GLENDALE/PEORIA ADMPU
NORTHWEST REGION UPDATE
HYDROLOGIC STUDY

CONTRACT FCD 2005C021

Assignment No. 3

May 2007

WP #062665.03

Prepared for: **Flood Control District of Maricopa County**
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Registered Professional Engineer (Civil) CERTIFICATE NO. 24999 JEFFREY R. MINCH DATE SIGNED 5-7-07 ARIZONA, U.S.A.

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Executive Summary

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Executive Summary

Project Location

The Glendale/Peoria Area Drainage Master Plan Update (ADMPU) Northwest Region Update Hydrologic Study area is a portion of the original Glendale/Peoria ADMPU and includes a watershed of about 30 square miles located north of Union Hills Drive, west of New River, south of the Dynamite Boulevard alignment, and east of the Agua Fria River. The project lies entirely within the City of Peoria corporate limits.

The study area north of Pinnacle Peak Road is mainly characterized by steep hills draining into flat valleys. Some of the runoff from areas north of Pinnacle Peak Road flows south to Deer Valley Road west of 91st Avenue. Stormwater runoff from areas east of 91st Avenue between Pinnacle Peak Road and Beardsley Road flows south and/or east. Several parcels of vacant land owned by the Arizona State Land Department (ASLD) contain natural washes that have not been significantly altered by development. However, several developments are currently under construction or in the planning stage. Given the rate of development in this portion of Peoria, it is anticipated that the entire area will be completely developed within the next few years.

Study Purpose and Objective

Since the completion of the ADMPU, many developments have been constructed and new developments are planned which impact the size of recommended flood control facilities within the watershed. In November 2006, the FCDMC contracted with Wood, Patel & Associates, Inc. (Wood/Patel) to perform the Glendale/Peoria ADMPU Northwest Region Update Hydrologic Study. This study updates the hydrologic modeling to address the impact of recent development, future development and capital improvement projects (CIP) on the watershed hydrology within the study limits.

Specifically, this study updates the existing and future conditions hydrologic models for the 10-year and 100-year, 6-hour storm and the 100-year, 24-hour storm. Existing conditions include funded CIP drainage improvements within the watershed. Future conditions include planned CIP drainage improvements within the study area including the City of Peoria Happy Valley Road project, Pinnacle Peak Road improvements, Camino A Lago North, and the Beardsley Road Channel projects. The land use for the future conditions model assume a fully developed watershed based on the City's current land use and zoning. The FCDMC was the lead agency for this project in partnership with the City of Peoria.

Methodology

The hydrologic modeling methodologies outlined in the Flood Control District of Maricopa County's (FCDMC), Drainage Design Manual for Maricopa County, Arizona, Volume I Hydrology, January 1995, were applied to the study area. The hydrologic modeling was performed using the U.S. Army Corps of Engineers Flood Hydrograph Package (HEC-1). The model input parameters were generally prepared using the FCDMC's Drainage Design Management System for Windows (DDMSW Version 2.1.0) program. However, the unit hydrograph hydrologic parameters were calculated using new computational procedures (MCUHP1) from DDMSW Version 3.3.2 based on concurrence from the FCDMC.

The study includes most of the sub-basins from the original hydrologic model developed for the ADMPU. However, most of the sub-basins boundaries were revised based on new studies within this project limits.

Summary of Results

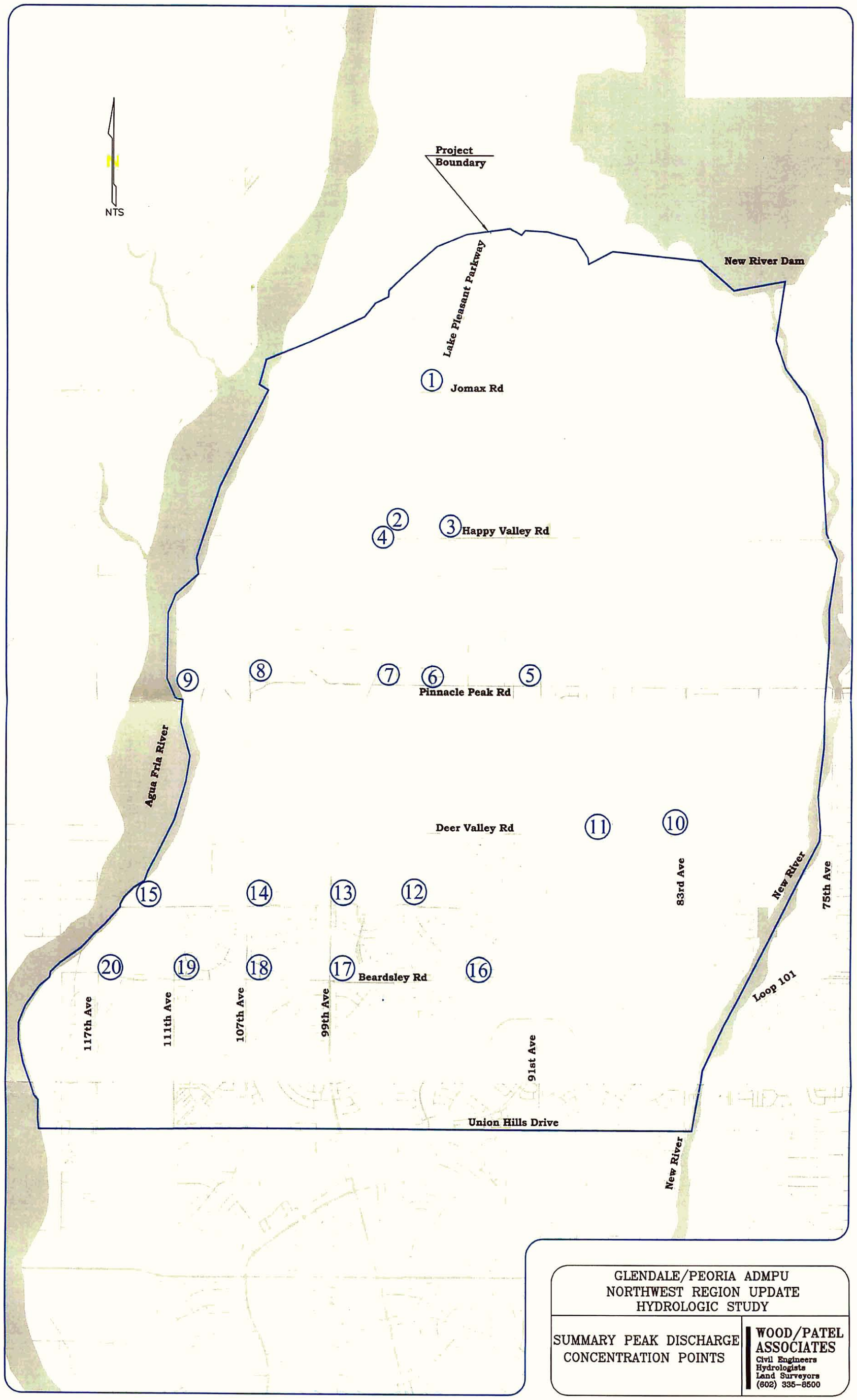
During the course of the study, Wood/Patel identified that the original ADMPU hydrologic model required modification in the vicinity of Happy Valley Road and Lake Pleasant Parkway. The FCDMC reviewed and concurred with the modification and the updated ADMPU hydrologic model was revised for comparison purposes with the updated hydrologic models. It should be noted that the updated ADMPU model includes the Rose Garden Lane Drainage Improvement project.

Since the completion of the Glendale/Peoria ADMPU, several developments have been constructed and new developments are in various stages of planning and construction. The CIP projects and major developments incorporated into the hydrologic models are summarized in a table in section four of the study. Both existing and future conditions were hydrologically modeled for the 10-year and 100-year, 6-hour storm and the 100-year, 24-hour storm.

Existing conditions incorporate developments that are under construction and funded CIP drainage improvements within the watershed. The major funded CIP drainage improvements within the watershed include the Rose Garden Lane Drainage Improvement project; and, the 83rd Avenue and Pinnacle Peak Drainage Improvement project.

Future conditions incorporate existing conditions and planned CIP drainage improvements including the City of Peoria Happy Valley Road project, Pinnacle Peak Road improvements, Camino A Lago North, and the Beardsley Road Channel projects. For future conditions, land uses were assumed to be fully developed and additional on-site retention was incorporated into the hydrologic models.

The following figure and table summarizing key watershed peak discharges illustrate that the calculated peak discharges are generally lower than those identified in the updated ADMPU models. Two major factors contribute to the lower runoff estimates. The first factor is the new unit hydrograph computational routine (MCUHP1). The second factor is that detention/retention facilities within the new developments reduce the peak discharges.



GLENDALE/PEORIA ADMPU
NORTHWEST REGION UPDATE
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SUMMARY PEAK DISCHARGE CONCENTRATION POINTS

WOOD/PATEL ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
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Glendale/Peoria ADMPU Northwest Region Update Hydrologic Study
100-Year, 6-Hour Peak Flow Comparison

Point Number	Location	Updated 2001 ADMPU (cfs)	Existing 2007 (cfs)	Future 2007 (cfs)
	Lake Pleasant Parkway			
1	Jomax Road	2019	1279	886
2	99th Avenue	2428	1255	1158
	Happy Valley Road			
3	97th Avenue	470	261	424
4	West of Lake Pleasant Parkway	2596	1469	1490
	Pinnacle Peak Road			
5	91st Avenue	751	318	315
6	97th Avenue	252	100	425
7	Lake Pleasant Parkway	474	198	412
8	107th Avenue	1001	219	527
9	Agua Fria River	1030	562	572
	Deer Valley Road			
10	83rd Avenue	N.A.	821	810
11	87th Avenue	N.A.	361	324
	Rose Garden Lane			
12	95th Avenue	227	124	124
13	99th Avenue	1058	1006	295
14	107th Avenue	1210	1328	593
15	Agua Fria River	1193	1330	582
	Beardsley Road			
16	95th Avenue	316	469	469
17	99th Avenue	492	426	425
18	107th Avenue	372	478	522
19	111th Avenue	388	458	483
20	117th Avenue	527	556	554

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ACKNOWLEDGEMENTS

Wood, Patel & Associates, Inc. is pleased to have represented the Flood Control District of Maricopa County in preparation of this Glendale/Peoria Area Drainage Master Plan Update Northwest Region Update Hydrologic Study. This professional assignment presented many interesting and unique challenges requiring creative teamwork solutions.

Ms. Debbi Shortal, Mr. Doug Williams, Mr. Greg Jones, Ms. Kelli Sertich, Mr. Steven Tucker, Mr. Amir Motamedi of the Flood Control District of Maricopa County; and Mr. Burton R. Charron with the City of Peoria provided critical technical support and decision making guidance throughout the duration of the study. Their individual and group contributions represent a key role in the successful completion of this on-call assignment.

We sincerely enjoyed these relationships and look forward to similar support from the agency representatives on future projects.

WOOD, PATEL & ASSOCIATES, INC.

Jeffrey R. Minch, P.E.
Vice President – Water Resources

1.0 INTRODUCTION

1.2 Location

The overall study area for the Glendale/Peoria Area Drainage Master Plan (ADMP) is approximately 80 square miles and includes portions of the Cities of Peoria, Glendale, Sun City, Youngtown, Phoenix, and unincorporated portions of Maricopa County. The original ADMP was completed in May 1987 by CDM Inc. and JM Montgomery Inc., and was updated in May 2002 by Entellus (ADMPU), for the Flood Control District of Maricopa County (FCDMC) and their project partners, the Cities of Peoria and Glendale.

The Glendale/Peoria ADMPU Northwest Region Update study area is a portion of the original Glendale/Peoria ADMPU and consists of an area of about 30 square miles located north of Union Hills Drive, west of New River, south of the Dynamite Boulevard alignment, and east of the Agua Fria River. The project lies within the City of Peoria, as shown in Figure 1.

1.3 Watershed Characteristics

The study area north of Pinnacle Peak Road is mainly characterized by steep hills draining into flat valleys. Some of the runoff from areas north of Pinnacle Peak Road flows south to Deer Valley Road west of 91st Avenue. Stormwater runoff from areas east of 91st Avenue between Pinnacle Peak Road and Beardsley Road flows south and/or east. Several parcels of vacant land owned by the Arizona State Land Department (ASLD) contain natural washes that have not been significantly altered by development. However, several developments are currently under construction or in the planning stage. Given the rate of development in this portion of Peoria, it is anticipated that the entire area will be completely developed within the next few years.

Other areas between Pinnacle Peak and Union Hills Drive are heavily developed and all the natural drainage paths have been significantly altered. The drainage systems in this area are mostly man-made and have been constructed by individual developers.

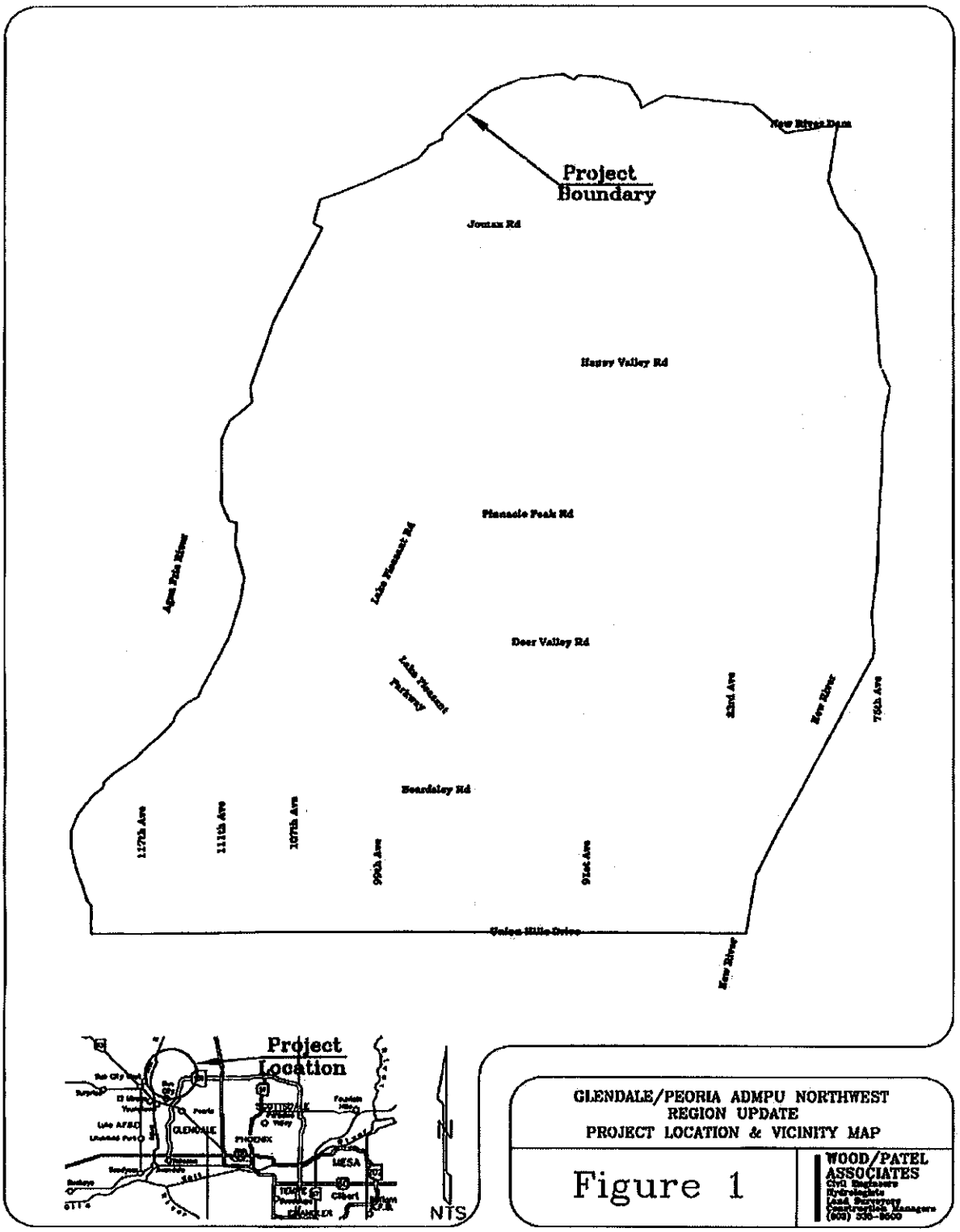

FIGURE 1 – Project Location and Vicinity Map

Under existing conditions, storm runoff flows south and west either as sheet flow or in natural washes or man made channels. A majority of the flow is now intercepted by the Beardsley Road channel and conveyed west to the Agua Fria River. Storm runoff from areas northeast and east portion of the watershed is tributary to the New River.

1.4 Purpose

Since the completion of the ADMPU, many developments have been constructed and new developments are planned which impact the flood control facilities that were recommended. In November 2006, the FCDMC contracted with Wood, Patel & Associates, Inc. (Wood/Patel) to perform the Glendale/Peoria ADMPU Northwest Region Update hydrologic analyses. This study updates the hydrologic modeling to address the impact of recent development, future development and capital improvement projects (CIP) on the watershed hydrology within the study limits.

Specifically, this study updates the existing and future conditions hydrologic models for the 10-year and 100-year, 6-hour storm and the 100-year, 24-hour storm. Existing conditions include funded CIP drainage improvements within the watershed. Future conditions include planned CIP drainage improvements within the study area including the City of Peoria Happy Valley Road project, Pinnacle Peak Road improvements, Camino A Lago North, and Beardsley Road Channel projects. The land use for the future conditions model assume a fully developed watershed based on the City's current land use and zoning. The FCDMC is the lead agency for this project in partnership with the City of Peoria.

2.0 PERTINENT STUDIES

Provided below is a summary of the reports that were collected and reviewed as part of the update process for new development within the study watershed.

2.1 Glendale/Peoria ADMP and Glendale/Peoria ADMP Update

The Glendale/Peoria ADMP was completed in May 1987 by CDM Inc. and JM Montgomery Inc., and updated in May 2002 by Entellus (ADMPU), for the Flood Control District of Maricopa County. The City of Peoria was a project participant as was the City of Glendale.

The purpose of the ADMPU was to develop alternative solutions for the drainage problems, select the most desirable alternative solutions, and develop a preliminary concept (15%) design. New or modified existing drainage systems were recommended along Rose Garden Lane, Pinnacle Peak Road and Beardsley Road within the Northwest Region study area.

2.2 Lake Pleasant Parkway Improvements

Two reports were collected relative to this project: *Drainage Report for Lake Pleasant Parkway, Phase II, 95th Avenue to Williams Road*, May 2003, and *Drainage Report Addendum for Lake Pleasant Parkway, Phase II, 95th Avenue to Williams Road*, July 2004 prepared by Entranco. The reports document the design of cross-drainage structures and pavement drainage facilities for the new roadway. The cross culverts required to convey the stormwater runoff under the proposed Lake Pleasant Parkway were designed using flows developed in the Glendale/Peoria ADMPU. These drainage facilities were also designed to accommodate both the interim and future fully developed conditions. In addition to the cross-drainage, a storm drain system for the sections of curbed roadway was also proposed.

2.3 Camino A Lago Development - South

The Camino A Lago development is in the study and design stages (between Deer Valley Road and Rose Garden Lane). The drainage report for the project was prepared by Coe & Van Loo Consultants, Inc. The drainage concept is an earthen channel along the north side of Deer Valley Road from 95th Avenue to 98th Avenue to intercept off-site flows from areas north of Deer Valley Road. Separate channels will be constructed within Camino A Lago along the west side of 98th Avenue, along the east side of the commercial site and along the west side of 101st Avenue to convey flows south to the Rose Garden Lane Channel. Camino A Lago will also construct the portion of Phase III of the Rose Garden Lane channel project from 95th Avenue to Lake Pleasant Road. On-site retention facilities will provide 100-year, 2-hour storage. Flows in excess of the 100-year, 2-hour storm will be routed to the Rose Garden Lane channel. Several culverts are proposed to route flows crossing the major roadways within the development.

2.4 Camino A Lago Development - North

The *Camino A Lago North Infrastructure Assessment Report* was completed in April 2006, by URS, and prepared for the ASLD. *The Camino A Lago North* project is a 1.2 square mile parcel of land in the City of Peoria located in the west central portion of study area in Section 16 and 17, Township 4 North, and Range 1 East. The project boundaries for the study area are Deer Valley Road to the south, 91st Avenue alignment to the east, Pinnacle Peak Road to the north, and Lake Pleasant Parkway to the west.

The purpose of this report was to develop a preliminary plan for the major infrastructure within the context of the existing facilities based on ASLD's and City of Peoria's criteria and requirements. The land use and infrastructure master plans are the basis for an estimate of major infrastructure costs and development fee.

The *Glendale/Peoria ADMPU Northwest Region Update* future conditions include the drainage basins and retention defined in the *Camino A Lago North Infrastructure Assessment Report* as well as retention from future land use areas that were previously considered desert or vacant, while the existing condition does not include this added

retention. Existing conditions use three sub-basins from the original base model developed for the ADMPU.

2.5 West Wing Mountain

The Conceptual Master Drainage Report for West Wing Mountain was completed in January 2005 by Wood, Patel & Associates. The study was prepared for The Pivotal Group.

This development is located in the north central portion of the study area and is bounded by Happy Valley Road on the south, 83rd Avenue on the east, Dixileta Drive on the north, and 99th Avenue on the west.

The report provides hydrologic data for both the residential parcels, as well as the roadway infrastructure and presents an overall summary of the on-site and off-site hydrologic analyses for the West Wing Mountain development. The hydrologic analysis includes a pre-development analysis as well as an analysis reflecting a combination of the post-development condition.

The hydrologic model for future and existing conditions for the study area includes all of the drainage basins and retention volumes that were developed in *The Conceptual Master Drainage Report for West Wing Mountain.* The only difference between the future and existing conditions are that the future condition includes added retention from future land use areas that was previously considered desert or vacant. The existing condition does not include the fully developed retention.

2.6 Cibola Vista

The Final Drainage Report for Parcel One of Cibola Vista P.A.D. was completed in April 2004 by Carter Burgess. The project was prepared for Cibola Vista Community Development, LLC & Lake Pleasant 241, L.P (C/o Morrell & Associates).

The development is located in the north central portion of study area in Section 33, Township 5 North, and Range 1 East. The project site is bounded on the north, south,

east, and west by private land. Lake Pleasant Parkway traverses the development along the northwest corner, and Jomax Road extends along the south property line. The Aqua Fria River lies approximately 1.5 miles west of the development.

The purpose of *The Final Drainage Report for Parcel of Cibola Vista P.A.D.* is to provide support for the design of the stormwater storage basin that will be used to retain the difference in the runoff volume between existing and proposed fully developed conditions.

The hydrologic model for this study includes a simplified version of the development drainage basins. There are nine sub-basins defined in the new model for the development. Both the existing and future conditions include retention volumes developed in *The Final Drainage Report for Parcel of Cibola Vista P.A.D.* The difference between the future and existing conditions is that the future condition includes added retention from future land use areas that were previously considered desert or vacant, while the existing condition does not include this added retention.

2.7 Pleasant Valley

The *Final Drainage Report for Pleasant Valley Units 2 & 3* was completed in March 2003 by RBF Consulting. The project was prepared for Hancock Communities. The study is located in the northwest portion of *Glendale/Peoria ADMPU Northwest Region Update.*

The Pleasant Valley site is bordered by Lake Pleasant Parkway on the east, Jomax Road on the south, 99th Ave. on the west, and Agua Fria River on the north. The Final Master Drainage Report, documents hydrologic and hydraulic calculations for the development of medium density residential homes. The report documents flows from the 10- and 100-year rainfall events and documents calculations for proposed retention areas within the development.

The future and existing conditions hydrologic model for the study area includes a simplified version of the development drainage sub-basins. There are two sub-basins

defined in the new model. Both the existing and future conditions will include retention volumes developed in the *Final Drainage Report for Pleasant Valley Units 2 & 3.* The only difference between the future and existing conditions is that the future condition includes added retention from future land use areas that were previously considered desert or vacant, while the existing condition does not include this added retention.

2.8 Tierra Del Rio

The *Master Drainage Report for Tierra Del Rio* was completed in August 2005 by CMX, LLC, and prepared for TDR, L.L.C. The study is located in the northwest portion *Glendale/Peoria ADMPU Northwest Region* and its boundaries include the Agua Fria River to the west and the north, and Hatfield Road to the south. The east boundary is approximately one-half mile west of Lake Pleasant Road. The purpose of this report is to establish a Master Drainage Plan for the *Tierra Del Rio* development. The report establishes 100-year peak discharges impacting the site for existing and fully developed conditions. As well as the design of drainage structures to convey the 100-year peak discharge from the greater of either the 6-hour or the 24-hour storm event. It also documents the required first-flush volume for all residential parcels discharging directly to the Agua Fria River, and 100-year 2 hour retention for areas that do not discharge into the Agua Fria River.

The study hydrologic model includes all of the drainage basins and retention volumes that were developed in *The Master Drainage Report for Tierra Del Rio.* The only difference between the future and existing conditions is that the future condition includes added retention from future land use that was previously considered desert or vacant. The existing condition does not include this added retention.

2.9 Rock Springs

The *Final Drainage Report for Rock Springs* was completed in March 2005 by Sage Engineering Corporation, and prepared for Courtland Homes. The study is located in the northeast portion of *Glendale/Peoria ADMPU Northwest Region Update* in the South west quarter of Section 35, Township 5 North, Range 2 East of the Gila and Salt River Base and Meridian. The purpose of the report was to address drainage issues for this site

and provide solutions for resolving these issues. The report also addressed design issues for Jomax Road Improvements.

2.10 Patriot American Development

The drainage study for this development has not yet been completed. Therefore, this hydrology study includes drainage basins from the ADMPU, and no new basins were delineated for the Patriot American future conditions. Retention for the fully developed condition is assumed in the future condition model.

2.11 Home Depot and Target Developments

Home Depot

The *Drainage report for the Lake Pleasant Towne Center* was completed in December 2005, by Landmark Engineering, and prepared for Vestar Development Company. The *Lake Pleasant Towne Center: Home Depot* study is located in the center portion of *Glendale/Peoria ADMPU Northwest Region Update,* within a portion of the northwest quarter of the southeast quarter of Section 5, Township 4 North, Range 1 East. The boundaries for the Home Depot site include Happy Valley road to the south, Lake Pleasant Parkway to the east, undeveloped desert to the north and low density residential to the west. The purpose of this report is to provide support of the design thirty-three commercial buildings with related parking and access drives. The site is designed to meet the FCDMC guidelines and provide adequate detention to limit peak discharge from the property to existing conditions during a 100-year, 6-hour storm event.

The study hydrologic model uses the sub-basins from the ADMPU model and not the basins in *the Drainage report for the Lake Pleasant Towne Center.* The difference between the future and existing conditions are that the future condition includes added retention from future land use areas that were previously considered desert or vacant, and the existing condition does not include this added retention.

Target

The *Final Drainage Report for Lake Pleasant Pavilion* was completed in October 2005, by CMX, L.L.C. and prepared for Kornwasser Shopping Center Properties, L.L.C. *The Final Drainage Report for Lake Pleasant Pavilion: Target* site is located within a portion of the northwest quarter of the southeast quarter of Section 5, Township 4 North, Range 1 East. The site is bounded on the north by Happy Valley Road, on the east by Lake Pleasant Parkway, on the south by undeveloped desert, and low-density residential developments on the west. The purpose of the report is to provide hydrologic and hydraulic evaluation for the site. This report addresses off-site and on-site conditions as well as stormwater runoff retention requirements and off-site routing.

The study hydrologic model incorporates a slightly modified version of the sub-basins from the original ADMPU.

2.12 Melton Ranch

The Drainage Report for the Melton Ranch Subdivision was completed in March 2002 by Z & H Engineering, Inc. Melton Ranch is located in the central portion of the study area. The purpose of this study was to define the drainage requirements and proposed drainage facilities to be constructed as part of the development of the Melton Ranch Subdivision.

The study hydrologic model incorporates a slightly modified version of the sub-basins from the original ADMPU.

2.13 83rd Avenue and Pinnacle Peak Drainage

The *83rd Avenue/Pinnacle Peak Road Drainage Improvements* was completed by Jacobs Engineering. Construction of the 83rd Avenue and Pinnacle Peak Drainage Improvements is expected to begin in 2007. The project was prepared for the FCDMC in partnership with the City of Peoria. The 83rd Avenue and Pinnacle Peak Drainage Improvements are bounded by 91st Avenue on the west, Happy Valley Road to the north, 83rd Avenue on the east, and Pinnacle Peak Road on the south. The project will provide a stormwater collection system and detention basins that will intercept the 10-year storm runoff from 87th Avenue to 83rd Avenue north of and along Pinnacle Peak Road. All

flows are conveyed to a new storm drain trunk line in 83rd Avenue which outfall into the existing channel south of Williams Road on the east side of the roadway.

For this study, the hydrologic model incorporated all of the drainage sub-basins, routings and retention volumes that were developed for the *83rd Avenue/Pinnacle Peak Road Drainage Improvement* project. The only difference between the future and existing conditions are that the future conditions include added retention for future land use that was previously considered desert or vacant, and the existing condition does not include this added retention.

2.14 Happy Valley Roadway Improvements

The *Drainage Report for Happy Valley Road, Lake Pleasant Parkway to Terramar Boulevard* was completed in January 2007 by Parsons and prepared for the City of Peoria. The proposed Happy Valley Road traverses the north central portion of the study area starting at Lake Pleasant Parkway on the west and ending at Terramar Boulevard on the east. The City of Peoria has separated this project into two phases, the first phase of construction will take place from 83rd Avenue to Terramar, and the second phase will construct the roadway from 83rd Avenue to Lake Pleasant Parkway. The purpose of the report is to document the drainage design in support of the Happy Valley Road improvements. The proposed improvements include the addition of a channel that will collect flows from the north, between 94th Avenue and Lake Pleasant Parkway and divert the flows to the Agua Fria River. The proposed roadway design east of 91st Avenue to Terramar will incorporate off-site catch basins and box culverts to maintain natural flow paths in this area of the study. Two new major wash crossings will be constructed as part of the improvements. A triple cell 8 foot by 6 foot box culvert will be constructed across Rock Springs Wash and a new 240 foot bridge will be constructed across New River.

For this study, the hydrologic model includes modified sub-basins from the original ADMPU. The proposed *Happy Valley Roadway Improvements* bisect the original basin boundaries in the original ADMPU, and split them into a north and south basin. The future condition diverts all the flow north of the roadway and west of 97th Avenue to the box culvert crossing of Lake Pleasant Peak Parkway. Existing conditions divert flows

south of Happy Valley Road at approximately 97th and 93rd Avenues, as well as convey flow in the existing roadside channel to the box culvert at the Lake Pleasant Parkway.

2.15 Pinnacle Peak Road and Channel Improvements

The Pinnacle Peak Road and Channel Improvements were identified as part of the ADMPU. Pinnacle Peak Road traverses the study, starting at 91st Avenue on the east and ending at the Agua Fria River on the west. The purpose of the improvements is to help reduce flooding hazards along Pinnacle Peak Road. The report proposes the construction of a channel and/or conduit along Pinnacle Peak Road to the Agua Fria River. The ADMPU sub-basin boundaries were not modified for existing or future conditions.

2.16 Rose Garden Lane Drainage Improvements

The *Rose Garden Lane Drainage Improvements 90% Design Report* was completed in October 2005 by Wood/Patel & Associates, Inc. Rose Garden Lane is located in the southwest portion of the study area. The purpose of the Rose Garden Lane Drainage Improvements is to mitigate flooding issues identified in the ADMPU. These drainage improvements are incorporated into both existing and future conditions models for this study.

2.17 Beardsley Road Channel

The *Beardsley Road Channel* project was identified in the ADMPU and is located in the southwest portion of the study area. The purpose of the Beardsley Channel Improvements is to mitigate flooding issues by conveying the contributing runoff to the Agua Fria River. The ADMPU study notes that the entrance into a golf course (115th Avenue) constricts the channel capacity and stormwater runoff potentially overtops the banks of the channel and flows south. Another problem identified is that runoff from inside the Ventana Lakes development flows through the lake system into the Beardsley Road channel. The proposed solution is to widen the existing channel to increase the capacity of the existing drainage facility.

The drainage sub-basins were not modified for the existing or future conditions for this study. The only difference between the future and existing conditions is that the future

condition includes added retention from future land use areas that were previously considered desert or vacant, while the existing condition does not include this added retention.

2.18 Deer Valley Road DCR

The Deer Valley Road Widening and Drainage Improvement DCR 83rd Avenue to 91st Avenue was completed in June 2006 by Premier Engineering Corporation, and prepared for the City of Peoria. The Deer Valley Road Design Concept Report (DCR) is located near the middle of the study area. The watershed boundary for the DCR includes the ridgeline of the hills north of Happy Valley Road, 91st Avenue on the west, Deer Valley Road to the south and 83rd Avenue to the east.

The purpose of the DCR is to develop a design concept for a drainage system and roadway to convey runoff under Deer Valley Road during major storm events. The hydrologic model for this study includes all of the drainage sub-basins and retention volumes that were developed in the DCR.

3.0 HYDROLOGIC MODELING METHODOLOGIES

3.1 General Modeling Methods

The hydrologic modeling methodologies outlined in the FCDMC's, Drainage Design Manual for Maricopa County, Arizona, Volume I Hydrology, January 1995, were applied to the study area. The hydrologic modeling was performed using the U.S. Army Corps of Engineers Flood Hydrograph Package (HEC-1). The model input parameters were generally prepared using the FCDMC's Drainage Design Management System for Windows (DDMSW Version 2.1.0) program. However, the unit hydrograph hydrologic parameters were calculated by using the new MCUHP1 procedures from DDMSW Version 3.3.2 based on concurrence from the FCDMC.

The study includes most of the sub-basins from the original hydrologic model developed for the ADMPU. However, most of the sub-basins boundaries were revised based on new studies within this project limits.

3.2 Hydrologic Data

The point rainfall values used in the study were derived from NOAA 2 (see Appendix A1); and the design depth-duration-frequency table was computed using the FCDMC's DDMSW PREFRE software module. The design rainfall depths were applied uniformly over the entire watershed with depth-area reduction factors based on the NOAA Technical Memorandum NWS HYDRO-40 (NOAA, 1984). The design rainfall depths are documented in Appendix A1. As defined by FCDMC's Drainage Design Manual, the design rainfall distributions are the Maricopa County local storm distribution for the 6-hour storm and the SCS Type II 24-hour storm.

The sub-basin boundary and HEC-1 schematic map for the existing conditions model is presented as Exhibit C which defines approximately 220 sub-basins. Most of the sub-basins boundaries were revised based on existing developments and new projects that are under construction within the study limits. The sub-basin boundary and HEC-1 schematic map for the future conditions model is presented as Exhibit D which defines approximate 240 sub-basins. Some of the sub-basin boundaries from the existing

conditions model were revised based on proposed future developments within the study limits.

Physical parameters for the sub-basins (areas, flow path lengths, and watercourse slopes) were estimated using AutoCAD. Other sub-basin data including Green-Amp rainfall loss and Clark Unit hydrograph parameters were estimated by using the new MCUHP1 procedures from DDMSW Version 3.3.2 which is tabulated in Appendix A2 for the 6-hour storm for both existing and future conditions. The electronic files for the physical parameters for the 24-hour storm are included in Exhibit E.

Soil data was provided by the FCDMC in GIS format. The total sub-basin area and the portions of each soil group within each sub-basin were computed with the use of ArcGIS software. Infiltration parameters are based on soil data obtained from Appendices A, B, and C of the FCDMC's Hydrology Manual. The soil data for each sub-basin within the watershed is summarized using DDMSW in Appendix A3. The GIS coverage of the soil data is presented as Exhibit A.

Land use data was provided by the FCDMC and the City of Peoria in GIS format. The total sub-basin area and the portions of each land use category within each sub-basin were computed using ArcGIS software. Default rainfall loss parameters provided by DDMSW were verified and updated to represent the watershed conditions. Land use for existing and future conditions were defined and confirmed by both the FCDMC and City of Peoria. Both existing and future land use maps are included in Exhibit B. Land use data for existing and future conditions for each sub-basin within the watershed was tabulated using the DDMSW software and is provided in Appendix A4.

Detention/retention basins were identified and classified by reviewing drainage reports and field visits. The storage volumes for retention basins were estimated from either drainage reports (existing) or the 100-year, 2-hour rainfall depth and land use (future). An 80% reduction factor was applied to the estimated retention volumes in the HEC-1 models. Appendix A5 documents the detention/retention basin volumes. Most of the flow diversions and channel routing data were retained from either the original ADMPU model or hydrologic models for new drainage studies within this project limits.

4.0 HYDROLOGIC MODELING RESULTS

4.1 Existing Conditions versus Future Conditions

Since the completion of the Glendale/Peoria ADMP Update, numerous developments have been constructed and new development is continuing. Both existing conditions and future conditions of the study watershed were modeled for the 10-year and 100-year, 6-hour storm and the 100-year, 24-hour storm. Existing conditions include developments that are under construction and funded CIP drainage improvements within the watershed. Future conditions include planned CIP drainage improvements in additional to the existing conditions within the study area. For future conditions, land uses were assumed to be fully developed and additional on-site retention basins were assumed in the model. The following table identifies the most significant developments and drainage facilities that were confirmed by both the FCDMC and City of Peoria. These developments differentiate the existing and future conditions hydrologic models.

Glendale/Peoria ADMPU Northwest Region Update – Existing vs. Future Conditions				
Report Section	**Development/Project**	**Existing Conditions**	**Future Conditions**	**Comments**
2.2	Lake Pleasant Parkway	X	X	
2.3	Camino A Lago South	X	X	
2.4	Camino A Lago North		X	
2.5	West Wing Mountain Ranch	X	X	
2.6	Cibola Vista	X	X	
2.7	Pleasant Valley	X	X	
2.8	Tierra Del Rio	X	X	
2.9	Rock Springs	X	X	
2.10	Patriot American Development		X	Land use change only
2.11	Home Depot & Target	X	X	
2.12	Melton Ranch	X	X	
2.13	83rd Ave. & Pinnacle Peak	X	X	
2.14	Happy Valley Road	a	b	a - East of 83rd Ave. b – Continuation west to Lake Pleasant Parkway
2.15	Pinnacle Peak Road & Channel Improvements		X	
2.16	Rose Garden Lane Drainage Improvements	X	X	
2.17	Beardsley Road Channel		X	
2.18	Deer Valley Road DCR	X	X	

4.2 Modeling Results for Existing Conditions

The hydrologic (HEC-1) models for existing conditions were developed in accordance with the methodologies presented in Section 3.0. The HEC-1 model summary input and output for the 100-year, 6-hour storm is included in Appendix B, and the electronic files for all existing condition models are included in Exhibit E. The sub-basin boundary and HEC-1 schematic map for existing conditions are presented as Exhibit C. The peak flows for the 100-year, 6-hour storm are summarized in Table 1, and the USGS envelope curve comparison is presented as Figure 2. Table 1 and Figure 2 indicate that the peak flows are relatively lower than those from the ADMPU models. The major factor contributing to the lower runoff estimates is the new MCUHP1 routine from DDMSW Version 3.3.2 which was used to estimate time of concentration and storage coefficient for the Clark Unit hydrograph method. Since the estimated net rainfall intensity is lower and the time of concentration is longer as calculated by the new MCUHP1 software routine than those estimated by the DDMSW V2.1.0 MCUHP1 routine, the computed peak flow estimates are lower. Retention associated with new developments within the watershed also reduces the estimated peak runoff.

4.3 Modeling Results for Future Conditions

The hydrologic (HEC-1) models for future conditions were developed in accordance with the methodologies presented in Section 3.0. The HEC-1 model summary input and output for the 100-year, 6-hour storm is included in Appendix C, and the electronic files for all future condition models are included in Exhibit E. The sub-basin boundary and HEC-1 schematic map for future conditions are presented as Exhibit D. The peak flows for the 100-year, 6-hour storm are summarized in Table 2, and the USGS envelope curve comparison is presented as Figure 3. Table 2 and Figure 3 indicate that the peak flows are relatively lower than those from the Glendale/Peoria ADMPU models as well. In addition to the effect of the new MCUHP1 software discussed in the previous section, retention associated with future development and proposed drainage facilities have a significant impact on the peak flows at downstream concentration points.

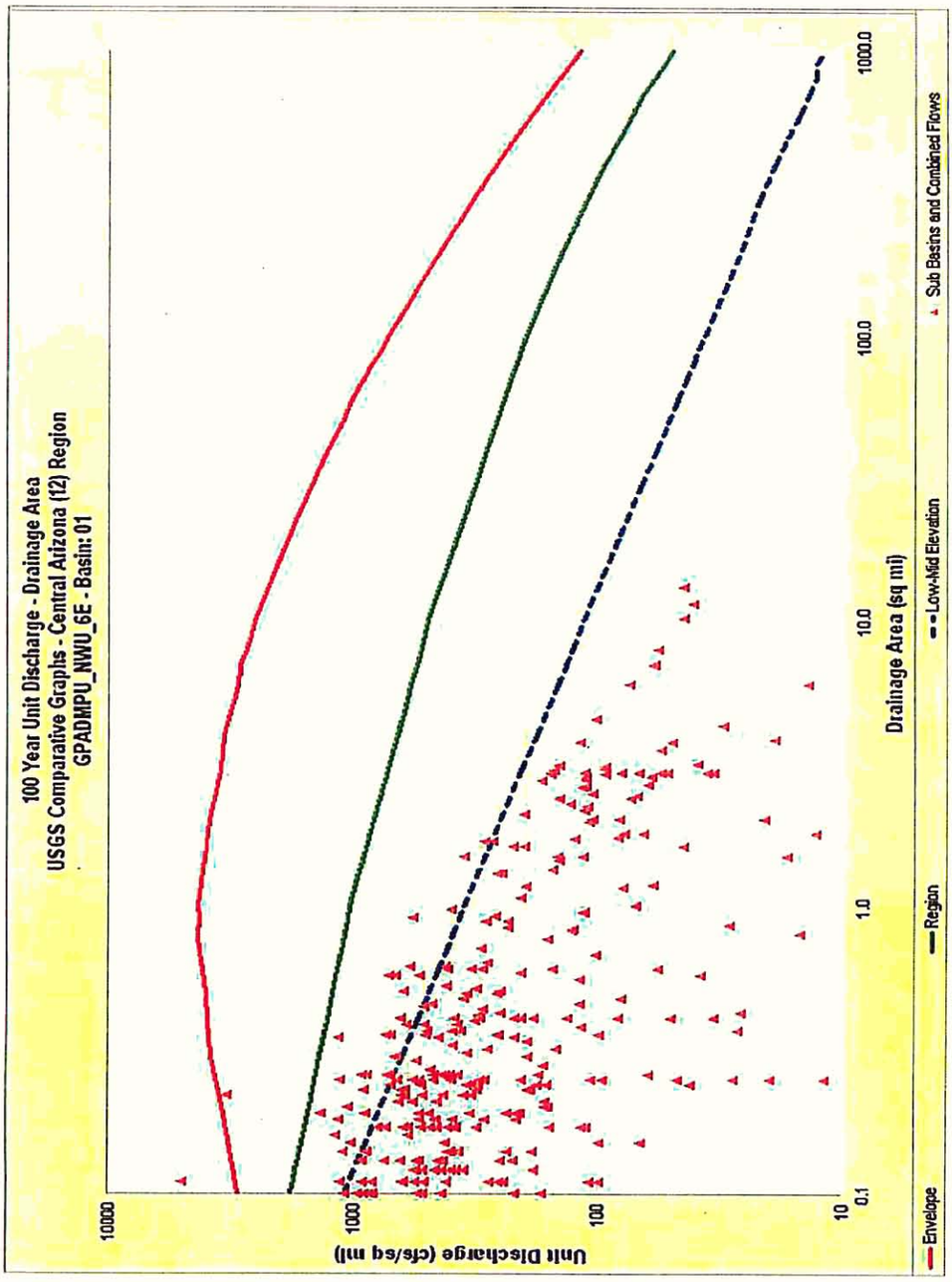

FIGURE 2 – USGS Comparative Graphs for 100-Year, 6-Hour Storm – Existing Conditions

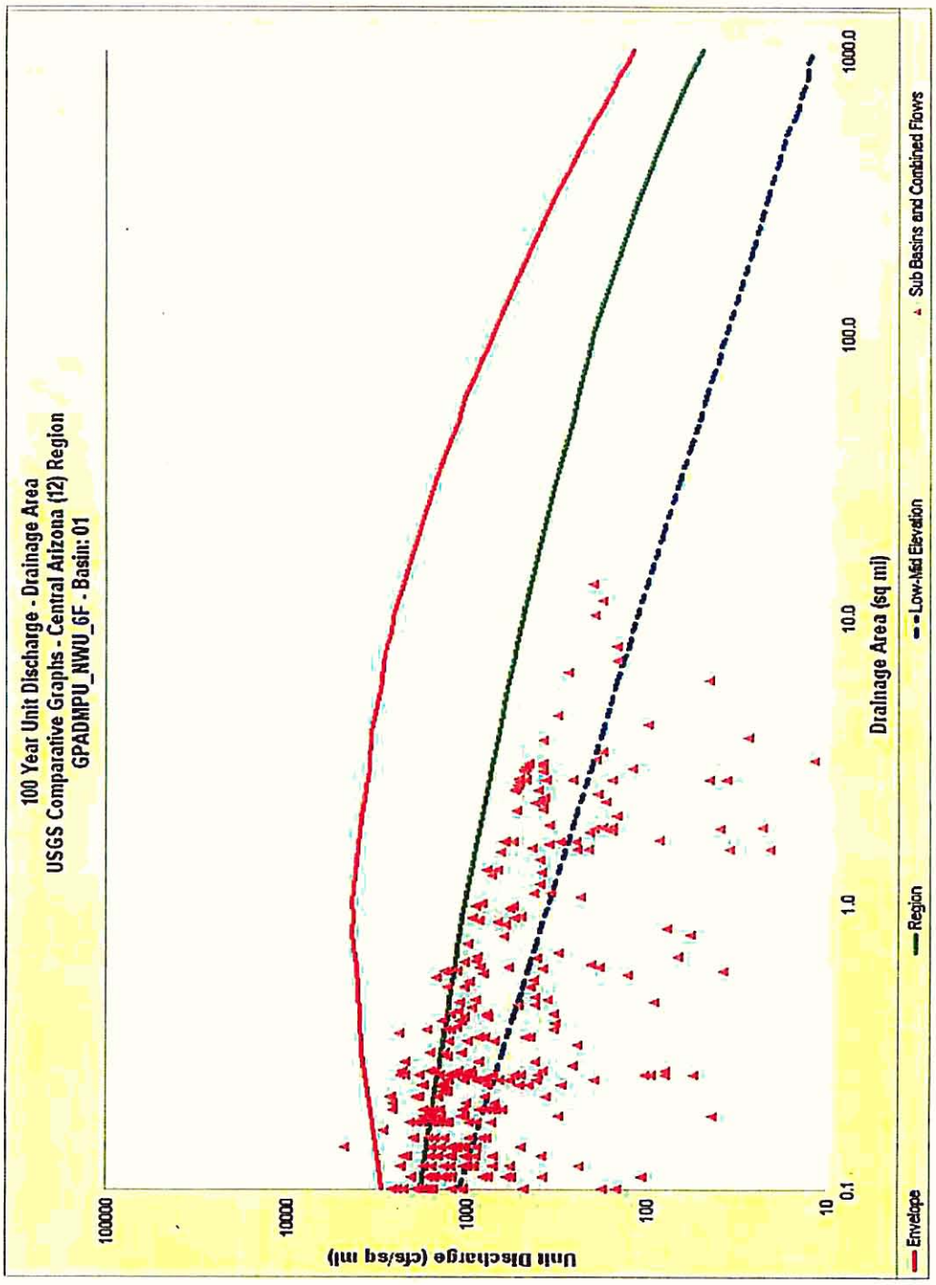

FIGURE 3 – USGS Comparative Graphs for 100-Year, 6-Hour Storm – Future Conditions

5.0 SUMMARY

The Glendale/Peoria ADMPU Northwest Region Update study area is a portion of the original Glendale/Peoria ADMPU (Entellus, 2002) and consists of an area of about 30 square miles. Since the completion of the Glendale/Peoria ADMPU, numerous developments have been constructed and new development is continuing. This study updates the hydrologic modeling to address the impact of recent developments as well as future developments and capital improvement projects (CIP) on the watershed hydrology within the study limits. Both existing conditions and future conditions of the study watershed were modeled for the 10-year and 100-year, 6-hour storm and the 100-year, 24-hour storm. Existing conditions include developments that are under construction and funded CIP drainage improvements within the watershed. Future conditions include planned CIP drainage improvements in additional to the existing conditions within the study area. For future conditions, land uses were assumed to be fully developed and additional on-site retention basins were assumed in the model.

The hydrologic modeling methodologies outlined in the FCDMC's *Hydrology Manual*, January 1995, were applied to the study area. The hydrologic modeling was performed using the U.S. Army Corps of Engineers Flood Hydrograph Package (HEC-1). The model input parameters were generally prepared by using the FCDMC's Drainage Design Management System for Windows (DDMSW Version 2.1.0) program. However, the unit hydrograph hydrologic parameters were calculated by using the new MCUHP1 procedures from DDMSW Version 3.3.2 with concurrence from the FCDMC.

The study includes a few of the sub-basins from the original hydrologic model developed for the ADMPU. However, most of the sub-basins boundaries were revised based on existing developments and new projects that are under construction within this project limits. For future conditions, some of the sub-basins boundaries for existing conditions were revised based on proposed future developments within this project limits. Physical parameters for all sub-basins were estimated by using either AutoCAD or ArcGIS software. This study also corrected a few errors in the original ADMPU model. Most of the flow diversions and channel routing data were retained from either the original ADMPU model or hydrologic models for new drainage studies within this project limits.

The modeling results show that the peak flows are relatively lower than those from the ADMPU models. The major factors contributing to the lower runoff estimates is the new MCUHP1 software and new development in the watershed. For future conditions, the proposed drainage facilities also have a significant impact on the peak flows at downstream concentration points.

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TABLE 1

Peak Flow Summary Table for Existing Conditions

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions

Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	CBA	16	4.1	1	0	0	0.01
ROUTED TO		RCBA	16	4.2	1	0	0	0.01
HYDROGRAPH	AT	P28	56	4.13	7	2	1	0.03
2 COMBINED	AT	CP28	70	4.13	9	2	2	0.03
DIVERSION	TO	DB28	55	4.03	2	1	0	0.03
HYDROGRAPH	AT	DT28	70	4.13	6	2	1	0.03
HYDROGRAPH	AT	CBB	40	4.07	3	1	1	0.02
ROUTED TO		RCBB	40	4.1	3	1	1	0.02
2 COMBINED	AT	CP28a	110	4.13	9	2	2	0.05
ROUTED TO		R28a	93	4.3	9	2	2	0.05
HYDROGRAPH	AT	P27	107	4.17	17	4	3	0.06
DIVERSION	TO	DB27	54	3.93	3	1	0	0.06
HYDROGRAPH	AT	DT27	107	4.17	14	3	3	0.06
2 COMBINED	AT	CP27	191	4.27	23	6	4	0.12
HYDROGRAPH	AT	P27A	16	4.07	2	0	0	0.01
DIVERSION	TO	DB27a	9	3.9	0	0	0	0.01
HYDROGRAPH	AT	DT27a	16	4.07	1	0	0	0.01
HYDROGRAPH	AT	P27B	24	4.1	3	1	1	0.01
DIVERSION	TO	DB27b	10	3.87	1	0	0	0.01
HYDROGRAPH	AT	DT27b	24	4.1	3	1	0	0.01
HYDROGRAPH	AT	CBL	54	4.1	6	2	1	0.03
4 COMBINED	AT	CCBL	260	4.23	33	8	6	0.16
ROUTED TO		RCBL	260	4.3	33	8	6	0.16
HYDROGRAPH	AT	CBK	108	4.17	9	2	2	0.05
2 COMBINED	AT	CCBK	344	4.23	41	10	7	0.22
ROUTED TO		RCBK	341	4.27	41	10	7	0.22
HYDROGRAPH	AT	P14	16	4.1	1	0	0	0.01
DIVERSION	TO	RB14	16	4.1	1	0	0	0.01
HYDROGRAPH	AT	RT14	0	0	0	0	0	0.01
2 COMBINED	AT	CP14	341	4.27	41	10	7	0.22
HYDROGRAPH	AT	P15	5	4.3	1	0	0	0.01
DIVERSION	TO	DB15	5	4.3	1	0	0	0.01
HYDROGRAPH	AT	DT15	2	4.8	0	0	0	0.01
HYDROGRAPH	AT	CBJ	29	4.13	2	1	0	0.01
3 COMBINED	AT	CP15	363	4.23	44	11	8	0.25
ROUTED TO		R15	362	4.27	44	11	8	0.25
HYDROGRAPH	AT	CBH	34	4.07	2	1	0	0.01
ROUTED TO		RCBH	30	4.13	2	1	0	0.01
HYDROGRAPH	AT	P25S	36	4.2	5	1	1	0.03

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
2 COMBINED	AT	CP25S	64	4.13	7	2	1	0.04
2 COMBINED	AT	AFR0	415	4.23	51	13	9	0.29
HYDROGRAPH	AT	E1	32	4.07	2	0	0	0.01
ROUTED TO		RE1	32	4.13	2	0	0	0.01
HYDROGRAPH	AT	E2	28	4.1	3	1	0	0.02
ROUTED TO		RE2	28	4.13	3	1	0	0.02
HYDROGRAPH	AT	P13	125	4.1	11	3	2	0.06
DIVERSION	TO	DB13	43	3.87	2	1	0	0.06
HYDROGRAPH	AT	DT13	125	4.1	9	2	2	0.06
3 COMBINED	AT	CP13	182	4.1	14	3	2	0.09
ROUTED TO		R13	178	4.17	14	3	2	0.09
HYDROGRAPH	AT	P12	69	4.17	8	2	2	0.04
DIVERSION	TO	DB12	53	4.03	2	1	0	0.04
HYDROGRAPH	AT	DT12	69	4.17	6	2	1	0.04
2 COMBINED	AT	CP12	246	4.17	20	5	4	0.13
HYDROGRAPH	AT	E3	74	4.4	12	3	2	0.08
ROUTED TO		RE3	74	4.43	12	3	2	0.08
HYDROGRAPH	AT	P10	98	4.13	11	3	2	0.05
DIVERSION	TO	DB10	46	3.93	2	1	0	0.05
HYDROGRAPH	AT	DT10	98	4.13	9	2	2	0.05
2 COMBINED	AT	CP10	142	4.2	21	5	4	0.14
ROUTED TO		R10	141	4.33	21	5	4	0.14
HYDROGRAPH	AT	P11	39	4.3	8	2	2	0.04
DIVERSION	TO	DB11	39	4.27	2	1	0	0.04
HYDROGRAPH	AT	DT11	39	4.33	6	1	1	0.04
2 COMBINED	AT	CP11	180	4.33	27	7	5	0.18
HYDROGRAPH	AT	E4	33	4.37	6	1	1	0.04
ROUTED TO		RE4	33	4.4	6	1	1	0.04
HYDROGRAPH	AT	P9	82	4.1	9	2	2	0.05
DIVERSION	TO	DB9	45	3.93	2	0	0	0.05
HYDROGRAPH	AT	DT9	82	4.1	7	2	1	0.05
HYDROGRAPH	AT	HV1	6	4.3	1	0	0	0.01
3 COMBINED	AT	CP9	104	4.13	14	4	3	0.09
ROUTED TO		R9	104	4.17	14	4	3	0.09
HYDROGRAPH	AT	P8	14	4.23	3	1	0	0.01
DIVERSION	TO	DB8	12	4.1	1	0	0	0.01
HYDROGRAPH	AT	DT8	14	4.23	2	1	0	0.01
HYDROGRAPH	AT	P7	17	4.2	3	1	1	0.01
DIVERSION	TO	DB7	13	4.07	1	0	0	0.01
HYDROGRAPH	AT	DT7	17	4.2	2	1	0	0.01

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
3 COMBINED	AT	CP7	135	4.17	18	5	3	0.12
ROUTED TO		R7	134	4.2	18	5	3	0.12
HYDROGRAPH	AT	P6	46	4.5	14	4	3	0.07
DIVERSION	TO	DB6	45	4.4	4	1	1	0.07
HYDROGRAPH	AT	DT6	46	4.5	11	3	2	0.07
2 COMBINED	AT	CP6	145	4.47	29	7	5	0.19
3 COMBINED	AT	HPVLY	498	4.2	75	19	14	0.5
HYDROGRAPH	AT	A11MA	207	4.07	17	4	3	0.07
DIVERSION	TO	DA11MA	182	4	7	2	1	0.07
HYDROGRAPH	AT	A11MAQ	207	4.07	10	2	2	0.07
ROUTED TO		SA11MA	30	4.47	10	2	2	0.07
ROUTED TO		RA11MA	30	4.7	10	2	2	0.07
HYDROGRAPH	AT	A11MB	494	4.1	51	13	9	0.19
DIVERSION	TO	DA11MB	142	3.77	7	2	1	0.19
HYDROGRAPH	AT	A11MBQ	494	4.1	43	11	8	0.19
ROUTED TO		SA11MB	267	4.33	41	11	8	0.19
HYDROGRAPH	AT	A11NA	198	4.07	16	4	3	0.08
ROUTED TO		SA11NA	32	4.47	16	4	3	0.08
ROUTED TO		RA11NA	32	4.7	16	4	3	0.08
3 COMBINED	AT	CA11MB	308	4.37	66	17	12	0.34
ROUTED TO		RA11MB	279	4.6	66	17	12	0.34
HYDROGRAPH	AT	A11O	116	4.13	12	3	2	0.06
ROUTED TO		SA11O	35	4.53	12	3	2	0.06
ROUTED TO		RA11O	35	4.83	12	3	2	0.06
HYDROGRAPH	AT	A11KB	227	4.13	23	6	4	0.11
ROUTED TO		SA11KB	32	4.67	21	6	4	0.11
HYDROGRAPH	AT	A11KA	191	4.07	19	5	3	0.08
ROUTED TO		SA11KA	31	4.57	18	5	3	0.08
ROUTED TO		RA11KA	31	4.8	18	5	3	0.08
3 COMBINED	AT	CA11KB	98	4.8	51	14	10	0.24
ROUTED TO		RA11KB	98	5.03	51	14	10	0.24
HYDROGRAPH	AT	A11G	90	4.23	12	3	2	0.06
ROUTED TO		RA11GN	86	4.43	12	3	2	0.06
HYDROGRAPH	AT	A11KC	276	4.13	26	7	5	0.13
ROUTED TO		SA11KC	82	4.47	25	7	5	0.13
3 COMBINED	AT	CA11KC	240	4.5	87	23	17	0.44
ROUTED TO		RA11KC	237	4.6	87	23	17	0.44
HYDROGRAPH	AT	A11J	157	4.37	25	6	5	0.11
ROUTED TO		SA11J	88	4.77	25	6	5	0.11
3 COMBINED	AT	CA11J	515	4.67	170	45	33	0.89

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	A11L	382	4.3	72	18	13	0.26
DIVERSION	TO	DA11L	285	4.1	15	4	3	0.26
HYDROGRAPH	AT	DA11LQ	382	4.3	57	14	10	0.26
ROUTED TO		RA11L	375	4.5	57	14	10	0.26
HYDROGRAPH	AT	A11I	298	4.2	43	11	8	0.15
DIVERSION	TO	DA11I	298	4.2	24	6	4	0.15
HYDROGRAPH	AT	DA11IQ	249	4.37	19	5	3	0.15
3 COMBINED	AT	CA11I	919	4.63	241	63	45	1.31
ROUTED TO		RA11I	898	4.83	240	63	45	1.31
HYDROGRAPH	AT	A11EA	143	4.4	24	6	4	0.14
ROUTED TO		RA11EA	141	4.53	24	6	4	0.14
HYDROGRAPH	AT	A11EB	126	4.6	29	7	5	0.19
3 COMBINED	AT	CA11EB	1040	4.83	281	73	53	1.64
HYDROGRAPH	AT	41	126	4.13	10	3	2	0.05
ROUTED TO		B41	96	4.23	10	3	2	0.05
HYDROGRAPH	AT	42	180	4.13	17	4	3	0.08
ROUTED TO		B42	136	4.23	17	4	3	0.08
2 COMBINED	AT	C41	232	4.23	27	7	5	0.13
ROUTED TO		RC41	212	4.63	27	7	5	0.13
HYDROGRAPH	AT	A11F	368	4.4	54	14	10	0.33
2 COMBINED	AT	CA11F	517	4.53	81	20	15	0.46
2 COMBINED	AT	CA11E	1279	4.8	343	89	64	2.11
ROUTED TO		RA11E	1270	4.9	342	89	64	2.11
HYDROGRAPH	AT	A09U	324	4.17	33	8	6	0.17
DIVERSION	TO	A09UI	259	4.17	26	7	5	0.17
HYDROGRAPH	AT	DA09U	65	4.17	7	2	1	0.17
ROUTED TO		RA09UW	58	4.47	7	2	1	0.17
HYDROGRAPH	AT	A09T	210	4.33	27	7	5	0.18
2 COMBINED	AT	CA09T	261	4.37	34	8	6	0.36
DIVERSION	TO	A09TI	51	4.37	2	1	0	0.36
HYDROGRAPH	AT	DA09T	210	4.27	32	8	6	0.36
ROUTED TO		RA09TW	210	4.5	32	8	6	0.36
HYDROGRAPH	AT	A11A	452	4.33	69	17	13	0.3
DIVERSION	TO	DA11A	315	4.1	16	4	3	0.3
HYDROGRAPH	AT	DA11AQ	452	4.33	54	14	10	0.3
3 COMBINED	AT	CX23	1469	4.87	409	106	77	2.76
ROUTED TO		RX23	1442	5.03	408	106	77	2.76
HYDROGRAPH	AT	S1	124	4.4	21	5	4	0.12
HYDROGRAPH	AT	P2	111	4.1	11	3	2	0.05
DIVERSION	TO	RB2	111	4.1	10	2	2	0.05

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	RT2	18	4.57	1	0	0	0.05
3 COMBINED	AT	CS1	1466	5.03	419	110	79	2.93
ROUTED TO		RS1	1466	5.07	419	110	79	2.93
HYDROGRAPH	AT	S2	31	4.07	2	0	0	0.01
HYDROGRAPH	AT	S3	18	4.03	1	0	0	0.01
3 COMBINED	AT	CS2	1465	5.07	420	110	79	2.95
ROUTED TO		RS2	1462	5.1	420	110	79	2.95
HYDROGRAPH	AT	P3	85	4.17	11	3	2	0.05
DIVERSION	TO	RB3	85	4.17	11	3	2	0.05
HYDROGRAPH	AT	RT3	9	5.17	1	0	0	0.05
2 COMBINED	AT	CP3	1462	5.1	420	110	79	3.01
HYDROGRAPH	AT	P4b	45	4.07	4	1	1	0.02
DIVERSION	TO	RB4b	12	3.8	1	0	0	0.02
HYDROGRAPH	AT	RT4b	45	4.07	3	1	1	0.02
HYDROGRAPH	AT	S4	16	4.23	2	1	0	0.01
HYDROGRAPH	AT	P1	42	4.2	5	1	1	0.03
DIVERSION	TO	DB1	33	4.07	1	0	0	0.03
HYDROGRAPH	AT	DT1	42	4.2	4	1	1	0.03
2 COMBINED	AT	CP1	57	4.2	6	2	1	0.04
HYDROGRAPH	AT	HV2	7	5.2	5	1	1	0.03
ROUTED TO		RHV2	7	5.27	5	1	1	0.03
DIVERSION	TO	DBHV2	7	5.27	1	0	0	0.03
HYDROGRAPH	AT	DTHV2	7	5.5	4	1	1	0.03
HYDROGRAPH	AT	P4a	51	4.2	8	2	1	0.04
DIVERSION	TO	DB4a	30	4	1	0	0	0.04
HYDROGRAPH	AT	DT4a	51	4.2	6	2	1	0.04
5 COMBINED	AT	SOUTH	1467	5.1	432	114	82	3.14
HYDROGRAPH	AT	N11O	78	4.3	8	2	1	0.05
DIVERSION	TO	N11OI	70	4.3	7	2	1	0.05
HYDROGRAPH	AT	DN11O	8	4.3	1	0	0	0.05
ROUTED TO		RN11OW	5	5.2	1	0	0	0.05
HYDROGRAPH	AT	DRA09T	51	4.37	2	1	0	0.36
ROUTED TO		RA09TS	11	5.93	2	1	0	0.36
HYDROGRAPH	AT	A09R	104	4.57	20	5	4	0.14
3 COMBINED	AT	CA09R	104	4.57	23	6	4	0.2
DIVERSION	TO	A09RI	104	4.57	23	6	4	0.2
HYDROGRAPH	AT	DA09R	1	5.23	0	0	0	0.2
ROUTED TO		RA09RW	1	7.17	0	0	0	0.2
HYDROGRAPH	AT	A09S	116	4.2	21	5	4	0.07
DIVERSION	TO	DA09S	116	4.2	14	4	3	0.07

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DA09SQ	69	4.6	7	2	1	0.07
2 COMBINED	AT	CA09S	69	4.6	7	2	1	0.27
ROUTED TO		RA09SW	61	4.77	7	2	1	0.27
HYDROGRAPH	AT	A09QA	112	4.3	13	3	2	0.09
2 COMBINED	AT	CA09QA	111	4.3	20	5	4	0.36
DIVERSION	TO	A09QAI	111	4.3	19	5	4	0.36
HYDROGRAPH	AT	DA09QA	1	5.97	0	0	0	0.36
ROUTED TO		RA09QW	1	6.1	0	0	0	0.36
HYDROGRAPH	AT	A99YA	157	4.23	16	4	3	0.1
2 COMBINED	AT	CA99YA	157	4.23	17	4	3	0.46
ROUTED TO		RA99YA	152	4.3	17	4	3	0.46
HYDROGRAPH	AT	A99YB	205	4.3	23	6	4	0.17
3 COMBINED	AT	CA99YB	1463	5.07	452	119	85	3.77
3 COMBINED	AT	AFR1	1620	5.03	538	141	101	4.56
HYDROGRAPH	AT	BA09UI	259	4.17	26	7	5	0.17
ROUTED TO		RA09US	237	4.37	26	7	5	0.17
HYDROGRAPH	AT	N11NB	159	4.37	24	6	4	0.14
2 COMBINED	AT	CN11NB	396	4.37	50	13	9	0.14
ROUTED TO		RN11NW	375	4.63	50	13	9	0.14
HYDROGRAPH	AT	BN11OI	70	4.3	7	2	1	0.05
ROUTED TO		RN11OS	57	4.73	7	2	1	0.05
HYDROGRAPH	AT	N11M	137	4.27	14	3	2	0.1
3 COMBINED	AT	CN11M	455	4.67	71	18	13	0.24
DIVERSION	TO	N11MI	114	4.67	18	4	3	0.24
HYDROGRAPH	AT	DN11M	341	4.67	53	13	10	0.24
ROUTED TO		RN11MS	319	4.9	53	13	10	0.24
HYDROGRAPH	AT	N11J	214	4.37	41	10	7	0.24
DIVERSION	TO	LN11JD	80	4.03	4	1	1	0.24
HYDROGRAPH	AT	LN11J	214	4.37	38	9	7	0.24
2 COMBINED	AT	CN11J	448	4.87	91	23	16	0.48
DIVERSION	TO	N11JI	448	4.87	91	23	16	0.48
HYDROGRAPH	AT	DN11J	0	0	0	0	0	0.48
ROUTED TO		RN11JW	0	0	0	0	0	0.48
HYDROGRAPH	AT	DRN11M	114	4.67	18	4	3	0.24
ROUTED TO		RN11MW	100	5.17	18	4	3	0.24
2 COMBINED	AT	CX4	100	5.17	18	4	3	0.48
ROUTED TO		RX4	96	5.37	18	4	3	0.48
HYDROGRAPH	AT	A09O	119	4.7	31	8	6	0.19
ROUTED TO		SA09O	45	5.73	28	8	6	0.19
HYDROGRAPH	AT	BA09RI	104	4.57	23	6	4	0.2

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RA09RS	100	4.9	23	6	4	0.2
3 COMBINED	AT	CA09O	198	5.33	65	17	12	0.68
DIVERSION	TO	A09OI	198	5.33	65	17	12	0.68
HYDROGRAPH	AT	DA09O	0	0	0	0	0	0.68
ROUTED TO		RA09OW	0	0	0	0	0	0.68
HYDROGRAPH	AT	A09P	184	4.47	31	8	6	0.19
ROUTED TO		SA09P	54	5.23	30	8	6	0.19
2 COMBINED	AT	CA09P	52	5.23	28	7	5	0.87
ROUTED TO		RA09P	52	5.27	28	7	5	0.87
HYDROGRAPH	AT	BA09QA	111	4.3	19	5	4	0.36
ROUTED TO		RA09QB	104	4.53	19	5	4	0.36
HYDROGRAPH	AT	A09QB	163	4.27	23	6	4	0.14
3 COMBINED	AT	CA09Q	234	4.5	66	17	12	1.01
DIVERSION	TO	A09QI	234	4.5	66	17	12	1.01
HYDROGRAPH	AT	DA09Q	0	0	0	0	0	1.01
ROUTED TO		RA09QW	0	0	0	0	0	1.01
HYDROGRAPH	AT	A10A	266	4.3	32	8	6	0.19
2 COMBINED	AT	CA10A	219	4.3	29	7	5	1.2
ROUTED TO		RA10A	217	4.37	29	7	5	1.2
HYDROGRAPH	AT	A99X	507	4.2	57	14	10	0.26
2 COMBINED	AT	CA99X	562	4.23	82	21	15	1.46
2 COMBINED	AT	AFR2	1652	4.63	584	154	111	6.02
HYDROGRAPH	AT	BA09OI	198	5.33	65	17	12	0.68
ROUTED TO		RA09OS	173	6.07	65	17	12	0.68
HYDROGRAPH	AT	A09K	382	4.57	60	15	11	0.41
DIVERSION	TO	A09KI	279	4.57	44	11	8	0.41
HYDROGRAPH	AT	DA09K	103	4.57	16	4	3	0.41
2 COMBINED	AT	CX7	197	5.4	83	22	16	0.41
ROUTED TO		RX7S	196	5.57	83	22	16	0.41
HYDROGRAPH	AT	N11NA	60	4.07	4	1	1	0.02
ROUTED TO		RN11NA	46	4.43	4	1	1	0.02
HYDROGRAPH	AT	N11NC	250	4.23	27	7	5	0.17
2 COMBINED	AT	CN11NC	265	4.27	31	8	6	0.19
DIVERSION	TO	N11NP	149	4.03	24	6	4	0.19
HYDROGRAPH	AT	DN11NC	116	4.27	7	2	1	0.19
ROUTED TO		RN11NC	111	4.37	7	2	1	0.19
HYDROGRAPH	AT	N11ND	62	4.23	10	2	2	0.05
HYDROGRAPH	AT	N11K	152	4.33	28	7	5	0.17
3 COMBINED	AT	CN11K	318	4.37	44	11	8	0.41
DIVERSION	TO	N11KP	55	3.97	19	5	4	0.41

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DN11KS	263	4.37	24	6	4	0.41
ROUTED TO		RN11K	246	4.63	24	6	4	0.41
DIVERSION	TO	X5I	122	4.63	7	2	1	0.41
HYDROGRAPH	AT	DX5	124	4.63	17	4	3	0.41
ROUTED TO		RX5W	118	4.93	17	4	3	0.41
HYDROGRAPH	AT	N11H	410	4.57	61	15	11	0.42
2 COMBINED	AT	CN11H	364	4.57	72	18	13	0.83
ROUTED TO		RN11H	351	4.8	72	18	13	0.83
HYDROGRAPH	AT	BN11JI	448	4.87	91	23	16	0.48
ROUTED TO		RN11JS	423	5.23	90	23	16	0.48
HYDROGRAPH	AT	N11G	526	4.57	73	18	13	0.52
3 COMBINED	AT	CN11G	865	4.8	209	52	38	1.36
ROUTED TO		RN11G	855	4.9	209	52	38	1.36
HYDROGRAPH	AT	N11DA	295	4.3	54	14	10	0.26
DIVERSION	TO	LDAOUT	277	4.23	16	4	3	0.26
HYDROGRAPH	AT	LN11DA	295	4.3	38	10	7	0.26
ROUTED TO		SN11DA	121	5	38	10	7	0.26
DIVERSION	TO	D11DAS	21	5	8	2	1	0.26
HYDROGRAPH	AT	N11DAW	100	5	30	8	5	0.26
ROUTED TO		RN11DA	100	5.2	30	8	5	0.26
HYDROGRAPH	AT	N11FB	114	4.33	25	6	5	0.12
DIVERSION	TO	LN1FBD	114	4.33	21	5	4	0.12
HYDROGRAPH	AT	LN11FB	29	5.57	4	1	1	0.12
2 COMBINED	AT	CN11FB	124	5.57	34	8	6	0.38
2 COMBINED	AT	C98RGL	894	4.93	227	57	41	1.73
ROUTED TO		RN11FB	889	5	227	57	41	1.73
HYDROGRAPH	AT	DRA09K	279	4.57	44	11	8	0.41
ROUTED TO		RA09KS	271	4.73	44	11	8	0.41
HYDROGRAPH	AT	N11FA	194	4.3	38	10	7	0.18
DIVERSION	TO	LN1FAD	194	4.3	16	4	3	0.18
HYDROGRAPH	AT	LN11FA	185	4.43	23	6	4	0.18
HYDROGRAPH	AT	A09GA	200	4.07	22	6	4	0.07
DIVERSION	TO	L09GAD	198	4.07	12	3	2	0.07
HYDROGRAPH	AT	LA09GA	193	4.1	10	3	2	0.07
4 COMBINED	AT	CN11FA	1135	4.93	286	72	52	1.99
ROUTED TO		RN11FA	1132	4.97	286	72	52	1.99
HYDROGRAPH	AT	A09GB	27	4.67	10	3	2	0.05
DIVERSION	TO	L09GBD	27	4.67	6	1	1	0.05
HYDROGRAPH	AT	LA09GB	20	5.4	5	1	1	0.05
2 COMBINED	AT	CA09G	1127	4.97	289	73	52	2.04

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
DIVERSION	TO	A09GI	150	4.73	50	13	9	2.04
HYDROGRAPH	AT	DA09G	976	4.97	239	60	43	2.04
ROUTED TO		RA09GW	969	5.03	239	60	43	2.04
2 COMBINED	AT	CX8	1006	5.07	294	75	54	2.45
ROUTED TO		RX8W	998	5.2	293	75	54	2.45
HYDROGRAPH	AT	A09H	199	4.43	50	13	9	0.24
DIVERSION	TO	LA09HD	199	4.43	25	6	5	0.24
HYDROGRAPH	AT	LA09H	166	4.8	25	6	5	0.24
2 COMBINED	AT	CA09H1	1074	5.17	307	78	56	2.69
HYDROGRAPH	AT	A09J	166	4.33	34	9	6	0.17
DIVERSION	TO	LA09JD	166	4.33	16	4	3	0.17
HYDROGRAPH	AT	LA09J	151	4.53	19	5	3	0.17
DIVERSION	TO	A09JI	0	0	0	0	0	0.17
HYDROGRAPH	AT	DA09J	151	4.53	19	5	3	0.17
ROUTED TO		RA09JS	130	4.87	19	5	3	0.17
2 COMBINED	AT	CA09H	1137	5.17	318	81	58	2.85
ROUTED TO		RA09H	1135	5.2	318	81	58	2.85
HYDROGRAPH	AT	BA09QI	234	4.5	66	17	12	1.01
ROUTED TO		RA09QS	230	4.63	66	17	12	1.01
HYDROGRAPH	AT	A09M	251	4.47	47	12	9	0.25
DIVERSION	TO	LA09MD	230	4.33	14	3	3	0.25
HYDROGRAPH	AT	LA09M	251	4.47	34	8	6	0.25
2 COMBINED	AT	CA09M	500	4.57	106	27	19	0.25
ROUTED TO		RA09M	497	4.6	106	27	19	0.25
HYDROGRAPH	AT	A09N	138	4.27	24	6	4	0.11
2 COMBINED	AT	CA09N	598	4.57	128	33	24	0.36
ROUTED TO		LA09N	415	4.93	123	33	24	0.36
ROUTED TO		RA09N	414	5.03	123	33	24	0.36
HYDROGRAPH	AT	DRA09J	0	0	0	0	0	0.17
ROUTED TO		RA09JW	0	0	0	0	0	0.17
HYDROGRAPH	AT	A09L	142	4.33	29	7	5	0.14
3 COMBINED	AT	CA09L	480	5.03	149	40	29	0.5
ROUTED TO		LA09L	478	5.07	148	40	29	0.5
ROUTED TO		RA09LS	475	5.1	148	40	29	0.5
HYDROGRAPH	AT	A09IH	103	4.27	19	5	3	0.09
2 COMBINED	AT	CA09IH	490	5.1	162	44	32	0.59
ROUTED TO		LA09IH	468	5.2	159	44	32	0.59
HYDROGRAPH	AT	A09I	134	4.37	30	8	5	0.13
DIVERSION	TO	LA09ID	134	4.37	11	3	2	0.13
HYDROGRAPH	AT	LA09I	131	4.47	19	5	3	0.13

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
3 COMBINED	AT	CX10	1328	5.4	448	118	85	3.57
ROUTED TO		RX10	1321	5.5	447	118	85	3.57
HYDROGRAPH	AT	A99V	276	4.4	35	9	6	0.21
2 COMBINED	AT	CA99V	1330	5.47	464	124	89	3.77
HYDROGRAPH	AT	A10	347	4.23	33	8	6	0.21
HYDROGRAPH	AT	A99W	237	4.57	46	12	8	0.22
DIVERSION	TO	LA99WD	211	4.37	14	3	2	0.22
HYDROGRAPH	AT	LA99W	237	4.57	33	8	6	0.22
4 COMBINED	AT	AFR3	2352	5.27	969	258	186	10.22
HYDROGRAPH	AT	DRA09G	150	4.73	50	13	9	2.04
ROUTED TO		RA09GS	150	5.63	50	13	9	2.04
HYDROGRAPH	AT	A09F	426	4.53	84	21	15	0.37
DIVERSION	TO	LA09FD	392	4.37	27	7	5	0.37
HYDROGRAPH	AT	LA09F	426	4.53	57	14	10	0.37
2 COMBINED	AT	CA09F	426	4.53	110	28	20	0.37
DIVERSION	TO	A09FI	65	4.53	12	3	2	0.37
HYDROGRAPH	AT	DA09F	360	4.53	98	25	18	0.37
ROUTED TO		RA09FW	363	4.63	98	25	18	0.37
HYDROGRAPH	AT	A09E	148	4.33	33	8	6	0.15
DIVERSION	TO	LA09ED	148	4.33	17	4	3	0.15
HYDROGRAPH	AT	LA09E	123	4.67	17	4	3	0.15
2 COMBINED	AT	CA09E	478	4.67	115	29	21	0.51
ROUTED TO		RA09E	443	4.83	114	29	21	0.51
HYDROGRAPH	AT	A09D	577	4.13	62	15	11	0.25
DIVERSION	TO	LA09DD	577	4.13	31	8	6	0.25
HYDROGRAPH	AT	LA09D	553	4.2	31	8	6	0.25
2 COMBINED	AT	CA09C*	458	4.23	141	36	26	0.77
ROUTED TO		RA09C*	452	4.87	141	36	26	0.77
HYDROGRAPH	AT	A09C	78	4.4	11	3	2	0.07
2 COMBINED	AT	CA09C	480	4.27	150	38	27	0.84
ROUTED TO		RA09C	469	4.97	150	38	27	0.84
HYDROGRAPH	AT	A09B	115	4.07	12	3	2	0.04
ROUTED TO		RA09B	91	4.5	11	3	2	0.04
HYDROGRAPH	AT	A09A	72	4.57	18	4	3	0.08
3 COMBINED	AT	CA09A	556	4.4	174	45	32	0.96
DIVERSION	TO	A09AI	416	4.4	86	22	16	0.96
HYDROGRAPH	AT	DA09AO	140	4.4	87	23	17	0.96
ROUTED TO		RA09AW	140	6.2	85	23	17	0.96
HYDROGRAPH	AT	A99T	83	4.03	6	1	1	0.03
DIVERSION	TO	LA99TD	16	3.73	1	0	0	0.03

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	LA99T	83	4.03	5	1	1	0.03
ROUTED TO		RA99T	70	4.17	5	1	1	0.03
HYDROGRAPH	AT	A09	249	4.3	30	8	5	0.18
3 COMBINED	AT	CA09	241	4.27	110	31	22	1.17
HYDROGRAPH	AT	A99U	82	4.3	13	3	2	0.07
3 COMBINED	AT	AFR4	2344	5.3	1056	283	204	11.46
HYDROGRAPH	AT	A07G	400	4.27	66	17	12	0.26
DIVERSION	TO	LA07GD	400	4.23	26	7	5	0.26
HYDROGRAPH	AT	LA07G	395	4.3	40	10	7	0.26
ROUTED TO		RA07G	352	4.53	40	10	7	0.26
HYDROGRAPH	AT	A07F	179	4.7	48	12	9	0.23
ROUTED TO		RA07F	178	4.8	48	12	9	0.23
HYDROGRAPH	AT	A07E	413	4.2	63	16	11	0.23
3 COMBINED	AT	CA07E	726	4.53	147	37	27	0.72
ROUTED TO		RA07E	716	4.6	147	37	27	0.72
HYDROGRAPH	AT	A07C	187	4.43	29	7	5	0.17
2 COMBINED	AT	CA07C	841	4.6	173	44	32	0.89
ROUTED TO		RA07C	833	4.63	173	44	32	0.89
HYDROGRAPH	AT	A07H	217	4.13	23	6	4	0.09
ROUTED TO		RA07H	202	4.27	23	6	4	0.09
HYDROGRAPH	AT	DA09AI	416	4.4	86	22	16	0.96
ROUTED TO		RA09AI	378	5.17	86	22	16	0.96
HYDROGRAPH	AT	A08B	122	4.37	20	5	4	0.1
2 COMBINED	AT	CA08B	560	4.6	115	29	21	0.1
ROUTED TO		RA08B	480	4.9	115	29	21	0.1
HYDROGRAPH	AT	A07D	117	5.03	39	10	7	0.23
4 COMBINED	AT	CA07D	1030	4.87	323	82	59	1.31
ROUTED TO		RA07D	1021	5.03	323	82	59	1.31
HYDROGRAPH	AT	A99S	47	4.63	10	2	2	0.08
HYDROGRAPH	AT	A08A	70	4.8	22	6	4	0.14
ROUTED TO		RA08A	69	4.97	22	6	4	0.14
HYDROGRAPH	AT	A99R	57	4.2	6	1	1	0.04
ROUTED TO		RA99R	51	4.47	6	1	1	0.04
HYDROGRAPH	AT	A08	185	4.07	11	3	2	0.08
5 COMBINED	AT	CA08	1076	4.93	354	91	65	1.64
2 COMBINED	AT	AFR5	2926	5.27	1294	345	249	13.11
HYDROGRAPH	AT	N11P5	62	4.1	4	1	1	0.03
ROUTED TO		R11P5S	54	4.27	4	1	1	0.03
HYDROGRAPH	AT	N11P1	83	4.27	9	2	2	0.06
2 COMBINED	AT	CN11P1	138	4.27	13	3	2	0.09

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		R11P1E	133	4.33	13	3	2	0.09
HYDROGRAPH	AT	N11P6	401	4.13	34	9	6	0.16
ROUTED TO		R11P6S	378	4.2	34	9	6	0.16
HYDROGRAPH	AT	N11P9	99	4.13	6	1	1	0.04
2 COMBINED	AT	CN11P9	459	4.17	40	10	7	0.2
ROUTED TO		R11P9S	442	4.23	40	10	7	0.2
HYDROGRAPH	AT	N11P2	122	4.2	8	2	2	0.06
2 COMBINED	AT	CN11P2	557	4.23	48	12	9	0.26
2 COMBINED	AT	LEJOS	659	4.23	61	15	11	0.36
DIVERSION	TO	VPRET	416	4.1	13	3	2	0.36
HYDROGRAPH	AT	VPDIV	659	4.23	48	12	9	0.36
HYDROGRAPH	AT	N11P4	67	4.23	8	2	1	0.05
ROUTED TO		R11P4S	65	4.33	8	2	1	0.05
DIVERSION	TO	N11P4E	33	4.33	4	1	1	0.05
HYDROGRAPH	AT	DN11P4	33	4.33	4	1	1	0.05
2 COMBINED	AT	SDLEJ1	689	4.27	52	13	9	0.41
HYDROGRAPH	AT	N11P8	112	4.1	8	2	1	0.04
ROUTED TO		R11P8S	105	4.17	8	2	1	0.04
HYDROGRAPH	AT	N11P7	167	4.07	8	2	2	0.06
2 COMBINED	AT	CN11P7	259	4.1	16	4	3	0.1
DIVERSION	TO	N11P7E	52	4.1	3	1	1	0.1
HYDROGRAPH	AT	DN11P7	207	4.1	13	3	2	0.1
ROUTED TO		R11P7S	187	4.17	13	3	2	0.1
HYDROGRAPH	AT	RDP4E	33	4.33	4	1	1	0.05
2 COMBINED	AT	SUMP7S	213	4.2	17	4	3	0.1
2 COMBINED	AT	SDLEJ2	887	4.23	68	17	12	0.51
ROUTED TO		RSDL2	877	4.23	68	17	12	0.51
HYDROGRAPH	AT	BN11NP	149	4.03	24	6	4	0.19
ROUTED TO		RN11NP	149	4.1	24	6	4	0.19
HYDROGRAPH	AT	N11L5A	62	4.2	8	2	1	0.05
2 COMBINED	AT	C89	211	4.2	32	8	6	0.05
DIVERSION	TO	ED89	0	0	0	0	0	0.05
HYDROGRAPH	AT	D89	211	4.2	32	8	6	0.05
ROUTED TO		R89E	209	4.23	32	8	6	0.05
HYDROGRAPH	AT	N11L3A	44	4.13	5	1	1	0.03
2 COMBINED	AT	C87	249	4.2	37	9	7	0.07
DIVERSION	TO	SOL	3	4.2	0	0	0	0.07
HYDROGRAPH	AT	D87	246	4.17	37	9	7	0.07
2 COMBINED	AT	C87BA	1090	4.23	104	26	19	0.58
DIVERSION	TO	87BAS	1068	4.23	93	23	17	0.58

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	87BP	22	3.8	11	3	2	0.58
ROUTED TO		R87BP	23	3.83	11	3	2	0.58
HYDROGRAPH	AT	87	39	4.23	5	1	1	0.03
HYDROGRAPH	AT	R87B	1068	4.23	93	23	17	0.58
2 COMBINED	AT	C87B	1150	4.23	100	25	18	0.03
ROUTED TO		87BA	133	4.97	91	25	18	0.03
2 COMBINED	AT	87BOUT	153	4.97	97	27	19	0.61
ROUTED TO		R87BA	153	5	97	27	19	0.61
DIVERSION	TO	87OUT	153	5	97	27	19	0.61
HYDROGRAPH	AT	D87BA	0	0	0	0	0	0.61
HYDROGRAPH	AT	LACAI	49	4.17	6	1	1	0.04
ROUTED TO		RTCAI	48	4.2	6	1	1	0.04
DIVERSION	TO	LECHE	20	4	4	1	1	0.04
HYDROGRAPH	AT	DNLECH	28	4.2	2	0	0	0.04
2 COMBINED	AT	SDLEJ3	25	4.2	1	0	0	0.64
HYDROGRAPH	AT	SUMMIT	36	4.17	4	1	1	0.03
HYDROGRAPH	AT	RDLECH	20	4	4	1	1	0.04
2 COMBINED	AT	LEJCHL	56	4.17	8	2	1	0.03
HYDROGRAPH	AT	RDP7E	52	4.1	3	1	1	0.1
ROUTED TO		R11P7E	45	4.27	3	1	1	0.1
DIVERSION	TO	EAST83	18	4.27	2	1	0	0.1
HYDROGRAPH	AT	D2-18	27	4.27	1	0	0	0.1
2 COMBINED	AT	83CL	79	4.27	9	2	2	0.13
DIVERSION	TO	EAGLE	60	4.17	9	2	2	0.13
HYDROGRAPH	AT	24PIPE	19	4.27	1	0	0	0.13
2 COMBINED	AT	SDLEJ4	36	4.23	2	0	0	0.77
ROUTED TO		RT83CL	31	4.33	2	0	0	0.77
HYDROGRAPH	AT	N11P3	38	4.3	7	2	1	0.04
2 COMBINED	AT	83SD	64	4.33	9	2	2	0.81
ROUTED TO		R83SD	64	4.37	9	2	2	0.81
HYDROGRAPH	AT	BN11KP	55	3.97	19	5	4	0.41
ROUTED TO		R91	55	4.27	19	5	4	0.41
HYDROGRAPH	AT	N11L5	67	4.17	8	2	1	0.04
HYDROGRAPH	AT	RED89	0	0	0	0	0	0.05
ROUTED TO		R89S	0	0	0	0	0	0.05
HYDROGRAPH	AT	N11L2	18	4.13	2	0	0	0.01
4 COMBINED	AT	CN11L5	139	4.17	29	7	5	0.05
DIVERSION	TO	DIVS89	55	4.17	3	1	1	0.05
HYDROGRAPH	AT	D11L5	84	4.13	26	7	5	0.05
ROUTED TO		RN11L5	84	4.23	26	6	5	0.05

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Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	N11L3	63	4.17	7	2	1	0.04
HYDROGRAPH	AT	RSOL	3	4.2	0	0	0	0.07
ROUTED TO		RTSOL	1	4.23	0	0	0	0.07
3 COMBINED	AT	PPSD1	147	4.17	33	8	6	0.09
DIVERSION	TO	DIVS87	25	4.17	1	0	0	0.09
HYDROGRAPH	AT	PPDIV	122	4.03	32	8	6	0.09
HYDROGRAPH	AT	N11L4	11	4.27	2	0	0	0.01
HYDROGRAPH	AT	N21I1	98	4.23	15	4	3	0.08
HYDROGRAPH	AT	87OUT	153	5	97	27	19	0.61
4 COMBINED	AT	PPSD	345	4.4	144	39	28	0.18
DIVERSION	TO	DIVS86	38	4.4	2	0	0	0.18
HYDROGRAPH	AT	DIVS3	307	4.2	143	39	28	0.18
ROUTED TO		RPPSD	307	4.67	143	39	28	0.18
HYDROGRAPH	AT	N21I2	50	4.3	10	3	2	0.06
HYDROGRAPH	AT	N21I4	34	4.2	5	1	1	0.03
4 COMBINED	AT	TEMP0	425	4.37	157	42	30	1.08
HYDROGRAPH	AT	N21Z	170	4.27	22	6	4	0.11
DIVERSION	TO	N21ZI	142	4.13	6	1	1	0.11
HYDROGRAPH	AT	LN21Z	170	4.27	17	4	3	0.11
DIVERSION	TO	DN21ZI	0	4.27	0	0	0	0.11
HYDROGRAPH	AT	DN21ZO	170	4.27	17	4	3	0.11
DIVERSION	TO	N21ZI*	85	4.27	8	2	2	0.11
HYDROGRAPH	AT	DN21Z*	85	4.27	8	2	2	0.11
ROUTED TO		RN21ZW	82	4.43	8	2	2	0.11
DIVERSION	TO	D1/2ST	12	4.3	3	1	1	0.11
HYDROGRAPH	AT	1/2ST	70	4.43	5	1	1	0.11
HYDROGRAPH	AT	R1/2ST	12	4.3	3	1	1	0.11
HYDROGRAPH	AT	18PIPE	18	4.27	2	1	0	0.1
HYDROGRAPH	AT	CLDIV	60	4.17	9	2	2	0.13
2 COMBINED	AT	CPIPE	78	4.27	11	3	2	0.23
ROUTED TO		RCPIPE	78	4.4	11	3	2	0.23
HYDROGRAPH	AT	N21I3	129	4.27	16	4	3	0.09
3 COMBINED	AT	CN21I3	216	4.3	30	8	5	0.32
DIVERSION	TO	N21I3O	216	4.3	28	7	5	0.32
HYDROGRAPH	AT	R21I3	32	5.37	2	1	0	0.32
2 COMBINED	AT	PPK_E	70	4.43	8	2	1	0.43
DIVERSION	TO	PPKEW3	70	4.43	8	2	1	0.43
HYDROGRAPH	AT	PPKEW2	0	0	0	0	0	0.43
2 COMBINED	AT	US_BSN	425	4.37	157	42	30	1.51
DIVERSION	TO	PPBAS	10	3.47	10	4	3	1.51

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Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	PPBP	401	4.4	143	37	26	1.51
ROUTED TO		R83BSN	29	9.63	28	24	19	1.51
HYDROGRAPH	AT	RPPB	10	3.47	10	4	3	1.51
2 COMBINED	AT	JCT1	39	9.63	37	27	22	1.51
HYDROGRAPH	AT	RESD	70	4.43	8	2	1	0.43
2 COMBINED	AT	JCT	75	4.5	41	28	23	1.51
ROUTED TO		OUTLET	75	4.6	41	28	23	1.51
HYDROGRAPH	AT	N21F	154	4.33	33	8	6	0.13
2 COMBINED	AT	CN21F	200	4.57	68	36	29	1.63
HYDROGRAPH	AT	N21G	92	4.23	17	4	3	0.06
HYDROGRAPH	AT	DR21Z*	85	4.27	8	2	2	0.11
ROUTED TO		RN21ZS	73	4.77	8	2	2	0.11
2 COMBINED	AT	CN21G	126	4.7	25	6	5	0.06
DIVERSION	TO	N21GI	37	4.7	2	0	0	0.06
HYDROGRAPH	AT	DN21GO	89	4.7	23	6	4	0.06
ROUTED TO		RN21GS	89	5.07	23	6	4	0.06
HYDROGRAPH	AT	N21E	100	4.23	18	4	3	0.06
3 COMBINED	AT	CN21E	339	4.53	107	45	36	1.76
ROUTED TO		RN21E	326	4.77	107	45	36	1.76
HYDROGRAPH	AT	N21D	78	4.23	14	4	3	0.05
DIVERSION	TO	LN21DD	78	4.23	8	2	1	0.05
HYDROGRAPH	AT	LN21D	61	4.53	6	2	1	0.05
2 COMBINED	AT	CN21D	368	4.73	113	47	37	1.81
DIVERSION	TO	N21DI	321	4.73	96	40	32	1.81
HYDROGRAPH	AT	DN21D	47	4.73	16	6	5	1.81
ROUTED TO		RN21DE	44	5.4	16	6	5	1.81
HYDROGRAPH	AT	20	86	4.13	10	2	2	0.04
ROUTED TO		R20	84	4.17	10	2	2	0.04
HYDROGRAPH	AT	19	100	4.1	10	3	2	0.05
2 COMBINED	AT	HC6	180	4.13	20	5	4	0.09
ROUTED TO		B19	92	4.43	14	5	4	0.09
ROUTED TO		RHC6	91	4.43	14	5	4	0.09
HYDROGRAPH	AT	21	56	4.13	7	2	1	0.03
2 COMBINED	AT	HC7	122	4.4	20	6	5	0.11
ROUTED TO		RHC7	118	4.53	20	6	5	0.11
HYDROGRAPH	AT	33	74	4.13	9	2	2	0.04
ROUTED TO		B33	5	5.17	5	2	2	0.04
ROUTED TO		R33	5	5.8	5	2	2	0.04
HYDROGRAPH	AT	34	79	4.03	6	2	1	0.03
ROUTED TO		B34	5	4.5	4	2	1	0.03

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		R34	5	5	4	2	1	0.03
HYDROGRAPH	AT	35	43	4.27	9	2	2	0.04
4 COMBINED	AT	HC8A	159	4.53	36	12	9	0.23
HYDROGRAPH	AT	22	104	4.1	10	2	2	0.04
ROUTED TO		R22	99	4.13	10	2	2	0.04
HYDROGRAPH	AT	23	66	4.1	7	2	1	0.03
2 COMBINED	AT	HC8	163	4.13	17	4	3	0.07
ROUTED TO		B23	148	4.2	13	3	2	0.07
HYDROGRAPH	AT	25	24	4.13	4	1	1	0.01
3 COMBINED	AT	HC9	268	4.23	52	16	12	0.31
ROUTED TO		RHC9	264	4.3	52	16	12	0.31
HYDROGRAPH	AT	27	81	4.1	9	2	2	0.04
HYDROGRAPH	AT	36	87	4.13	10	2	2	0.05
ROUTED TO		R36	86	4.17	10	2	2	0.05
HYDROGRAPH	AT	37w	9	4.27	2	0	0	0.01
4 COMBINED	AT	C37W	411	4.27	71	22	16	0.41
ROUTED TO		B37W	343	4.47	71	22	16	0.41
ROUTED TO		RB37W	340	4.57	71	22	16	0.41
HYDROGRAPH	AT	37e	18	4.13	2	1	0	0.01
HYDROGRAPH	AT	24	38	4.13	5	1	1	0.02
ROUTED TO		R24	38	4.13	5	1	1	0.02
HYDROGRAPH	AT	100	75	4.13	9	2	2	0.04
2 COMBINED	AT	HC100	112	4.13	13	3	2	0.06
ROUTED TO		R100	112	4.17	13	3	2	0.06
HYDROGRAPH	AT	28R	26	4.1	3	1	1	0.01
2 COMBINED	AT	HC28R	137	4.13	16	4	3	0.07
ROUTED TO		R28R	132	4.23	16	4	3	0.07
HYDROGRAPH	AT	26R	131	4.13	13	3	2	0.06
ROUTED TO		R26R	125	4.17	13	3	2	0.06
HYDROGRAPH	AT	29	73	4.1	8	2	1	0.03
2 COMBINED	AT	HC11	194	4.13	21	5	4	0.1
ROUTED TO		B29	139	4.33	16	5	4	0.1
HYDROGRAPH	AT	48	34	4.17	5	1	1	0.03
5 COMBINED	AT	HC12	563	4.4	107	32	24	0.61
HYDROGRAPH	AT	49	34	4.17	5	1	1	0.02
ROUTED TO		B49	4	5.17	0	0	0	0.02
2 COMBINED	AT	C-N24M	562	4.4	108	32	24	0.64
ROUTED TO		RB49	531	4.73	107	32	24	0.64
HYDROGRAPH	AT	N24V	81	4.17	7	2	1	0.05
ROUTED TO		RN24V	44	5.23	7	2	1	0.05

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions

Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	N24M	258	4.27	31	8	6	0.17
3 COMBINED	AT	CN24M	592	4.73	139	41	30	0.85
ROUTED TO		RN24M	554	5.17	139	41	30	0.85
HYDROGRAPH	AT	45	145	4.1	13	3	2	0.06
ROUTED TO		R45	139	4.17	13	3	2	0.06
HYDROGRAPH	AT	47	81	4.1	9	2	2	0.04
2 COMBINED	AT	HC14	215	4.13	22	6	4	0.1
ROUTED TO		RHC14	211	4.2	22	6	4	0.1
HYDROGRAPH	AT	50	47	4.13	6	2	1	0.03
ROUTED TO		R50	45	4.2	6	2	1	0.03
HYDROGRAPH	AT	51	18	4.13	3	1	0	0.01
3 COMBINED	AT	HC15	274	4.2	31	8	6	0.14
ROUTED TO		B51	206	4.37	27	7	5	0.14
HYDROGRAPH	AT	46	140	4.1	13	3	2	0.06
ROUTED TO		R46	129	4.2	13	3	2	0.06
HYDROGRAPH	AT	52	75	4.13	10	2	2	0.04
2 COMBINED	AT	HC16	202	4.17	23	6	4	0.1
HYDROGRAPH	AT	53R	141	4.13	15	4	3	0.07
ROUTED TO		R53	136	4.17	15	4	3	0.07
HYDROGRAPH	AT	54R	38	4.13	5	1	1	0.02
2 COMBINED	AT	HC17	173	4.17	20	5	4	0.09
2 COMBINED	AT	HC17A	374	4.17	43	11	8	0.19
ROUTED TO		B52	150	4.53	30	10	7	0.19
HYDROGRAPH	AT	56R	34	4.03	3	1	1	0.01
ROUTED TO		B56	15	4.23	2	0	0	0.01
3 COMBINED	AT	C-N24I	346	4.4	58	18	13	0.35
ROUTED TO		R-N24I	332	4.63	58	18	13	0.35
HYDROGRAPH	AT	55	137	4.13	15	4	3	0.05
ROUTED TO		R55	136	4.17	15	4	3	0.05
HYDROGRAPH	AT	57R	20	4.07	2	0	0	0.01
2 COMBINED	AT	HC18	153	4.13	17	4	3	0.06
ROUTED TO		B57R	133	4.23	13	3	2	0.06
ROUTED TO		RB57R	130	4.3	13	3	2	0.06
HYDROGRAPH	AT	N24I	195	4.7	41	10	7	0.3
HYDROGRAPH	AT	N24H	342	4.37	44	11	8	0.23
HYDROGRAPH	AT	N24N	140	4.33	24	6	4	0.13
ROUTED TO		RN24N	128	4.83	24	6	4	0.13
HYDROGRAPH	AT	N24J	72	4.63	16	4	3	0.12
2 COMBINED	AT	CN24J	193	4.8	40	10	7	0.25
ROUTED TO		RN24J	192	4.87	40	10	7	0.25

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	N24K	111	4.77	30	8	5	0.21
7 COMBINED	AT	CN24I	990	5.1	311	88	64	2.25
ROUTED TO		RN24I	984	5.2	311	88	64	2.25
HYDROGRAPH	AT	N21JA	151	4.2	15	4	3	0.08
ROUTED TO		RN21JS	135	4.4	15	4	3	0.08
HYDROGRAPH	AT	N21JB	231	4.27	27	7	5	0.17
2 COMBINED	AT	CN21J	351	4.33	42	11	8	0.25
ROUTED TO		RN21JE	321	4.67	42	11	8	0.25
2 COMBINED	AT	CN24G*	1110	4.87	342	96	70	2.5
ROUTED TO		RN24G*	1101	5	342	96	70	2.5
HYDROGRAPH	AT	N24G	330	4.63	64	16	12	0.43
DIVERSION	TO	LN24GD	16	3.83	1	0	0	0.43
HYDROGRAPH	AT	LN24G	330	4.63	63	16	11	0.43
2 COMBINED	AT	CN24G	1239	4.97	382	106	77	2.93
HYDROGRAPH	AT	DRN21Z	0	4.27	0	0	0	0.11
ROUTED TO		RN21ZE	0	6.63	0	0	0	0.11
2 COMBINED	AT	CN24G+	1239	4.97	382	106	77	2.93
ROUTED TO		RN24G	1234	5.03	382	106	77	2.93
HYDROGRAPH	AT	N24F	125	4.37	19	5	3	0.11
2 COMBINED	AT	CN24F	1261	5	394	110	80	3.03
HYDROGRAPH	AT	N24D	130	4.2	19	5	3	0.09
2 COMBINED	AT	CN24D	1280	5	407	113	82	3.12
ROUTED TO		LN24D	21	13.07	21	18	15	3.12
HYDROGRAPH	AT	N21H	50	4.17	6	2	1	0.03
HYDROGRAPH	AT	DRN21G	37	4.7	2	0	0	0.06
ROUTED TO		RN21GE	30	5	2	0	0	0.06
2 COMBINED	AT	CN21H	50	4.17	8	2	1	0.03
ROUTED TO		RN21H	37	5.1	8	2	1	0.03
HYDROGRAPH	AT	N24E	15	4.47	3	1	1	0.02
ROUTED TO		RN24E	14	4.7	3	1	1	0.02
3 COMBINED	AT	CN24D*	43	5.17	21	20	16	3.18
HYDROGRAPH	AT	N27	149	4.63	39	10	7	0.28
ROUTED TO		RN27	146	4.87	39	10	7	0.28
HYDROGRAPH	AT	N26	47	4.3	5	1	1	0.04
2 COMBINED	AT	CN26	161	4.83	44	11	8	0.32
ROUTED TO		RN26	156	5.1	44	11	8	0.32
HYDROGRAPH	AT	N25	142	4.7	29	7	5	0.24
2 COMBINED	AT	CN25	247	5.07	71	18	13	0.56
ROUTED TO		RN25	222	5.53	71	18	13	0.56
HYDROGRAPH	AT	N24	90	4.43	14	4	3	0.11

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
3 COMBINED	AT	CN24	223	5.3	100	46	36	3.85
ROUTED TO		RCN24	157	5.97	72	32	25	3.85
HYDROGRAPH	AT	N23	361	4.4	76	19	14	0.39
3 COMBINED	AT	CN23	253	4.57	132	47	37	6.05
ROUTED TO		RN23	244	5.2	132	47	37	6.05
HYDROGRAPH	AT	BN21DI	321	4.73	96	40	32	1.81
ROUTED TO		RN21DS	302	5.27	95	40	32	1.81
HYDROGRAPH	AT	N21C	430	4.4	100	25	18	0.39
DIVERSION	TO	LN21CD	37	3.67	5	1	1	0.39
HYDROGRAPH	AT	LN21C	430	4.4	97	24	17	0.39
2 COMBINED	AT	CN21C	564	5.1	193	67	52	0.39
HYDROGRAPH	AT	N21	583	4.67	147	37	27	0.62
3 COMBINED	AT	CN21	1010	5.03	415	134	103	7.06
ROUTED TO		RN21	1000	5.37	415	134	102	7.06
DIVERSION	TO	N20DI	1000	5.37	415	134	102	7.06
HYDROGRAPH	AT	N21-20	0	0	0	0	0	7.06
HYDROGRAPH	AT	N11DB	320	4.3	54	14	10	0.25
HYDROGRAPH	AT	B11DAS	21	5	8	2	1	0.26
ROUTED TO		R11DAS	21	5.53	8	2	1	0.26
2 COMBINED	AT	C11DAB	320	4.3	61	16	11	0.25
DIVERSION	TO	LNBOUT	320	4.3	29	7	5	0.25
HYDROGRAPH	AT	LN11DB	262	4.53	33	8	6	0.25
DIVERSION	TO	N11DI	236	4.53	30	7	5	0.25
HYDROGRAPH	AT	DN11D	26	4.53	3	1	1	0.25
ROUTED TO		RN11DE	19	5	3	1	1	0.25
HYDROGRAPH	AT	DRX5	122	4.63	7	2	1	0.41
ROUTED TO		RX5S	37	4.93	7	2	1	0.41
2 COMBINED	AT	CX1	55	5	10	3	2	0.25
DIVERSION	TO	X1I	0	0	0	0	0	0.25
HYDROGRAPH	AT	DX1	55	5	10	3	2	0.25
ROUTED TO		RX1E	53	5.1	10	3	2	0.25
HYDROGRAPH	AT	DIVS1	55	4.17	3	1	1	0.05
ROUTED TO		RNDV89	52	4.3	3	1	1	0.05
HYDROGRAPH	AT	DV1	106	4.27	19	5	3	0.09
2 COMBINED	AT	CPD1	157	4.3	23	6	4	0.09
ROUTED TO		RNCP1	157	4.3	23	6	4	0.09
HYDROGRAPH	AT	DV2	28	4.33	7	2	1	0.03
2 COMBINED	AT	CPD2	184	4.3	29	7	5	0.12
DIVERSION	TO	DVRB	53	4.13	7	2	1	0.12
HYDROGRAPH	AT	89WRB	131	4.3	22	6	4	0.12

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RNRDV2	125	4.4	22	6	4	0.12
HYDROGRAPH	AT	DV3	62	4.23	11	3	2	0.05
2 COMBINED	AT	CPD3	182	4.37	33	8	6	0.17
ROUTED TO		RNRDV3	180	4.43	33	8	6	0.17
HYDROGRAPH	AT	DV4	54	4.33	13	3	2	0.06
HYDROGRAPH	AT	DV5	44	4.17	6	2	1	0.03
3 COMBINED	AT	CPD5	264	4.4	52	13	9	0.26
HYDROGRAPH	AT	DV6	103	4.27	19	5	4	0.09
2 COMBINED	AT	CPDV6	361	4.4	71	18	13	0.35
ROUTED TO		RN11IS	353	4.5	71	18	13	0.35
HYDROGRAPH	AT	N11EA	251	4.4	58	15	11	0.26
2 COMBINED	AT	CN11EA	581	4.5	127	32	23	0.61
ROUTED TO		RN11ES	575	4.57	127	32	23	0.61
ROUTED TO		LX50	532	4.73	203	159	155	0.61
DIVERSION	TO	DX50I	401	4.73	178	148	146	0.61
HYDROGRAPH	AT	DX50	131	4.73	24	10	9	0.61
ROUTED TO		RX50E	128	4.93	24	10	9	0.61
HYDROGRAPH	AT	DIVS2	25	4.17	1	0	0	0.09
ROUTED TO		RNDV87	14	4.73	1	0	0	0.09
HYDROGRAPH	AT	DV7	166	4.4	29	7	5	0.13
2 COMBINED	AT	CPD7	168	4.4	30	8	5	0.13
ROUTED TO		RNRDV7	166	4.53	30	8	5	0.13
HYDROGRAPH	AT	DV8	115	4.3	23	6	4	0.09
2 COMBINED	AT	CPD8	270	4.5	53	13	10	0.22
HYDROGRAPH	AT	DV9	100	4.1	10	3	2	0.04
2 COMBINED	AT	DVCP9	309	4.4	63	16	11	0.27
HYDROGRAPH	AT	DIVS13	38	4.4	2	0	0	0.18
ROUTED TO		RNRS86	21	4.57	2	0	0	0.18
HYDROGRAPH	AT	DV10	319	4.27	46	11	8	0.21
2 COMBINED	AT	CPD10	320	4.27	48	12	9	0.21
ROUTED TO		RNRD10	316	4.37	48	12	9	0.21
HYDROGRAPH	AT	DV11	241	4.23	42	11	8	0.14
3 COMBINED	AT	CPD11	821	4.33	151	38	27	0.62
ROUTED TO		RCP11S	811	4.47	151	38	27	0.62
HYDROGRAPH	AT	N22A	403	4.33	84	21	15	0.3
2 COMBINED	AT	CN22A	1132	4.43	231	58	42	0.92
DIVERSION	TO	LN22DA	622	4.13	35	9	6	0.92
HYDROGRAPH	AT	LN22A	1132	4.43	198	49	36	0.92
ROUTED TO		R22AS	1075	4.63	198	49	36	0.92
HYDROGRAPH	AT	N22B	260	4.27	46	12	8	0.17

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
DIVERSION	TO	LN22DB	260	4.27	24	6	4	0.17
HYDROGRAPH	AT	LN22B	221	4.5	22	6	4	0.17
3 COMBINED	AT	CN22	1214	4.7	235	63	47	1.71
DIVERSION	TO	N22I	500	4.27	155	43	32	1.71
HYDROGRAPH	AT	DN22	714	4.7	80	20	14	1.71
ROUTED TO		RN22W	710	4.8	80	20	14	1.71
HYDROGRAPH	AT	DRX50I	401	4.73	178	148	146	0.61
ROUTED TO		RX50W	397	4.87	178	148	144	0.61
HYDROGRAPH	AT	N11EB	333	4.27	53	13	10	0.23
4 COMBINED	AT	CN11E	1146	4.8	298	179	166	2.19
DIVERSION	TO	LN11ED	145	2.93	63	16	11	2.19
HYDROGRAPH	AT	LN11E	1146	4.8	297	178	155	2.19
ROUTED TO		R-WBE1	1146	4.8	297	178	155	2.19
HYDROGRAPH	AT	WB1	146	4.3	28	7	5	0.12
2 COMBINED	AT	CPWB1	1222	4.8	322	184	159	2.31
ROUTED TO		R-R3	1222	4.8	319	184	157	2.31
HYDROGRAPH	AT	WB2	134	4.23	23	6	4	0.09
2 COMBINED	AT	CPWB2	1281	4.8	338	188	161	2.4
ROUTED TO		R-4-5	1210	4.9	278	173	145	2.4
HYDROGRAPH	AT	WB3	30	4.03	2	1	0	0.01
2 COMBINED	AT	CPWB3	1210	4.9	278	173	145	2.41
ROUTED TO		R-6	1165	5	276	173	145	2.41
HYDROGRAPH	AT	DRN22	500	4.27	155	43	32	1.71
HYDROGRAPH	AT	WB4	193	4.2	28	7	5	0.11
2 COMBINED	AT	CPWB4	686	4.27	178	49	37	0.11
ROUTED TO		R-R1	787	4.3	170	49	37	0.11
HYDROGRAPH	AT	WB5	247	4.17	29	7	5	0.11
2 COMBINED	AT	CPWB5	988	4.3	196	56	42	0.22
ROUTED TO		R-R2	611	4.77	141	51	40	0.22
2 COMBINED	AT	CPR6	1744	4.97	416	224	184	2.63
ROUTED TO		RCR26	1726	5.07	415	223	183	2.63
HYDROGRAPH	AT	WB7	87	4.13	12	3	2	0.05
2 COMBINED	AT	CR6W7	1737	5.07	417	224	185	2.67
ROUTED TO		R-R7	1732	5.1	416	223	183	2.67
HYDROGRAPH	AT	WB6	136	4.33	29	7	5	0.12
ROUTED TO		R-R8	22	5.83	20	7	5	0.12
2 COMBINED	AT	C7R8	1744	5.1	434	229	188	2.79
ROUTED TO		RC78	1735	5.13	433	229	188	2.79
HYDROGRAPH	AT	WB8	39	4.77	17	5	3	0.07
2 COMBINED	AT	CP-678	1762	5.13	445	232	191	2.86

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	WB10	128	4.27	23	6	4	0.09
ROUTED TO		R-R9	55	4.93	23	6	4	0.09
2 COMBINED	AT	WBEOT	1796	5.13	462	237	195	2.95
DIVERSION	TO	TONRI	100	4.93	80	60	51	2.95
HYDROGRAPH	AT	DVNR	1696	5.13	382	176	144	2.95
DIVERSION	TO	DCLUB	380	5.13	71	23	17	2.95
HYDROGRAPH	AT	CCLUB	1316	5.13	310	153	127	2.95
ROUTED TO		RR287	1313	5.13	310	153	126	2.95
DIVERSION	TO	DV87SI	391	5.13	74	24	18	2.95
HYDROGRAPH	AT	DV87S	921	5.13	236	130	109	2.95
ROUTED TO		RR289	917	5.17	236	130	108	2.95
DIVERSION	TO	DV89I	386	5.17	57	14	10	2.95
HYDROGRAPH	AT	DS89	531	5.17	179	116	98	2.95
ROUTED TO		TODET	529	5.23	179	116	98	2.95
DIVERSION	TO	DV91I	491	5.23	82	20	15	2.95
HYDROGRAPH	AT	DV91	124	5.83	103	96	83	2.95
HYDROGRAPH	AT	WB9	173	4.5	47	12	9	0.22
ROUTED TO		R-R10	30	6.47	25	12	9	0.22
HYDROGRAPH	AT	DRX1I	0	0	0	0	0	0.25
ROUTED TO		RX1S	0	0	0	0	0	0.25
3 COMBINED	AT	CN11B1	148	5.83	125	105	91	3.17
HYDROGRAPH	AT	N11C	293	4.3	51	13	9	0.25
DIVERSION	TO	LN11CD	293	4.3	25	6	5	0.25
HYDROGRAPH	AT	LN11C	256	4.5	26	6	5	0.25
DIVERSION	TO	N11CWI	1	4.5	0	0	0	0.25
HYDROGRAPH	AT	DN11CW	255	4.5	26	6	5	0.25
DIVERSION	TO	N11CEI	14	4.5	4	1	1	0.25
HYDROGRAPH	AT	DN11CE	241	4.5	22	6	4	0.25
HYDROGRAPH	AT	DRN11C	1	4.5	0	0	0	0.25
ROUTED TO		LN11CW	0	4.7	0	0	0	0.25
HYDROGRAPH	AT	DR11C*	14	4.5	4	1	1	0.25
ROUTED TO		LN11CE	3	6.8	3	1	1	0.25
3 COMBINED	AT	CN11C1	242	4.5	25	6	5	0.25
HYDROGRAPH	AT	BN11DI	236	4.53	30	7	5	0.25
2 COMBINED	AT	CN11D	469	4.53	55	14	10	0.25
ROUTED TO		RWBW1	364	4.97	55	14	10	0.25
HYDROGRAPH	AT	N11A	596	4.67	187	48	35	0.93
2 COMBINED	AT	CWBW	754	5.13	230	59	43	1.18
ROUTED TO		RBWB	25	5.23	25	25	22	1.18
ROUTED TO		RWBW2	25	7.03	25	25	21	1.18

Table 1 100-Year, 6-Hour Storm Peak Flow Summary Table for Existing Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
2 COMBINED	AT	CN11B	166	5.83	149	130	111	4.35
HYDROGRAPH	AT	S30D	209	4.23	32	8	6	0.13
ROUTED TO		RS30D	198	4.53	32	8	6	0.13
HYDROGRAPH	AT	S30C	496	4.4	116	29	21	0.45
HYDROGRAPH	AT	DA09FI	65	4.53	12	3	2	0.37
ROUTED TO		RA09FI	49	5.13	12	3	2	0.37
3 COMBINED	AT	XX1	671	4.5	158	40	29	0.58
HYDROGRAPH	AT	S30B	311	4.73	86	22	16	0.4
2 COMBINED	AT	CS30B	892	4.57	237	60	43	0.98
DIVERSION	TO	DS30BI	342	4.57	36	9	7	0.98
HYDROGRAPH	AT	DS30BO	550	4.47	201	51	37	0.98
ROUTED TO		RS30BW	550	4.9	201	51	37	0.98
HYDROGRAPH	AT	S30A	524	4.43	120	30	22	0.53
2 COMBINED	AT	CS30A	995	4.6	313	80	58	1.51
HYDROGRAPH	AT	DRTONR	100	4.93	80	60	51	2.95
HYDROGRAPH	AT	BN20DI	1000	5.37	415	134	102	7.06
HYDROGRAPH	AT	N20	801	4.17	92	23	17	0.35
3 COMBINED	AT	CN20	1115	5.33	543	206	166	8

TABLE 2

Peak Flow Summary Table for Future Conditions

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions

Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	CBA	18	4.1	2	0	0	0.01
DIVERSION	TO	DCBAQ	18	4.1	1	0	0	0.01
HYDROGRAPH	AT	DCBA	15	4.17	1	0	0	0.01
ROUTED TO		RCBA	15	4.27	1	0	0	0.01
HYDROGRAPH	AT	P28	56	4.13	7	2	1	0.03
2 COMBINED	AT	CP28	62	4.27	8	2	1	0.03
DIVERSION	TO	DB28	49	4.03	2	1	0	0.03
HYDROGRAPH	AT	DT28	62	4.27	6	1	1	0.03
HYDROGRAPH	AT	CBB	46	4.07	4	1	1	0.02
DIVERSION	TO	DCBBQ	45	4.03	2	1	0	0.02
HYDROGRAPH	AT	DCBB	43	4.1	2	0	0	0.02
ROUTED TO		RCBB	40	4.17	2	0	0	0.02
2 COMBINED	AT	CP28a	95	4.17	8	2	1	0.05
ROUTED TO		R28a	76	4.4	7	2	1	0.05
HYDROGRAPH	AT	P27	107	4.17	17	4	3	0.06
DIVERSION	TO	DB27	54	3.93	3	1	0	0.06
HYDROGRAPH	AT	DT27	107	4.17	14	3	3	0.06
2 COMBINED	AT	CP27	165	4.37	21	5	4	0.12
HYDROGRAPH	AT	P27A	16	4.07	2	0	0	0.01
DIVERSION	TO	DB27a	7	3.9	0	0	0	0.01
HYDROGRAPH	AT	DT27a	16	4.07	1	0	0	0.01
HYDROGRAPH	AT	P27B	24	4.1	3	1	1	0.01
DIVERSION	TO	DB27b	8	3.83	1	0	0	0.01
HYDROGRAPH	AT	DT27b	24	4.1	3	1	0	0.01
HYDROGRAPH	AT	CBL	57	4.1	6	2	1	0.03
DIVERSION	TO	DCBLQ	24	3.87	1	0	0	0.03
HYDROGRAPH	AT	DCBL	57	4.1	5	1	1	0.03
4 COMBINED	AT	CCBL	223	4.33	30	8	5	0.16
ROUTED TO		RCBL	222	4.37	30	8	5	0.16
HYDROGRAPH	AT	CBK	125	4.13	12	3	2	0.05
DIVERSION	TO	DCBKQ	125	4.13	7	2	1	0.05
HYDROGRAPH	AT	DCBK	97	4.23	4	1	1	0.05
2 COMBINED	AT	CCBK	288	4.23	35	9	6	0.22
ROUTED TO		RCBK	290	4.27	35	9	6	0.22
HYDROGRAPH	AT	P14	19	4.07	2	0	0	0.01
DIVERSION	TO	RB14	19	4.07	2	0	0	0.01
HYDROGRAPH	AT	RT14	0	0	0	0	0	0.01
2 COMBINED	AT	CP14	290	4.27	35	9	6	0.22

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	P15	7	4.23	1	0	0	0.01
DIVERSION	TO	DB15	7	4.23	1	0	0	0.01
HYDROGRAPH	AT	DT15	0	0	0	0	0	0.01
HYDROGRAPH	AT	CBJ	34	4.1	3	1	1	0.01
DIVERSION	TO	DCBJQ	34	4.1	2	1	0	0.01
HYDROGRAPH	AT	DCBJ	22	4.27	1	0	0	0.01
3 COMBINED	AT	CP15	312	4.27	36	9	6	0.25
ROUTED TO		R15	304	4.3	36	9	6	0.25
HYDROGRAPH	AT	CBH	37	4.03	3	1	1	0.01
DIVERSION	TO	DCBHQ	37	4.03	2	0	0	0.01
HYDROGRAPH	AT	DCBH	33	4.1	1	0	0	0.01
ROUTED TO		RCBH	19	4.23	1	0	0	0.01
HYDROGRAPH	AT	P25S	52	4.17	7	2	1	0.03
DIVERSION	TO	DP25SQ	37	4	2	0	0	0.03
HYDROGRAPH	AT	DP25S	52	4.17	6	1	1	0.03
2 COMBINED	AT	CP25S	69	4.2	7	2	1	0.04
2 COMBINED	AT	AFR0	363	4.3	42	11	8	0.29
HYDROGRAPH	AT	E1	35	4.07	3	1	0	0.01
DIVERSION	TO	DE1Q	35	4.03	1	0	0	0.01
HYDROGRAPH	AT	DE1	33	4.1	1	0	0	0.01
ROUTED TO		RE1	28	4.23	1	0	0	0.01
HYDROGRAPH	AT	E2	28	4.1	3	1	0	0.02
ROUTED TO		RE2	28	4.13	3	1	0	0.02
HYDROGRAPH	AT	P13	127	4.1	12	3	2	0.06
DIVERSION	TO	DB13	59	3.9	3	1	0	0.06
HYDROGRAPH	AT	DT13	127	4.1	9	2	2	0.06
3 COMBINED	AT	CP13	156	4.2	13	3	2	0.09
ROUTED TO		R13	150	4.17	13	3	2	0.09
HYDROGRAPH	AT	P12	69	4.17	8	2	2	0.04
DIVERSION	TO	DB12	53	4.03	2	1	0	0.04
HYDROGRAPH	AT	DT12	69	4.17	6	2	1	0.04
2 COMBINED	AT	CP12	218	4.17	19	5	3	0.13
HYDROGRAPH	AT	E3	82	4.37	14	4	3	0.08
DIVERSION	TO	DE3Q	72	4.23	3	1	1	0.08
HYDROGRAPH	AT	DE3	82	4.37	11	3	2	0.08
ROUTED TO		RE3	87	4.33	11	3	2	0.08
HYDROGRAPH	AT	P10	98	4.13	11	3	2	0.05
DIVERSION	TO	DB10	46	3.93	2	1	0	0.05
HYDROGRAPH	AT	DT10	98	4.13	9	2	2	0.05

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
2 COMBINED	AT	CP10	154	4.33	19	5	3	0.14
ROUTED TO		R10	132	4.47	19	5	3	0.14
HYDROGRAPH	AT	P11	39	4.3	8	2	2	0.04
DIVERSION	TO	DB11	39	4.27	2	1	0	0.04
HYDROGRAPH	AT	DT11	39	4.33	6	1	1	0.04
2 COMBINED	AT	CP11	168	4.47	25	6	4	0.18
HYDROGRAPH	AT	E4	43	4.3	8	2	1	0.04
DIVERSION	TO	DE4Q	43	4.3	5	1	1	0.04
HYDROGRAPH	AT	DE4	24	4.77	3	1	0	0.04
ROUTED TO		RE4	24	4.8	3	1	0	0.04
HYDROGRAPH	AT	P9	82	4.1	9	2	2	0.05
DIVERSION	TO	DB9	45	3.93	2	0	0	0.05
HYDROGRAPH	AT	DT9	82	4.1	7	2	1	0.05
HYDROGRAPH	AT	HV1	6	4.27	1	0	0	0.01
DIVERSION	TO	DHV1Q	6	4.27	0	0	0	0.01
HYDROGRAPH	AT	DHV1	6	4.33	1	0	0	0.01
3 COMBINED	AT	CP9	82	4.1	11	3	2	0.09
ROUTED TO		R9	81	4.13	11	3	2	0.09
HYDROGRAPH	AT	P8	14	4.23	3	1	0	0.01
DIVERSION	TO	DB8	12	4.1	1	0	0	0.01
HYDROGRAPH	AT	DT8	14	4.23	2	1	0	0.01
HYDROGRAPH	AT	P7	17	4.2	3	1	1	0.01
DIVERSION	TO	DB7	13	4.07	1	0	0	0.01
HYDROGRAPH	AT	DT7	17	4.2	2	1	0	0.01
3 COMBINED	AT	CP7	109	4.17	15	4	3	0.12
ROUTED TO		R7	107	4.2	15	4	3	0.12
HYDROGRAPH	AT	P6	46	4.5	14	4	3	0.07
DIVERSION	TO	DB6	45	4.4	4	1	1	0.07
HYDROGRAPH	AT	DT6	46	4.5	11	3	2	0.07
2 COMBINED	AT	CP6	113	4.47	26	6	5	0.19
3 COMBINED	AT	HPVLY	411	4.2	69	17	12	0.5
HYDROGRAPH	AT	A11MA	220	4.07	19	5	3	0.07
DIVERSION	TO	DA11MA	220	4.07	15	4	3	0.07
HYDROGRAPH	AT	A11MAQ	123	4.23	5	1	1	0.07
ROUTED TO		SA11MA	21	4.5	5	1	1	0.07
ROUTED TO		RA11MA	21	4.77	5	1	1	0.07
HYDROGRAPH	AT	A11MB	498	4.1	51	13	9	0.19
DIVERSION	TO	DA11MB	144	3.77	7	2	1	0.19
HYDROGRAPH	AT	A11MBQ	498	4.1	43	11	8	0.19

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		SA11MB	268	4.33	41	11	8	0.19
HYDROGRAPH	AT	A11NA	211	4.07	17	4	3	0.08
DIVERSION	TO	A11NAQ	62	3.8	3	1	1	0.08
HYDROGRAPH	AT	DA11NA	211	4.07	14	3	2	0.08
ROUTED TO		SA11NA	31	4.43	14	3	2	0.08
ROUTED TO		RA11NA	31	4.7	14	3	2	0.08
3 COMBINED	AT	CA11MB	292	4.37	59	15	11	0.34
ROUTED TO		RA11MB	260	4.57	59	15	11	0.34
HYDROGRAPH	AT	A11O	123	4.1	13	3	2	0.06
DIVERSION	TO	DA11OQ	33	3.8	2	0	0	0.06
HYDROGRAPH	AT	DA11O	123	4.1	11	3	2	0.06
ROUTED TO		SA11O	35	4.53	11	3	2	0.06
ROUTED TO		RA11O	35	4.8	11	3	2	0.06
HYDROGRAPH	AT	A11KB	227	4.13	23	6	4	0.11
ROUTED TO		SA11KB	32	4.67	21	6	4	0.11
HYDROGRAPH	AT	A11KA	199	4.07	19	5	3	0.08
DIVERSION	TO	A11KAQ	5	3.27	1	0	0	0.08
HYDROGRAPH	AT	DA11KA	199	4.07	18	4	3	0.08
ROUTED TO		SA11KA	31	4.53	17	4	3	0.08
ROUTED TO		RA11KA	31	4.77	17	4	3	0.08
3 COMBINED	AT	CA11KB	98	4.77	49	13	9	0.24
ROUTED TO		RA11KB	98	5	49	13	9	0.24
HYDROGRAPH	AT	A11G	94	4.23	13	3	2	0.06
DIVERSION	TO	DA11GQ	44	3.97	2	0	0	0.06
HYDROGRAPH	AT	DA11G	94	4.23	11	3	2	0.06
ROUTED TO		RA11GN	88	4.43	11	3	2	0.06
HYDROGRAPH	AT	A11KC	285	4.1	27	7	5	0.13
DIVERSION	TO	A11KCQ	57	3.8	4	1	1	0.13
HYDROGRAPH	AT	DA11KC	285	4.1	23	6	4	0.13
ROUTED TO		SA11KC	74	4.47	23	6	4	0.13
3 COMBINED	AT	CA11KC	227	4.53	83	21	15	0.44
ROUTED TO		RA11KC	224	4.63	83	21	15	0.44
HYDROGRAPH	AT	A11J	172	4.33	28	7	5	0.11
DIVERSION	TO	DA11JQ	122	4.1	6	2	1	0.11
HYDROGRAPH	AT	DA11J	172	4.33	22	5	4	0.11
ROUTED TO		SA11J	76	4.83	22	5	4	0.11
3 COMBINED	AT	CA11J	468	4.67	157	41	29	0.89
HYDROGRAPH	AT	A11L	398	4.27	74	19	13	0.26
DIVERSION	TO	DA11L	358	4.17	21	5	4	0.26

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DA11LQ	398	4.27	54	13	10	0.26
ROUTED TO		RA11L	382	4.53	54	13	10	0.26
HYDROGRAPH	AT	A11I	299	4.2	43	11	8	0.15
DIVERSION	TO	DA11I	299	4.2	24	6	4	0.15
HYDROGRAPH	AT	DA11IQ	249	4.37	19	5	3	0.15
3 COMBINED	AT	CA11I	886	4.63	224	57	41	1.31
ROUTED TO		RA11I	861	4.87	223	57	41	1.31
HYDROGRAPH	AT	A11EA	158	4.37	27	7	5	0.14
DIVERSION	TO	D11EAQ	154	4.3	9	2	2	0.14
HYDROGRAPH	AT	D11EA	158	4.37	18	4	3	0.14
ROUTED TO		RA11EA	148	4.6	18	4	3	0.14
HYDROGRAPH	AT	A11EB	163	4.53	38	10	7	0.19
DIVERSION	TO	D11EBQ	163	4.53	23	6	4	0.19
HYDROGRAPH	AT	D11EB	115	4.93	16	4	3	0.19
3 COMBINED	AT	CA11EB	941	4.93	247	64	46	1.64
HYDROGRAPH	AT	41	148	4.1	11	3	2	0.05
DIVERSION	TO	D41Q	128	4	5	1	1	0.05
HYDROGRAPH	AT	D41	148	4.1	6	1	1	0.05
ROUTED TO		B41	85	4.2	6	1	1	0.05
HYDROGRAPH	AT	42	194	4.13	18	5	3	0.08
DIVERSION	TO	D42Q	167	4.03	8	2	1	0.08
HYDROGRAPH	AT	D42	194	4.13	10	3	2	0.08
ROUTED TO		B42	122	4.27	10	3	2	0.08
2 COMBINED	AT	C41	205	4.23	16	4	3	0.13
ROUTED TO		RC41	163	4.73	16	4	3	0.13
HYDROGRAPH	AT	A11F	419	4.37	63	16	11	0.33
DIVERSION	TO	DA11FQ	398	4.27	23	6	4	0.33
HYDROGRAPH	AT	DA11F	419	4.37	40	10	7	0.33
2 COMBINED	AT	CA11F	419	4.37	56	14	10	0.46
2 COMBINED	AT	CA11E	1158	4.83	287	74	53	2.11
ROUTED TO		RA11E	1145	4.93	286	74	53	2.11
HYDROGRAPH	AT	A09U	357	4.13	35	9	6	0.17
DIVERSION	TO	DA09UQ	216	3.97	8	2	2	0.17
HYDROGRAPH	AT	DA09U	357	4.13	26	7	5	0.17
DIVERSION	TO	A09UI	0	0	0	0	0	0.17
HYDROGRAPH	AT	DA09U	357	4.13	26	7	5	0.17
ROUTED TO		RA09UW	270	4.57	26	7	5	0.17
HYDROGRAPH	AT	A09T	287	4.27	39	10	7	0.18
DIVERSION	TO	DA09TQ	287	4.27	19	5	3	0.18

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DA09T	271	4.33	20	5	4	0.18
2 COMBINED	AT	CA09T	424	4.57	46	12	8	0.36
DIVERSION	TO	A09TI	0	0	0	0	0	0.36
HYDROGRAPH	AT	DA09T	424	4.57	46	12	8	0.36
ROUTED TO		RA09TW	398	4.7	46	12	8	0.36
HYDROGRAPH	AT	A11A	486	4.3	75	19	14	0.3
DIVERSION	TO	DA11A	447	4.2	28	7	5	0.3
HYDROGRAPH	AT	DA11AQ	486	4.3	47	12	9	0.3
3 COMBINED	AT	CX23	1490	4.9	357	92	66	2.76
ROUTED TO		RX23	1455	5.13	355	92	66	2.76
HYDROGRAPH	AT	S1	139	4.37	23	6	4	0.12
DIVERSION	TO	DS1Q	85	4.1	4	1	1	0.12
HYDROGRAPH	AT	DS1	139	4.37	19	5	3	0.12
HYDROGRAPH	AT	P2	111	4.1	11	3	2	0.05
DIVERSION	TO	RB2	111	4.1	10	2	2	0.05
HYDROGRAPH	AT	RT2	18	4.57	1	0	0	0.05
3 COMBINED	AT	CS1	1473	5.13	365	95	68	2.93
ROUTED TO		RS1	1472	5.17	365	95	68	2.93
HYDROGRAPH	AT	S2	33	4.03	2	1	0	0.01
DIVERSION	TO	DS2Q	33	4.03	1	0	0	0.01
HYDROGRAPH	AT	DS2	30	4.1	1	0	0	0.01
HYDROGRAPH	AT	S3	18	4.03	1	0	0	0.01
3 COMBINED	AT	CS2	1471	5.17	365	95	68	2.95
ROUTED TO		RS2	1470	5.17	365	95	68	2.95
HYDROGRAPH	AT	P3	85	4.17	11	3	2	0.05
DIVERSION	TO	RB3	85	4.17	11	3	2	0.05
HYDROGRAPH	AT	RT3	10	5.13	1	0	0	0.05
2 COMBINED	AT	CP3	1470	5.17	365	95	68	3.01
HYDROGRAPH	AT	P4b	45	4.07	4	1	1	0.02
DIVERSION	TO	RB4b	12	3.8	1	0	0	0.02
HYDROGRAPH	AT	RT4b	45	4.07	3	1	1	0.02
HYDROGRAPH	AT	S4	17	4.23	3	1	0	0.01
DIVERSION	TO	DS4Q	17	4.2	1	0	0	0.01
HYDROGRAPH	AT	DS4	17	4.27	2	0	0	0.01
HYDROGRAPH	AT	P1	47	4.2	6	1	1	0.03
DIVERSION	TO	DB1	47	4.2	4	1	1	0.03
HYDROGRAPH	AT	DT1	27	4.5	2	0	0	0.03
2 COMBINED	AT	CP1	38	4.5	4	1	1	0.04
HYDROGRAPH	AT	HV2	7	5.2	5	1	1	0.03

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RHV2	7	5.27	5	1	1	0.03
DIVERSION	TO	DBHV2	7	5.27	2	0	0	0.03
HYDROGRAPH	AT	DTHV2	7	5.73	4	1	1	0.03
HYDROGRAPH	AT	P4a	52	4.2	8	2	1	0.04
DIVERSION	TO	DB4a	30	4	1	0	0	0.04
HYDROGRAPH	AT	DT4a	52	4.2	6	2	1	0.04
5 COMBINED	AT	SOUTH	1470	5.17	373	98	70	3.14
HYDROGRAPH	AT	N11O	89	4.27	10	2	2	0.05
DIVERSION	TO	DN11OQ	89	4.27	6	1	1	0.05
HYDROGRAPH	AT	DN11O	64	4.43	4	1	1	0.05
DIVERSION	TO	N11OI	58	4.43	4	1	1	0.05
HYDROGRAPH	AT	DN11O	6	4.43	0	0	0	0.05
ROUTED TO		RN11OW	2	5.53	0	0	0	0.05
HYDROGRAPH	AT	DRA09T	0	0	0	0	0	0.36
ROUTED TO		RA09TS	0	0	0	0	0	0.36
HYDROGRAPH	AT	A09R	171	4.4	32	8	6	0.14
DIVERSION	TO	DA09RQ	171	4.4	21	5	4	0.14
HYDROGRAPH	AT	DA09R	108	4.77	11	3	2	0.14
3 COMBINED	AT	CA09R	108	4.77	12	3	2	0.2
DIVERSION	TO	A09RI	107	4.77	12	3	2	0.2
HYDROGRAPH	AT	DA09R	1	5.2	0	0	0	0.2
ROUTED TO		RA09RW	0	7.4	0	0	0	0.2
HYDROGRAPH	AT	A09S	117	4.2	21	5	4	0.07
DIVERSION	TO	DA09S	117	4.2	14	4	3	0.07
HYDROGRAPH	AT	DA09SQ	70	4.6	7	2	1	0.07
2 COMBINED	AT	CA09S	70	4.6	7	2	1	0.27
ROUTED TO		RA09SW	61	4.77	7	2	1	0.27
HYDROGRAPH	AT	A09QA	130	4.27	16	4	3	0.09
DIVERSION	TO	A09QAQ	130	4.27	9	2	2	0.09
HYDROGRAPH	AT	DA09QA	106	4.43	7	2	1	0.09
2 COMBINED	AT	CA09QA	105	4.43	14	3	2	0.36
DIVERSION	TO	A09QAI	105	4.43	13	3	2	0.36
HYDROGRAPH	AT	DA09QA	1	6	0	0	0	0.36
ROUTED TO		RA09QW	1	6.13	0	0	0	0.36
HYDROGRAPH	AT	A99YA	174	4.2	19	5	4	0.1
DIVERSION	TO	A99YAQ	174	4.2	11	3	2	0.1
HYDROGRAPH	AT	DA99YA	148	4.33	9	2	2	0.1
2 COMBINED	AT	CA99YA	147	4.33	9	2	2	0.46
ROUTED TO		RA99YA	124	4.47	9	2	2	0.46

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	A99YB	327	4.2	37	9	7	0.17
DIVERSION	TO	A99YBQ	327	4.2	21	5	4	0.17
HYDROGRAPH	AT	DA99YB	289	4.3	15	4	3	0.17
3 COMBINED	AT	CA99YB	1460	5.17	381	100	72	3.77
3 COMBINED	AT	AFR1	1578	5.17	454	118	85	4.56
HYDROGRAPH	AT	N11NA	68	4.03	5	1	1	0.02
DIVERSION	TO	N11NAQ	63	3.97	2	1	0	0.02
HYDROGRAPH	AT	DN11NA	68	4.03	2	1	0	0.02
ROUTED TO		RN11NA	30	4.57	2	1	0	0.02
HYDROGRAPH	AT	N11NC	270	4.23	29	7	5	0.17
DIVERSION	TO	N11NCQ	201	4.07	7	2	1	0.17
HYDROGRAPH	AT	DN11NC	270	4.23	21	5	4	0.17
2 COMBINED	AT	CN11NC	271	4.23	23	6	4	0.19
DIVERSION	TO	N11NP	149	4.13	18	4	3	0.19
HYDROGRAPH	AT	DN11NC	122	4.23	6	1	1	0.19
ROUTED TO		RN11NC	108	4.37	6	1	1	0.19
HYDROGRAPH	AT	N11ND	62	4.23	10	2	2	0.05
HYDROGRAPH	AT	N11K	152	4.33	28	7	5	0.17
3 COMBINED	AT	CN11K	315	4.37	43	11	8	0.41
DIVERSION	TO	N11KP	0	0	0	0	0	0.41
HYDROGRAPH	AT	DN11K	315	4.37	43	11	8	0.41
DIVERSION	TO	DN11KS	0	0	0	0	0	0.41
HYDROGRAPH	AT	DN11KW	315	4.37	43	11	8	0.41
ROUTED TO		RN11KW	293	4.57	43	11	8	0.41
HYDROGRAPH	AT	BA09UI	0	0	0	0	0	0.17
ROUTED TO		RA09US	0	0	0	0	0	0.17
HYDROGRAPH	AT	N11NB	164	4.37	25	6	5	0.14
DIVERSION	TO	N11NBQ	76	4.03	3	1	0	0.14
HYDROGRAPH	AT	DN11NB	164	4.37	22	6	4	0.14
2 COMBINED	AT	CN11NB	164	4.37	22	6	4	0.14
ROUTED TO		RN11NW	152	4.77	22	6	4	0.14
HYDROGRAPH	AT	BN11OI	58	4.43	4	1	1	0.05
ROUTED TO		RN11OS	30	5.2	4	1	1	0.05
HYDROGRAPH	AT	N11M	161	4.23	17	4	3	0.1
DIVERSION	TO	DN11MQ	161	4.23	11	3	2	0.1
HYDROGRAPH	AT	DN11M	130	4.37	6	2	1	0.1
3 COMBINED	AT	CN11M	184	4.73	32	8	6	0.24
DIVERSION	TO	N11MI	46	4.73	8	2	1	0.24
HYDROGRAPH	AT	DN11M	138	4.73	24	6	4	0.24

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RN11MS	131	5.03	24	6	4	0.24
HYDROGRAPH	AT	N11J	212	4.37	41	10	7	0.24
DIVERSION	TO	LN11JD	96	4.07	4	1	1	0.24
HYDROGRAPH	AT	LN11J	212	4.37	37	9	7	0.24
3 COMBINED	AT	CN11J	427	4.6	94	24	17	0.9
DIVERSION	TO	N11JI	0	0	0	0	0	0.9
HYDROGRAPH	AT	DN11J	427	4.6	94	24	17	0.9
ROUTED TO		RN11JW	425	4.67	94	24	17	0.9
HYDROGRAPH	AT	DRN11M	46	4.73	8	2	1	0.24
ROUTED TO		RN11MW	41	5.33	8	2	1	0.24
2 COMBINED	AT	CX4	425	4.67	102	25	18	0.9
ROUTED TO		RX4	421	4.8	102	25	18	0.9
HYDROGRAPH	AT	A09O	133	4.67	34	9	6	0.19
DIVERSION	TO	DA09OQ	128	4.53	9	2	2	0.19
HYDROGRAPH	AT	DA09O	133	4.67	25	6	4	0.19
ROUTED TO		SA09O	41	5.87	23	6	4	0.19
HYDROGRAPH	AT	BA09RI	107	4.77	12	3	2	0.2
ROUTED TO		RA09RS	76	5.3	12	3	2	0.2
3 COMBINED	AT	CA09O	412	4.83	128	33	24	1.09
DIVERSION	TO	A09OI	0	0	0	0	0	1.09
HYDROGRAPH	AT	DA09O	410	4.83	128	33	24	1.09
ROUTED TO		RA09OW	406	4.9	128	33	24	1.09
HYDROGRAPH	AT	A09P	200	4.43	34	8	6	0.19
DIVERSION	TO	DA09PQ	180	4.3	9	2	2	0.19
HYDROGRAPH	AT	DA09P	200	4.43	25	6	4	0.19
ROUTED TO		SA09P	50	5.27	24	6	4	0.19
2 COMBINED	AT	CA09P	436	5.3	145	37	27	1.28
ROUTED TO		RA09P	435	5.33	145	37	27	1.28
HYDROGRAPH	AT	BA09QA	105	4.43	13	3	2	0.36
ROUTED TO		RA09QB	87	5	13	3	2	0.36
HYDROGRAPH	AT	A09QB	162	4.27	23	6	4	0.14
DIVERSION	TO	A09QBQ	3	3.63	0	0	0	0.14
HYDROGRAPH	AT	DA09QB	162	4.27	23	6	4	0.14
3 COMBINED	AT	CA09Q	513	4.97	172	44	32	1.42
DIVERSION	TO	A09QI	0	0	0	0	0	1.42
HYDROGRAPH	AT	DA09Q	513	4.97	172	44	32	1.42
ROUTED TO		RA09QW	508	5.07	172	44	32	1.42
HYDROGRAPH	AT	A10A	295	4.27	35	9	6	0.19
DIVERSION	TO	DA10AQ	282	4.2	13	3	2	0.19

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DA10A	295	4.27	23	6	4	0.19
2 COMBINED	AT	CA10A	527	5.03	187	48	34	1.61
ROUTED TO		RA10A	525	5.07	187	48	34	1.61
HYDROGRAPH	AT	A99X	606	4.13	67	17	12	0.26
DIVERSION	TO	DA99XQ	192	3.83	13	3	2	0.26
HYDROGRAPH	AT	DA99X	606	4.13	54	14	10	0.26
2 COMBINED	AT	CA99X	572	4.4	231	59	42	1.88
2 COMBINED	AT	AFR2	1866	5.17	617	160	115	6.43
HYDROGRAPH	AT	BN11KS	0	0	0	0	0	0.41
ROUTED TO		3.1	0	0	0	0	0	0.41
HYDROGRAPH	AT	M3	106	4.33	21	5	4	0.12
DIVERSION	TO	3R	105	4.33	17	4	3	0.12
HYDROGRAPH	AT	3S	36	5.27	4	1	1	0.12
2 COMBINED	AT	3.2	36	5.27	4	1	1	0.12
ROUTED TO		4.1	35	5.5	5	1	1	0.12
HYDROGRAPH	AT	M4	123	4.3	24	6	4	0.13
DIVERSION	TO	4R	123	4.3	18	5	3	0.13
HYDROGRAPH	AT	4S	52	5.1	6	2	1	0.13
2 COMBINED	AT	4.2	63	5.5	11	3	2	0.25
HYDROGRAPH	AT	M1	100	4.3	18	5	3	0.11
DIVERSION	TO	1R	100	4.3	15	4	3	0.11
HYDROGRAPH	AT	1S	34	5.13	4	1	1	0.11
ROUTED TO		2.1	31	5.4	4	1	1	0.11
HYDROGRAPH	AT	M2	161	4.3	30	7	5	0.16
DIVERSION	TO	2R	161	4.3	21	5	4	0.16
HYDROGRAPH	AT	2S	84	4.9	9	2	2	0.16
2 COMBINED	AT	2.3	83	4.9	13	3	2	0.26
DIVERSION	TO	X5I	0	0	0	0	0	0.26
HYDROGRAPH	AT	DX5	83	4.9	13	3	2	0.26
ROUTED TO		2.2	79	5.07	13	3	2	0.26
2 COMBINED	AT	4.3	124	5.1	23	6	4	0.52
ROUTED TO		10.1	119	5.37	25	6	5	0.52
HYDROGRAPH	AT	M10	152	4.17	25	6	5	0.09
DIVERSION	TO	10R	152	4.17	12	3	2	0.09
HYDROGRAPH	AT	10S	139	4.27	13	3	2	0.09
2 COMBINED	AT	10.2	128	4.33	36	9	7	0.61
ROUTED TO		11A.1	126	5.43	37	9	7	0.61
HYDROGRAPH	AT	M11A	63	4.33	14	4	3	0.07
DIVERSION	TO	11AR	63	4.33	11	3	2	0.07

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	11AS	21	5.4	3	1	1	0.07
2 COMBINED	AT	11A.2	135	5.43	39	10	7	0.67
ROUTED TO		RN11G	127	5.67	39	10	7	0.67
HYDROGRAPH	AT	N11DA	295	4.3	54	14	10	0.26
DIVERSION	TO	LDAOUT	277	4.23	16	4	3	0.26
HYDROGRAPH	AT	LN11DA	295	4.3	38	10	7	0.26
ROUTED TO		SN11DA	121	5	38	10	7	0.26
DIVERSION	TO	D11DAS	21	5	8	2	1	0.26
HYDROGRAPH	AT	N11DAW	100	5	30	8	5	0.26
ROUTED TO		RN11DA	100	5.2	30	8	5	0.26
HYDROGRAPH	AT	N11FB	114	4.33	25	6	5	0.12
DIVERSION	TO	LN1FBD	114	4.33	21	5	4	0.12
HYDROGRAPH	AT	LN11FB	29	5.57	4	1	1	0.12
2 COMBINED	AT	CN11FB	124	5.57	34	8	6	0.38
2 COMBINED	AT	C98RGL	197	5.67	63	16	11	1.05
ROUTED TO		RN11FB	192	5.77	63	16	11	1.05
HYDROGRAPH	AT	DN11JI	0	0	0	0	0	0.9
ROUTED TO		6.1	0	0	0	0	0	0.9
ROUTED TO		6.2	0	0	0	0	0	0.9
HYDROGRAPH	AT	M5	18	4.2	3	1	0	0.02
DIVERSION	TO	5R	18	4.17	1	0	0	0.02
HYDROGRAPH	AT	5S	18	4.23	2	0	0	0.02
ROUTED TO		6.3	18	4.3	2	0	0	0.02
HYDROGRAPH	AT	M6	42	4.13	6	2	1	0.02
DIVERSION	TO	6R	42	4.13	3	1	1	0.02
HYDROGRAPH	AT	6S	38	4.23	3	1	1	0.02
3 COMBINED	AT	6.4	51	4.3	5	1	1	0.04
ROUTED TO		8.1	51	4.4	5	1	1	0.04
HYDROGRAPH	AT	M7	80	4.4	19	5	4	0.11
DIVERSION	TO	7R	80	4.4	16	4	3	0.11
HYDROGRAPH	AT	7S	26	5.63	4	1	1	0.11
ROUTED TO		8.2	26	5.73	4	1	1	0.11
HYDROGRAPH	AT	M8	63	4.3	12	3	2	0.07
DIVERSION	TO	8R	63	4.3	10	3	2	0.07
HYDROGRAPH	AT	8S	11	5.57	1	0	0	0.07
3 COMBINED	AT	8.3	51	4.4	10	3	2	0.22
ROUTED TO		9.1	49	4.5	10	3	2	0.22
HYDROGRAPH	AT	M9	157	4.23	22	5	4	0.12
DIVERSION	TO	9R	157	4.23	16	4	3	0.12

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	9S	72	4.7	5	1	1	0.12
2 COMBINED	AT	9.2	108	4.7	16	4	3	0.34
ROUTED TO		12A.1	100	4.77	16	4	3	0.34
HYDROGRAPH	AT	M12A	194	4.17	23	6	4	0.11
DIVERSION	TO	12AR	194	4.17	15	4	3	0.11
HYDROGRAPH	AT	12AS	131	4.4	8	2	1	0.11
2 COMBINED	AT	12A.2	146	4.73	23	6	4	0.45
ROUTED TO		11B.1	143	4.77	23	6	4	0.45
HYDROGRAPH	AT	M11B	25	4.17	4	1	1	0.02
DIVERSION	TO	11BR	25	4.17	2	1	0	0.02
HYDROGRAPH	AT	11BS	17	4.47	1	0	0	0.02
HYDROGRAPH	AT	MA1	20	4.13	4	1	1	0.01
DIVERSION	TO	A1R	20	4.13	2	1	0	0.01
HYDROGRAPH	AT	A1S	12	4.53	1	0	0	0.01
3 COMBINED	AT	11B.2	160	4.77	26	7	5	0.48
ROUTED TO		RA09KS	147	4.73	26	7	5	0.48
HYDROGRAPH	AT	N11FA	195	4.3	38	10	7	0.18
DIVERSION	TO	LN1FAD	195	4.3	16	4	3	0.18
HYDROGRAPH	AT	LN11FA	186	4.43	23	6	4	0.18
HYDROGRAPH	AT	A09GA	200	4.07	22	6	4	0.07
DIVERSION	TO	L09GAD	198	4.07	12	3	2	0.07
HYDROGRAPH	AT	LA09GA	193	4.1	10	3	2	0.07
4 COMBINED	AT	CN11FA	374	4.97	99	25	18	1.78
ROUTED TO		RN11FA	364	5.03	99	25	18	1.78
HYDROGRAPH	AT	A09GB	27	4.67	10	3	2	0.05
DIVERSION	TO	L09GBD	27	4.67	6	1	1	0.05
HYDROGRAPH	AT	LA09GB	20	5.4	5	1	1	0.05
2 COMBINED	AT	CA09G	363	5.03	102	26	19	1.84
DIVERSION	TO	A09GI	73	5.03	20	5	4	1.84
HYDROGRAPH	AT	DA09G	290	5.03	82	21	15	1.84
ROUTED TO		RA09GW	284	5.1	82	21	15	1.84
HYDROGRAPH	AT	DA09oI	0	0	0	0	0	1.09
ROUTED TO		371	0	0	0	0	0	1.09
HYDROGRAPH	AT	M370	136	4.3	25	6	4	0.13
DIVERSION	TO	DM370Q	136	4.3	11	3	2	0.13
HYDROGRAPH	AT	DM370	120	4.5	13	3	2	0.13
2 COMBINED	AT	372	120	4.5	13	3	2	0.13
ROUTED TO		B4	12	5.93	9	3	2	0.13
ROUTED TO		12B.1	12	6.1	9	3	2	0.13

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	M12B	50	4.23	9	2	2	0.04
DIVERSION	TO	12BR	50	4.23	6	2	1	0.04
HYDROGRAPH	AT	12BS	25	4.8	3	1	0	0.04
2 COMBINED	AT	12B.2	26	4.8	12	4	3	0.17
ROUTED TO		A2.1	24	4.9	12	4	3	0.17
HYDROGRAPH	AT	MA2	54	4.1	8	2	1	0.03
DIVERSION	TO	A2R	54	4.1	5	1	1	0.03
HYDROGRAPH	AT	A2S	32	4.4	2	1	0	0.03
2 COMBINED	AT	A2.2	34	4.9	14	5	3	0.2
ROUTED TO		RX7S	30	5.3	13	5	3	0.2
2 COMBINED	AT	CX8	295	5.1	89	24	17	2.04
ROUTED TO		RX8W	284	5.27	88	24	17	2.04
HYDROGRAPH	AT	A09H	198	4.43	49	13	9	0.24
DIVERSION	TO	LA09HD	198	4.43	26	7	5	0.24
HYDROGRAPH	AT	LA09H	161	4.83	25	6	4	0.24
2 COMBINED	AT	CA09H1	371	5.27	104	28	20	2.27
HYDROGRAPH	AT	A09J	166	4.33	34	9	6	0.17
DIVERSION	TO	LA09JD	166	4.33	16	4	3	0.17
HYDROGRAPH	AT	LA09J	151	4.53	19	5	3	0.17
DIVERSION	TO	A09JI	0	0	0	0	0	0.17
HYDROGRAPH	AT	DA09J	151	4.53	19	5	3	0.17
ROUTED TO		RA09JS	129	4.87	19	5	3	0.17
2 COMBINED	AT	CA09H	439	5.27	117	31	22	2.44
ROUTED TO		RA09H	438	5.3	117	31	22	2.44
HYDROGRAPH	AT	BA09QI	0	0	0	0	0	1.42
ROUTED TO		RA09QS	0	0	0	0	0	1.42
HYDROGRAPH	AT	A09M	266	4.47	51	13	9	0.25
DIVERSION	TO	LA09MD	266	4.47	24	6	4	0.25
HYDROGRAPH	AT	LA09M	254	4.57	28	7	5	0.25
2 COMBINED	AT	CA09M	254	4.57	28	7	5	0.25
ROUTED TO		RA09M	239	4.67	28	7	5	0.25
HYDROGRAPH	AT	A09N	140	4.27	24	6	4	0.11
DIVERSION	TO	DA09NQ	27	3.83	2	0	0	0.11
HYDROGRAPH	AT	DA09N	140	4.27	23	6	4	0.11
2 COMBINED	AT	CA09N	330	4.67	50	13	9	0.36
ROUTED TO		LA09N	145	5.17	47	13	9	0.36
ROUTED TO		RA09N	144	5.27	47	13	9	0.36
HYDROGRAPH	AT	DRA09J	0	0	0	0	0	0.17
ROUTED TO		RA09JW	0	0	0	0	0	0.17

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	A09L	142	4.33	29	7	5	0.14
3 COMBINED	AT	CA09L	199	5.07	74	20	14	0.5
ROUTED TO		LA09L	176	5.43	73	20	14	0.5
ROUTED TO		RA09LS	176	5.5	73	20	14	0.5
HYDROGRAPH	AT	A09IH	102	4.27	19	5	3	0.09
DIVERSION	TO	A09IHQ	2	2.5	0	0	0	0.09
HYDROGRAPH	AT	DA09IH	102	4.27	18	5	3	0.09
2 COMBINED	AT	CA09IH	192	5.4	89	24	17	0.59
ROUTED TO		LA09IH	179	5.77	88	24	17	0.59
HYDROGRAPH	AT	A09I	134	4.37	30	8	5	0.13
DIVERSION	TO	LA09ID	134	4.37	11	3	2	0.13
HYDROGRAPH	AT	LA09I	131	4.47	19	5	3	0.13
3 COMBINED	AT	CX10	593	5.3	198	53	38	3.15
ROUTED TO		RX10	581	5.5	197	53	38	3.15
HYDROGRAPH	AT	A99V	408	4.27	44	11	8	0.21
DIVERSION	TO	DA99VQ	408	4.27	24	6	4	0.21
HYDROGRAPH	AT	DA99V	341	4.37	20	5	4	0.21
2 COMBINED	AT	CA99V	582	5.5	210	56	41	3.36
HYDROGRAPH	AT	A10	568	4.1	58	15	11	0.21
DIVERSION	TO	DA10Q	568	4.1	33	8	6	0.21
HYDROGRAPH	AT	DA10	539	4.17	25	6	5	0.21
HYDROGRAPH	AT	A99W	291	4.47	53	13	10	0.22
DIVERSION	TO	LA99WD	291	4.47	26	7	5	0.22
HYDROGRAPH	AT	LA99W	276	4.57	27	7	5	0.22
4 COMBINED	AT	AFR3	2068	5.23	770	202	146	10.22
HYDROGRAPH	AT	DRA09G	73	5.03	20	5	4	1.84
ROUTED TO		RA09GS	63	5.6	20	5	4	1.84
HYDROGRAPH	AT	A09F	425	4.53	84	21	15	0.37
DIVERSION	TO	LA09FD	412	4.43	31	8	6	0.37
HYDROGRAPH	AT	LA09F	425	4.53	54	13	10	0.37
2 COMBINED	AT	CA09F	425	4.53	81	21	15	0.37
ROUTED TO		RA09FW	415	4.7	81	21	15	0.37
HYDROGRAPH	AT	A09E	147	4.37	33	8	6	0.15
DIVERSION	TO	LA09ED	147	4.37	18	4	3	0.15
HYDROGRAPH	AT	LA09E	114	4.73	16	4	3	0.15
2 COMBINED	AT	CA09E	522	4.73	96	24	18	0.51
ROUTED TO		RA09E	492	4.87	96	24	18	0.51
HYDROGRAPH	AT	A09D	589	4.13	63	16	11	0.25
DIVERSION	TO	LA09DD	589	4.13	34	9	6	0.25

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	LA09D	521	4.23	29	7	5	0.25
2 COMBINED	AT	CA09C*	483	4.87	119	30	22	0.77
ROUTED TO		RA09C*	480	4.9	119	30	22	0.77
HYDROGRAPH	AT	A09C	99	4.37	15	4	3	0.07
DIVERSION	TO	DA09CQ	99	4.37	9	2	2	0.07
HYDROGRAPH	AT	DA09C	63	4.67	6	2	1	0.07
2 COMBINED	AT	CA09C	509	4.9	123	31	22	0.84
ROUTED TO		RA09C	493	5	123	31	22	0.84
HYDROGRAPH	AT	A09B	116	4.07	12	3	2	0.04
DIVERSION	TO	DA09BQ	2	0.7	0	0	0	0.04
HYDROGRAPH	AT	DA09B	116	4.07	11	3	2	0.04
ROUTED TO		RA09B	91	4.5	11	3	2	0.04
HYDROGRAPH	AT	A09A	74	4.57	18	5	3	0.08
3 COMBINED	AT	CA09A	554	5	146	38	27	0.96
ROUTED TO		RA09AW	465	5.7	144	38	27	0.96
HYDROGRAPH	AT	A99T	84	4.03	6	1	1	0.03
DIVERSION	TO	LA99TD	23	3.83	2	0	0	0.03
HYDROGRAPH	AT	LA99T	84	4.03	4	1	1	0.03
ROUTED TO		RA99T	70	4.17	4	1	1	0.03
HYDROGRAPH	AT	A09	300	4.23	32	8	6	0.18
DIVERSION	TO	DA09Q	189	4.03	7	2	1	0.18
HYDROGRAPH	AT	DA09	300	4.23	25	6	4	0.18
3 COMBINED	AT	CA09	458	5.73	163	43	31	1.17
HYDROGRAPH	AT	A99U	93	4.27	15	4	3	0.07
DIVERSION	TO	DA99UQ	85	4.17	5	1	1	0.07
HYDROGRAPH	AT	DA99U	93	4.27	10	3	2	0.07
3 COMBINED	AT	AFR4	2079	5.27	874	230	166	11.46
HYDROGRAPH	AT	A07G	421	4.23	68	17	12	0.26
DIVERSION	TO	LA07GD	421	4.23	31	8	6	0.26
HYDROGRAPH	AT	LA07G	401	4.33	38	9	7	0.26
ROUTED TO		RA07G	352	4.57	38	9	7	0.26
HYDROGRAPH	AT	A07F	179	4.7	48	12	9	0.23
ROUTED TO		RA07F	178	4.8	48	12	9	0.23
HYDROGRAPH	AT	A07E	413	4.2	63	16	11	0.23
3 COMBINED	AT	CA07E	711	4.57	145	37	27	0.72
ROUTED TO		RA07E	694	4.63	145	37	27	0.72
HYDROGRAPH	AT	A07C	228	4.37	37	9	7	0.17
DIVERSION	TO	DA07CQ	228	4.37	20	5	4	0.17
HYDROGRAPH	AT	DA07C	202	4.53	18	5	3	0.17

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
2 COMBINED	AT	CA07C	830	4.63	160	41	29	0.89
ROUTED TO		RA07C	815	4.67	160	41	29	0.89
HYDROGRAPH	AT	A07H	221	4.13	24	6	4	0.09
DIVERSION	TO	DA07HQ	10	3.4	2	1	0	0.09
HYDROGRAPH	AT	DA07H	221	4.13	22	5	4	0.09
ROUTED TO		RA07H	206	4.27	22	5	4	0.09
HYDROGRAPH	AT	A08B	121	4.37	20	5	4	0.1
ROUTED TO		RA08B	114	4.73	20	5	4	0.1
HYDROGRAPH	AT	A07D	118	5	40	10	7	0.23
DIVERSION	TO	DA07DQ	29	4.13	1	0	0	0.23
HYDROGRAPH	AT	DA07D	118	5	39	10	7	0.23
4 COMBINED	AT	CA07D	1009	4.7	228	58	42	1.31
ROUTED TO		RA07D	954	4.9	228	58	42	1.31
HYDROGRAPH	AT	A99S	81	4.4	11	3	2	0.08
DIVERSION	TO	DA99SQ	81	4.4	8	2	1	0.08
HYDROGRAPH	AT	DA99S	37	4.87	3	1	1	0.08
HYDROGRAPH	AT	A08A	71	4.8	22	6	4	0.14
DIVERSION	TO	DA08AQ	1	2.57	0	0	0	0.14
HYDROGRAPH	AT	DA08A	71	4.8	22	6	4	0.14
ROUTED TO		RA08A	70	4.97	22	6	4	0.14
HYDROGRAPH	AT	A99R	70	4.13	6	2	1	0.04
DIVERSION	TO	DA99RQ	62	4.07	2	1	0	0.04
HYDROGRAPH	AT	DA99R	70	4.13	4	1	1	0.04
ROUTED TO		RA99R	52	4.5	4	1	1	0.04
HYDROGRAPH	AT	A08	185	4.07	11	3	2	0.08
5 COMBINED	AT	CA08	1009	4.93	254	65	47	1.64
2 COMBINED	AT	AFR5	2652	5.2	1049	276	199	13.11
HYDROGRAPH	AT	N11P5	77	4.07	5	1	1	0.03
DIVERSION	TO	N11P5Q	73	4	3	1	1	0.03
HYDROGRAPH	AT	DN11P5	77	4.07	2	1	0	0.03
ROUTED TO		R11P5S	44	4.3	2	1	0	0.03
HYDROGRAPH	AT	N11P1	96	4.23	10	3	2	0.06
DIVERSION	TO	N11P1Q	96	4.23	7	2	1	0.06
HYDROGRAPH	AT	DN11P1	51	4.53	3	1	1	0.06
2 COMBINED	AT	CN11P1	66	4.53	6	1	1	0.09
ROUTED TO		R11P1E	57	4.63	6	1	1	0.09
HYDROGRAPH	AT	N11P6	476	4.07	37	9	7	0.16
DIVERSION	TO	N11P6Q	392	3.97	16	4	3	0.16
HYDROGRAPH	AT	DN11P6	476	4.07	20	5	4	0.16

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		R11P6S	407	4.17	20	5	4	0.16
HYDROGRAPH	AT	N11P9	108	4.1	7	2	1	0.04
DIVERSION	TO	N11P9Q	108	4.1	5	1	1	0.04
HYDROGRAPH	AT	DN11P9	78	4.2	2	1	0	0.04
2 COMBINED	AT	CN11P9	457	4.2	23	6	4	0.2
ROUTED TO		R11P9S	421	4.23	23	6	4	0.2
HYDROGRAPH	AT	N11P2	136	4.17	10	3	2	0.06
2 COMBINED	AT	CN11P2	542	4.23	33	8	6	0.26
2 COMBINED	AT	LEJOS	542	4.23	38	10	7	0.36
DIVERSION	TO	VPRET	542	4.23	20	5	4	0.36
HYDROGRAPH	AT	VPDIV	337	4.37	18	5	3	0.36
HYDROGRAPH	AT	N11P4	70	4.23	8	2	1	0.05
DIVERSION	TO	N11P4Q	37	4	1	0	0	0.05
HYDROGRAPH	AT	DN11P4	70	4.23	7	2	1	0.05
ROUTED TO		R11P4S	68	4.33	7	2	1	0.05
DIVERSION	TO	N11P4E	34	4.33	4	1	1	0.05
HYDROGRAPH	AT	DN11P4	34	4.33	4	1	1	0.05
2 COMBINED	AT	SDLEJ1	370	4.37	22	5	4	0.41
HYDROGRAPH	AT	N11P8	125	4.07	9	2	2	0.04
DIVERSION	TO	N11P8Q	116	4	5	1	1	0.04
HYDROGRAPH	AT	DN11P8	125	4.07	4	1	1	0.04
ROUTED TO		R11P8S	98	4.17	4	1	1	0.04
HYDROGRAPH	AT	N11P7	177	4.07	10	2	2	0.06
DIVERSION	TO	N11P7Q	177	4.03	6	2	1	0.06
HYDROGRAPH	AT	DN11P7	167	4.1	3	1	1	0.06
2 COMBINED	AT	CN11P7	210	4.13	7	2	1	0.1
DIVERSION	TO	N11P7E	42	4.13	1	0	0	0.1
HYDROGRAPH	AT	DN11P7	168	4.13	6	1	1	0.1
ROUTED TO		R11P7S	129	4.27	6	1	1	0.1
HYDROGRAPH	AT	RDP4E	34	4.33	4	1	1	0.05
2 COMBINED	AT	SUMP7S	161	4.27	9	2	2	0.1
2 COMBINED	AT	SDLEJ2	473	4.37	31	8	6	0.51
ROUTED TO		RSDL2	444	4.4	31	8	6	0.51
HYDROGRAPH	AT	BN11NP	149	4.13	18	4	3	0.19
ROUTED TO		RN11NP	158	4.27	18	4	3	0.19
HYDROGRAPH	AT	N11L5A	62	4.2	8	2	1	0.05
2 COMBINED	AT	C89	217	4.27	26	6	5	0.05
DIVERSION	TO	ED89	0	0	0	0	0	0.05
HYDROGRAPH	AT	D89	217	4.27	26	6	5	0.05

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		R89E	200	4.33	26	6	5	0.05
HYDROGRAPH	AT	N11L3A	44	4.13	5	1	1	0.03
2 COMBINED	AT	C87	230	4.33	30	8	5	0.07
DIVERSION	TO	SOL	0	0	0	0	0	0.07
HYDROGRAPH	AT	D87	230	4.33	30	8	5	0.07
2 COMBINED	AT	C87BA	637	4.4	59	15	11	0.58
DIVERSION	TO	87BAS	615	4.4	50	12	9	0.58
HYDROGRAPH	AT	87BP	22	3.87	10	2	2	0.58
ROUTED TO		R87BP	22	3.93	10	2	2	0.58
HYDROGRAPH	AT	87	41	4.23	5	1	1	0.03
DIVERSION	TO	D87Q	31	4.07	1	0	0	0.03
HYDROGRAPH	AT	D87	41	4.23	4	1	1	0.03
HYDROGRAPH	AT	R87B	615	4.4	50	12	9	0.58
2 COMBINED	AT	C87B	683	4.4	56	14	10	0.03
ROUTED TO		87BA	95	5.03	54	14	10	0.03
2 COMBINED	AT	87BOUT	114	5.03	60	15	11	0.61
ROUTED TO		R87BA	114	5.07	60	15	11	0.61
DIVERSION	TO	87OUT	114	5.07	60	15	11	0.61
HYDROGRAPH	AT	D87BA	0	0	0	0	0	0.61
HYDROGRAPH	AT	LACAI	51	4.17	6	1	1	0.04
DIVERSION	TO	LACAIQ	28	3.97	1	0	0	0.04
HYDROGRAPH	AT	DLACAI	51	4.17	5	1	1	0.04
ROUTED TO		RTCAI	50	4.2	5	1	1	0.04
DIVERSION	TO	LECHE	20	4.07	3	1	1	0.04
HYDROGRAPH	AT	DNLECH	30	4.2	2	0	0	0.04
2 COMBINED	AT	SDLEJ3	27	4.2	1	0	0	0.64
HYDROGRAPH	AT	SUMMIT	36	4.17	4	1	1	0.03
HYDROGRAPH	AT	RDLECH	20	4.07	3	1	1	0.04
2 COMBINED	AT	LEJCHL	56	4.17	8	2	1	0.03
HYDROGRAPH	AT	RDP7E	42	4.13	1	0	0	0.1
ROUTED TO		R11P7E	26	4.4	1	0	0	0.1
DIVERSION	TO	EAST83	18	4.4	1	0	0	0.1
HYDROGRAPH	AT	D2-18	8	4.4	0	0	0	0.1
2 COMBINED	AT	83CL	56	4.17	8	2	1	0.13
DIVERSION	TO	EAGLE	55	4.17	8	2	1	0.13
HYDROGRAPH	AT	24PIPE	0	0	0	0	0	0.13
2 COMBINED	AT	SDLEJ4	27	4.2	1	0	0	0.77
ROUTED TO		RT83CL	22	4.33	1	0	0	0.77
HYDROGRAPH	AT	N11P3	38	4.3	7	2	1	0.04

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
2 COMBINED	AT	83SD	56	4.33	8	2	1	0.81
ROUTED TO		R83SD	55	4.33	8	2	1	0.81
HYDROGRAPH	AT	BN11KP	0	0	0	0	0	0.41
ROUTED TO		R91	0	0	0	0	0	0.41
HYDROGRAPH	AT	N11L5	67	4.17	8	2	1	0.04
HYDROGRAPH	AT	RED89	0	0	0	0	0	0.05
ROUTED TO		R89S	0	0	0	0	0	0.05
HYDROGRAPH	AT	N11L2	18	4.13	2	0	0	0.01
4 COMBINED	AT	CN11L5	84	4.17	10	2	2	0.05
DIVERSION	TO	DIVS89	0	4.17	0	0	0	0.05
HYDROGRAPH	AT	D11L5	84	4.17	10	2	2	0.05
ROUTED TO		RN11L5	82	4.2	10	2	2	0.05
HYDROGRAPH	AT	N11L3	64	4.17	7	2	1	0.04
DIVERSION	TO	N11L3Q	54	4.07	2	1	0	0.04
HYDROGRAPH	AT	DN11L3	64	4.17	5	1	1	0.04
HYDROGRAPH	AT	RSOL	0	0	0	0	0	0.07
ROUTED TO		RTSOL	0	0	0	0	0	0.07
3 COMBINED	AT	PPSD1	145	4.17	15	4	3	0.09
DIVERSION	TO	DIVS87	23	4.17	1	0	0	0.09
HYDROGRAPH	AT	PPDIV	122	4.1	14	4	3	0.09
HYDROGRAPH	AT	N11L4	12	4.23	2	0	0	0.01
DIVERSION	TO	N11L4Q	9	4.1	0	0	0	0.01
HYDROGRAPH	AT	DN11L4	12	4.23	1	0	0	0.01
HYDROGRAPH	AT	N21I1	98	4.23	15	4	3	0.08
DIVERSION	TO	N21I1Q	9	3.77	0	0	0	0.08
HYDROGRAPH	AT	DN21I1	98	4.23	15	4	3	0.08
HYDROGRAPH	AT	87OUT	114	5.07	60	15	11	0.61
4 COMBINED	AT	PPSD	287	4.33	92	24	17	0.18
DIVERSION	TO	DIVS86	0	0	0	0	0	0.18
HYDROGRAPH	AT	DIVS3	287	4.33	92	24	17	0.18
ROUTED TO		RPPSD	286	4.37	92	24	17	0.18
HYDROGRAPH	AT	N21I2	50	4.3	10	3	2	0.06
HYDROGRAPH	AT	N21I4	34	4.2	5	1	1	0.03
4 COMBINED	AT	TEMP0	368	4.37	103	26	19	1.08
HYDROGRAPH	AT	N21Z	151	4.37	23	6	4	0.11
DIVERSION	TO	N21ZI	151	4.37	14	3	2	0.11
HYDROGRAPH	AT	LN21Z	120	4.57	10	2	2	0.11
DIVERSION	TO	DN21ZI	0	4.57	0	0	0	0.11
HYDROGRAPH	AT	DN21ZO	120	4.57	10	2	2	0.11

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
DIVERSION	TO	N21ZI*	60	4.57	5	1	1	0.11
HYDROGRAPH	AT	DN21Z*	60	4.57	5	1	1	0.11
ROUTED TO		RN21ZW	48	4.8	5	1	1	0.11
DIVERSION	TO	D1/2ST	12	4.73	3	1	0	0.11
HYDROGRAPH	AT	1/2ST	36	4.8	2	1	0	0.11
HYDROGRAPH	AT	R1/2ST	12	4.73	3	1	0	0.11
HYDROGRAPH	AT	18PIPE	18	4.4	1	0	0	0.1
HYDROGRAPH	AT	CLDIV	55	4.17	8	2	1	0.13
2 COMBINED	AT	CPIPE	72	4.37	9	2	2	0.23
ROUTED TO		RCPIPE	71	4.53	9	2	2	0.23
HYDROGRAPH	AT	N21I3	107	4.37	17	4	3	0.09
3 COMBINED	AT	CN21I3	166	4.5	29	7	5	0.32
DIVERSION	TO	N21I3O	166	4.5	29	7	5	0.32
HYDROGRAPH	AT	R21I3	0	0	0	0	0	0.32
2 COMBINED	AT	PPK_E	36	4.8	2	1	0	0.43
DIVERSION	TO	PPKEW3	35	4.8	2	1	0	0.43
HYDROGRAPH	AT	PPKEW2	0	0	0	0	0	0.43
2 COMBINED	AT	US_BSN	368	4.37	103	26	19	1.51
DIVERSION	TO	PPBAS	10	3.73	10	3	2	1.51
HYDROGRAPH	AT	PPBP	332	4.4	88	22	16	1.51
ROUTED TO		R83BSN	22	7.8	21	15	11	1.51
HYDROGRAPH	AT	RPPB	10	3.73	10	3	2	1.51
2 COMBINED	AT	JCT1	32	7.8	29	18	13	1.51
HYDROGRAPH	AT	RESD	35	4.8	2	1	0	0.43
2 COMBINED	AT	JCT	47	4.97	30	18	14	1.51
ROUTED TO		OUTLET	47	5.07	30	18	14	1.51
HYDROGRAPH	AT	N21F	158	4.33	33	8	6	0.13
DIVERSION	TO	DN21FQ	27	3.77	2	0	0	0.13
HYDROGRAPH	AT	DN21F	158	4.33	32	8	6	0.13
2 COMBINED	AT	CN21F	145	4.43	59	26	19	1.63
HYDROGRAPH	AT	N21G	92	4.23	17	4	3	0.06
HYDROGRAPH	AT	DR21Z*	60	4.57	5	1	1	0.11
ROUTED TO		RN21ZS	37	5.13	5	1	1	0.11
2 COMBINED	AT	CN21G	92	4.23	22	5	4	0.06
DIVERSION	TO	N21GI	3	4.23	0	0	0	0.06
HYDROGRAPH	AT	DN21GO	89	4.23	21	5	4	0.06
ROUTED TO		RN21GS	87	4.57	21	5	4	0.06
HYDROGRAPH	AT	N21E	100	4.23	18	4	3	0.06
3 COMBINED	AT	CN21E	288	4.43	95	34	26	1.76

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RN21E	285	4.63	95	34	26	1.76
HYDROGRAPH	AT	N21D	78	4.23	14	4	3	0.05
DIVERSION	TO	LN21DD	78	4.23	8	2	1	0.05
HYDROGRAPH	AT	LN21D	61	4.53	6	2	1	0.05
2 COMBINED	AT	CN21D	333	4.63	100	36	27	1.81
DIVERSION	TO	N21DI	290	4.63	86	31	23	1.81
HYDROGRAPH	AT	DN21D	43	4.63	15	4	3	1.81
ROUTED TO		RN21DE	40	5.4	14	4	3	1.81
HYDROGRAPH	AT	20	94	4.1	10	3	2	0.04
DIVERSION	TO	D20Q	30	3.8	1	0	0	0.04
HYDROGRAPH	AT	D20	94	4.1	9	2	2	0.04
ROUTED TO		R20	93	4.13	9	2	2	0.04
HYDROGRAPH	AT	19	103	4.1	10	3	2	0.05
DIVERSION	TO	D19Q	5	3.53	1	0	0	0.05
HYDROGRAPH	AT	D19	103	4.1	10	2	2	0.05
2 COMBINED	AT	HC6	192	4.13	18	5	3	0.09
ROUTED TO		B19	83	4.43	12	4	3	0.09
ROUTED TO		RHC6	82	4.47	12	4	3	0.09
HYDROGRAPH	AT	21	55	4.13	7	2	1	0.03
2 COMBINED	AT	HC7	111	4.43	18	6	4	0.11
ROUTED TO		RHC7	108	4.53	18	6	4	0.11
HYDROGRAPH	AT	33	75	4.1	9	2	2	0.04
DIVERSION	TO	D33Q	1	1.3	0	0	0	0.04
HYDROGRAPH	AT	D33	75	4.1	9	2	2	0.04
ROUTED TO		B33	5	5.13	5	2	2	0.04
ROUTED TO		R33	5	5.77	5	2	2	0.04
HYDROGRAPH	AT	34	82	4.03	6	2	1	0.03
DIVERSION	TO	D34Q	6	3.5	1	0	0	0.03
HYDROGRAPH	AT	D34	82	4.03	6	1	1	0.03
ROUTED TO		B34	4	4.5	3	1	1	0.03
ROUTED TO		R34	4	5	3	1	1	0.03
HYDROGRAPH	AT	35	43	4.27	9	2	2	0.04
4 COMBINED	AT	HC8A	149	4.53	34	12	9	0.23
HYDROGRAPH	AT	22	114	4.07	10	3	2	0.04
DIVERSION	TO	D22Q	47	3.83	2	1	0	0.04
HYDROGRAPH	AT	D22	114	4.07	8	2	1	0.04
ROUTED TO		R22	110	4.1	8	2	1	0.04
HYDROGRAPH	AT	23	66	4.1	7	2	1	0.03
2 COMBINED	AT	HC8	176	4.1	15	4	3	0.07

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		B23	145	4.23	11	3	2	0.07
HYDROGRAPH	AT	25	24	4.13	4	1	1	0.01
3 COMBINED	AT	HC9	264	4.23	48	15	11	0.31
ROUTED TO		RHC9	257	4.3	48	15	11	0.31
HYDROGRAPH	AT	27	81	4.1	9	2	2	0.04
HYDROGRAPH	AT	36	93	4.13	10	3	2	0.05
DIVERSION	TO	D36Q	12	3.67	1	0	0	0.05
HYDROGRAPH	AT	D36	93	4.13	9	2	2	0.05
ROUTED TO		R36	92	4.17	9	2	2	0.05
HYDROGRAPH	AT	37w	9	4.27	2	0	0	0.01
4 COMBINED	AT	C37W	404	4.27	67	20	15	0.41
ROUTED TO		B37W	327	4.43	67	20	15	0.41
ROUTED TO		RB37W	325	4.53	67	20	15	0.41
HYDROGRAPH	AT	37e	22	4.13	3	1	1	0.01
HYDROGRAPH	AT	24	43	4.1	5	1	1	0.02
DIVERSION	TO	D24Q	22	3.9	1	0	0	0.02
HYDROGRAPH	AT	D24	43	4.1	4	1	1	0.02
ROUTED TO		R24	43	4.1	4	1	1	0.02
HYDROGRAPH	AT	100	87	4.1	9	2	2	0.04
DIVERSION	TO	D100Q	64	3.97	2	1	0	0.04
HYDROGRAPH	AT	D100	87	4.1	7	2	1	0.04
2 COMBINED	AT	HC100	130	4.1	10	3	2	0.06
ROUTED TO		R100	130	4.1	10	3	2	0.06
HYDROGRAPH	AT	28R	26	4.1	3	1	1	0.01
2 COMBINED	AT	HC28R	155	4.1	13	3	2	0.07
ROUTED TO		R28R	151	4.2	13	3	2	0.07
HYDROGRAPH	AT	26R	149	4.1	13	3	2	0.06
DIVERSION	TO	D26RQ	94	3.93	3	1	1	0.06
HYDROGRAPH	AT	D26R	149	4.1	10	2	2	0.06
ROUTED TO		R26R	143	4.17	10	2	2	0.06
HYDROGRAPH	AT	29	73	4.1	8	2	1	0.03
2 COMBINED	AT	HC11	215	4.13	18	4	3	0.1
ROUTED TO		B29	118	4.37	13	4	3	0.1
HYDROGRAPH	AT	48	34	4.17	5	1	1	0.03
5 COMBINED	AT	HC12	533	4.4	99	30	22	0.61
HYDROGRAPH	AT	49	34	4.17	5	1	1	0.02
ROUTED TO		B49	4	5.17	0	0	0	0.02
2 COMBINED	AT	C-N24M	529	4.4	99	30	22	0.64
ROUTED TO		RB49	494	4.77	98	30	22	0.64

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	N24V	109	4.1	8	2	1	0.05
DIVERSION	TO	DN24VQ	109	4.1	5	1	1	0.05
HYDROGRAPH	AT	DN24V	92	4.17	4	1	1	0.05
ROUTED TO		RN24V	28	5.3	4	1	1	0.05
HYDROGRAPH	AT	N24M	305	4.23	38	9	7	0.17
DIVERSION	TO	DN24MQ	305	4.23	27	7	5	0.17
HYDROGRAPH	AT	DN24M	173	4.5	10	3	2	0.17
3 COMBINED	AT	CN24M	535	4.73	109	32	24	0.85
ROUTED TO		RN24M	481	5.23	108	32	23	0.85
HYDROGRAPH	AT	45	156	4.07	14	3	2	0.06
DIVERSION	TO	D45Q	36	3.77	2	1	0	0.06
HYDROGRAPH	AT	D45	156	4.07	12	3	2	0.06
ROUTED TO		R45	148	4.13	12	3	2	0.06
HYDROGRAPH	AT	47	81	4.1	9	2	2	0.04
2 COMBINED	AT	HC14	228	4.13	20	5	4	0.1
ROUTED TO		RHC14	219	4.17	20	5	4	0.1
HYDROGRAPH	AT	50	47	4.13	6	2	1	0.03
ROUTED TO		R50	45	4.2	6	2	1	0.03
HYDROGRAPH	AT	51	18	4.13	3	1	0	0.01
3 COMBINED	AT	HC15	281	4.17	29	7	5	0.14
ROUTED TO		B51	195	4.37	25	7	5	0.14
HYDROGRAPH	AT	46	161	4.07	14	4	3	0.06
DIVERSION	TO	D46Q	91	3.9	4	1	1	0.06
HYDROGRAPH	AT	D46	161	4.07	10	3	2	0.06
ROUTED TO		R46	155	4.17	10	3	2	0.06
HYDROGRAPH	AT	52	75	4.13	10	2	2	0.04
2 COMBINED	AT	HC16	228	4.17	20	5	4	0.1
HYDROGRAPH	AT	53R	153	4.1	16	4	3	0.07
DIVERSION	TO	D53RQ	30	3.73	2	1	0	0.07
HYDROGRAPH	AT	D53R	153	4.1	14	3	2	0.07
ROUTED TO		R53	147	4.17	14	3	2	0.07
HYDROGRAPH	AT	54R	38	4.13	5	1	1	0.02
2 COMBINED	AT	HC17	184	4.13	18	5	3	0.09
2 COMBINED	AT	HC17A	411	4.13	38	10	7	0.19
ROUTED TO		B52	118	4.57	25	9	6	0.19
HYDROGRAPH	AT	56R	34	4.03	3	1	1	0.01
ROUTED TO		B56	15	4.23	2	0	0	0.01
3 COMBINED	AT	C-N24I	299	4.43	51	16	12	0.35
ROUTED TO		R-N24I	286	4.67	51	16	12	0.35

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	55	159	4.1	15	4	3	0.05
DIVERSION	TO	D55Q	85	3.9	5	1	1	0.05
HYDROGRAPH	AT	D55	159	4.1	10	3	2	0.05
ROUTED TO		R55	158	4.1	10	3	2	0.05
HYDROGRAPH	AT	57R	20	4.07	2	0	0	0.01
2 COMBINED	AT	HC18	177	4.1	12	3	2	0.06
ROUTED TO		B57R	105	4.23	8	2	2	0.06
ROUTED TO		RB57R	98	4.33	8	2	2	0.06
HYDROGRAPH	AT	N24I	328	4.57	72	18	13	0.3
DIVERSION	TO	DN24IQ	167	4.27	13	3	2	0.3
HYDROGRAPH	AT	DN24I	328	4.57	61	15	11	0.3
4 COMBINED	AT	CP57R	717	5.27	209	61	45	1.56
HYDROGRAPH	AT	N24H	403	4.33	54	14	10	0.23
DIVERSION	TO	DN24HQ	101	3.93	8	2	1	0.23
HYDROGRAPH	AT	DN24H	403	4.33	47	12	8	0.23
HYDROGRAPH	AT	N24N	165	4.27	25	6	4	0.13
DIVERSION	TO	DN24NQ	165	4.27	11	3	2	0.13
HYDROGRAPH	AT	DN24N	156	4.37	14	3	2	0.13
ROUTED TO		RN24N	99	5.03	14	3	2	0.13
HYDROGRAPH	AT	N24J	110	4.57	26	7	5	0.12
DIVERSION	TO	DN24JQ	4	3.07	1	0	0	0.12
HYDROGRAPH	AT	DN24J	110	4.57	26	6	5	0.12
2 COMBINED	AT	CN24J	174	5	39	10	7	0.25
ROUTED TO		RN24J	171	5.07	39	10	7	0.25
HYDROGRAPH	AT	N24K	169	4.7	47	12	9	0.21
DIVERSION	TO	DN24KQ	47	4.17	5	1	1	0.21
HYDROGRAPH	AT	DN24K	169	4.7	44	11	8	0.21
4 COMBINED	AT	CN24I	960	5.27	315	88	64	2.25
ROUTED TO		RN24I	942	5.37	314	88	64	2.25
HYDROGRAPH	AT	N21JA	177	4.17	17	4	3	0.08
DIVERSION	TO	N21JAQ	157	4.1	7	2	1	0.08
HYDROGRAPH	AT	DN21JA	177	4.17	10	3	2	0.08
ROUTED TO		RN21JS	129	4.43	10	3	2	0.08
HYDROGRAPH	AT	N21JB	245	4.27	29	7	5	0.17
DIVERSION	TO	N21JBQ	165	4.07	6	2	1	0.17
HYDROGRAPH	AT	DN21JB	245	4.27	23	6	4	0.17
2 COMBINED	AT	CN21J	324	4.43	33	8	6	0.25
ROUTED TO		RN21JE	281	4.73	33	8	6	0.25
2 COMBINED	AT	CN24G*	1030	4.83	337	94	68	2.5

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		RN24G*	1015	4.93	336	94	68	2.5
HYDROGRAPH	AT	N24G	403	4.57	78	20	14	0.43
DIVERSION	TO	LN24GD	399	4.5	30	8	5	0.43
HYDROGRAPH	AT	LN24G	403	4.57	48	12	9	0.43
2 COMBINED	AT	CN24G	1201	4.93	364	101	73	2.93
HYDROGRAPH	AT	DRN21Z	0	4.57	0	0	0	0.11
ROUTED TO		RN21ZE	0	7.17	0	0	0	0.11
2 COMBINED	AT	CN24G+	1201	4.93	364	101	73	2.93
ROUTED TO		RN24G	1191	4.97	364	101	73	2.93
HYDROGRAPH	AT	N24F	142	4.33	21	5	4	0.11
DIVERSION	TO	DN24FQ	105	4.13	5	1	1	0.11
HYDROGRAPH	AT	DN24F	142	4.33	16	4	3	0.11
2 COMBINED	AT	CN24F	1224	4.97	374	104	75	3.03
HYDROGRAPH	AT	N24D	180	4.17	26	7	5	0.09
DIVERSION	TO	DN24DQ	4	1.67	1	0	0	0.09
HYDROGRAPH	AT	DN24	180	4.17	25	6	5	0.09
2 COMBINED	AT	CN24D	1252	4.97	390	109	79	3.12
ROUTED TO		LN24D	18	14.37	18	16	13	3.12
HYDROGRAPH	AT	N21H	50	4.17	6	2	1	0.03
HYDROGRAPH	AT	DRN21G	3	4.23	0	0	0	0.06
ROUTED TO		RN21GE	2	4.63	0	0	0	0.06
2 COMBINED	AT	CN21H	50	4.17	7	2	1	0.03
ROUTED TO		RN21H	37	5.1	7	2	1	0.03
HYDROGRAPH	AT	N24E	18	4.43	4	1	1	0.02
DIVERSION	TO	DN24EQ	18	4.43	2	1	0	0.02
HYDROGRAPH	AT	DN24E	10	5	1	0	0	0.02
ROUTED TO		RN24E	8	5.4	1	0	0	0.02
3 COMBINED	AT	CN24D*	37	5.23	19	18	15	3.18
HYDROGRAPH	AT	N27	279	4.4	59	15	11	0.28
DIVERSION	TO	DN27Q	279	4.4	30	8	5	0.28
HYDROGRAPH	AT	DN27	230	4.63	30	7	5	0.28
ROUTED TO		RN27	186	5.03	30	7	5	0.28
HYDROGRAPH	AT	N26	86	4.17	10	2	2	0.04
DIVERSION	TO	DN26Q	86	4.17	6	1	1	0.04
HYDROGRAPH	AT	DN26	62	4.3	4	1	1	0.04
2 COMBINED	AT	CN26	193	5.03	34	8	6	0.32
ROUTED TO		RN26	149	5.4	34	8	6	0.32
HYDROGRAPH	AT	N25	288	4.5	56	14	10	0.24
DIVERSION	TO	DN25Q	288	4.5	37	9	7	0.24

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DN25	171	4.93	20	5	4	0.24
2 COMBINED	AT	CN25	226	5.4	53	13	9	0.56
ROUTED TO		RN25	198	5.87	53	13	9	0.56
HYDROGRAPH	AT	N24	167	4.27	26	7	5	0.11
DIVERSION	TO	DN24Q	167	4.27	14	3	2	0.11
HYDROGRAPH	AT	DN24	151	4.4	13	3	2	0.11
3 COMBINED	AT	CN24	218	6.2	82	37	29	3.85
ROUTED TO		RCN24	139	6.9	62	27	21	3.85
HYDROGRAPH	AT	N23	425	4.37	86	22	16	0.39
DIVERSION	TO	DN23Q	161	4	11	3	2	0.39
HYDROGRAPH	AT	DN23	425	4.37	75	19	14	0.39
3 COMBINED	AT	CN23	281	4.47	126	43	33	6.05
ROUTED TO		RN23	268	5.07	126	43	33	6.05
HYDROGRAPH	AT	BN21DI	290	4.63	86	31	23	1.81
ROUTED TO		RN21DS	268	5.23	85	31	23	1.81
HYDROGRAPH	AT	N21C	430	4.4	100	25	18	0.39
DIVERSION	TO	LN21CD	58	3.77	6	1	1	0.39
HYDROGRAPH	AT	LN21C	430	4.4	96	24	17	0.39
2 COMBINED	AT	CN21C	539	5.07	182	59	44	0.39
HYDROGRAPH	AT	N21	645	4.63	159	40	29	0.62
DIVERSION	TO	DN21Q	58	3.63	12	3	2	0.62
HYDROGRAPH	AT	DN21	645	4.63	150	37	27	0.62
3 COMBINED	AT	CN21	1067	5	408	121	90	7.06
ROUTED TO		RN21	1051	5.3	407	121	89	7.06
DIVERSION	TO	N20DI	1051	5.3	407	121	89	7.06
HYDROGRAPH	AT	N21-20	0	0	0	0	0	7.06
HYDROGRAPH	AT	N11DB	320	4.3	54	14	10	0.25
HYDROGRAPH	AT	B11DAS	21	5	8	2	1	0.26
ROUTED TO		R11DAS	21	5.53	8	2	1	0.26
2 COMBINED	AT	C11DAB	320	4.3	61	16	11	0.25
DIVERSION	TO	LNBOUT	320	4.3	29	7	5	0.25
HYDROGRAPH	AT	LN11DB	262	4.53	33	8	6	0.25
DIVERSION	TO	N11DI	236	4.53	30	7	5	0.25
HYDROGRAPH	AT	DN11D	26	4.53	3	1	1	0.25
ROUTED TO		RN11DE	19	5	3	1	1	0.25
HYDROGRAPH	AT	DRX5	0	0	0	0	0	0.26
ROUTED TO		RX5S	0	0	0	0	0	0.26
2 COMBINED	AT	CX1	19	5	3	1	1	0.25
DIVERSION	TO	X1I	0	0	0	0	0	0.25

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DX1	19	5	3	1	1	0.25
ROUTED TO		RX1E	17	5.23	3	1	1	0.25
HYDROGRAPH	AT	DIVS1	0	4.17	0	0	0	0.05
ROUTED TO		RNDV89	0	4.2	0	0	0	0.05
HYDROGRAPH	AT	DV1	107	4.27	19	5	4	0.09
DIVERSION	TO	DDV1Q	2	2.3	0	0	0	0.09
HYDROGRAPH	AT	DDV1	107	4.27	19	5	3	0.09
2 COMBINED	AT	CPD1	107	4.27	19	5	3	0.09
ROUTED TO		RNCP1	107	4.27	19	5	3	0.09
HYDROGRAPH	AT	DV2	28	4.33	7	2	1	0.03
2 COMBINED	AT	CPD2	134	4.27	26	6	5	0.12
DIVERSION	TO	DVRB	53	4.13	7	2	1	0.12
HYDROGRAPH	AT	89WRB	81	4.27	19	5	3	0.12
ROUTED TO		RNRDV2	78	4.37	19	5	3	0.12
HYDROGRAPH	AT	DV3	62	4.23	11	3	2	0.05
2 COMBINED	AT	CPD3	136	4.33	30	7	5	0.17
ROUTED TO		RNRDV3	135	4.4	30	7	5	0.17
HYDROGRAPH	AT	DV4	54	4.33	13	3	2	0.06
HYDROGRAPH	AT	DV5	44	4.17	6	2	1	0.03
3 COMBINED	AT	CPD5	223	4.37	48	12	9	0.26
HYDROGRAPH	AT	DV6	103	4.27	19	5	4	0.09
2 COMBINED	AT	CPDV6	324	4.33	68	17	12	0.35
ROUTED TO		RN11IS	320	4.43	67	17	12	0.35
HYDROGRAPH	AT	N11EA	251	4.4	58	15	11	0.26
2 COMBINED	AT	CN11EA	554	4.43	124	31	23	0.61
ROUTED TO		RN11ES	550	4.53	124	31	23	0.61
ROUTED TO		LX50	507	4.7	200	158	154	0.61
DIVERSION	TO	DX50I	384	4.7	177	148	145	0.61
HYDROGRAPH	AT	DX50	123	4.7	24	10	9	0.61
ROUTED TO		RX50E	121	4.9	24	10	9	0.61
HYDROGRAPH	AT	DIVS2	23	4.17	1	0	0	0.09
ROUTED TO		RNDV87	5	4.3	1	0	0	0.09
HYDROGRAPH	AT	DV7	164	4.43	30	8	5	0.13
DIVERSION	TO	DDV7Q	98	4.1	5	1	1	0.13
HYDROGRAPH	AT	DDV7	164	4.43	25	6	5	0.13
2 COMBINED	AT	CPD7	168	4.4	26	7	5	0.13
ROUTED TO		RNRDV7	167	4.53	26	7	5	0.13
HYDROGRAPH	AT	DV8	115	4.3	23	6	4	0.09
2 COMBINED	AT	CPD8	270	4.5	49	12	9	0.22

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
HYDROGRAPH	AT	DV9	100	4.1	10	2	2	0.04
2 COMBINED	AT	DVCP9	308	4.43	59	15	11	0.27
HYDROGRAPH	AT	DIVS13	0	0	0	0	0	0.18
ROUTED TO		RNRS86	0	0	0	0	0	0.18
HYDROGRAPH	AT	DV10	330	4.23	47	12	9	0.21
DIVERSION	TO	DDV10Q	58	3.8	2	1	0	0.21
HYDROGRAPH	AT	DDV10	330	4.23	45	11	8	0.21
2 COMBINED	AT	CPD10	330	4.23	45	11	8	0.21
ROUTED TO		RNRD10	324	4.33	45	11	8	0.21
HYDROGRAPH	AT	DV11	241	4.23	42	11	8	0.14
3 COMBINED	AT	CPD11	810	4.4	144	36	26	0.62
ROUTED TO		RCP11S	792	4.5	144	36	26	0.62
HYDROGRAPH	AT	N22A	404	4.33	84	21	15	0.3
2 COMBINED	AT	CN22A	1110	4.5	225	57	41	0.92
DIVERSION	TO	LN22DA	741	4.17	38	9	7	0.92
HYDROGRAPH	AT	LN22A	1110	4.5	190	48	34	0.92
ROUTED TO		R22AS	1068	4.67	190	48	34	0.92
HYDROGRAPH	AT	N22B	260	4.27	46	12	8	0.17
DIVERSION	TO	LN22DB	260	4.27	24	6	4	0.17
HYDROGRAPH	AT	LN22B	221	4.5	22	6	4	0.17
3 COMBINED	AT	CN22	1213	4.7	228	61	46	1.71
DIVERSION	TO	N22I	500	4.33	152	42	32	1.71
HYDROGRAPH	AT	DN22	713	4.7	76	19	14	1.71
ROUTED TO		RN22W	709	4.8	76	19	14	1.71
HYDROGRAPH	AT	DRX50I	384	4.7	177	148	145	0.61
ROUTED TO		RX50W	381	4.87	177	148	145	0.61
HYDROGRAPH	AT	N11EB	333	4.27	53	13	10	0.23
4 COMBINED	AT	CN11E	1142	4.77	294	177	167	2.19
DIVERSION	TO	LN11ED	144	2.63	63	16	11	2.19
HYDROGRAPH	AT	LN11E	1142	4.77	293	177	155	2.19
ROUTED TO		R-WBE1	1142	4.8	293	177	155	2.19
HYDROGRAPH	AT	WB1	146	4.3	28	7	5	0.12
2 COMBINED	AT	CPWB1	1220	4.77	318	183	160	2.31
ROUTED TO		R-R3	1220	4.8	316	183	157	2.31
HYDROGRAPH	AT	WB2	134	4.23	22	6	4	0.09
2 COMBINED	AT	CPWB2	1278	4.8	336	188	161	2.4
ROUTED TO		R-4-5	1217	4.9	280	174	145	2.4
HYDROGRAPH	AT	WB3	30	4.03	2	1	0	0.01
2 COMBINED	AT	CPWB3	1217	4.9	280	174	146	2.41

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Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
ROUTED TO		R-6	1173	4.97	278	173	145	2.41
HYDROGRAPH	AT	DRN22	500	4.33	152	42	32	1.71
HYDROGRAPH	AT	WB4	193	4.2	28	7	5	0.11
2 COMBINED	AT	CPWB4	680	4.3	175	48	36	0.11
ROUTED TO		R-R1	772	4.33	167	48	36	0.11
HYDROGRAPH	AT	WB5	247	4.17	29	7	5	0.11
2 COMBINED	AT	CPWB5	960	4.33	193	55	41	0.22
ROUTED TO		R-R2	612	4.77	141	51	40	0.22
2 COMBINED	AT	CPR6	1757	4.97	420	224	186	2.63
ROUTED TO		RCR26	1737	5.07	418	224	185	2.63
HYDROGRAPH	AT	WB7	87	4.13	12	3	2	0.05
2 COMBINED	AT	CR6W7	1749	5.07	420	224	187	2.67
ROUTED TO		R-R7	1746	5.07	420	224	185	2.67
HYDROGRAPH	AT	WB6	136	4.33	29	7	5	0.12
ROUTED TO		R-R8	22	5.83	20	7	5	0.12
2 COMBINED	AT	C7R8	1759	5.07	438	230	190	2.79
ROUTED TO		RC78	1755	5.1	437	230	189	2.79
HYDROGRAPH	AT	WB8	39	4.77	17	5	3	0.07
2 COMBINED	AT	CP-678	1782	5.1	450	234	192	2.86
HYDROGRAPH	AT	WB10	130	4.27	24	6	4	0.09
ROUTED TO		R-R9	56	4.93	23	6	4	0.09
2 COMBINED	AT	WBEOT	1817	5.1	466	238	196	2.95
DIVERSION	TO	TONRI	100	4.93	80	60	51	2.95
HYDROGRAPH	AT	DVNR	1717	5.1	386	177	145	2.95
DIVERSION	TO	DCLUB	385	5.1	72	23	17	2.95
HYDROGRAPH	AT	CCLUB	1332	5.1	314	154	128	2.95
ROUTED TO		RR287	1332	5.13	314	154	128	2.95
DIVERSION	TO	DV87SI	397	5.13	75	24	18	2.95
HYDROGRAPH	AT	DV87S	934	5.13	239	130	110	2.95
ROUTED TO		RR289	930	5.17	239	130	109	2.95
DIVERSION	TO	DV89I	392	5.17	58	14	10	2.95
HYDROGRAPH	AT	DS89	537	5.17	181	116	99	2.95
ROUTED TO		TODET	535	5.2	181	116	99	2.95
DIVERSION	TO	DV91I	495	5.23	83	21	15	2.95
HYDROGRAPH	AT	DV91	124	5.83	103	96	84	2.95
HYDROGRAPH	AT	WB9	173	4.5	47	12	9	0.22
ROUTED TO		R-R10	30	6.47	25	12	9	0.22
HYDROGRAPH	AT	DRX1I	0	0	0	0	0	0.25
ROUTED TO		RX1S	0	0	0	0	0	0.25

Table 2 100-Year, 6-Hour Storm Peak Flow Summary Table for Future Conditions								
Operation		Hydrograph Name	Peak Flow (cfs)	Time to Peak (hour)	Average 6-hour (Ac-Ft)	Average 12-hour (Ac-Ft)	Average 72-hour (Ac-Ft)	Basin Area (sq. mile)
3 COMBINED	AT	CN11B1	148	5.83	125	105	92	3.17
HYDROGRAPH	AT	N11C	293	4.3	51	13	9	0.25
DIVERSION	TO	LN11CD	293	4.3	25	6	5	0.25
HYDROGRAPH	AT	LN11C	256	4.5	26	6	5	0.25
DIVERSION	TO	N11CWI	1	4.5	0	0	0	0.25
HYDROGRAPH	AT	DN11CW	255	4.5	26	6	5	0.25
DIVERSION	TO	N11CEI	14	4.5	4	1	1	0.25
HYDROGRAPH	AT	DN11CE	241	4.5	22	6	4	0.25
HYDROGRAPH	AT	DRN11C	1	4.5	0	0	0	0.25
ROUTED TO		LN11CW	0	4.7	0	0	0	0.25
HYDROGRAPH	AT	DR11C*	14	4.5	4	1	1	0.25
ROUTED TO		LN11CE	3	6.8	3	1	1	0.25
3 COMBINED	AT	CN11C1	242	4.5	25	6	5	0.25
HYDROGRAPH	AT	BN11DI	236	4.53	30	7	5	0.25
2 COMBINED	AT	CN11D	469	4.53	55	14	10	0.25
ROUTED TO		RWBW1	364	4.97	55	14	10	0.25
HYDROGRAPH	AT	N11A	596	4.67	187	48	35	0.93
2 COMBINED	AT	CWBW	754	5.13	230	59	43	1.18
ROUTED TO		RBWB	25	5.23	25	25	22	1.18
ROUTED TO		RWBW2	25	7.03	25	25	21	1.18
2 COMBINED	AT	CN11B	166	5.83	149	130	112	4.35
HYDROGRAPH	AT	S30D	209	4.23	32	8	6	0.13
ROUTED TO		RS30D	198	4.53	32	8	6	0.13
HYDROGRAPH	AT	S30C	496	4.4	116	29	21	0.45
2 COMBINED	AT	XX1	671	4.5	147	37	27	0.58
HYDROGRAPH	AT	S30B	311	4.73	86	22	16	0.4
2 COMBINED	AT	CS30B	892	4.57	226	58	42	0.98
DIVERSION	TO	DS30BI	342	4.57	34	9	6	0.98
HYDROGRAPH	AT	DS30BO	550	4.47	192	49	35	0.98
ROUTED TO		RS30BW	550	4.83	191	49	35	0.98
HYDROGRAPH	AT	S30A	524	4.43	120	30	22	0.53
2 COMBINED	AT	CS30A	997	4.57	304	78	56	1.51
HYDROGRAPH	AT	DRTONR	100	4.93	80	60	51	2.95
HYDROGRAPH	AT	BN20DI	1051	5.3	407	121	89	7.06
HYDROGRAPH	AT	N20	842	4.13	99	25	18	0.35
DIVERSION	TO	DN20Q	25	2.97	7	2	1	0.35
HYDROGRAPH	AT	DN20	842	4.13	92	23	17	0.35
3 COMBINED	AT	CN20	1175	5.27	537	195	153	8

EXHIBITS

EXHIBIT A

Soil Map

GLENDALE/PEORIA ADMPU NORTHWEST REGION UPDATE SOIL DATA

Flood Control District of Maricopa County

WOOD/PATEL

CIVIL ENGINEERS HYDROLOGISTS LAND SURVEYORS CONSTRUCTION MANAGERS

2051 West Northern, Suite 100, Phoenix, Arizona 85021 Phone: (602) 335-8500

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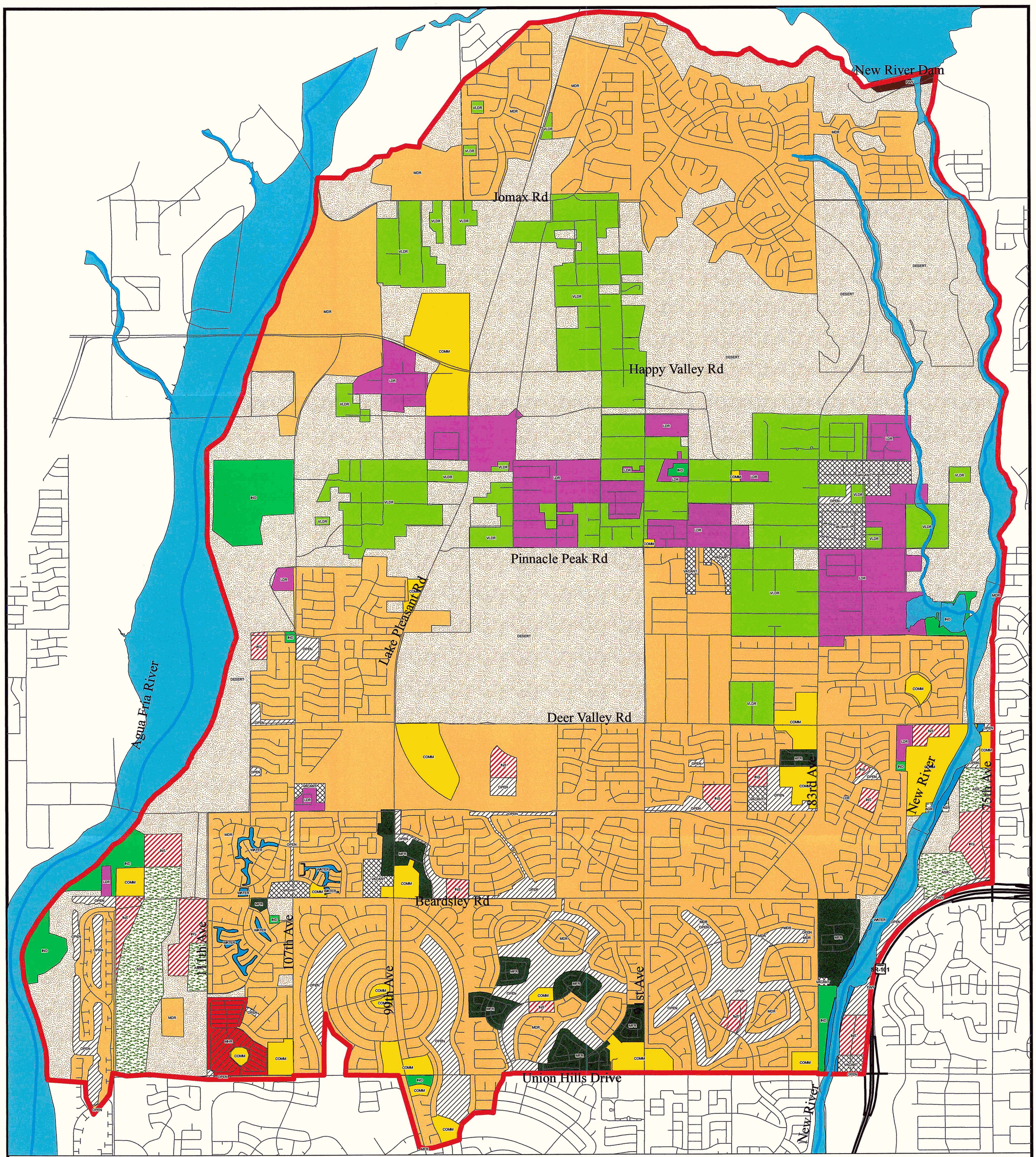
EXHIBIT B

Land Use Maps



Legend

- Railroad
- Highway
- Local Road
- Project Boundary
- River/Wash

COMM	- COMMERCIAL
FWY	- TRANSPORTATION
IND	- INDUSTRIAL
INS	- INSTITUTIONAL
MHR	- MOBILE HOUSING RESIDENTIAL
MFR	- MULTI-FAMILY RESIDENTIAL
MDR	- MEDIUM DENSITY RESIDENTIAL
LDR	- LARGE LOT RESIDENTIAL
VLDR	- RURAL
OPEN	- OPEN SPACE
AGR	- AGRICULTURE
VACANT	
DESERT	
WATER	

N

1,500 0 1,500 3,000 Feet

1"=1500'

GLENDALE/PEORIA ADMPU NORTHWEST REGION UPDATE LAND USE - EXISTING CONDITIONS

Flood Control District of Maricopa County

WOOD/PATEL

CIVIL ENGINEERS HYDROLOGISTS LAND SURVEYORS CONSTRUCTION MANAGERS
2051 West Northern, Suite 100, Phoenix, Arizona 85021 Phone: (602) 335-8500

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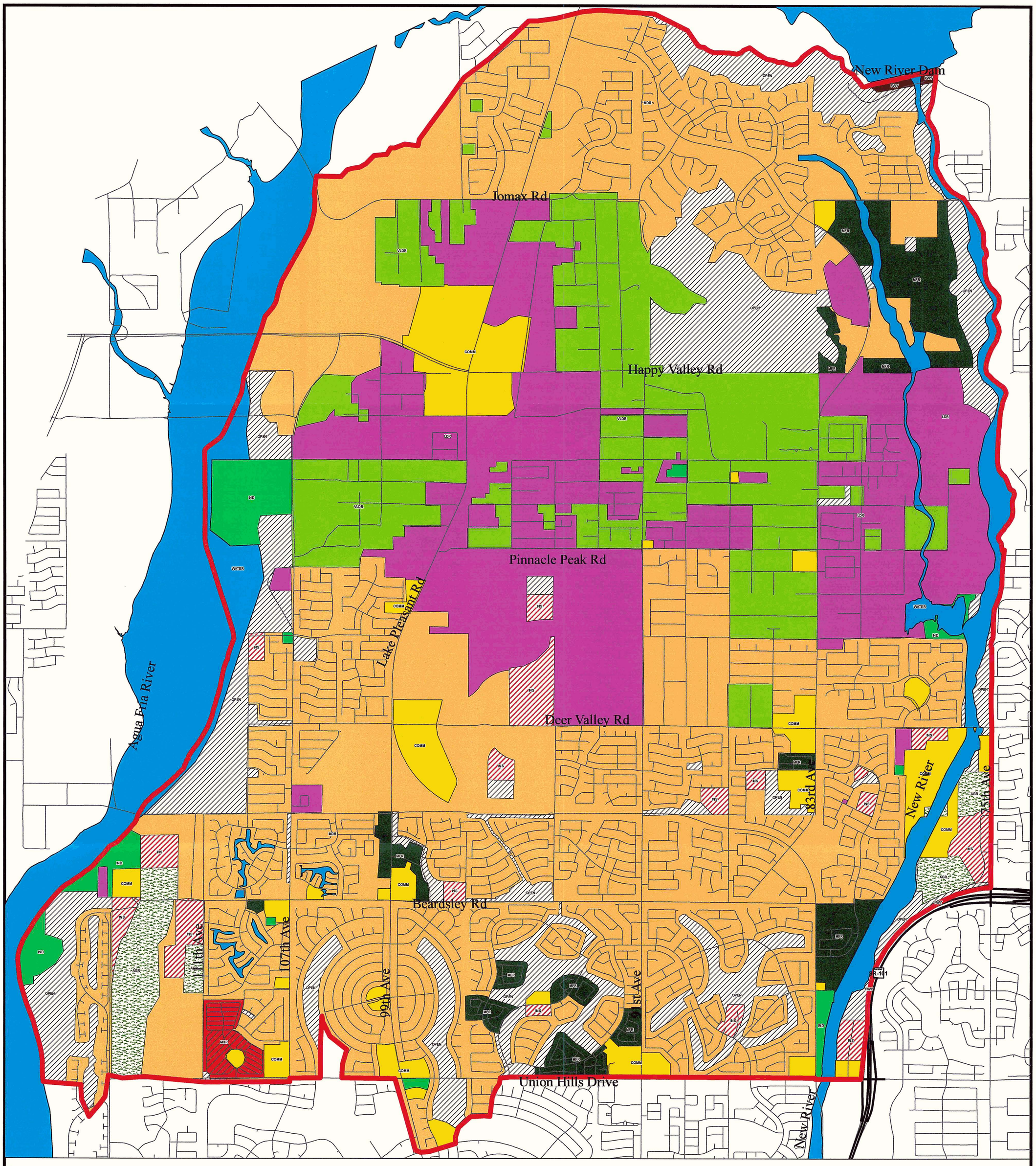

Legend

- Railroad
- Highway
- Local Road
- Project Boundary
- COMM - *COMMERCIAL*
- FWY - *TRANSPORTATION*
- IND - *INDUSTRIAL*
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- VLDR - *RURAL*
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- AGR - *AGRICULTURE*
- VACANT
- DESERT
- WATER

N

1,500 0 1,500 3,000 Feet

1"=1500'

GLENDALE/PEORIA ADMPU NORTHWEST REGION UPDATE LAND USE - FUTURE CONDITIONS

Flood Control District of Maricopa County

WOOD/PATEL

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EXHIBIT C

Sub-basin Boundary and HEC-1 Schematic Map for Existing Conditions

Glendale/Peoria ADMPU
Northwest Region Update
Sub-Basin Boundary & HEC-1 Schematic for Existing Conditions

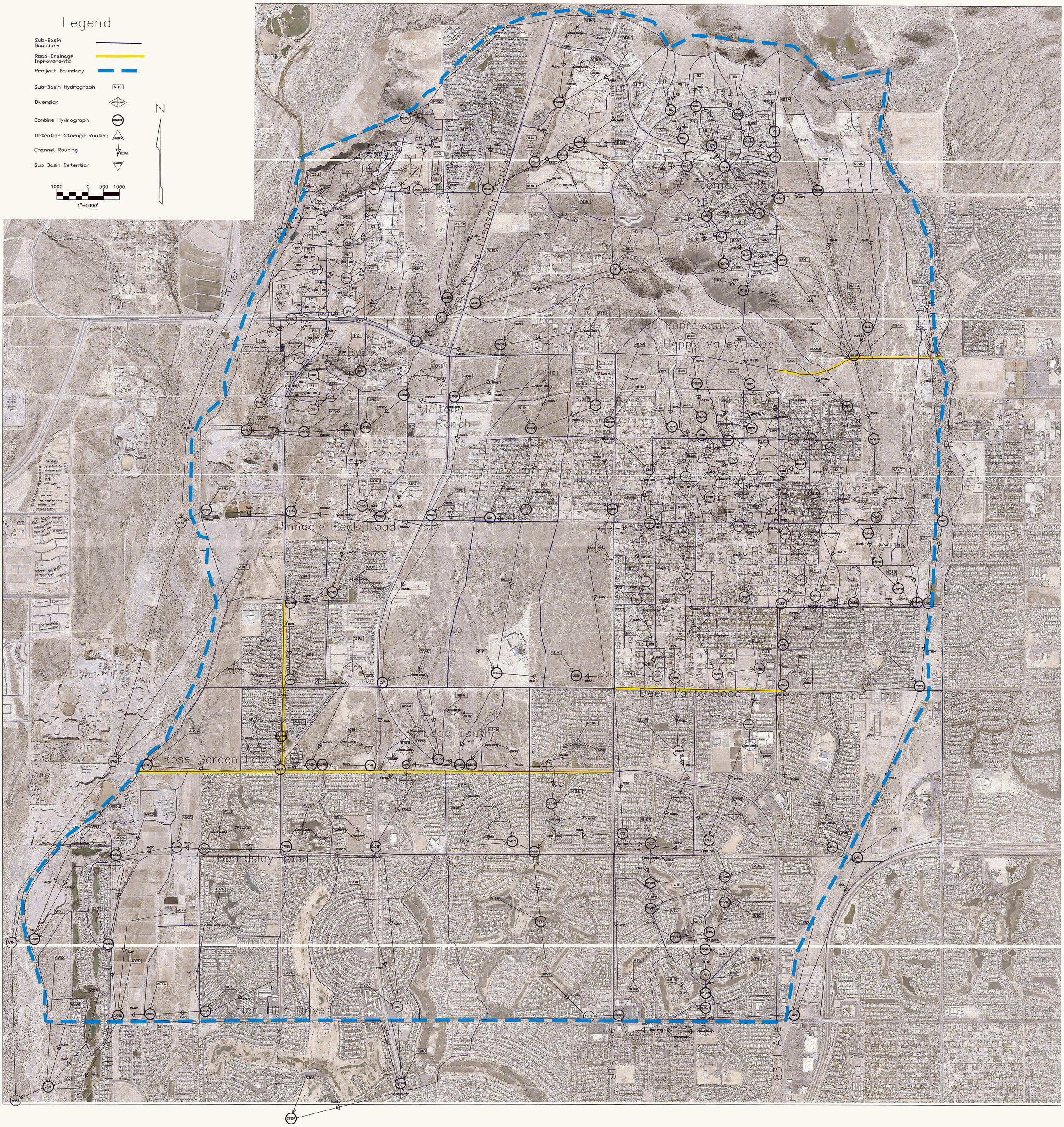

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EXHIBIT D

Sub-basin Boundary and HEC-1 Schematic Map for Future Conditions

Glendale/Peoria ADMPU
Northwest Region Update
Sub-Basin Boundary & HEC-1 Schematic for Future Conditions

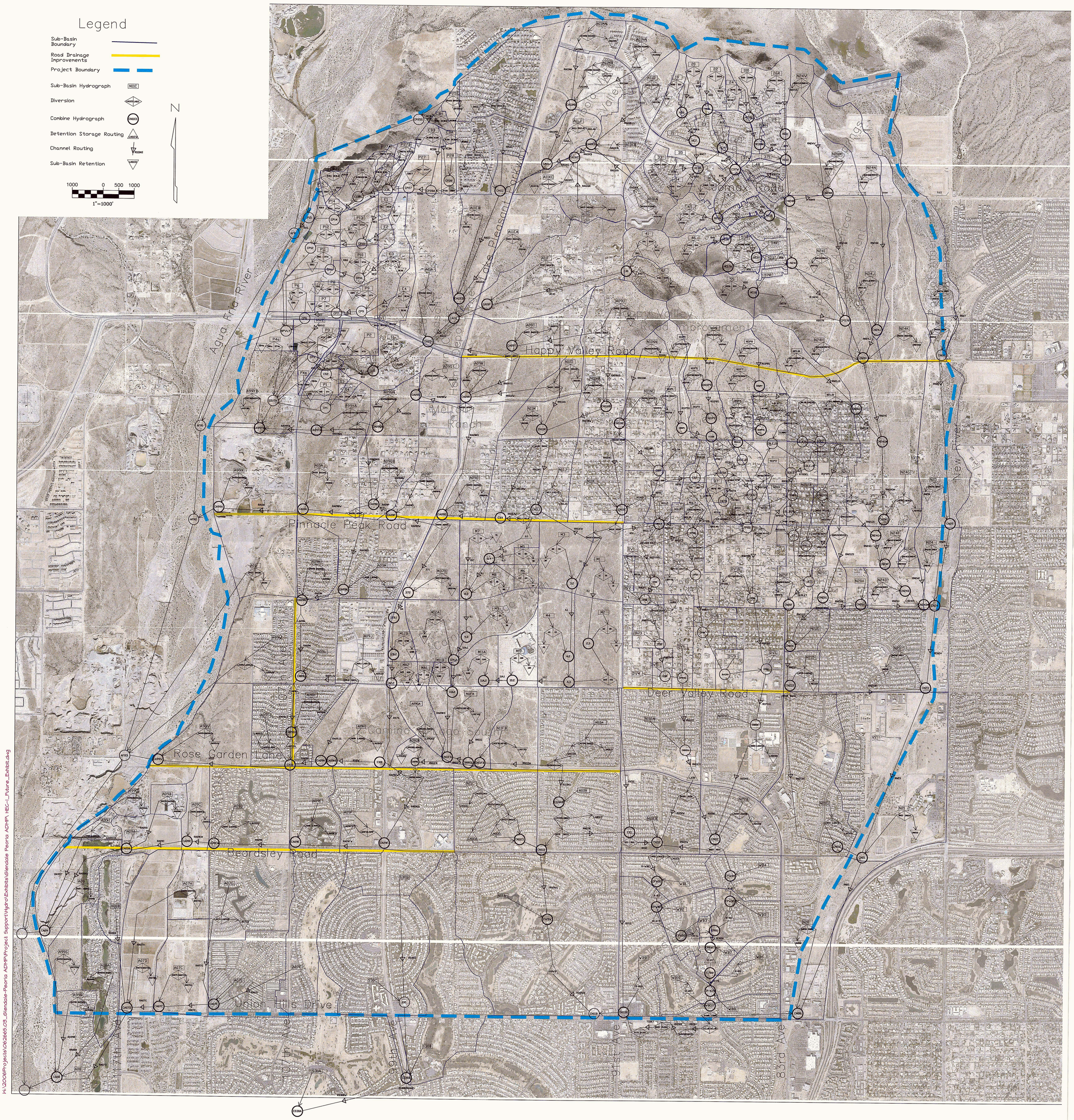

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EXHIBIT E

CD Containing Electronic Files