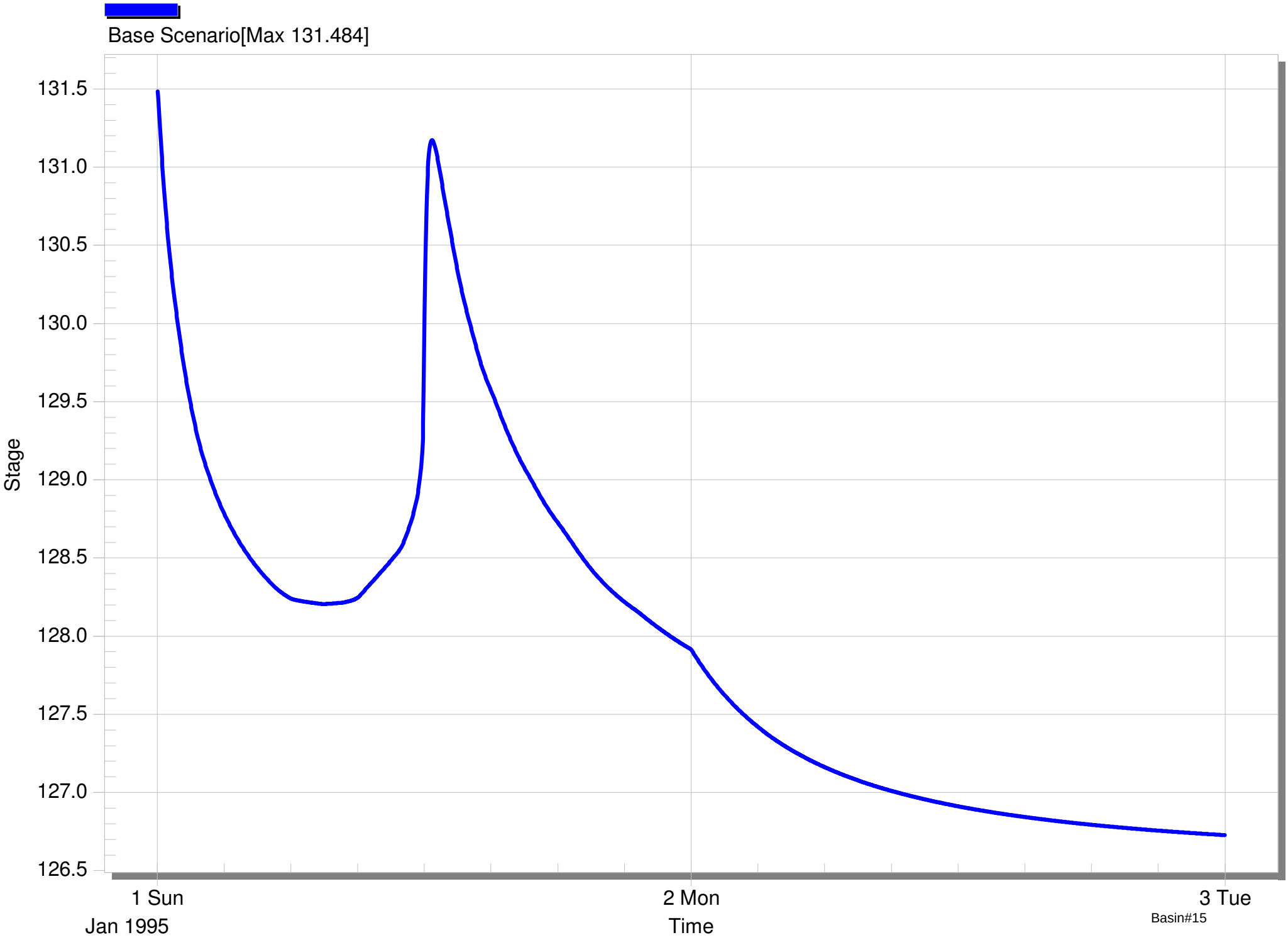
California
May 2017
18458.C00

PRELIMINARY - Subject to Revision

Conduit Link326 from PRD903X to Node511



Node - Basin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130.5
130.0
129.5
129.0
128.5
128.0
127.5
127.0
126.5
1 Sun
Jan 1995
2 Mon
Time
3 Tue
Basin#15

Appendix H
Volumetric Calculations
Data and Results

Placer Ranch Retention Requirements

Placer Ranch		Total Area	Volumetric Impact Rates (acre-feet/acre)			Shed Area by Soil Type (acres)			Retention Volume (acre-feet)			
Land Use	%Imp	(acres)	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Total
Low Density Residential (LDR & LDR-A)	40%	538.84	0.090323	0.117062	0.090323	12.76	45.16	480.92	1.15	5.29	43.44	49.88
Medium Density Residential (MDR)	50%	130.74	0.145981	0.178801	0.145981	0.46	40.38	89.90	0.07	7.22	13.12	20.41
High Density Residential (HDR)	65%	93.13	0.229469	0.271410	0.229469		57.66	35.47	0.00	15.65	8.14	23.79
General Commercial (GC)	80%	26.24	0.312956	0.364019	0.312956		2.37	23.87	0.00	0.86	7.47	8.33
Commercial Mixed Use (CMU)	80%	48.77	0.312956	0.364019	0.312956		16.79	31.98	0.00	6.11	10.01	16.12
Campus Park (CP)	70%	395.52	0.257298	0.302280	0.257298		124.34	271.18	0.00	37.59	69.77	107.36
University Campus (UZ)	50%	301.21	0.145981	0.178801	0.145981	4.61		296.60	0.67	0.00	43.30	43.97
Public Facilities - Schools, County Facilities (PF)	50%	37.42	0.145981	0.178801	0.145981		16.73	20.69	0.00	2.99	3.02	6.01
Parks and Recreation (PR) & Landsacpe (LS)	5%	99.96	-0.104481	-0.099025	-0.104481	0.13	27.50	72.33	-0.01	-2.72	-7.56	-10.29
Open Space Preserves (OS)	2%	255.64	0.000000	0.000000	0.000000	70.02	5.03	180.59	0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	85%	173.53	0.340785	0.394888	0.340785		70.62	102.91	0.00	27.89	35.07	62.96
Major Roads (Roadway)	85%	134.18	0.340785	0.394888	0.340785	2.18	28.03	103.97	0.74	11.07	35.43	47.24
		2235.18				90.16	434.61	1710.41			**Total Required Volume>>**	**375.78**

Placer Ranch Retention Requirements

University Creek / Pleasant Grove Creek Watershed		Total Area	Volumetric Impact Rates (acre-feet/acre)			Shed Area by Soil Type (acres)			Retention Volume (acre-feet)			
Land Use	%Imp	(acres)	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Total
Low Density Residential (LDR & LDR-A)	40%	528.79	0.090323	0.117062	0.090323	12.76	45.16	470.87	1.15	5.29	42.53	48.97
Medium Density Residential (MDR)	50%	62.65	0.145981	0.178801	0.145981	0.46	2.44	59.75	0.07	0.44	8.72	9.23
High Density Residential (HDR)	65%	62.75	0.229469	0.271410	0.229469		27.90	34.85	0.00	7.57	8.00	15.57
General Commercial (GC)	80%	26.24	0.312956	0.364019	0.312956		2.37	23.87	0.00	0.86	7.47	8.33
Commercial Mixed Use (CMU)	80%	40.82	0.312956	0.364019	0.312956		14.54	26.28	0.00	5.29	8.22	13.52
Campus Park (CP)	70%	211.44	0.257298	0.302280	0.257298		9.15	202.29	0.00	2.77	52.05	54.81
University Campus (UZ)	50%	301.21	0.145981	0.178801	0.145981	4.61		296.60	0.67	0.00	43.30	43.97
Public Facilities - Schools, County Facilities (PF)	50%	33.53	0.145981	0.178801	0.145981		12.84	20.69	0.00	2.30	3.02	5.32
Parks and Recreation (PR) & Landsacpe (LS)	5%	82.41	-0.104481	-0.099025	-0.104481	0.13	21.62	60.66	-0.01	-2.14	-6.34	-8.49
Open Space Preserves (OS)	2%	212.11	0.000000	0.000000	0.000000	70.02	2.59	139.50	0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	85%	142.58	0.340785	0.394888	0.340785		39.70	102.88	0.00	15.68	35.06	50.74
Major Roads (Roadway)	85%	100.15	0.340785	0.394888	0.340785	2.18	12.57	85.40	0.74	4.96	29.10	34.81
		1804.68				90.16	190.88	1523.64			**Total Required Volume>>**	**276.77**

North Branch Placer Tributary/ Pleasant Grove Creek Watershed		Total Area	Volumetric Impact Rates (acre-feet/acre)			Shed Area by Soil Type (acres)			Retention Volume (acre-feet)			
Land Use	%Imp	(acres)	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Total
Low Density Residential (LDR & LDR-A)	40%	10.05	0.090323	0.117062	0.090323			10.05	0.00	0.00	0.91	0.91
Medium Density Residential (MDR)	50%	68.09	0.145981	0.178801	0.145981		37.94	30.15	0.00	6.78	4.40	11.19
High Density Residential (HDR)	65%	30.38	0.229469	0.271410	0.229469		29.76	0.62	0.00	8.08	0.14	8.22
General Commercial (GC)	80%	0.00	0.312956	0.364019	0.312956				0.00	0.00	0.00	0.00
Commercial Mixed Use (CMU)	80%	7.95	0.312956	0.364019	0.312956		2.25	5.70	0.00	0.82	1.78	2.60
Campus Park (CP)	70%	130.23	0.257298	0.302280	0.257298		61.44	68.79	0.00	18.57	17.70	36.27
University Campus (UZ)	50%	0.00	0.145981	0.178801	0.145981				0.00	0.00	0.00	0.00
Public Facilities - Schools, County Facilities (PF)	50%	3.89	0.145981	0.178801	0.145981		3.89		0.00	0.70	0.00	0.70
Parks and Recreation (PR) & Landsacpe (LS)	5%	17.55	-0.104481	-0.099025	-0.104481		5.88	11.67	0.00	-0.58	-1.22	-1.80
Open Space Preserves (OS)	2%	43.53	0.000000	0.000000	0.000000		2.44	41.09	0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	85%	30.93	0.340785	0.394888	0.340785		30.90	0.03	0.00	12.20	0.01	12.21
Major Roads (Roadway)	85%	31.25	0.340785	0.394888	0.340785		12.98	18.27	0.00	5.13	6.23	11.35
		373.85				0.00	187.48	186.37			**Total Required Volume>>**	**81.64**

Orchard Creek / Auburn Ravine Watershed		Total Area	Volumetric Impact Rates (acre-feet/acre)			Shed Area by Soil Type (acres)			Retention Volume (acre-feet)			
Land Use	%Imp	(acres)	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Type B/D Soil	Type C Soil	Type D Soil	Total
Low Density Residential (LDR & LDR-A)	40%	0.00	0.090323	0.117062	0.090323				0.00	0.00	0.00	0.00
Medium Density Residential (MDR)	50%	0.00	0.145981	0.178801	0.145981				0.00	0.00	0.00	0.00
High Density Residential (HDR)	65%	0.00	0.229469	0.271410	0.229469				0.00	0.00	0.00	0.00
General Commercial (GC)	80%	0.00	0.312956	0.364019	0.312956				0.00	0.00	0.00	0.00
Commercial Mixed Use (CMU)	80%	0.00	0.312956	0.364019	0.312956				0.00	0.00	0.00	0.00
Campus Park (CP)	70%	53.85	0.257298	0.302280	0.257298		53.75	0.10	0.00	16.25	0.03	16.27
University Campus (UZ)	50%	0.00	0.145981	0.178801	0.145981				0.00	0.00	0.00	0.00
Public Facilities - Schools, County Facilities (PF)	50%	0.00	0.145981	0.178801	0.145981				0.00	0.00	0.00	0.00
Parks and Recreation (PR) & Landsacpe (LS)	5%	0.00	-0.104481	-0.099025	-0.104481				0.00	0.00	0.00	0.00
Open Space Preserves (OS)	2%	0.00	0.000000	0.000000	0.000000				0.00	0.00	0.00	0.00
Placer Parkway (Parkway)	85%	0.02	0.340785	0.394888	0.340785		0.02		0.00	0.01	0.00	0.01
Major Roads (Roadway)	85%	2.78	0.340785	0.394888	0.340785		2.48	0.30	0.00	0.98	0.10	1.08
		56.65				0.00	56.25	0.40			**Total Required Volume>>**	**17.36**

Volumetric Rate Calculations

Low Density Residential (LDR)	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.562217	0.525732	0.562217
% Impervious	**40%**		**Impact Rates>>**	**0.090323**	**0.117062**	**0.090323**

Medium Density Residential (MDR)	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.617876	0.587471	0.617876
% Impervious	**50%**		**Impact Rates>>**	**0.145981**	**0.178801**	**0.145981**

High Density Residential (HDR)	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.701363	0.680080	0.701363
% Impervious	**65%**		**Impact Rates>>**	**0.229469**	**0.271410**	**0.229469**

General / Mixed Use Commercial	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.784850	0.772689	0.784850
% Impervious	**80%**		**Impact Rates>>**	**0.312956**	**0.364019**	**0.312956**

Campus Park	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.729192	0.710950	0.729192
% Impervious	**70%**		**Impact Rates>>**	**0.257298**	**0.302280**	**0.257298**

Univ. Campus, Schools, Public Facilities	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.617876	0.587471	0.617876
% Impervious	**50%**		**Impact Rates>>**	**0.145981**	**0.178801**	**0.145981**

Parks and Recreation (PR)	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.367413	0.309645	0.367413
% Impervious	**5%**		**Impact Rates>>**	**-0.104481**	**-0.099025**	**-0.104481**

Volumetric Rate Calculations

Open Space Preserves (OS)	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
% Impervious	**2%**		**Impact Rates>>**	**0.000000**	**0.000000**	**0.000000**

Placer Parkway / Major Roads	Infiltration Rates (in/hr)			Results (af/acre)		
USGS Soil Type	B/D	C	D	B/D	C	D
Pre-Project	0.07	0.09	0.07	0.471894	0.408670	0.471894
Post-Project	0.12	0.16	0.12	0.812680	0.803558	0.812680
% Impervious	**85%**		**Impact Rates>>**	**0.340785**	**0.394888**	**0.340785**

Volumetric Rate Formulas

Pre-Project Volumetric Rate Formula

$$0.09920478 + \frac{0.697025}{1 + \left(\frac{PreProject\ Infiltration}{0.07704916}\right)^{1.44835}}$$

Post-Project Volumetric Rate Formula

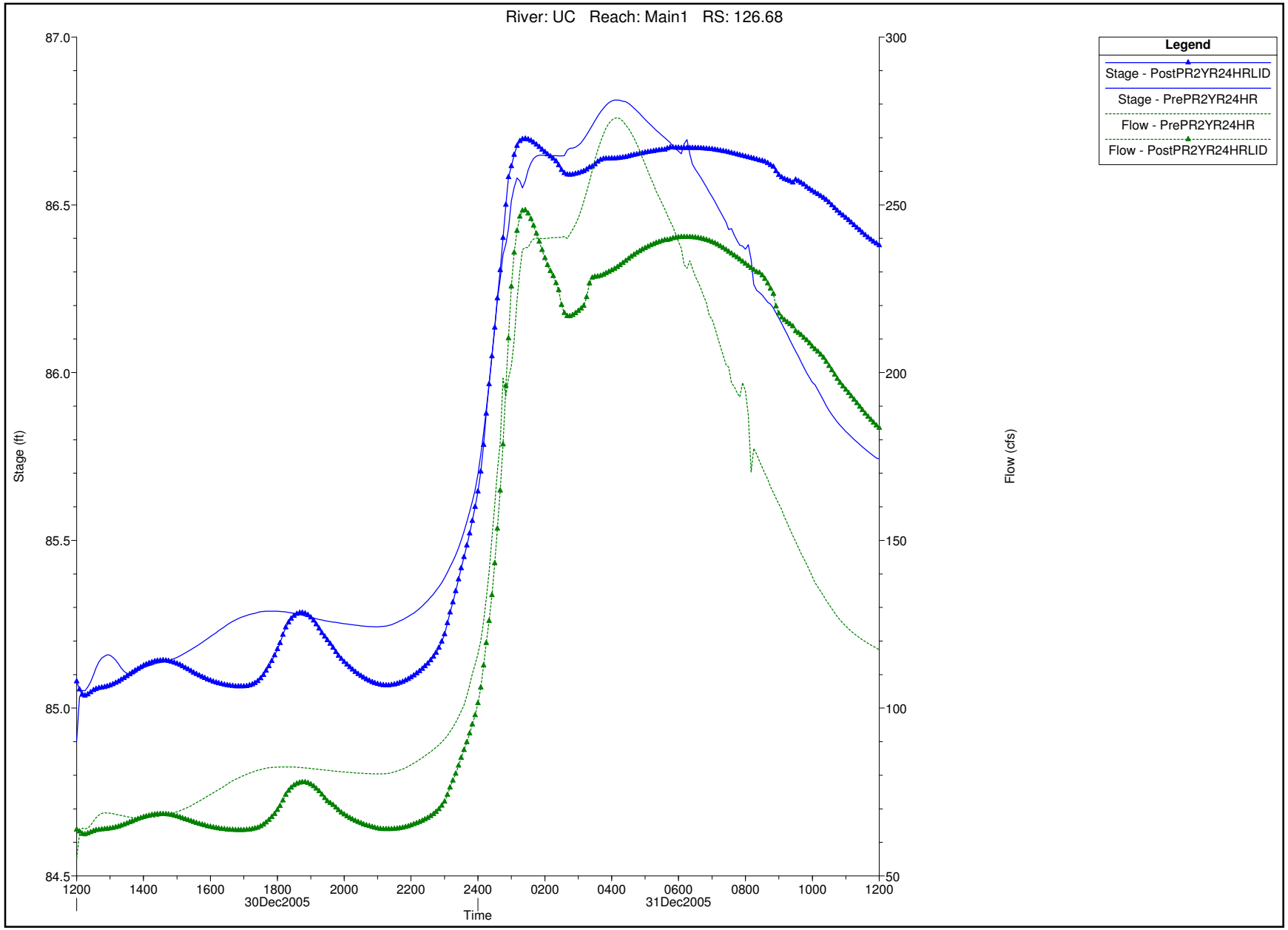
$$(\%Impervious)\times(0.896167) + (1 - \%Impervious)\times\left[0.09920478 + \frac{0.697025}{1 + \left(\frac{PostProject\ Infiltration}{0.07704916}\right)^{1.44835}}\right]$$

Impact Rate Formula

$$PostProject\ Results - PreProject\ Results$$

*The above formulas were developed by Civil Engineering Solutions, Inc for the 2017 update to the Pleasant Grove/Curry Creek Mitigation Fee report.

Appendix I
Compliance Point
Hydrograph Comparison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Stage - PrePR2YR24HR
Flow - PrePR2YR24HR
Flow - PostPR2YR24HRLID
Stage (ft)
Flow (cfs)
87.0
86.5
86.0
85.5
85.0
84.5
300
250
200
150
100
50
1200
1400
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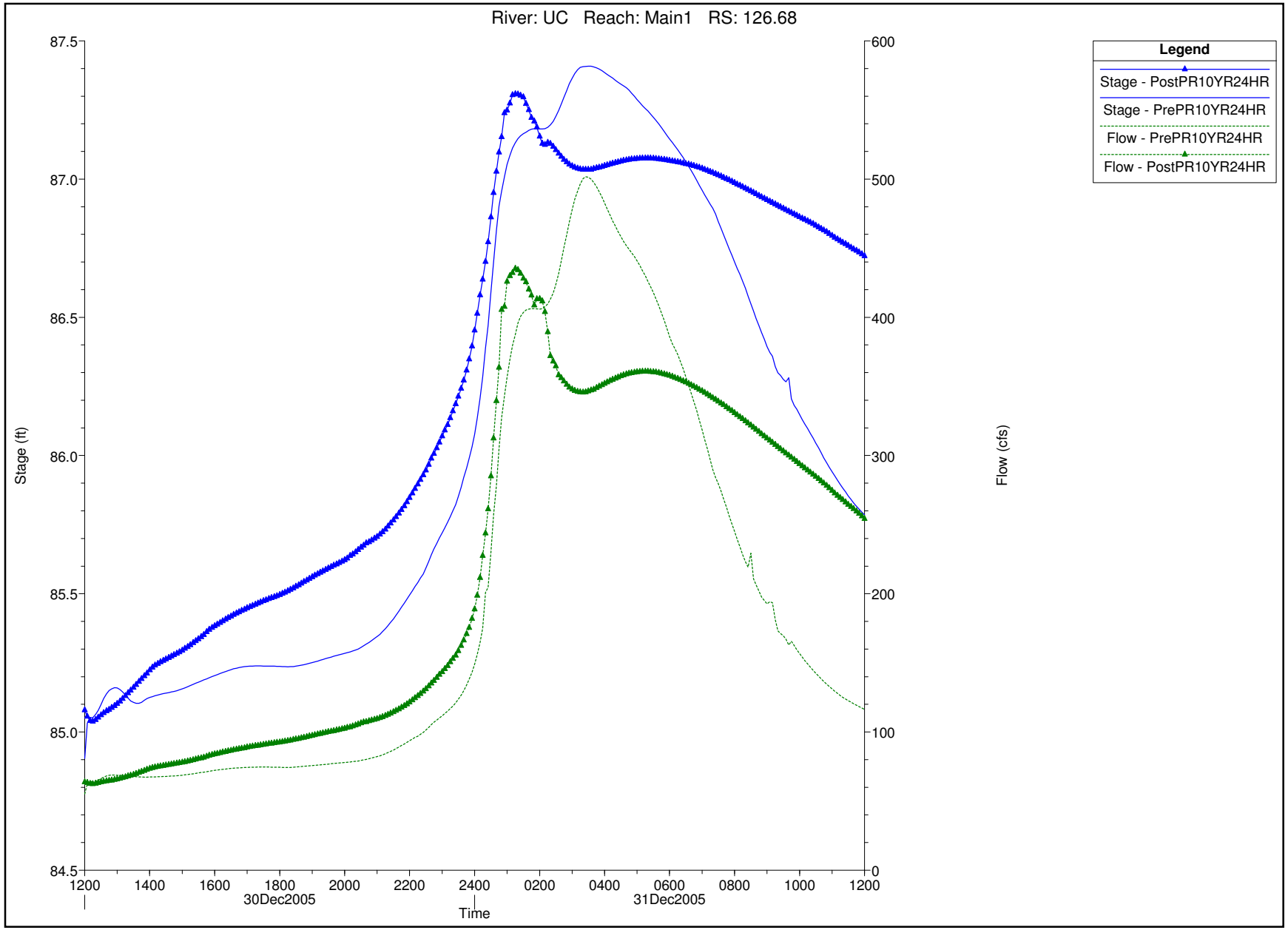
1000
1200
30Dec2005
31Dec2005
Time


River: UC Reach: Main1 RS: 126.68
Legend
Stage - PostPR10YR24HR
Stage - PrePR10YR24HR
Flow - PrePR10YR24HR
Flow - PostPR10YR24HR
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
87.5
87.0
86.5
86.0
85.5
85.0
84.5
600
500
400
300
200
100
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
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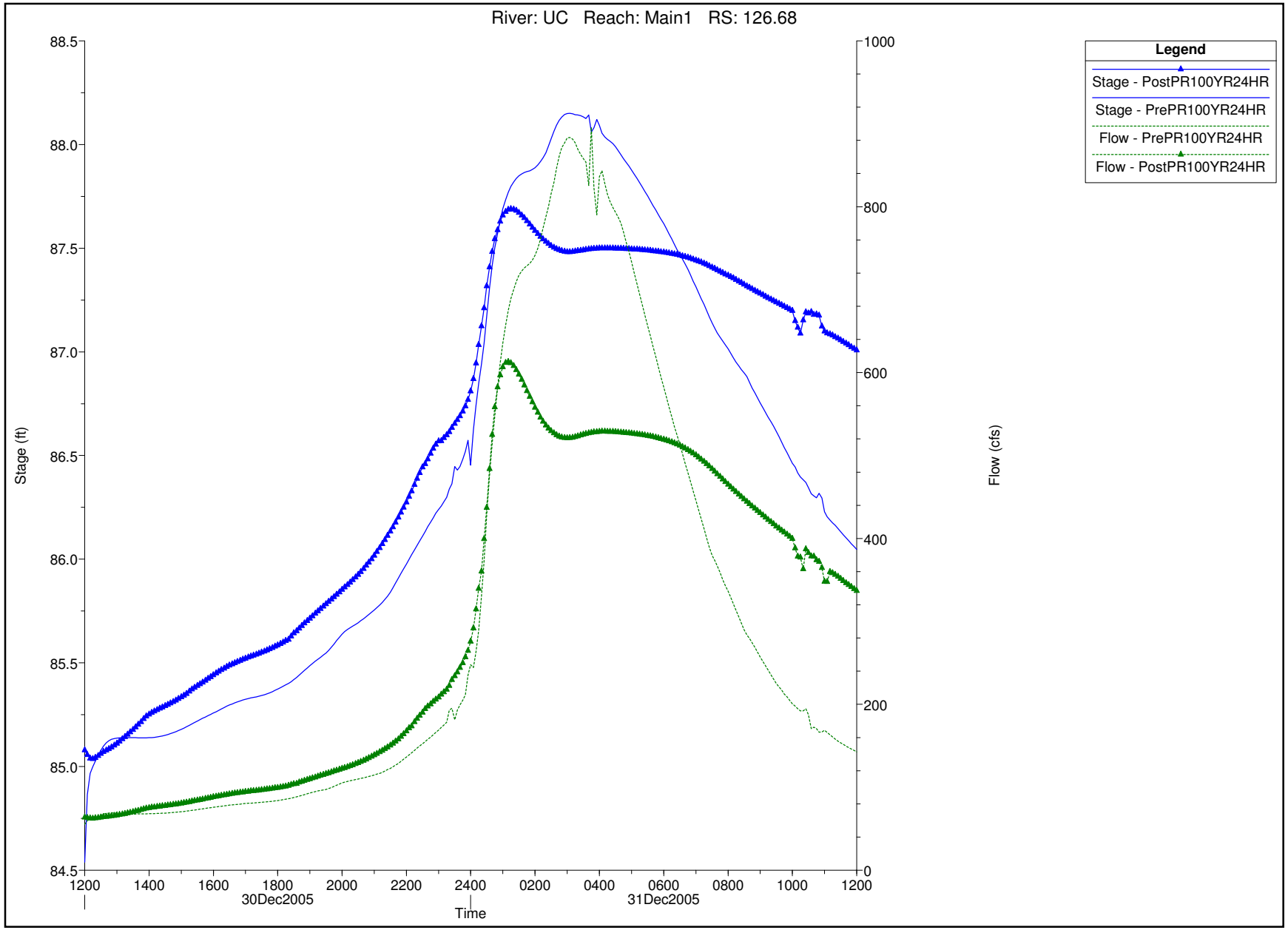
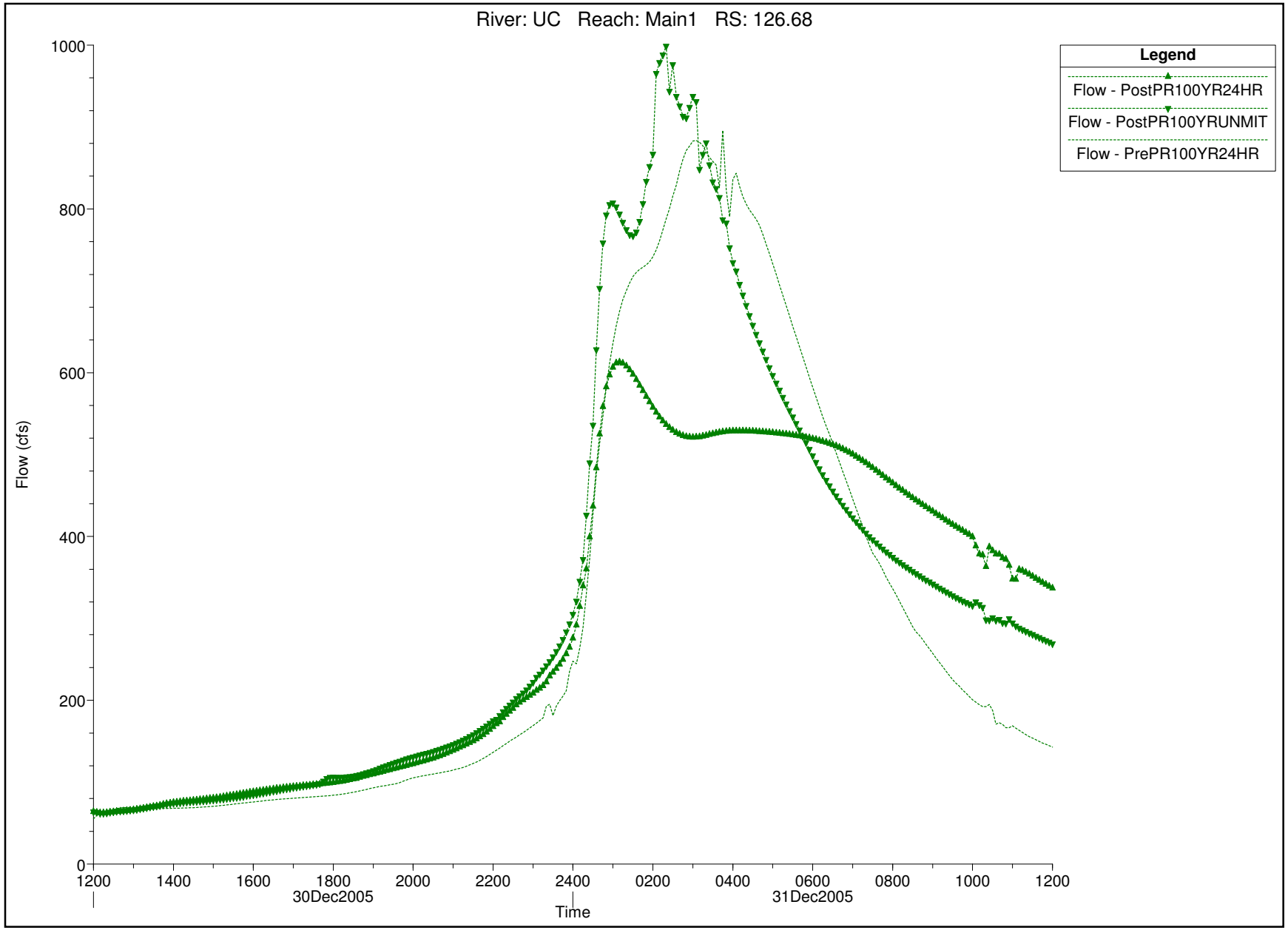
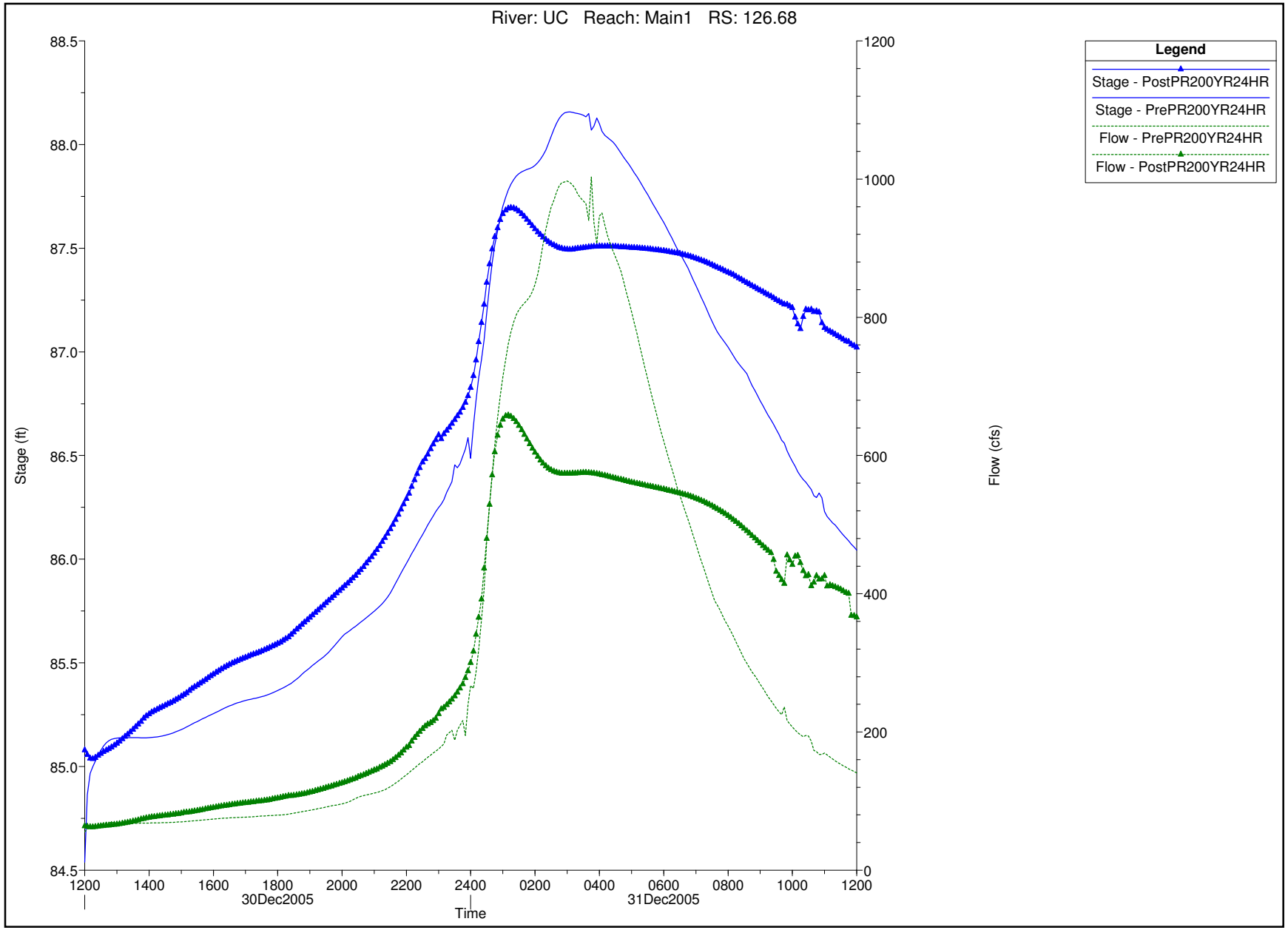
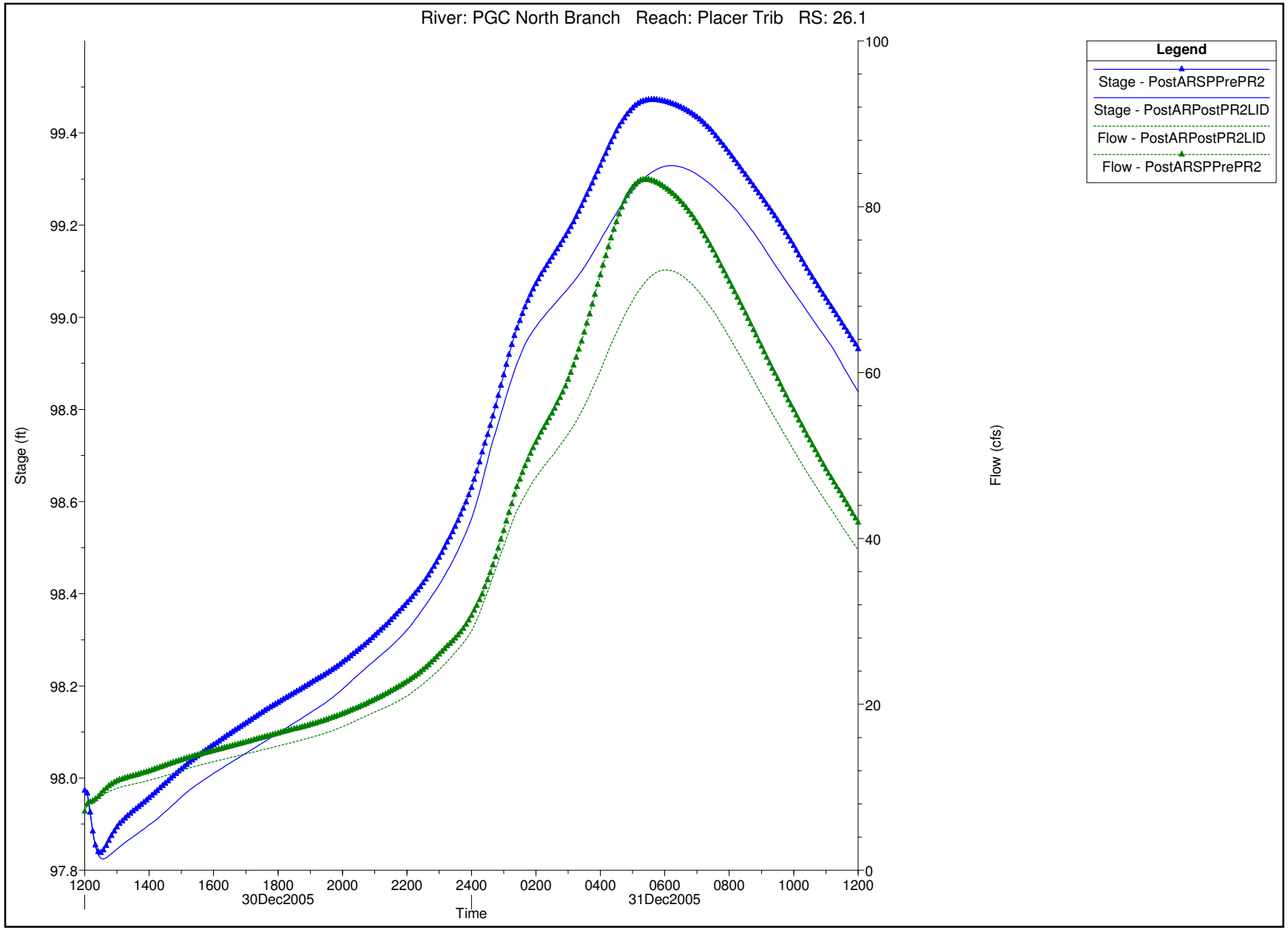
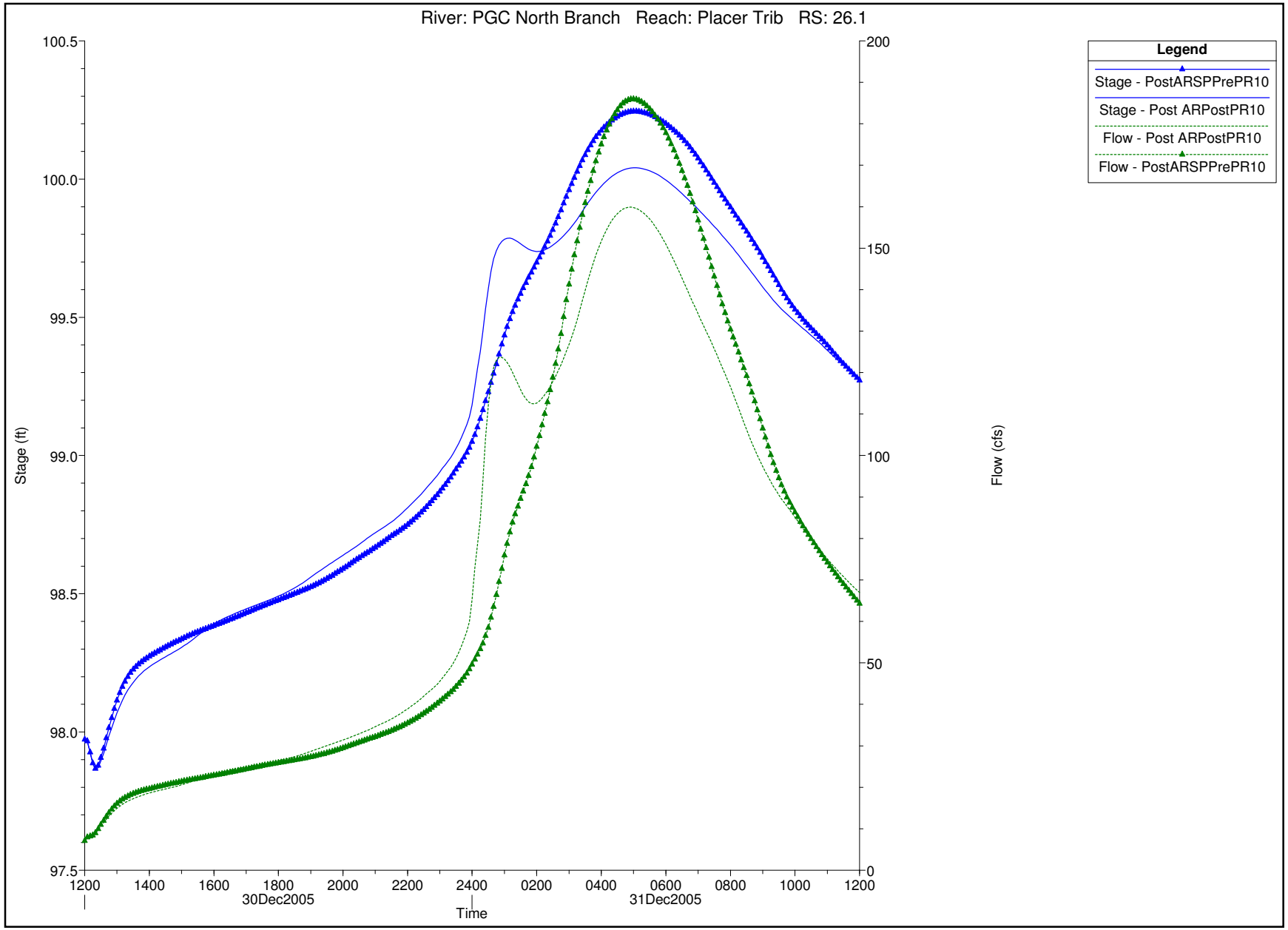
1000
1200

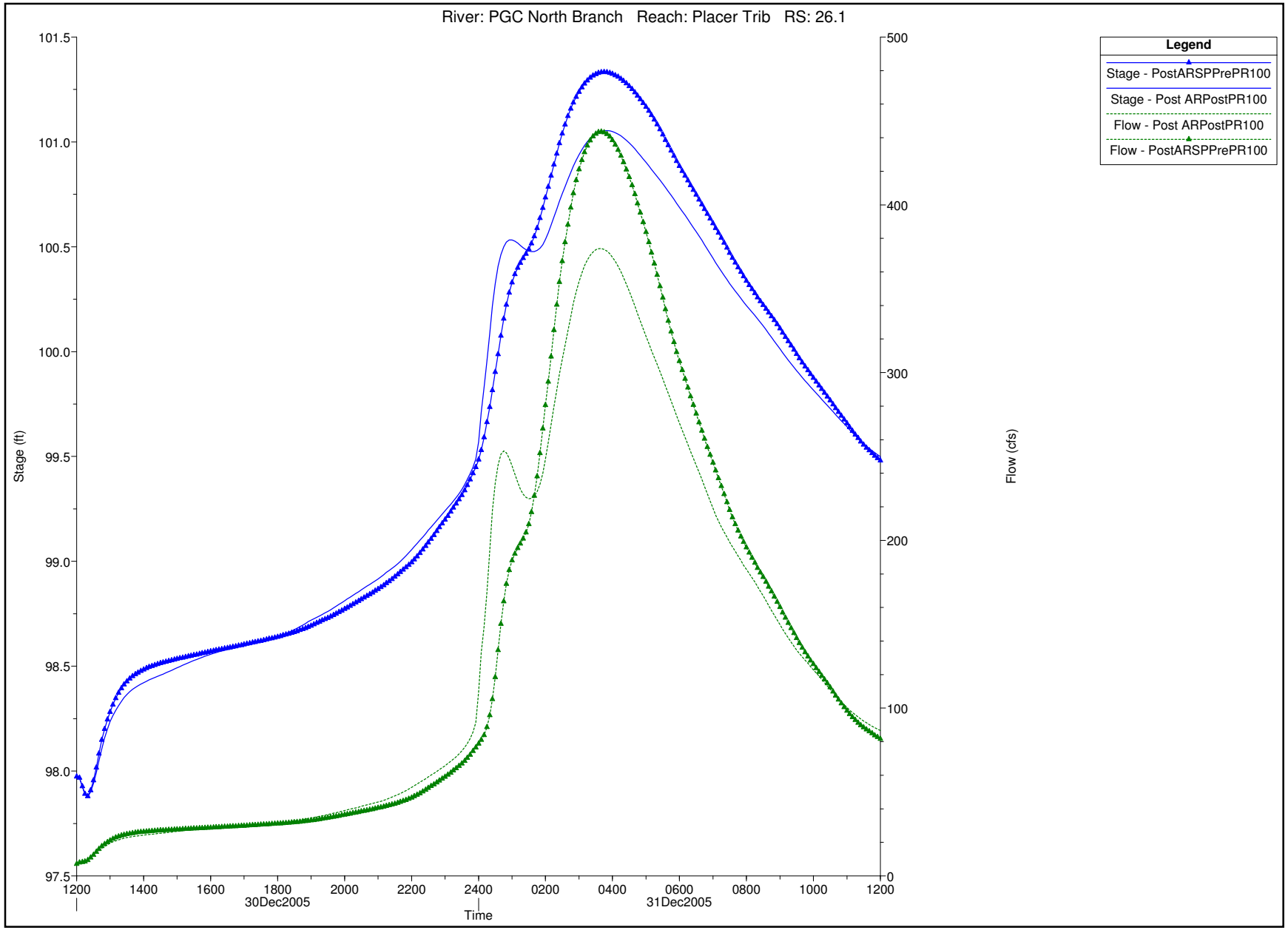

River: UC Reach: Main1 RS: 126.68
Legend
Stage - PostPR100YR24HR
Stage - PrePR100YR24HR
Flow - PrePR100YR24HR
Flow - PostPR100YR24HR
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
88.5
88.0
87.5
87.0
86.5
86.0
85.5
85.0
84.5
1000
800
600
400
200
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200

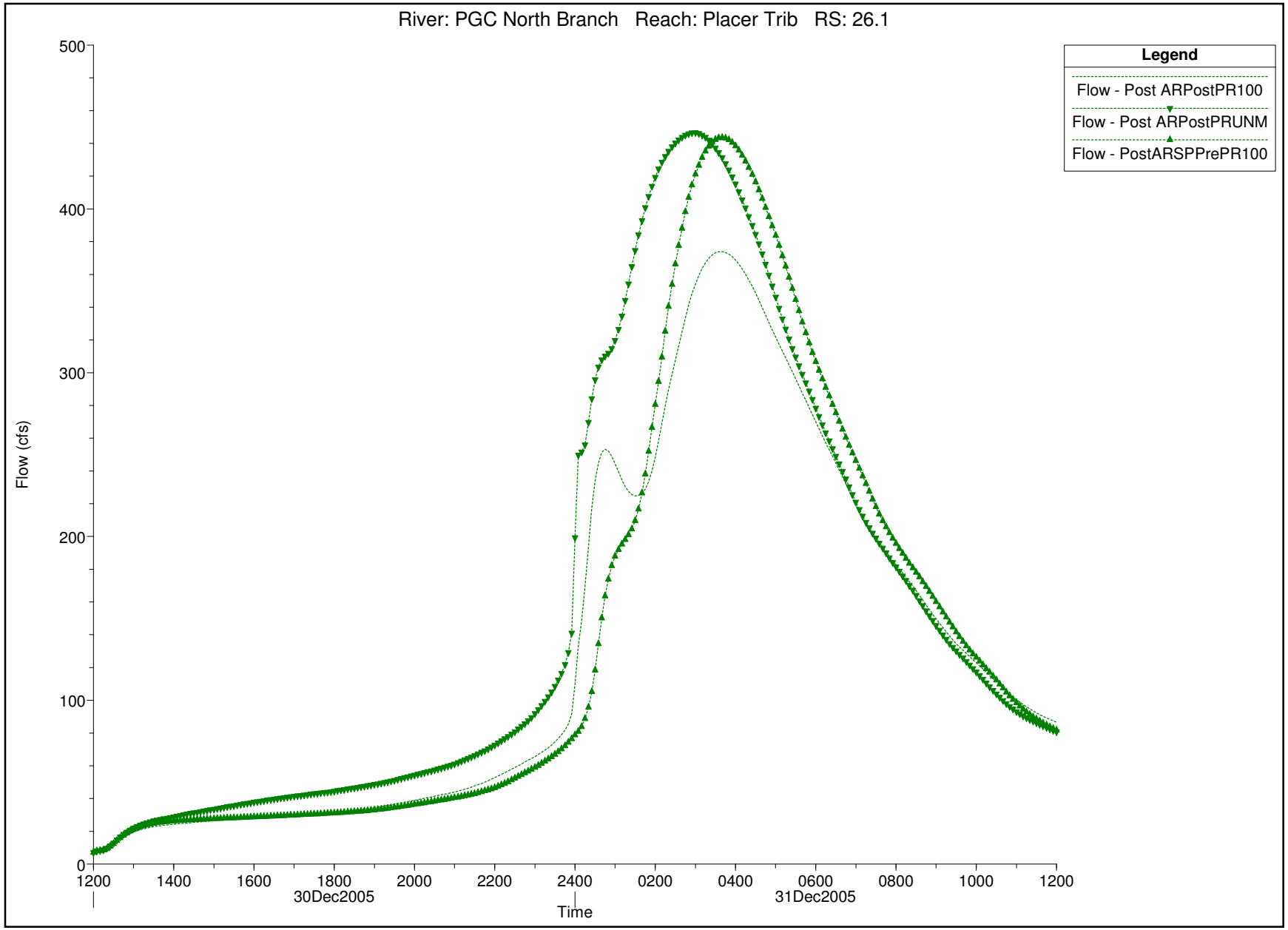

River: UC Reach: Main1 RS: 126.68
Legend
Flow - PostPR100YR24HR
Flow - PostPR100YRUNMIT
Flow - PrePR100YR24HR
Flow (cfs)
1000
800
600
400
200
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time


River: UC Reach: Main1 RS: 126.68
Legend
Stage - PostPR200YR24HR
Stage - PrePR200YR24HR
Flow - PrePR200YR24HR
Flow - PostPR200YR24HR
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
88.5
88.0
87.5
87.0
86.5
86.0
85.5
85.0
84.5
1200
1000
800
600
400
200
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200

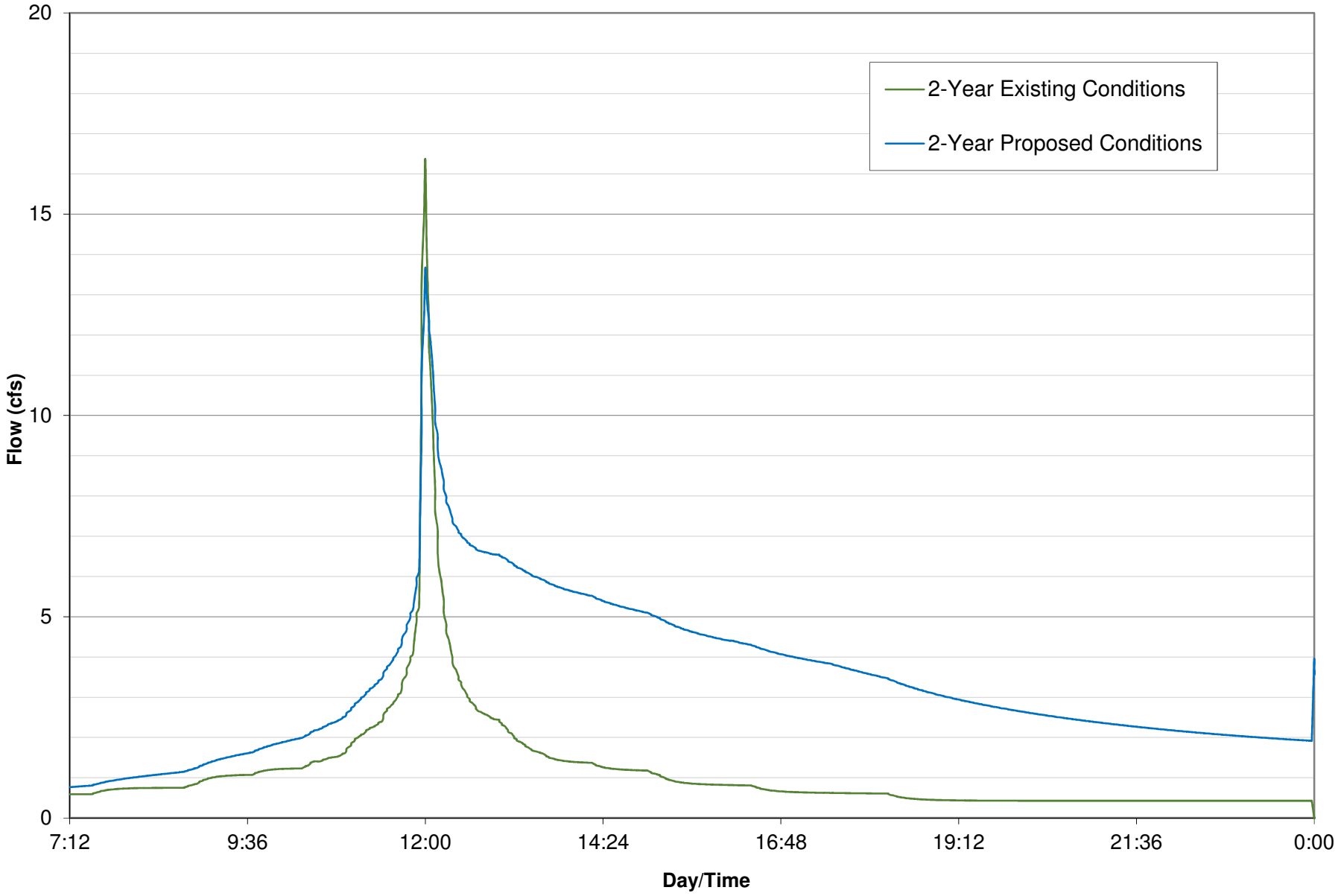

River: PGC North Branch Reach: Placer Trib RS: 26.1
Legend
Stage - PostARSPPrePR2
Stage - PostARPostPR2LID
Flow - PostARPostPR2LID
Flow - PostARSPPrePR2
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
97.8
98.0
98.2
98.4
98.6
98.8
99.0
99.2
99.4
0
20
40
60
80
100
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: PGC North Branch Reach: Placer Trib RS: 26.1
Legend
Stage - PostARSPPrePR10
Stage - Post ARPostPR10
Flow - Post ARPostPR10
Flow - PostARSPPrePR10
Stage (ft)
Flow (cfs)
100.5
100.0
99.5
99.0
98.5
98.0
97.5
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time

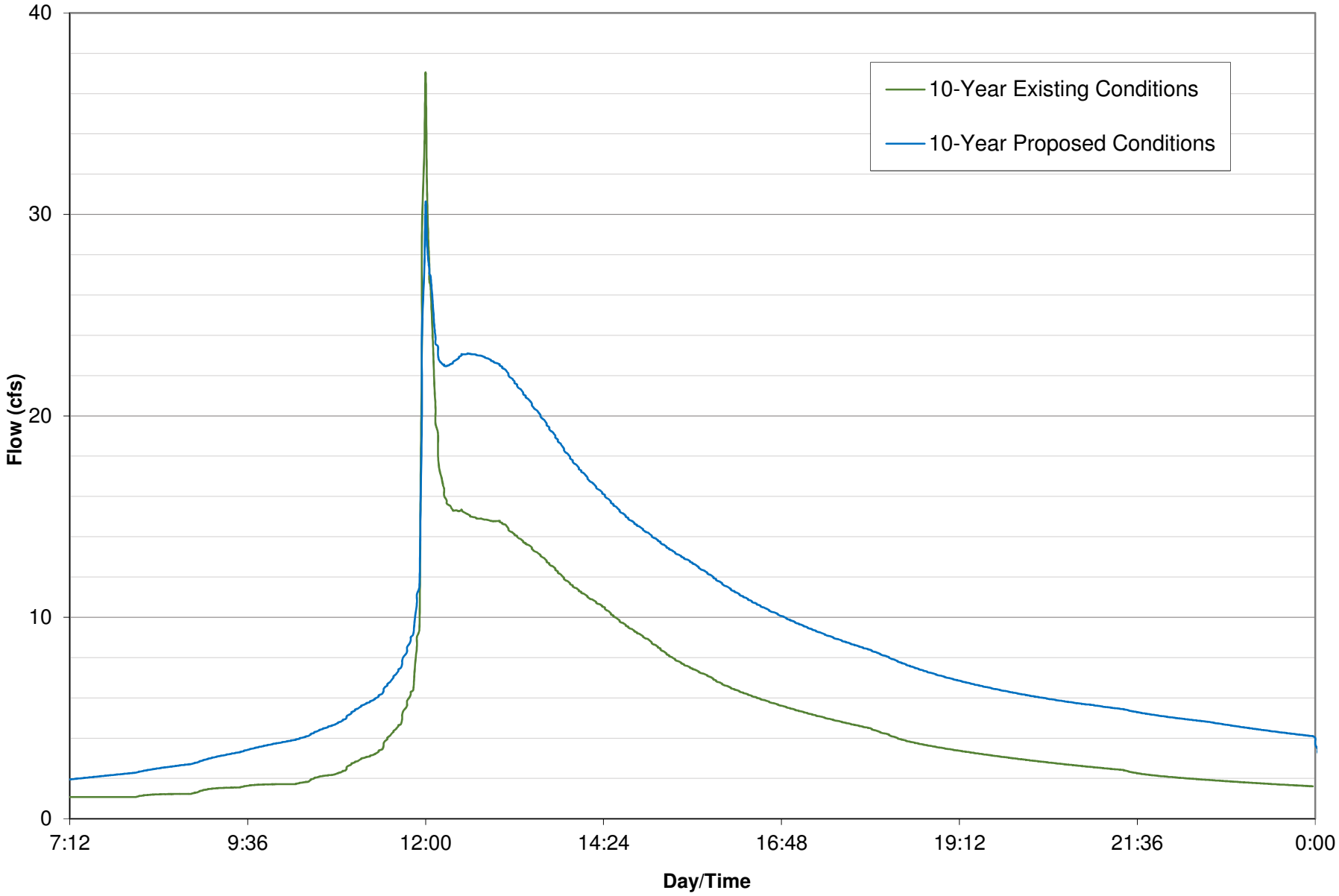

River: PGC North Branch Reach: Placer Trib RS: 26.1
Legend
Stage - PostARSPPrePR100
Stage - Post ARPostPR100
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
101.5
101.0
100.5
100.0
99.5
99.0
98.5
98.0
97.5
500
400
300
200
100
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: PGC North Branch Reach: Placer Trib RS: 26.1
Legend
Flow - Post ARPostPR100
Flow - Post ARPostPRUNM
Flow - PostARSPPrePR100
Flow (cfs)
500
400
300
200
100
0
1200
1400
1600
1800
30Dec2005
2000
2200
2400
0200
0400
0600
31Dec2005
0800
1000
1200
Time

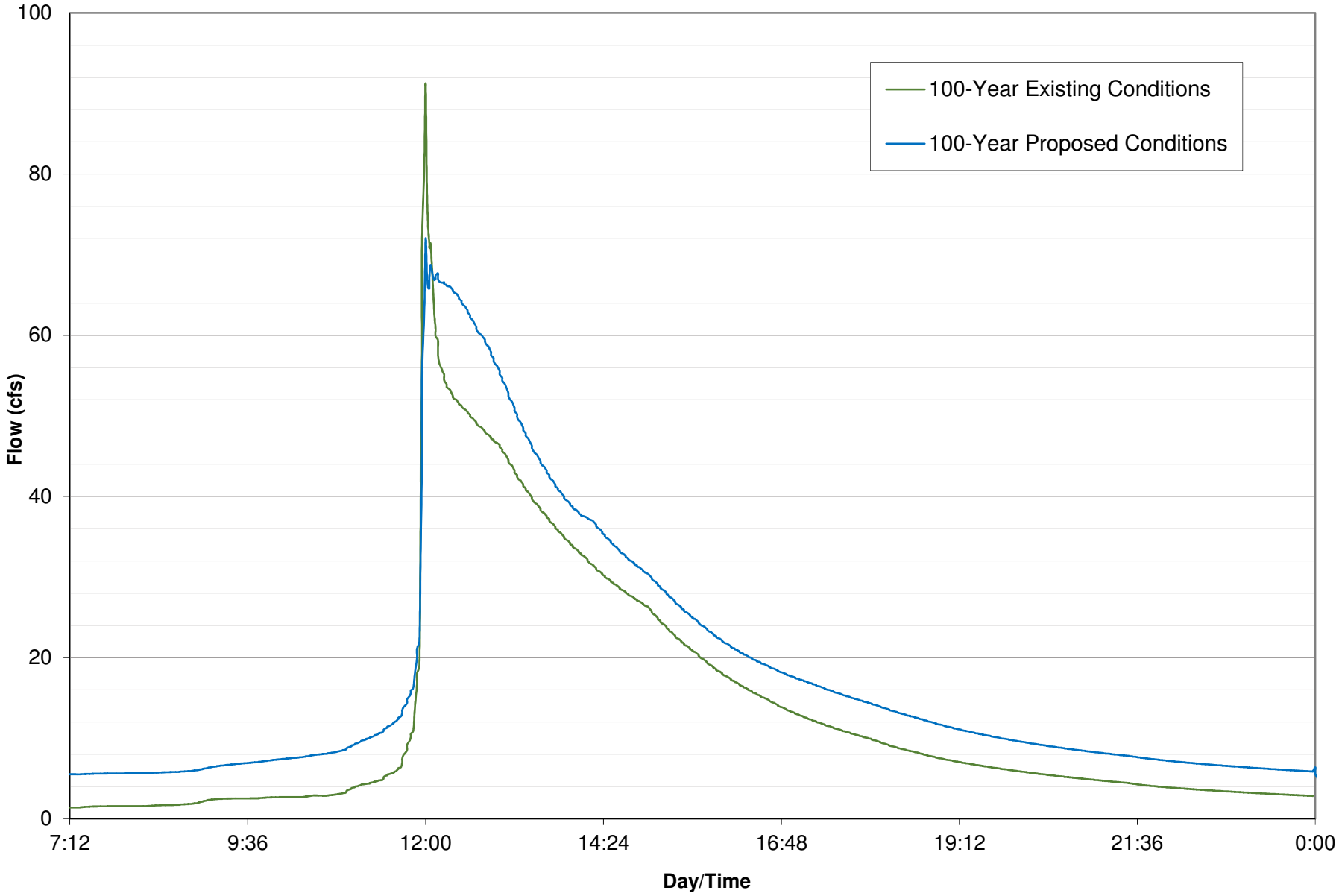
2-Year Analysis - Existing and Proposed Conditions
Compliance Point #3



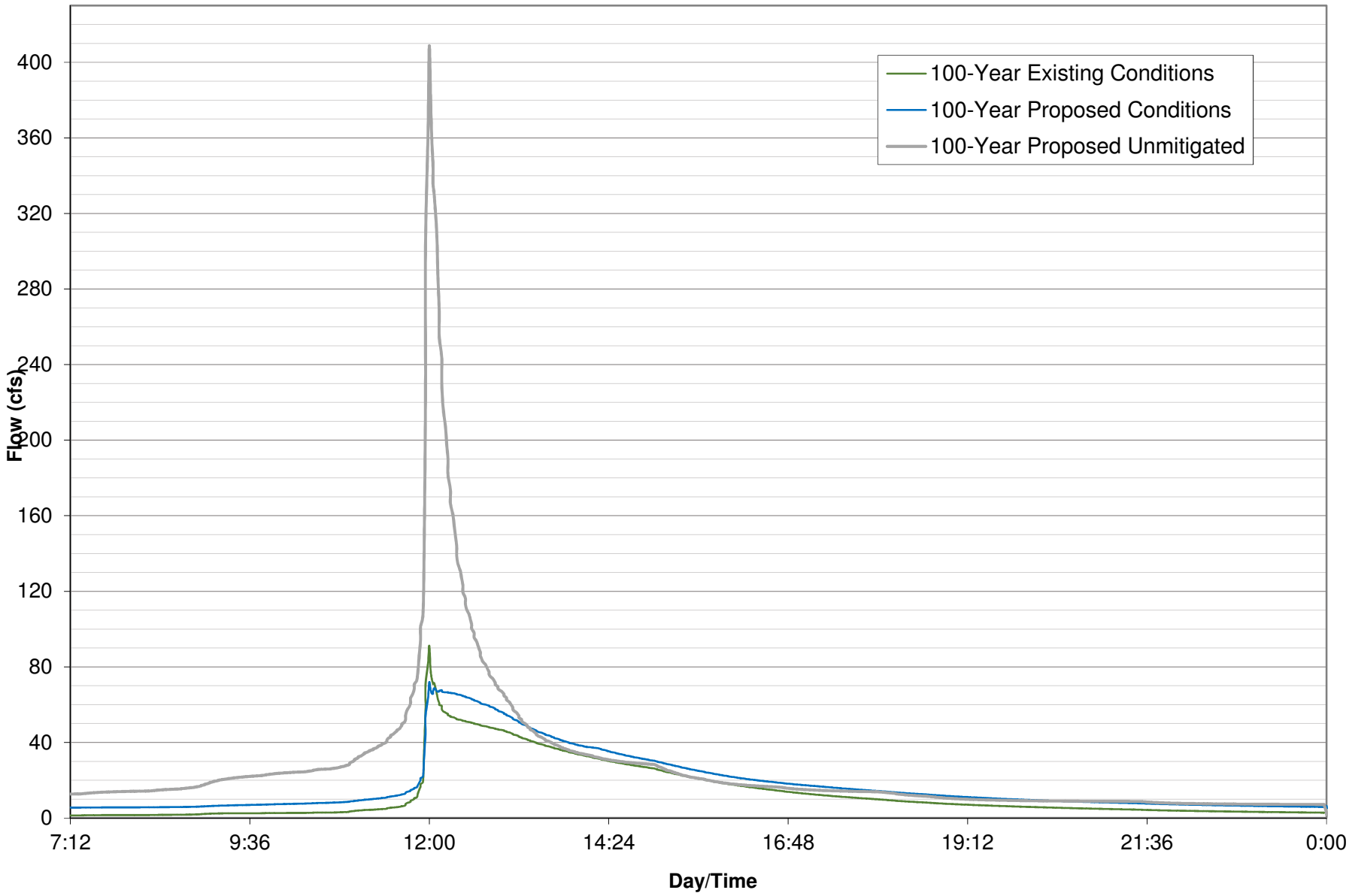
10-Year Analysis - Existing and Proposed Conditions
Compliance Point #3



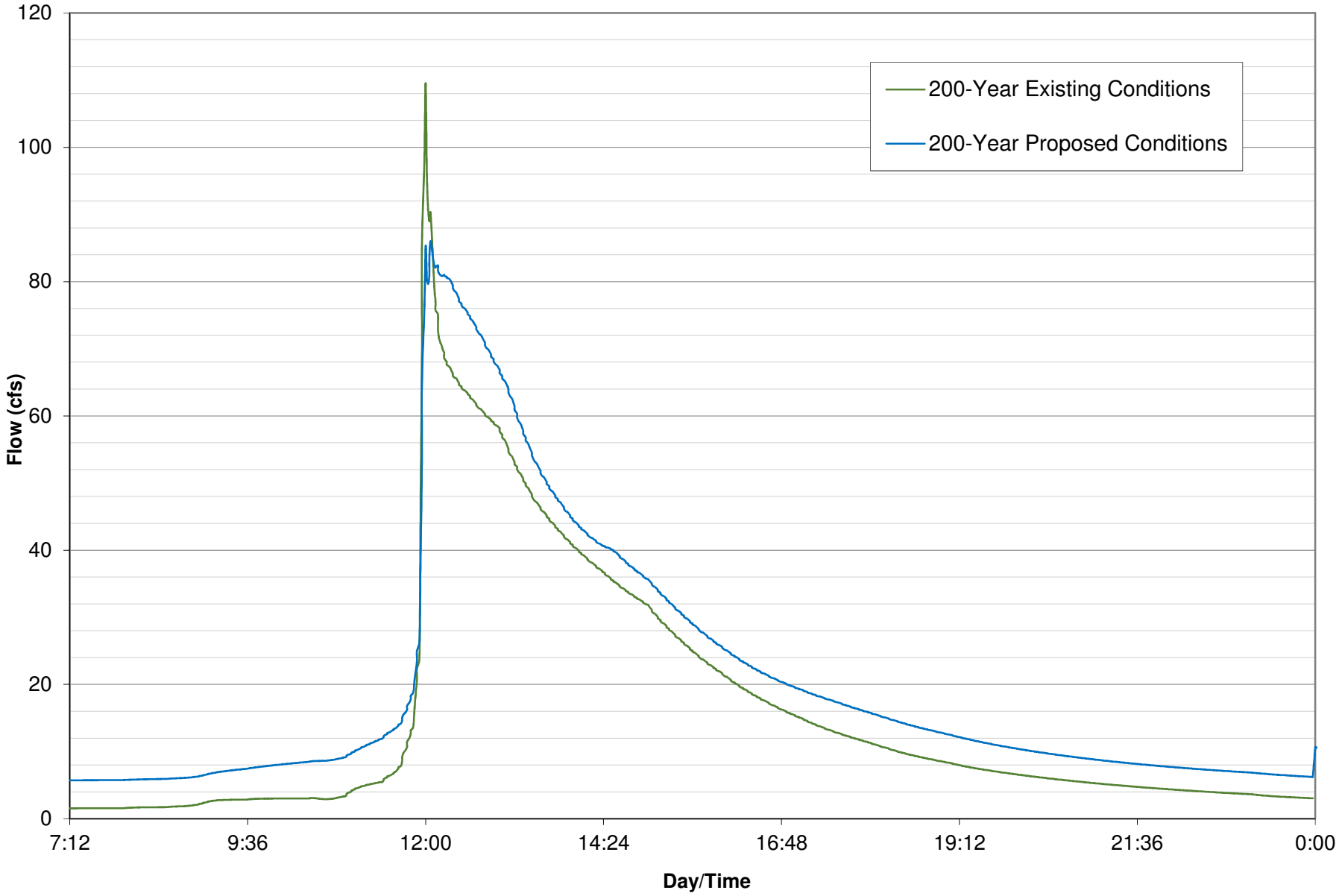
100-Year Analysis - Existing and Proposed Conditions
Compliance Point #3

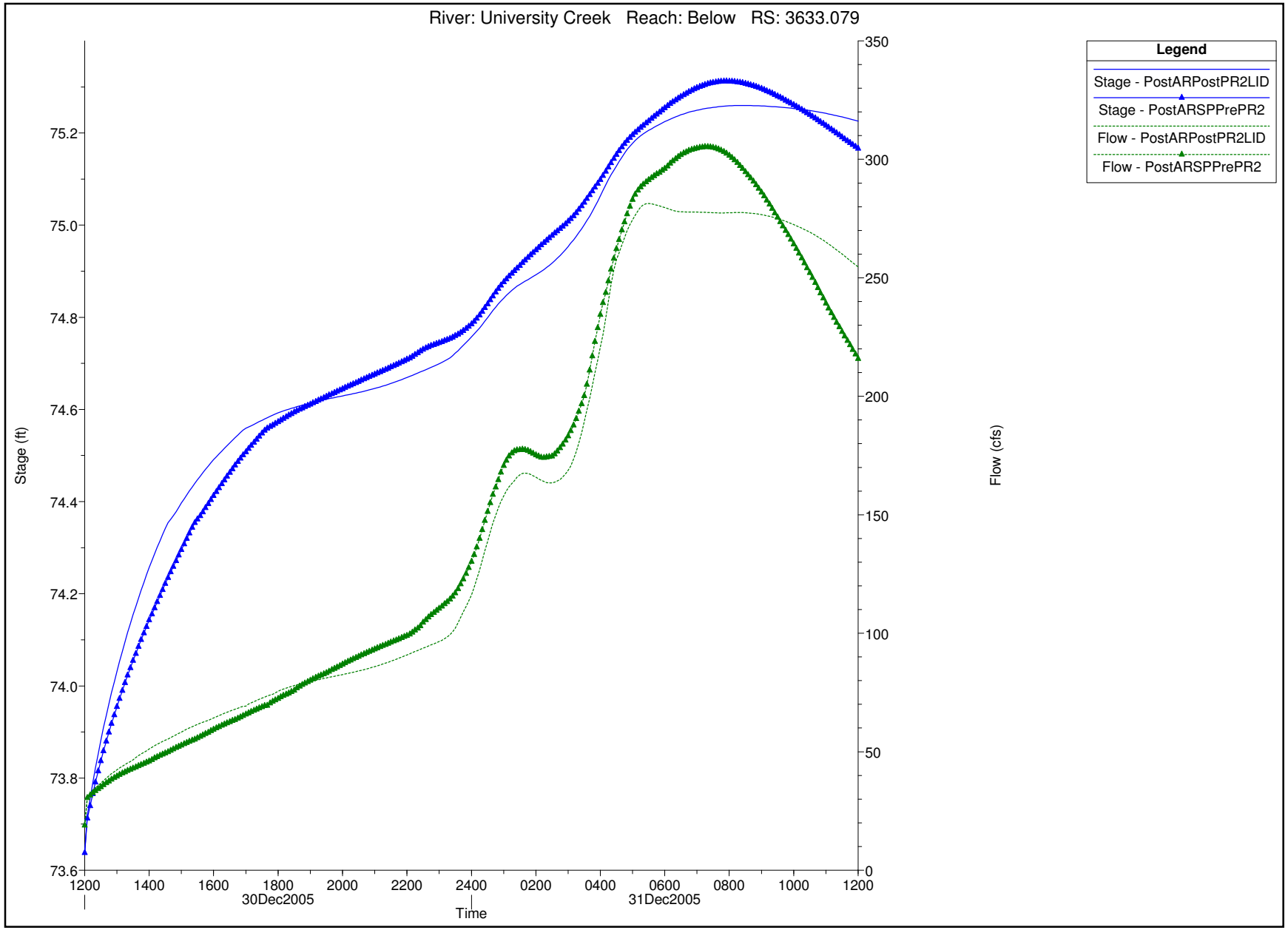


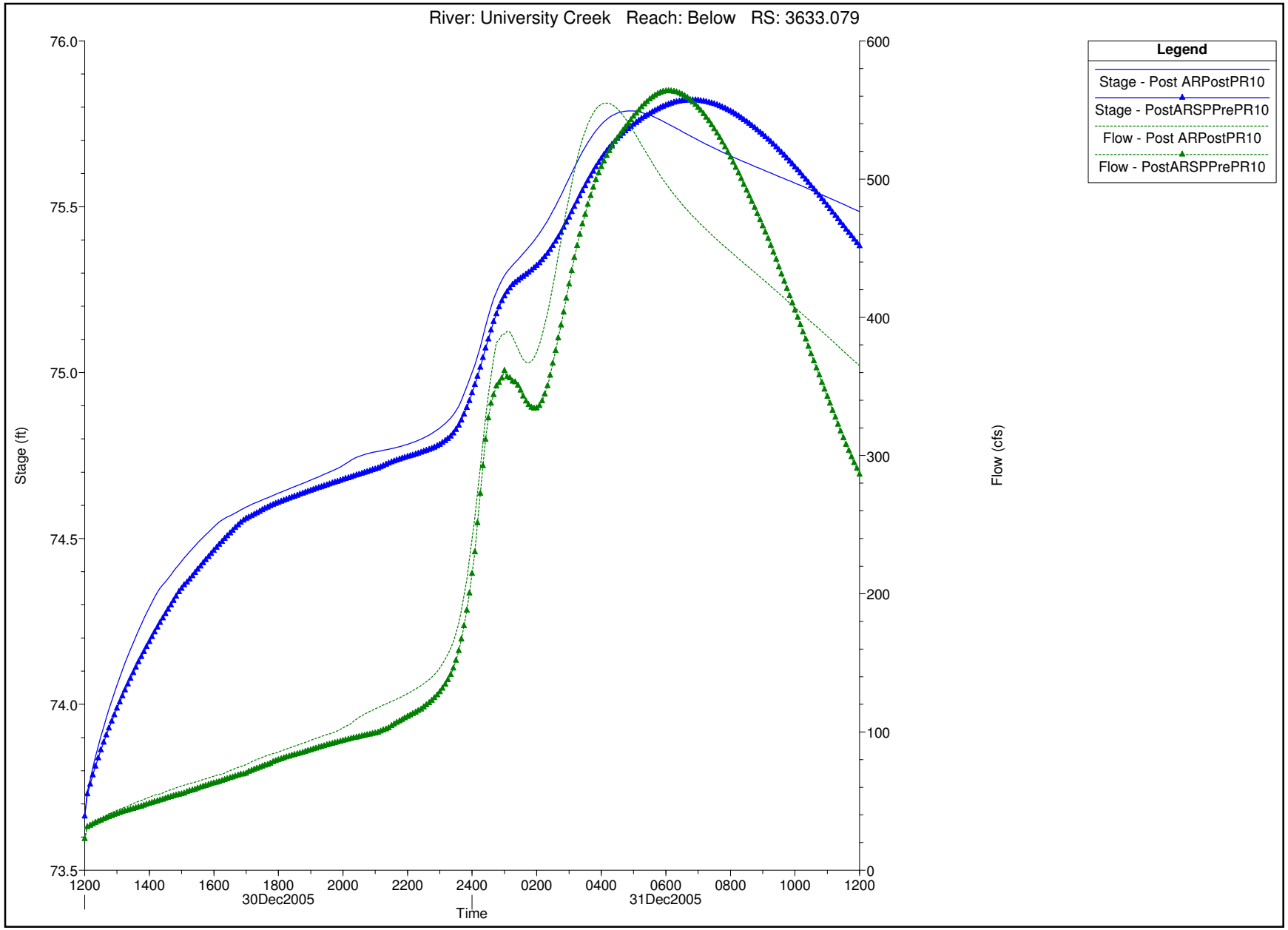
100-Year Analysis - Existing and Proposed Mitigated and Unmitigated Conditions
Compliance Point #3

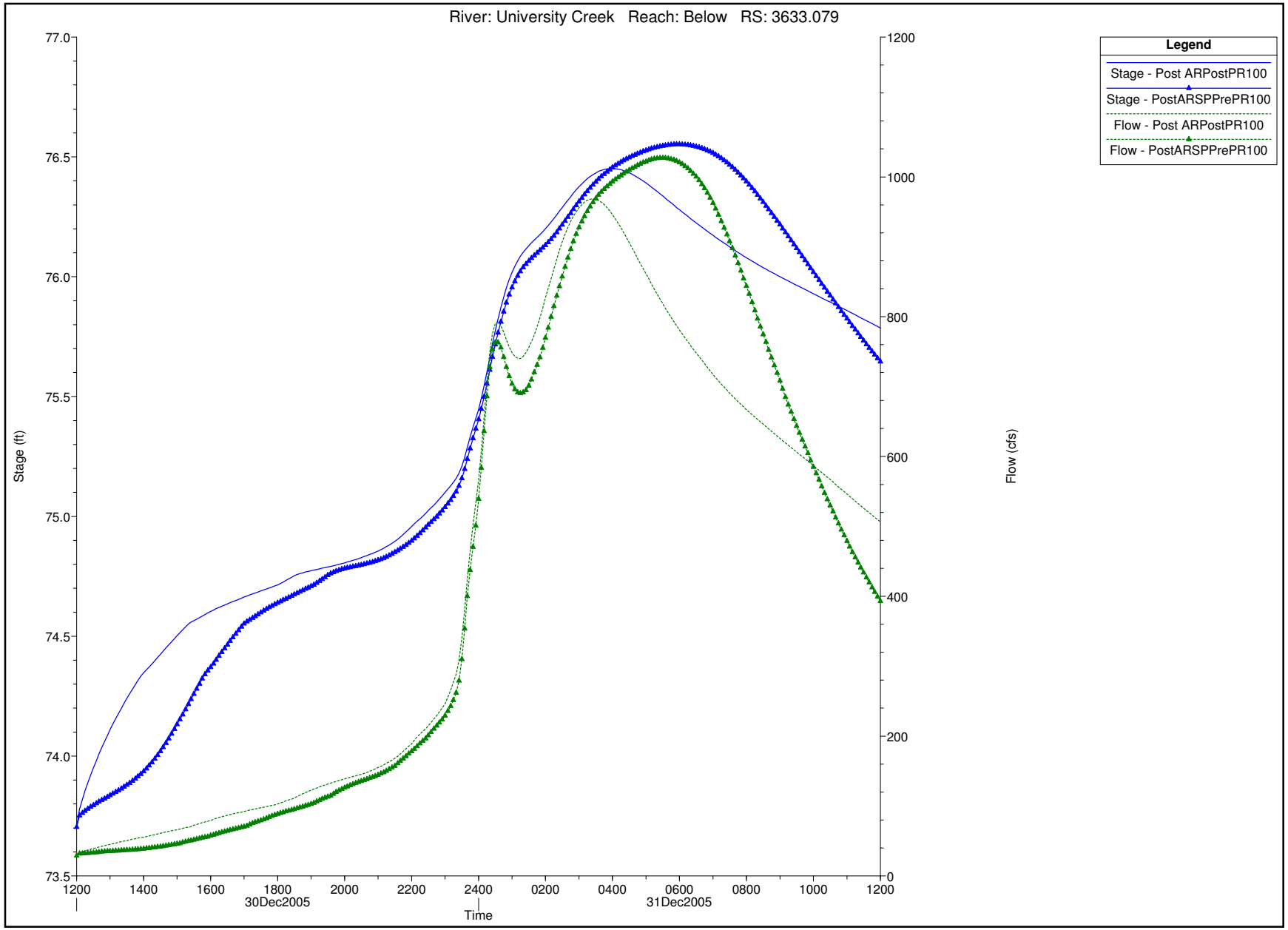


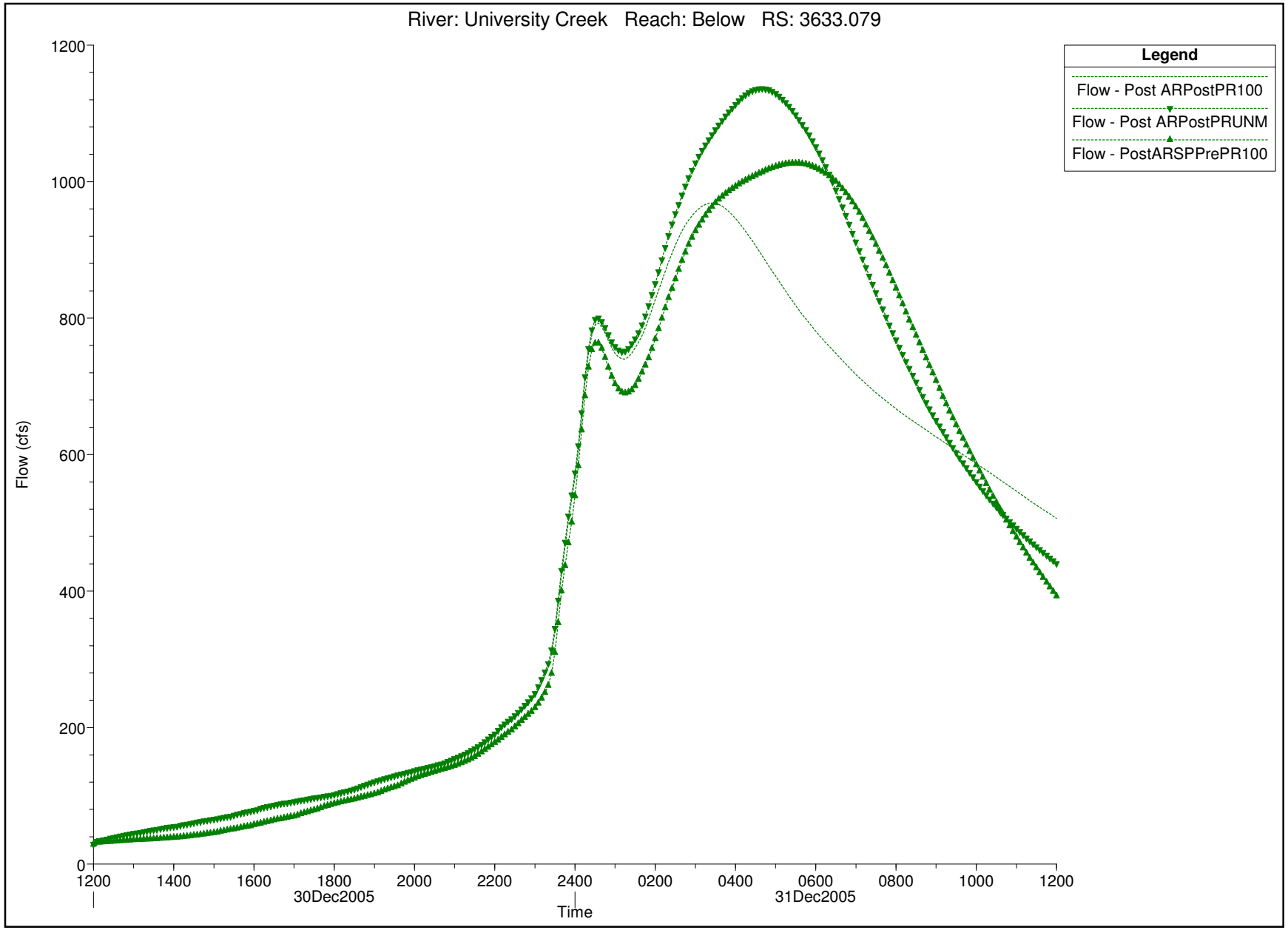
200-Year Analysis - Existing and Proposed Conditions
Compliance Point #3

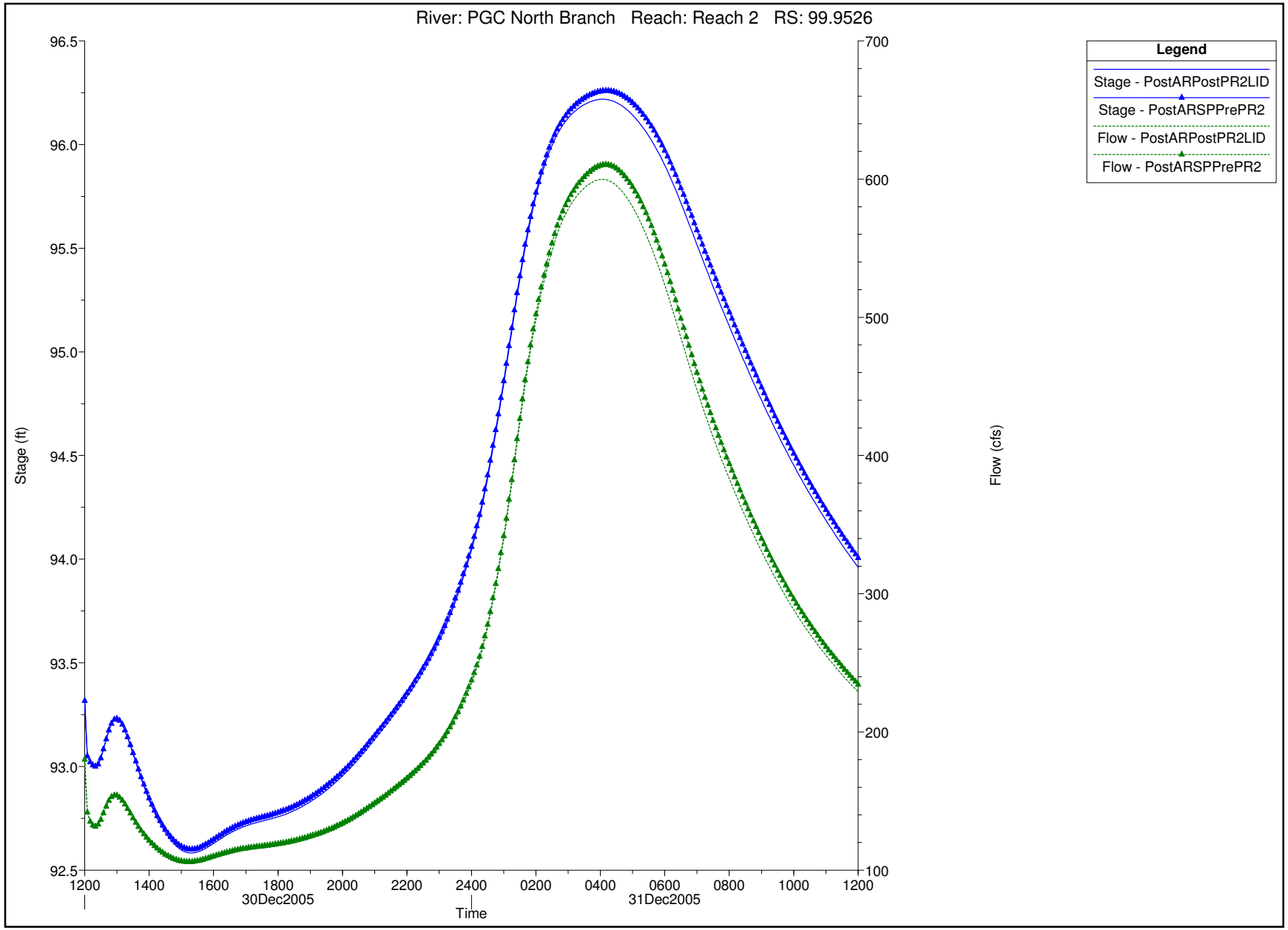



River: University Creek Reach: Below RS: 3633.079
Legend
Stage - PostARPostPR2LID
Stage - PostARSPPrePR2
Flow - PostARPostPR2LID
Flow - PostARSPPrePR2
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
75.2
75.0
74.8
74.6
74.4
74.2
74.0
73.8
73.6
350
300
250
200
150
100
50
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: University Creek Reach: Below RS: 3633.079
Legend
Stage - Post ARPostPR10
Stage - PostARSPPrePR10
Flow - Post ARPostPR10
Flow - PostARSPPrePR10
Stage (ft)
Flow (cfs)
76.0
75.5
75.0
74.5
74.0
73.5
600
500
400
300
200
100
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time


River: University Creek Reach: Below RS: 3633.079
Legend
Stage - Post ARPostPR100
Stage - PostARSPPrePR100
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
77.0
76.5
76.0
75.5
75.0
74.5
74.0
73.5
1200
1000
800
600
400
200
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: University Creek Reach: Below RS: 3633.079
Legend
Flow - Post ARPostPR100
Flow - Post ARPostPRUNM
Flow - PostARSPPrePR100
Flow (cfs)
0
200
400
600
800
1000
1200
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time


River: PGC North Branch Reach: Reach 2 RS: 99.9526
Legend
Stage - PostARPostPR2LID
Stage - PostARSPPrePR2
Flow - PostARPostPR2LID
Flow - PostARSPPrePR2
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
96.5
96.0
95.5
95.0
94.5
94.0
93.5
93.0
92.5
700
600
500
400
300
200
100
1200
1400
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2000
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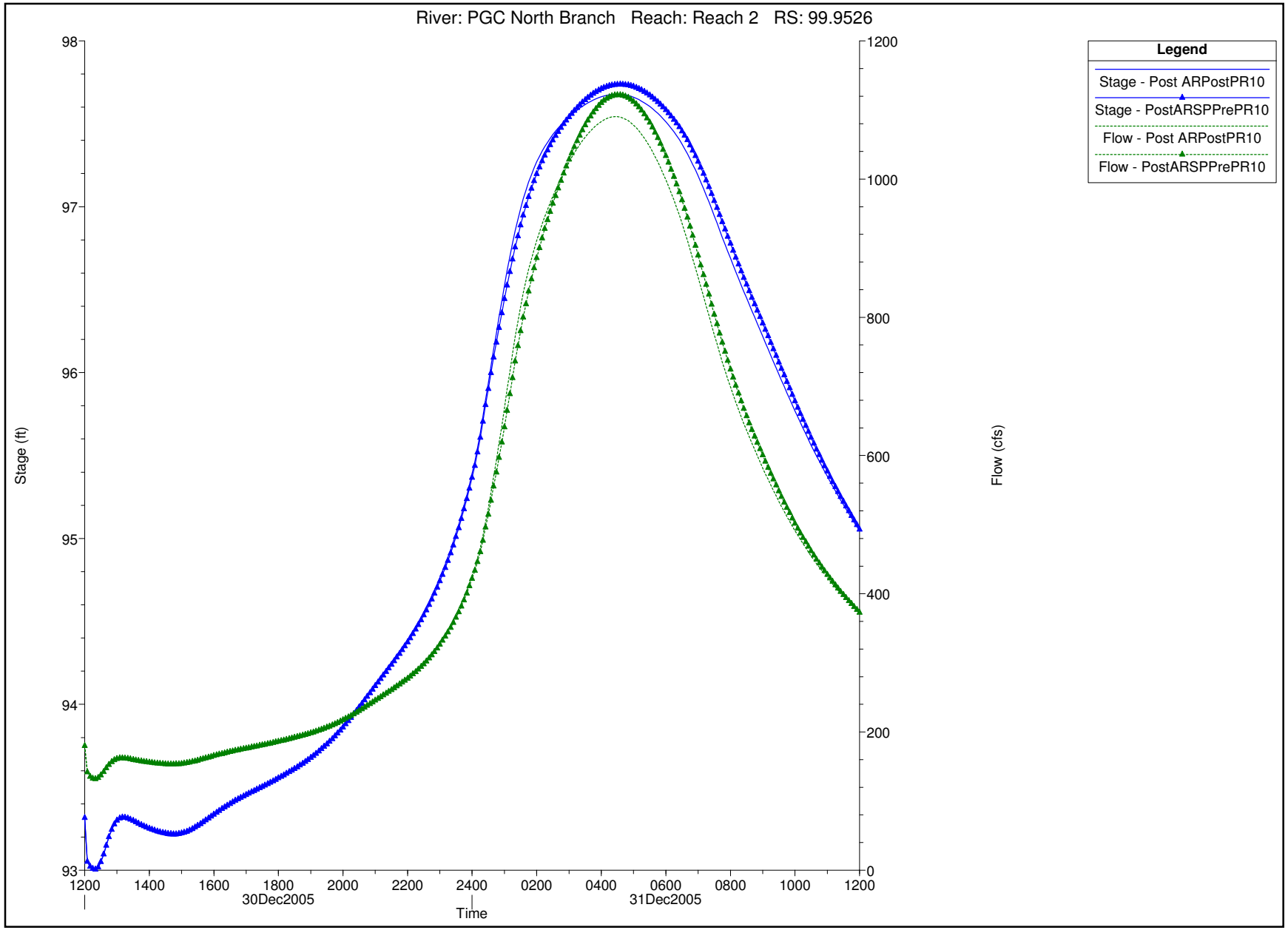
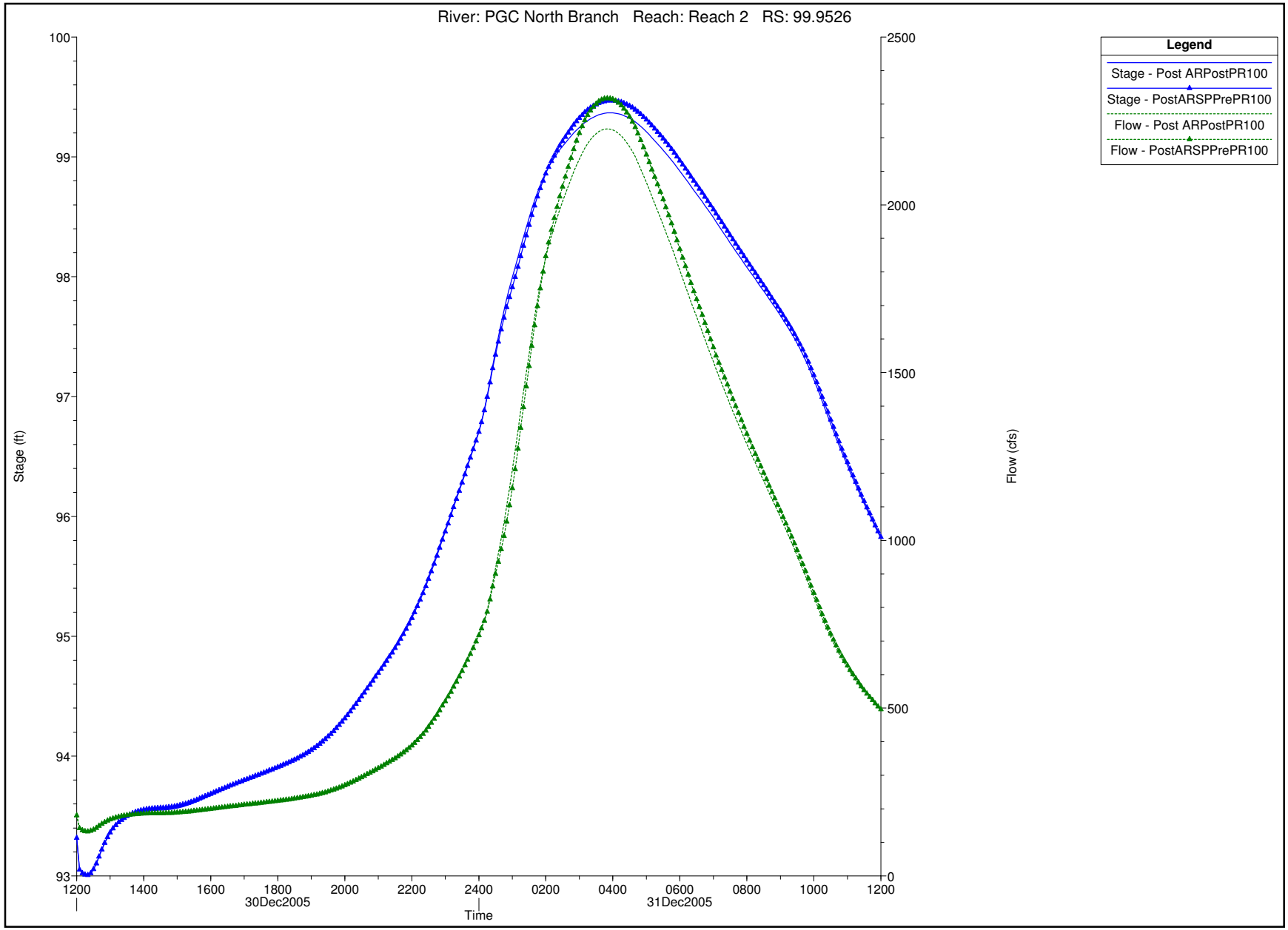
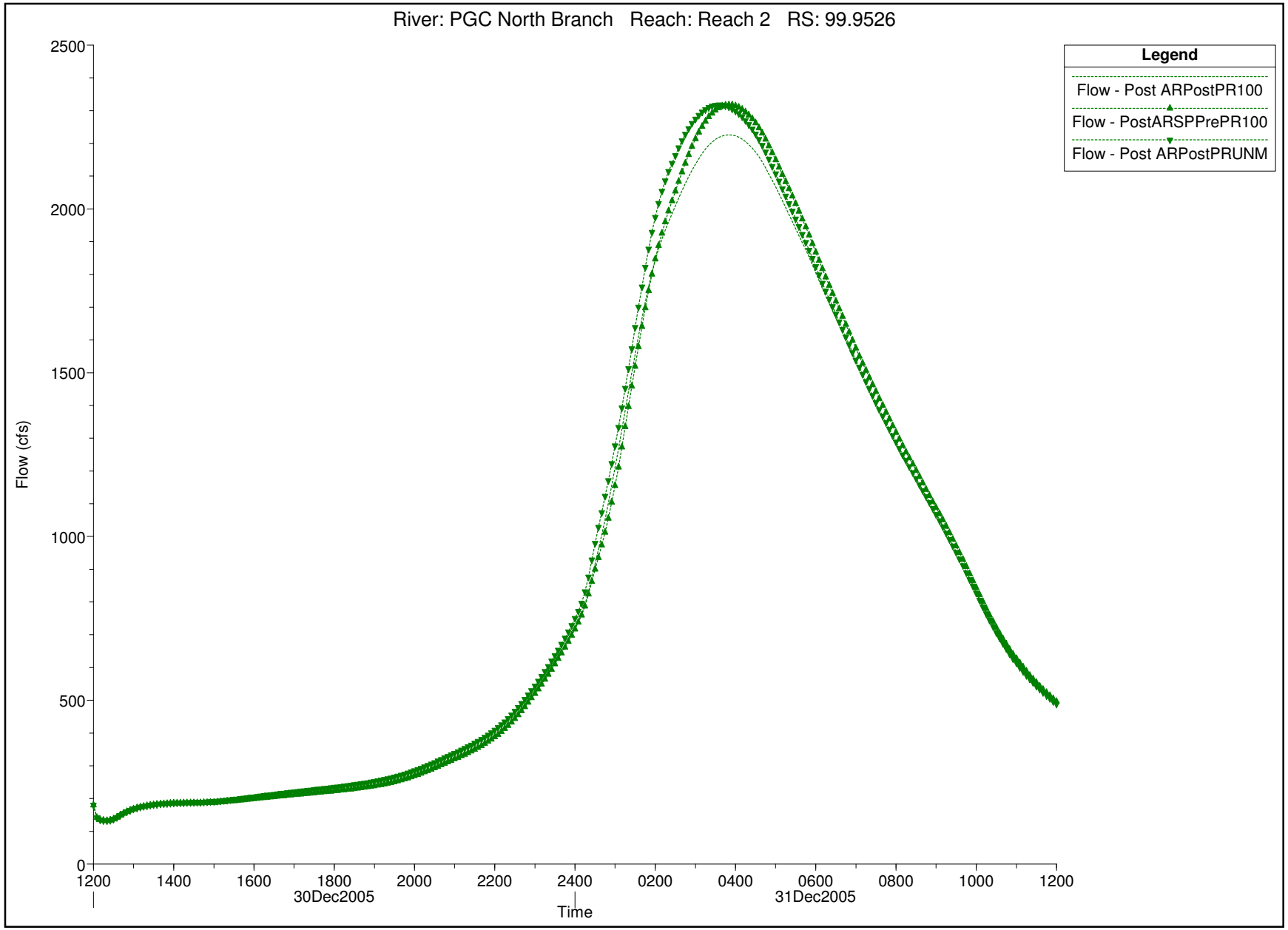
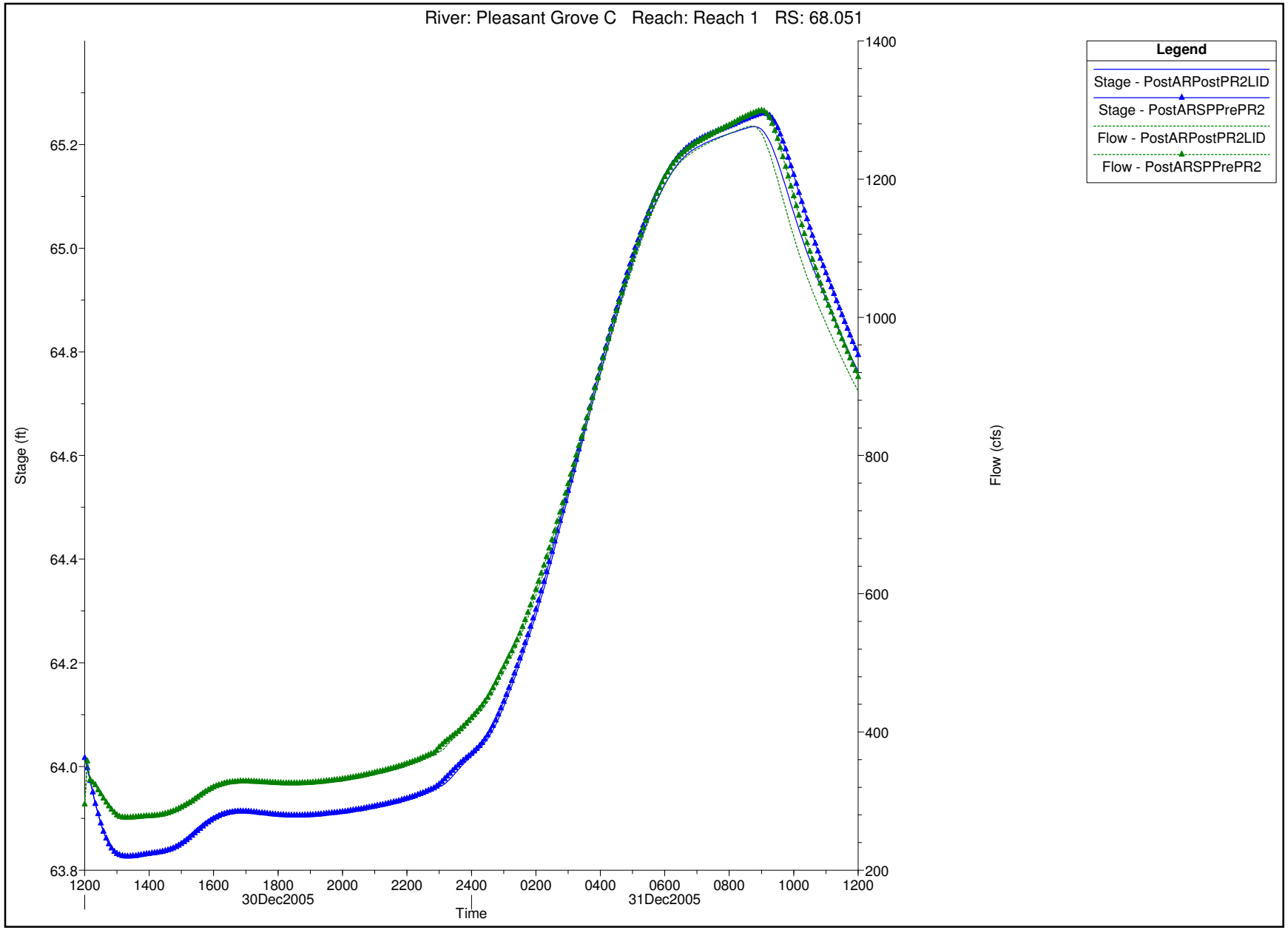
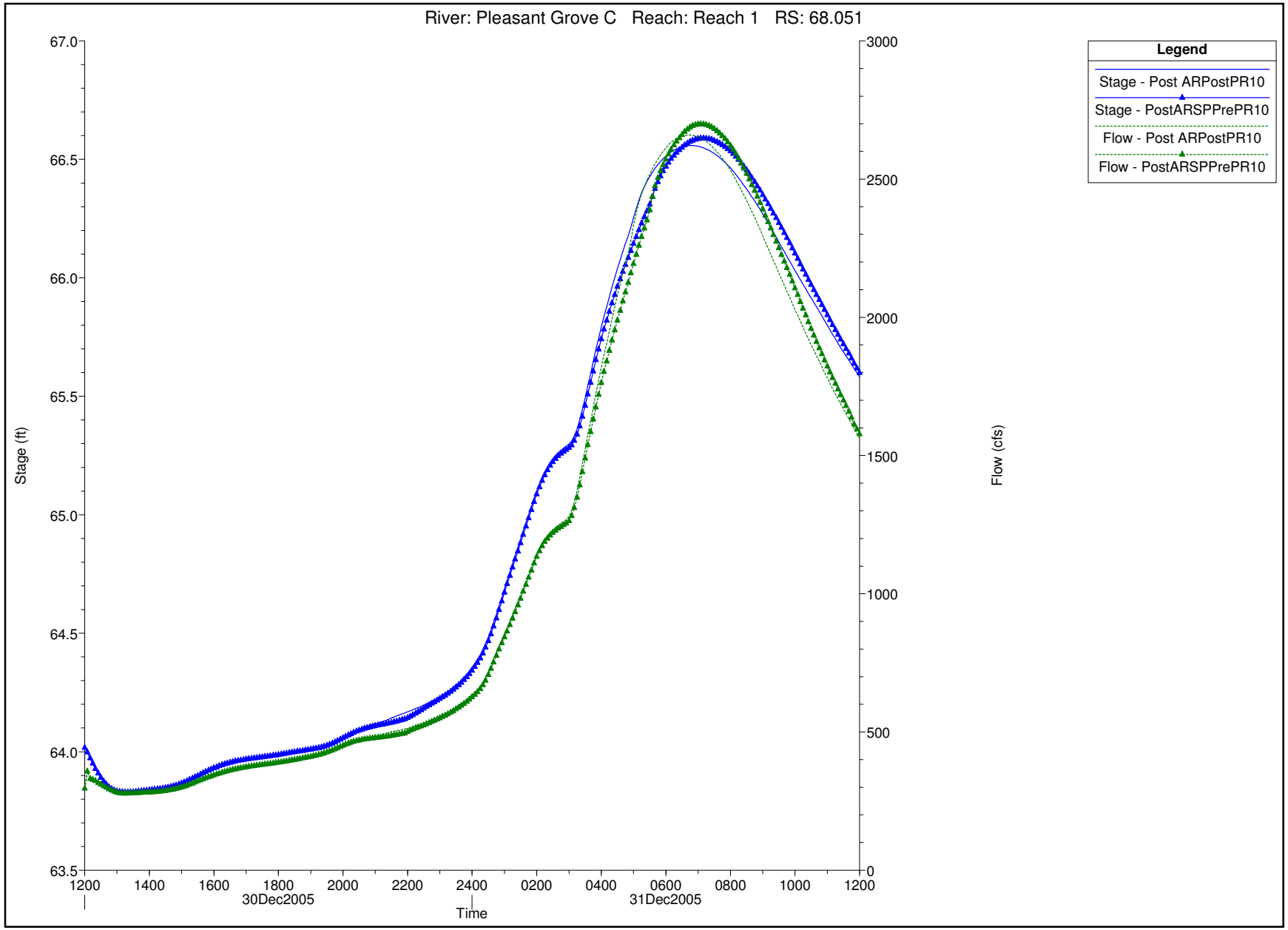
0200
0400
0600
0800
1000
1200

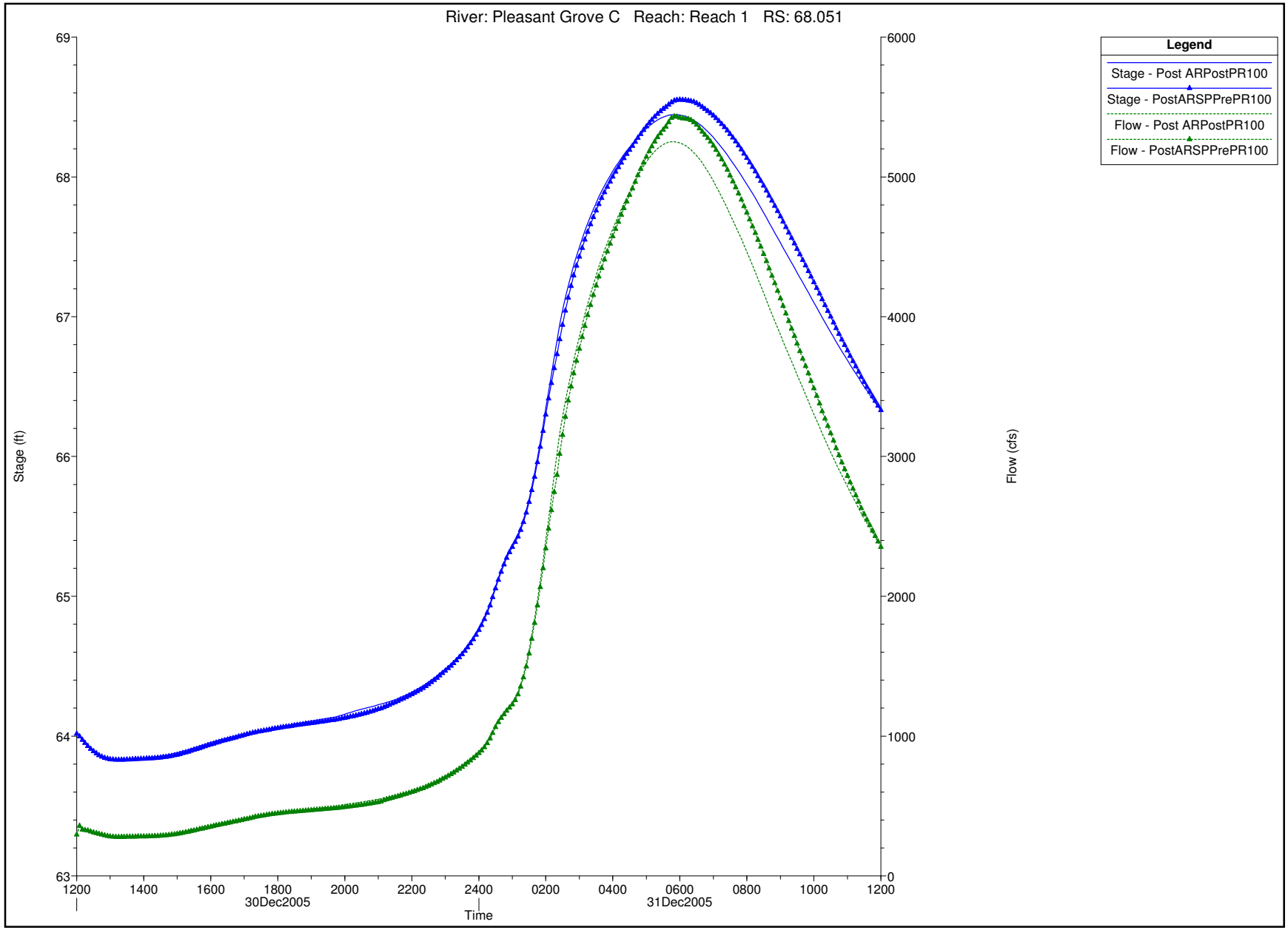

River: PGC North Branch Reach: Reach 2 RS: 99.9526
Legend
Stage - Post ARPostPR10
Stage - PostARSPPrePR10
Flow - Post ARPostPR10
Flow - PostARSPPrePR10
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
98
97
96
95
94
93
1200
1000
800
600
400
200
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200

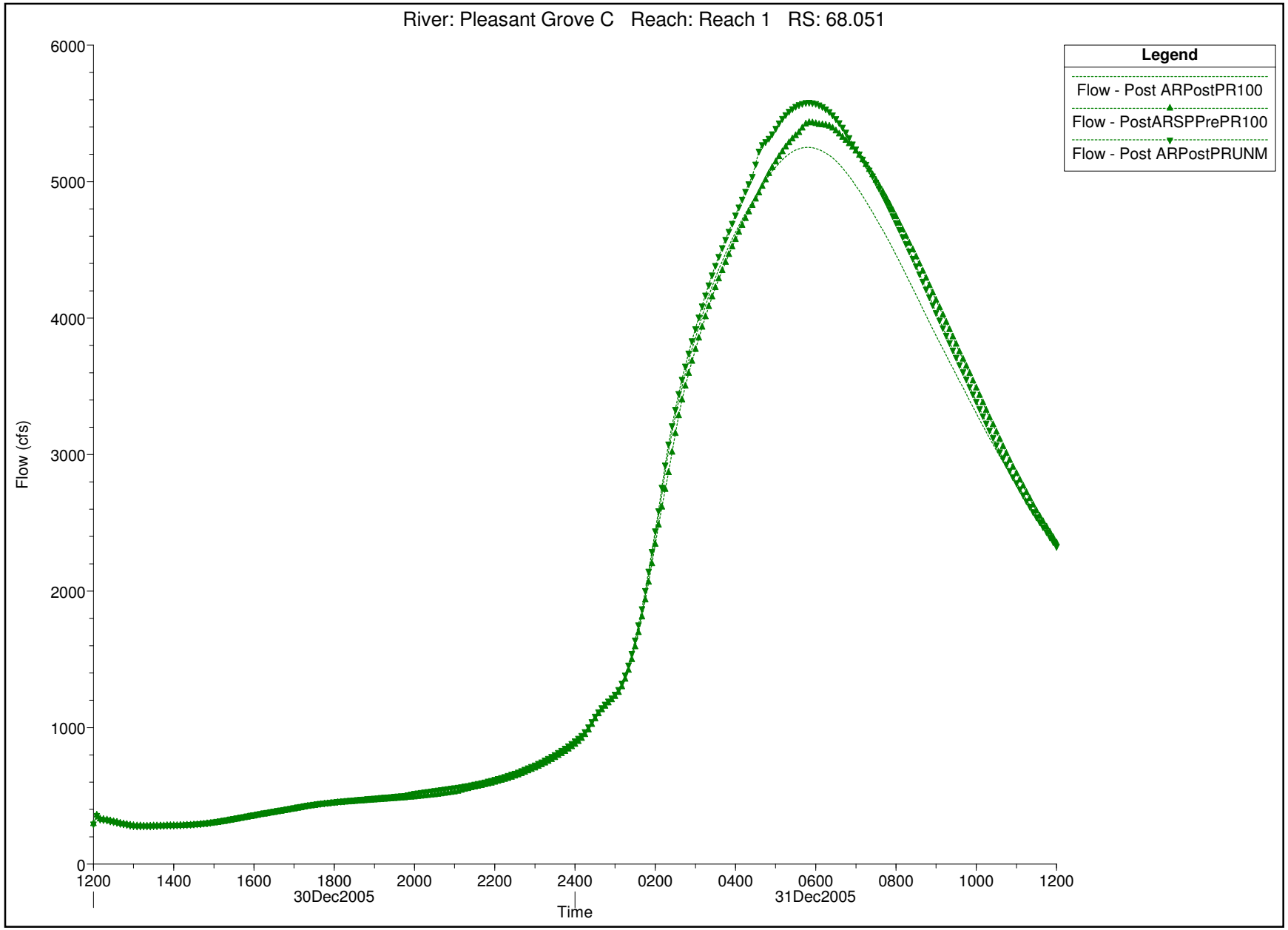

River: PGC North Branch Reach: Reach 2 RS: 99.9526
Legend
Stage - Post ARPostPR100
Stage - PostARSPPrePR100
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
100
99
98
97
96
95
94
93
2500
2000
1500
1000
500
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: PGC North Branch Reach: Reach 2 RS: 99.9526
Legend
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Flow - Post ARPostPRUNM
Flow (cfs)
2500
2000
1500
1000
500
0
1200
1400
1600
1800
30Dec2005
2000
2200
2400
0200
0400
0600
31Dec2005
0800
1000
1200
Time


River: Pleasant Grove C Reach: Reach 1 RS: 68.051
Legend
Stage - PostARPostPR2LID
Stage - PostARSPPrePR2
Flow - PostARPostPR2LID
Flow - PostARSPPrePR2
Stage (ft)
65.2
65.0
64.8
64.6
64.4
64.2
64.0
63.8
Flow (cfs)
1400
1200
1000
800
600
400
200
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200
30Dec2005
31Dec2005
Time


River: Pleasant Grove C Reach: Reach 1 RS: 68.051
Legend
Stage - Post ARPostPR10
Stage - PostARSPPrePR10
Flow - Post ARPostPR10
Flow - PostARSPPrePR10
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
67.0
66.5
66.0
65.5
65.0
64.5
64.0
63.5
3000
2500
2000
1500
1000
500
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: Pleasant Grove C Reach: Reach 1 RS: 68.051
Legend
Stage - Post ARPostPR100
Stage - PostARSPPrePR100
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Stage (ft)
Flow (cfs)
Time
30Dec2005
31Dec2005
69
68
67
66
65
64
63
6000
5000
4000
3000
2000
1000
0
1200
1400
1600
1800
2000
2200
2400
0200
0400
0600
0800
1000
1200


River: Pleasant Grove C Reach: Reach 1 RS: 68.051
Legend
Flow - Post ARPostPR100
Flow - PostARSPPrePR100
Flow - Post ARPostPRUNM
Flow (cfs)
6000
5000
4000
3000
2000
1000
0
1200
1400
1600
1800
30Dec2005
2000
2200
2400
0200
0400
0600
31Dec2005
0800
1000
1200
Time

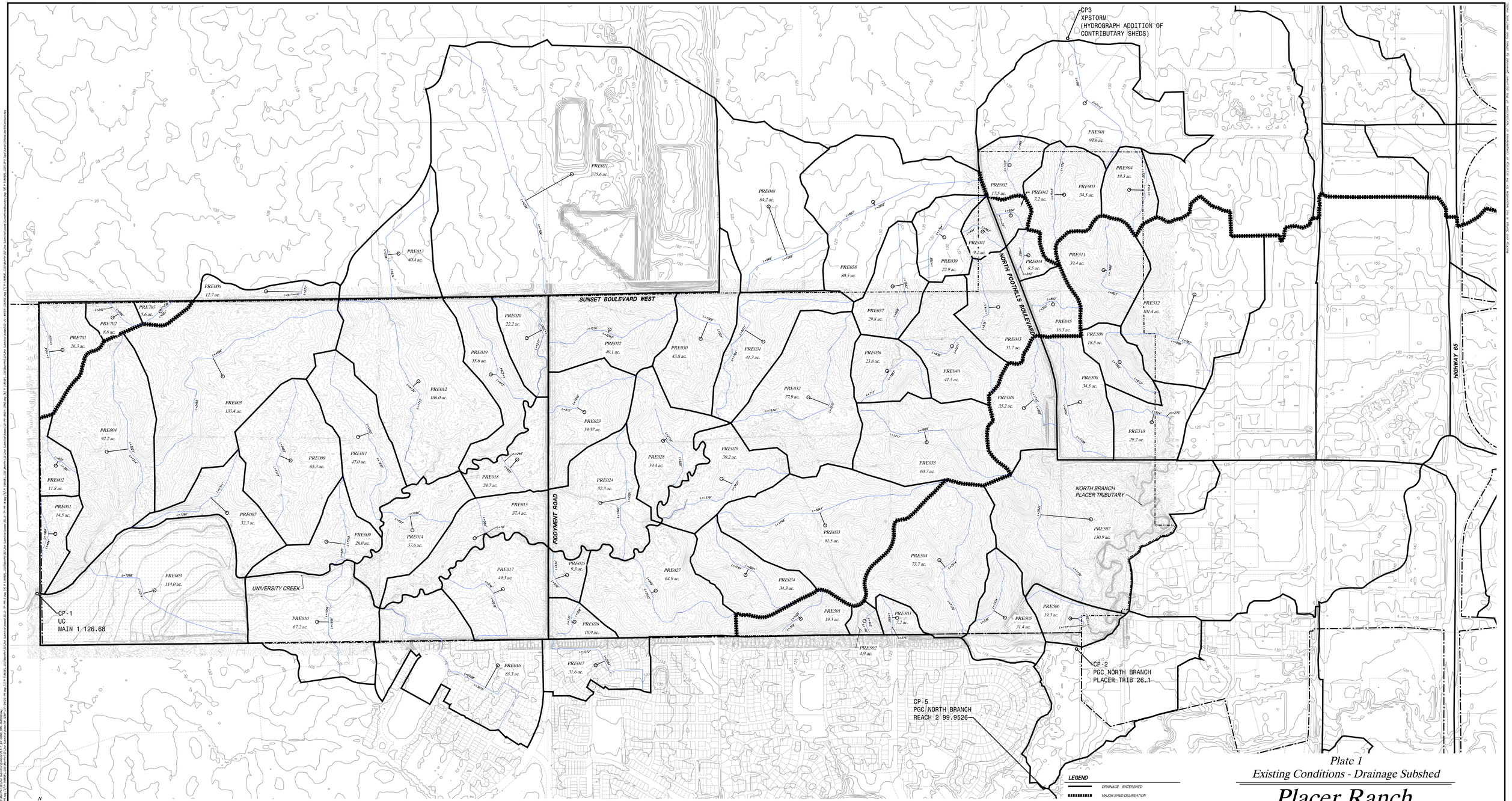


Plate 1

Existing Conditions - Drainage Subshed

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

MacKay & Somps
ENGINEERS PLANNERS SURVEYORS
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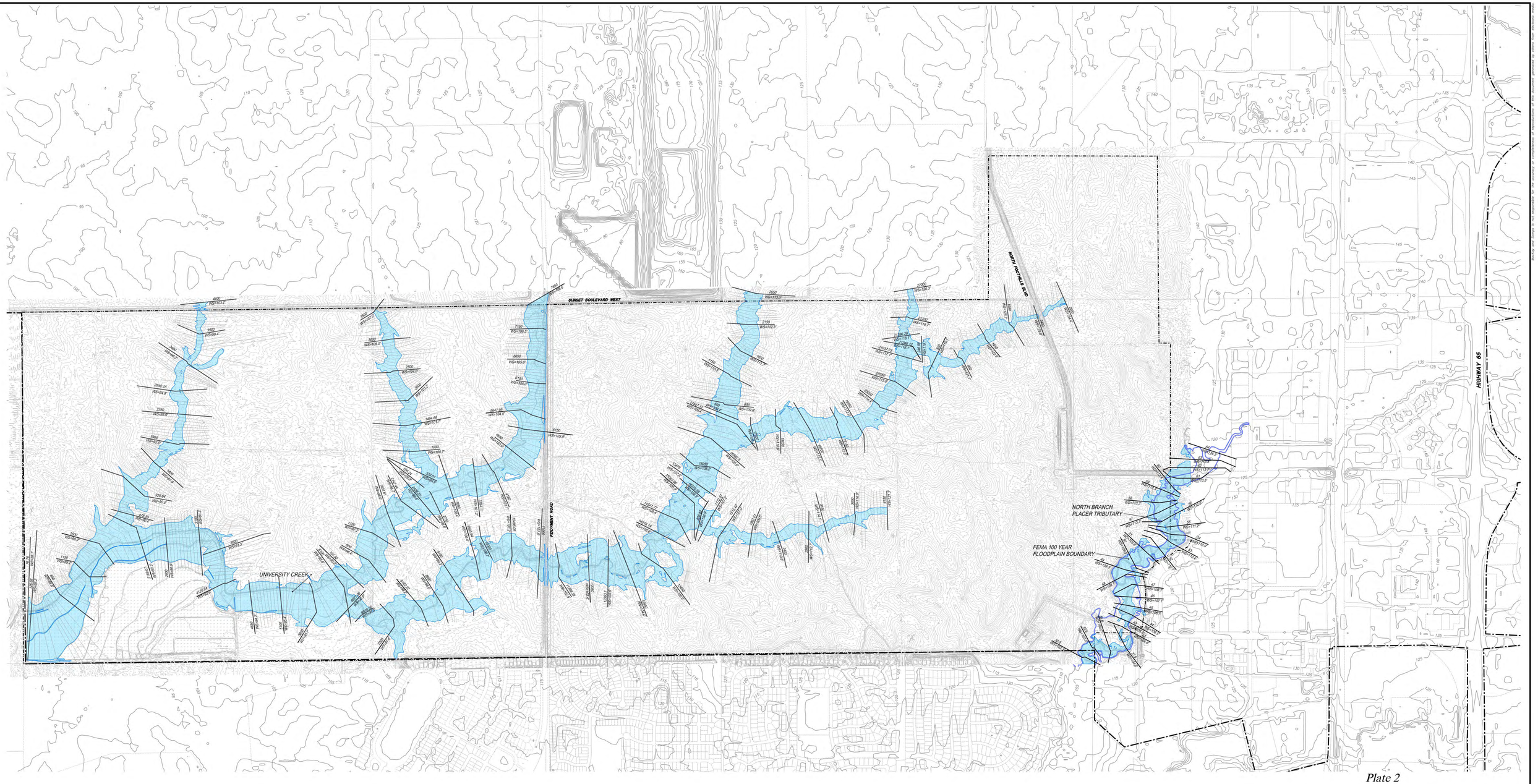
California
May 2017
18458.C00

PRELIMINARY - Subject to Revision



LEGEND

- PROJECT BOUNDARY
- SUNSET INDUSTRIAL AREA BOUNDARY
- 15680 / 396.2' — STATION / 100 YEAR WATER SURFACE ELEVATION
- EXISTING 100 YEAR FLOODPLAIN
- FEMA 100 YEAR FLOODPLAIN BOUNDARY

N

0 200 400 800
SCALE: 1"=400'

Plate 2

Existing Conditions - 100 Year Flood Plain

Placer Ranch Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

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Plate 3

LEGEND

- PROPOSED SUBSHEDS
- MAJOR SHED DELINEATION
- PROJECT BOUNDARY
- SUNSET INDUSTRIAL AREA BOUNDARY
- CP-# COMPLIANCE POINT
- L=547' SHED WATER COURSE LENGTHS & CENTROID

NOTE:
WATER COURSE LENGTHS SHOWN HERE WERE MULTIPLIED BY 0.9 IN THE HEC-1 MODEL TO CLOSER REPRESENT ON-SITE PEAK FLOW TIMING.

Proposed Conditions - Drainage Subshed

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

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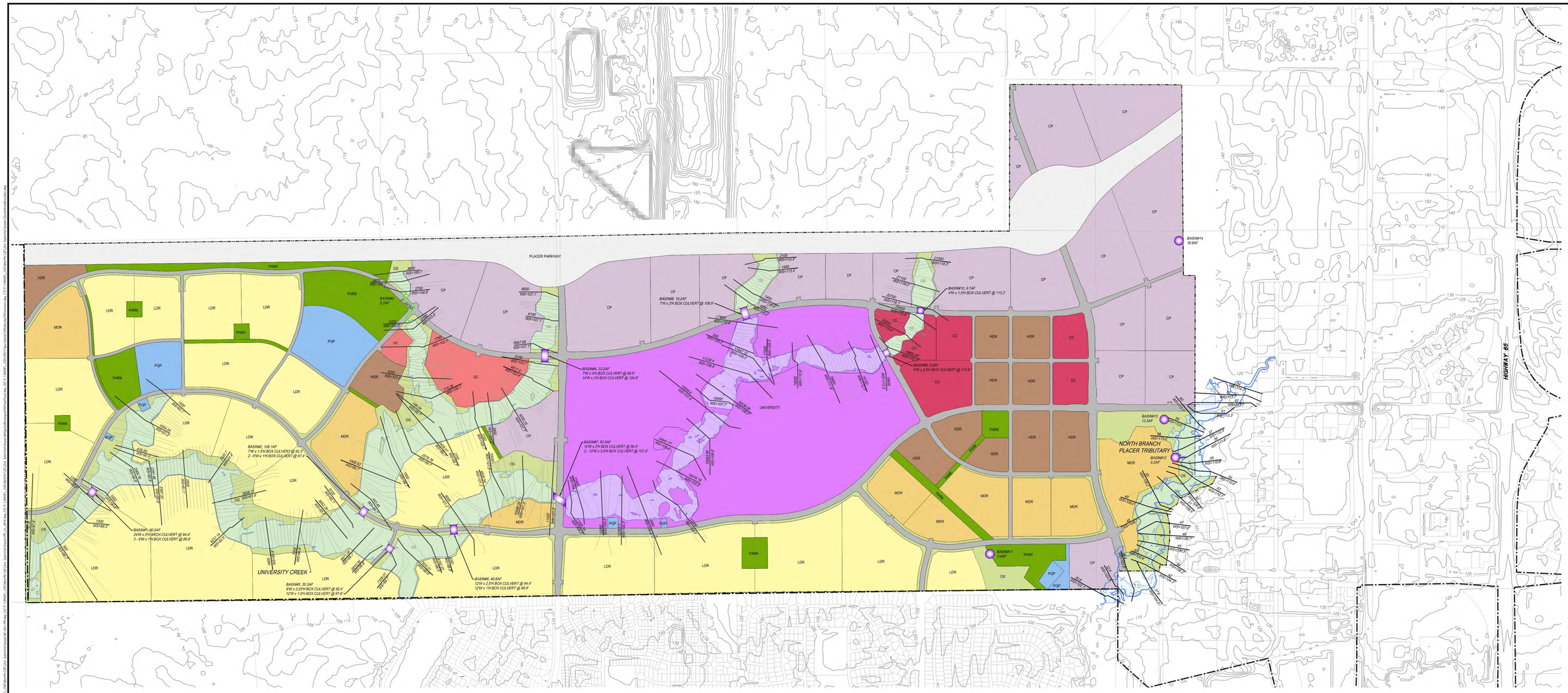

LEGEND

- PROJECT BOUNDARY
- SUNSET INDUSTRIAL AREA BOUNDARY
- 10680 / 396.2' — STATION / 100 YEAR WATER SURFACE ELEVATION
- PROPOSED 100 YEAR FLOODPLAIN
- DETENTION BASIN & VOLUME (AF)
- FEMA 100 YEAR FLOODPLAIN BOUNDARY

N

0 200 400 800
SCALE: 1"=400'

Plate 4

Proposed Conditions - 100 Year Flood Plain Mitigated

Placer Ranch Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

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California
May 2017
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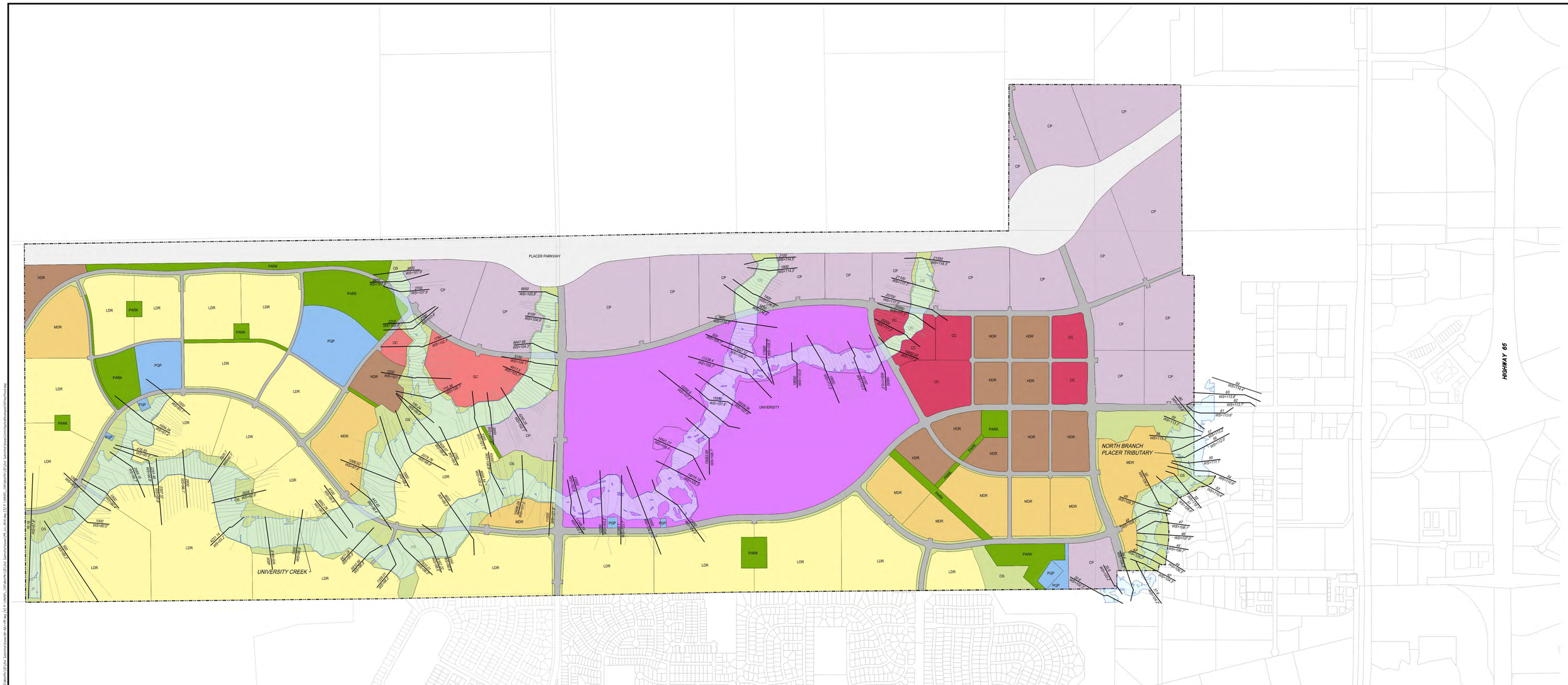

N

0 200 400 800
SCALE: 1"=400'

LEGEND

— · — · —	PROJECT BOUNDARY
10480 / 396.2'	STATION / WATER SURFACE ELEVATION
	PROPOSED 100 YEAR FLOODPLAIN

Plate 5

Proposed Conditions - 100 Year Flood Plain
Unmitigated

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

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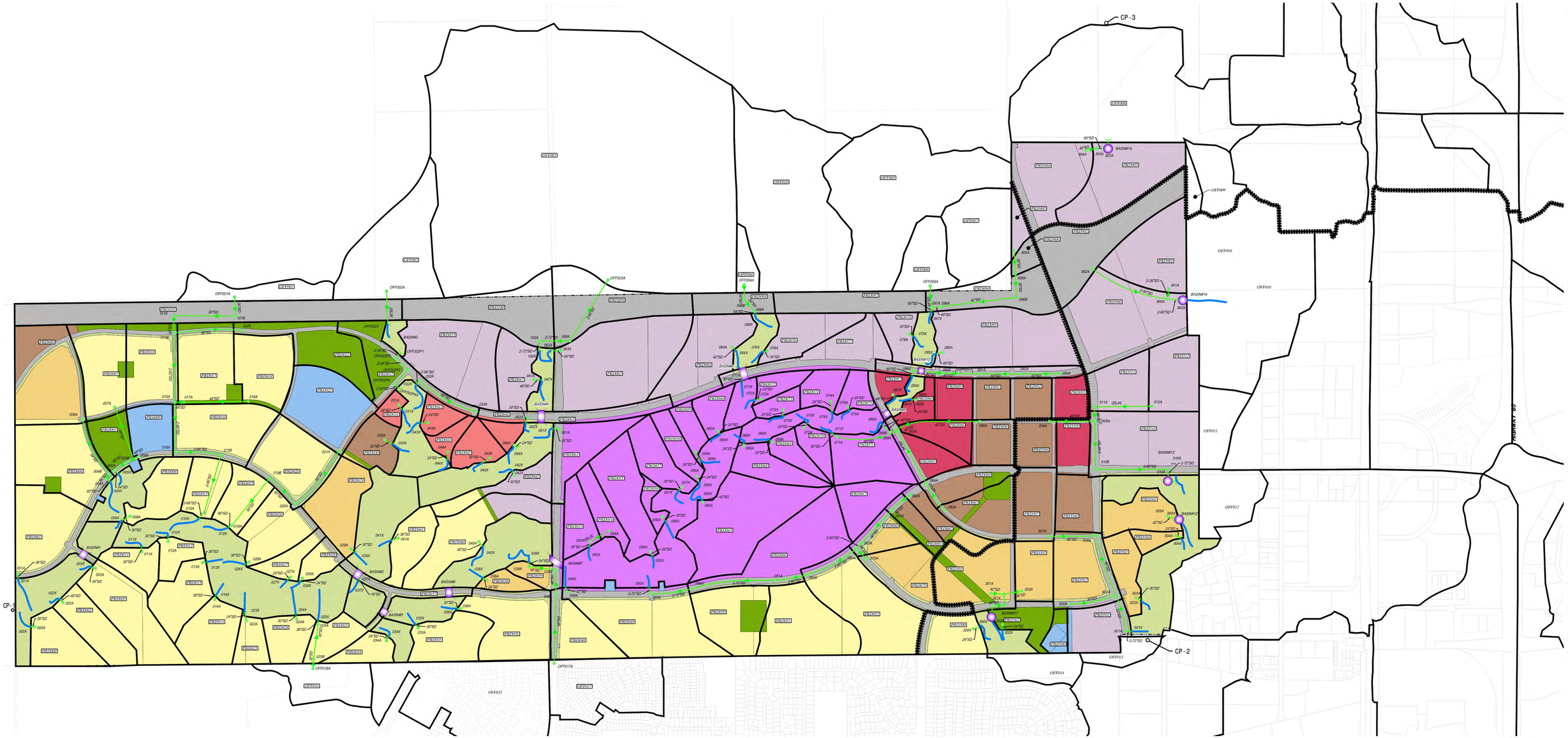
California
May 2017
18458.C00

PRELIMINARY - Subject to Revision



LEGEND

- SHED BOUNDARY
- MAJOR SHED DELINEATION
- SWALE
- *"SD* STORM DRAIN PIPE
- 053X STORM DRAIN OUTFALL & OUTFALL NAME
- 053A STORM DRAIN NODE & NODE NAME
- BASIN

Plate 6

Conceptual Backbone - Storm Water Infrastructure

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=400'
Datum NGVD 29

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California
May 2017
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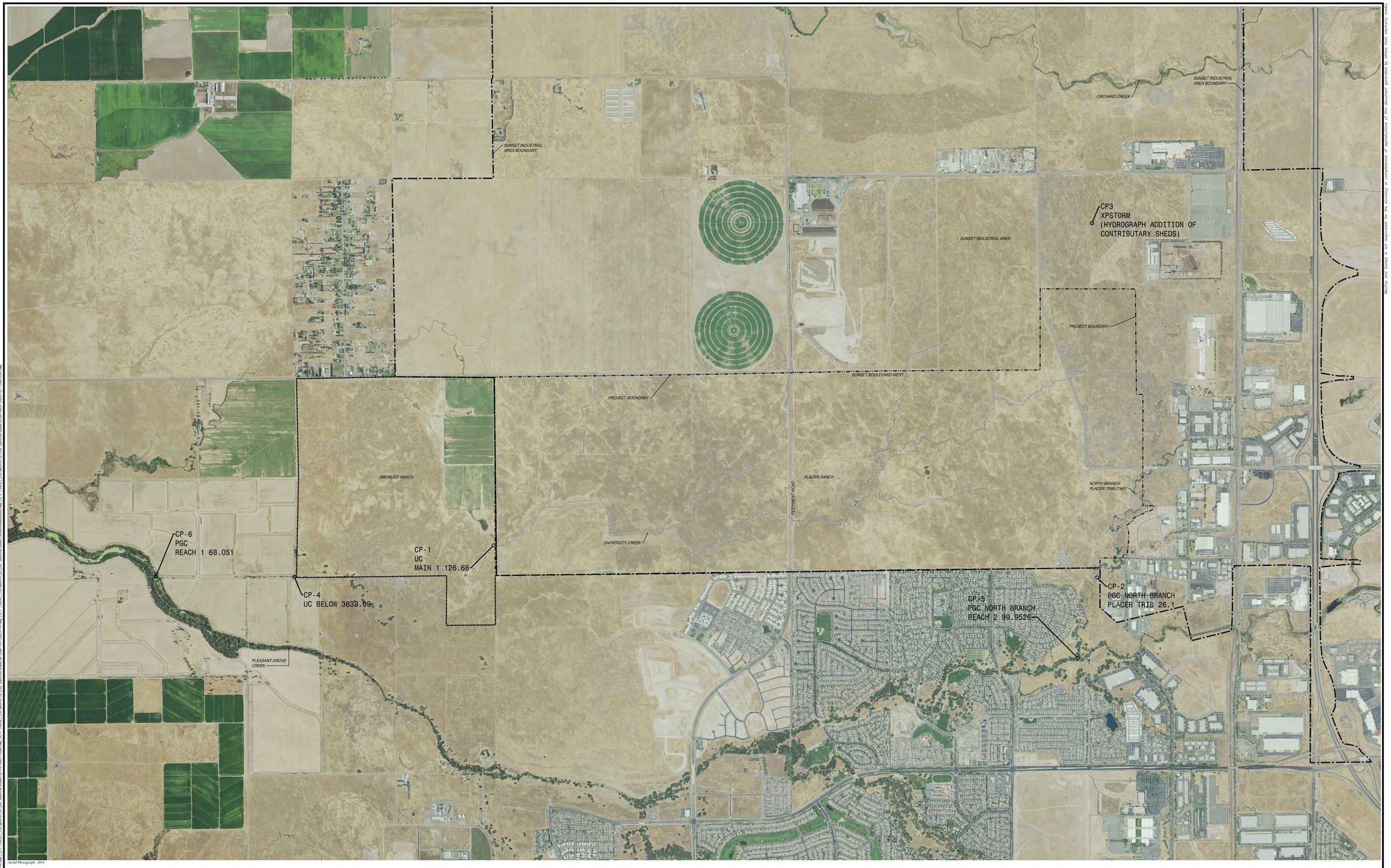

Aerial Photograph - 2014

LEGEND

CP-#	COMPLIANCE POINT
	PLAN AREA CREEK
	PROJECT BOUNDARY
	SUNSET INDUSTRIAL AREA BOUNDARY
	AMORUSO RANCH BOUNDARY
UC MAIN 1 126.68	COMPLIANCE POINT LOCATION IN MODEL

N

0 400 800 1600
SCALE: 1"=800'

Plate 7

Compliance Point Locations

Placer Ranch
Storm Drainage Master Plan

Placer County
Scale 1"=800'
Datum NGVD 29

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

California
May 2017
18458.C00

PRELIMINARY - Subject to Revision

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