



FIGURES

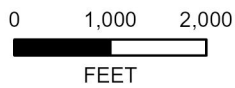
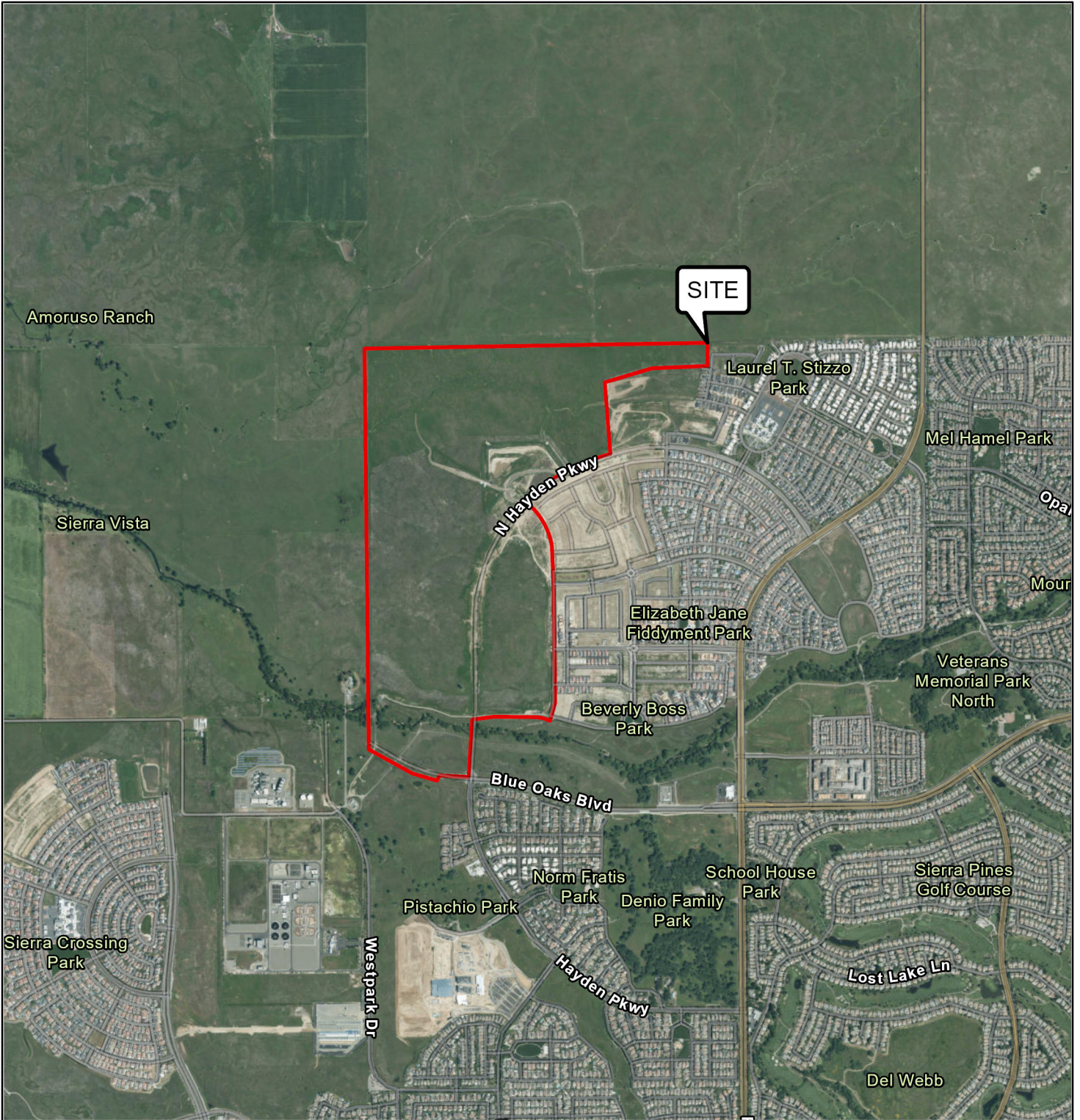
FIGURE 1: Vicinity Map

FIGURE 2: Site Plan

FIGURE 3: Assessor's Parcel Map

FIGURE 4: Site Photographs

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BASEMAP SOURCE: ESRI MAPPING SERVICE 2019



VICINITY MAP
 FIDDYMENT RANCH - PHASE 3
 ROSEVILLE, CALIFORNIA

PROJECT NO. : 16880.000.000

SCALE: AS SHOWN

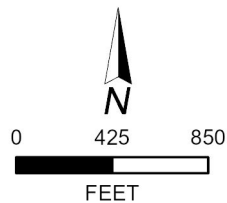
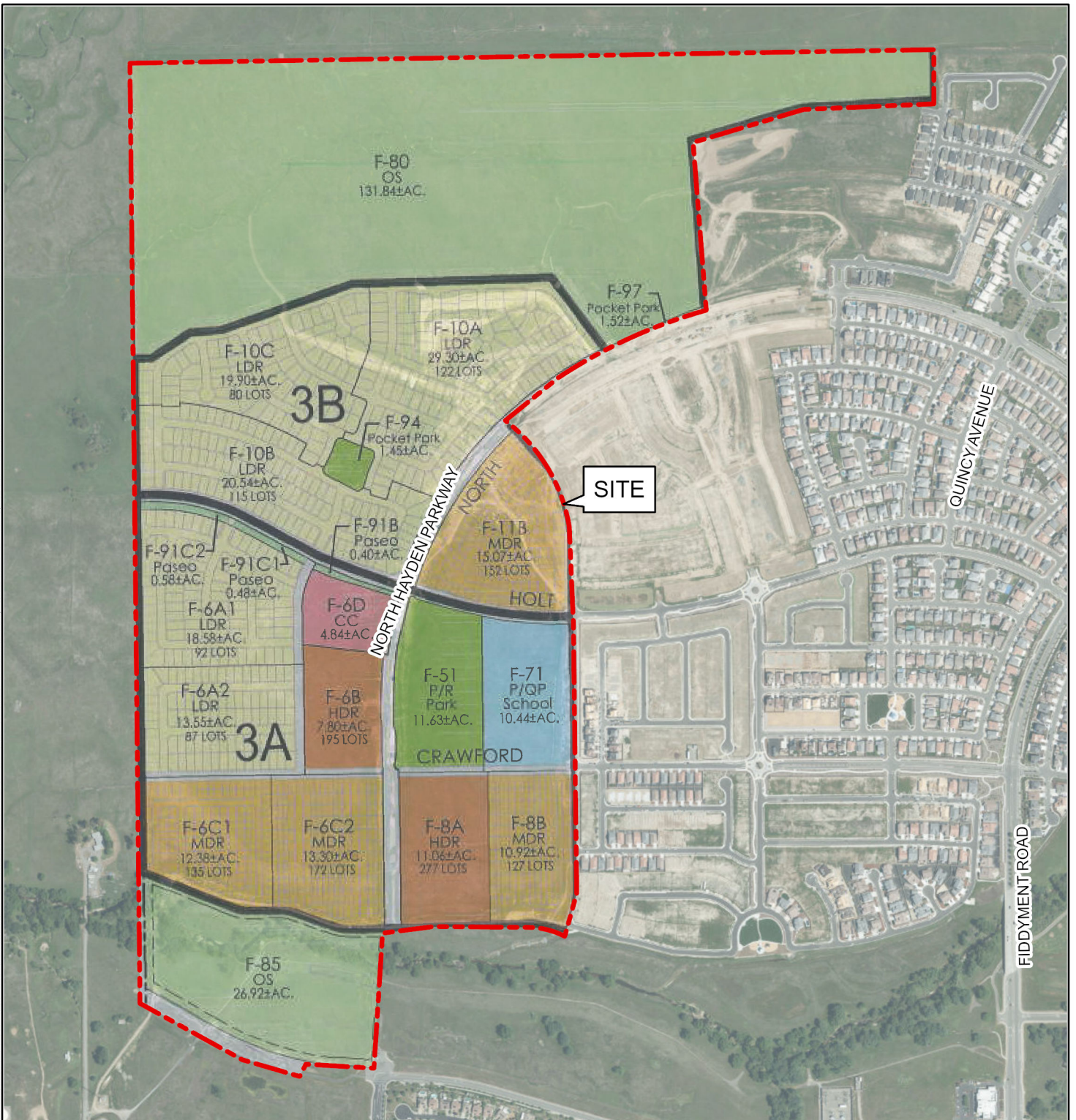
DRAWN BY: JV

CHECKED BY: SPM

FIGURE NO.

1

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BASEMAP SOURCE: ESRI MAPPING SERVICE 2019 AND WOOD ROGERS



SITE PLAN
FIDDYMENT RANCH - PHASE 3
ROSEVILLE, CALIFORNIA

PROJECT NO. : 16880.000.000

SCALE: AS SHOWN

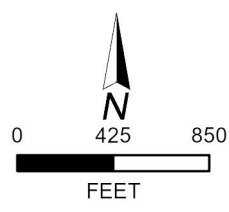
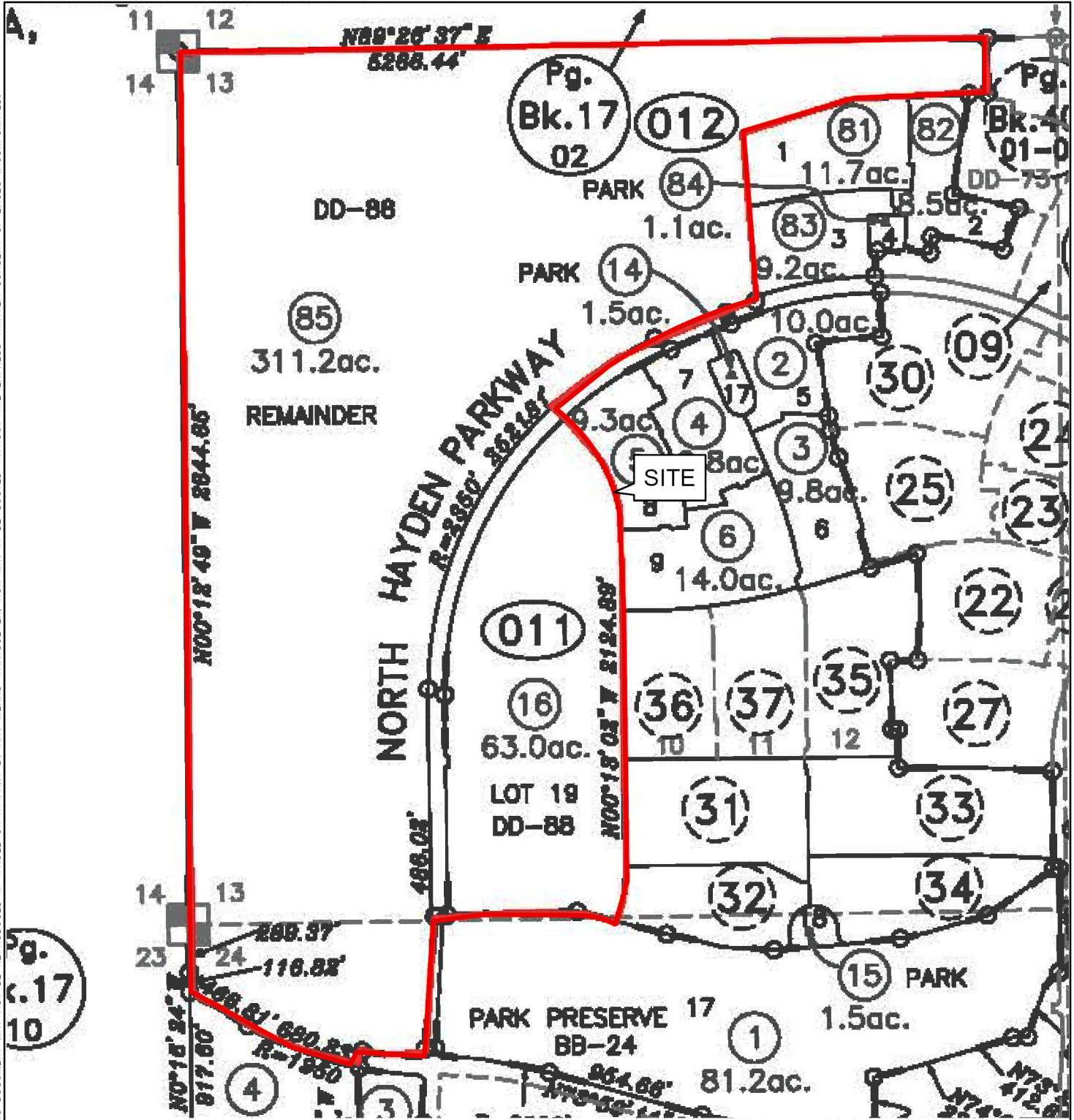
DRAWN BY: JV

CHECKED BY: SPM

FIGURE NO.

2

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BASEMAP SOURCE: PLACER COUNTY ASSESSOR'S OFFICE



ASSESSOR'S PARCEL MAP
 FIDDYMENT RANCH - PHASE 3
 ROSEVILLE, CALIFORNIA

PROJECT NO. : 16880.000.000
 SCALE: AS SHOWN
 DRAWN BY: JV CHECKED BY: SPM

FIGURE NO.
3



PHOTO 1
DEBRIS IN NORTHEAST CORNER OF VILLAGE 3B



PHOTO 2
F-80 PARCEL, LOOKING SOUTHWEST



PHOTO 3
POND AT SOUTHWEST CORNER OF VILLAGE 3A



PHOTO 4
RIEGO CREEK SCHOOL CONSTRUCTION IN EAST PORTION OF VILLAGE 3A



PHOTO 5
SOIL AND ROCK STOCKPILES IN VILLAGE 3B



PHOTO 6
SOIL STOCKPILES IN SOUTHEAST CORNER OF VILLAGE 3A



PHOTO 7
UNDERGROUND UTILITIES IN NORTHEAST CORNER OF VILLAGE 3B



PHOTO 8
VIEW OF FUTURE HAYDEN PARKWAY
IN VILLAGE 3A, LOOKING NORTH



PHOTO 9
VILLAGE 3B, LOOKING SOUTH FROM NORTH HAYDEN PARKWAY
TOWARDS SCHOOL CONSTRUCTION



APPENDIX A

ENVIRONMENTAL DATA RESOURCES, INC.

Radius Map Report

Fiddymment Ranch Phase 3

North Hayden Parkway
Roseville, CA 95747

Inquiry Number: 05891567.2r
December 03, 2019

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NORTH HAYDEN PARKWAY
ROSEVILLE, CA 95747

COORDINATES

Latitude (North): 38.8035050 - 38° 48' 12.61"
Longitude (West): 121.3722470 - 121° 22' 20.08"
Universal Transverse Mercator: Zone 10
UTM X (Meters): 641346.8
UTM Y (Meters): 4296022.5
Elevation: 104 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5619746 ROSEVILLE, CA
Version Date: 2012

West Map: 5619742 PLEASANT GROVE, CA
Version Date: 2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140713, 20140810
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
 NORTH HAYDEN PARKWAY
 ROSEVILLE, CA 95747

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	ROSEVILLE CITY SD -	PARCEL F-71 AT FIDDY	ENVIROSTOR, SCH	Higher	1 ft.
2	ESWAY MOBILE MECHANI	2501 HAYDEN PKWY UNI	RCRA NonGen / NLR	Lower	866, 0.164, South
3	WESTPLAN SUBSTATION	2200 BLUE OAKS BLVD	AST	Lower	1015, 0.192, SSE
A4	ROSEVILLE ENERGY PAR	5120 PHILLIP	AST	Lower	1196, 0.227, SSW
A5	CITY OF ROSEVILLE-RO	5120 PHILLIP RD	RCRA NonGen / NLR	Lower	1196, 0.227, SSW
A6	REP SWITCHYARD	5120 PHILLIP RD	RCRA-SQG, FINDS, HAZNET	Lower	1196, 0.227, SSW
A7	ROSEVILLE ENERGY PAR	5120 PHILLIP RD	AST, CERS HAZ WASTE, CERS TANKS, NPDES, CIWQS,...	Lower	1196, 0.227, SSW
8	VERIZON WIRELESS (FI	2150 BLUE OAKS BLVD	EMI, CA PLACER CO. MS, CERS	Lower	1313, 0.249, SSE
B9	ELEMENTARY SCHOOL (F	FIDDYMENT ROAD/BLUE	ENVIROSTOR, SCH	Lower	2512, 0.476, SE
B10	ELEMENTARY SCHOOL (W	FIDDYMENT ROAD/DEL W	ENVIROSTOR, SCH	Lower	2512, 0.476, SE
B11	ELEMENTARY SCHOOL (W	FIDDYMENT ROAD/DEL W	ENVIROSTOR, SCH	Lower	2512, 0.476, SE
B12	MIDDLE SCHOOL (W-73)	FIDDYMENT ROAD/DEL W	ENVIROSTOR, SCH, CERS	Lower	2512, 0.476, SE
13	COMPREHENSIVE HIGH S	SOUTHWEST OF THE INT	ENVIROSTOR, SCH	Higher	3726, 0.706, South
14	W-70 ELEMENTARY SCHO	LOT 15 OF WESTPARK-P	ENVIROSTOR, SCH	Lower	4955, 0.938, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing
SEMS..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
US ENG CONTROLS..... Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

CPS-SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing

UST..... Active UST Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database

SWRCY..... Recycler Database

HAULERS..... Registered Waste Tire Haulers Listing

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI..... Open Dump Inventory

IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

EXECUTIVE SUMMARY

HIST Cal-Sites.....	Historical Calsites Database
CDL.....	Clandestine Drug Labs
Toxic Pits.....	Toxic Pits Cleanup Act Sites
US CDL.....	National Clandestine Laboratory Register
PFAS.....	PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST.....	SWEEPS UST Listing
HIST UST.....	Hazardous Substance Storage Container Database
CA FID UST.....	Facility Inventory Database

Local Land Records

LIENS.....	Environmental Liens Listing
LIENS 2.....	CERCLA Lien Information
DEED.....	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS.....	Hazardous Materials Information Reporting System
CHMIRS.....	California Hazardous Material Incident Report System
LDS.....	Land Disposal Sites Listing
MCS.....	Military Cleanup Sites Listing
SPILLS 90.....	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS.....	Formerly Used Defense Sites
DOD.....	Department of Defense Sites
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
TSCA.....	Toxic Substances Control Act
TRIS.....	Toxic Chemical Release Inventory System
SSTS.....	Section 7 Tracking Systems
ROD.....	Records Of Decision
RMP.....	Risk Management Plans
RAATS.....	RCRA Administrative Action Tracking System
PRP.....	Potentially Responsible Parties
PADS.....	PCB Activity Database System
ICIS.....	Integrated Compliance Information System
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS.....	Material Licensing Tracking System
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER.....	PCB Transformer Registration Database
RADINFO.....	Radiation Information Database
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS.....	Incident and Accident Data
CONSENT.....	Superfund (CERCLA) Consent Decrees
INDIAN RESERV.....	Indian Reservations
FUSRAP.....	Formerly Utilized Sites Remedial Action Program

EXECUTIVE SUMMARY

UMTRA.....	Uranium Mill Tailings Sites
LEAD SMELTERS.....	Lead Smelter Sites
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
ECHO.....	Enforcement & Compliance History Information
UXO.....	Unexploded Ordnance Sites
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN.....	Bond Expenditure Plan
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
DRYCLEANERS.....	Cleaner Facilities
EMI.....	Emissions Inventory Data
ENF.....	Enforcement Action Listing
Financial Assurance.....	Financial Assurance Information Listing
HAZNET.....	Facility and Manifest Data
ICE.....	ICE
HIST CORTESE.....	Hazardous Waste & Substance Site List
HWP.....	EnviroStor Permitted Facilities Listing
HWT.....	Registered Hazardous Waste Transporter Database
MINES.....	Mines Site Location Listing
MWMP.....	Medical Waste Management Program Listing
NPDES.....	NPDES Permits Listing
PEST LIC.....	Pesticide Regulation Licenses Listing
PROC.....	Certified Processors Database
Notify 65.....	Proposition 65 Records
UIC.....	UIC Listing
UIC GEO.....	UIC GEO (GEOTRACKER)
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List
MILITARY PRIV SITES.....	MILITARY PRIV SITES (GEOTRACKER)
PROJECT.....	PROJECT (GEOTRACKER)
WDR.....	Waste Discharge Requirements Listing
CIWQS.....	California Integrated Water Quality System
CERS.....	CERS
NON-CASE INFO.....	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS.....	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS.....	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT.....	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ.....	Well Stimulation Project (GEOTRACKER)
MINES MRDS.....	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
-------------	--

EXECUTIVE SUMMARY

RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/24/2019 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>REP SWITCHYARD</i> EPA ID:: CAR000164665	<i>5120 PHILLIP RD</i>	<i>SSW 1/8 - 1/4 (0.227 mi.)</i>	<i>A6</i>	<i>15</i>

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 07/29/2019 has revealed that there are 7 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>ROSEVILLE CITY SD -</i>	<i>PARCEL F-71 AT FIDDY</i>	<i>0 - 1/8 (0.000 mi.)</i>	<i>1</i>	<i>9</i>

EXECUTIVE SUMMARY

Status: No Action Required
Facility Id: 60002615

COMPREHENSIVE HIGH S	SOUTHWEST OF THE INT	S 1/2 - 1 (0.706 mi.)	13	60
Status: No Action Required Facility Id: 31020006				

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ELEMENTARY SCHOOL (F) Status: No Action Required Facility Id: 31020009	FIDDYMENT ROAD/BLUE	SE 1/4 - 1/2 (0.476 mi.)	B9	51
ELEMENTARY SCHOOL (W) Status: No Action Required Facility Id: 60000035	FIDDYMENT ROAD/DEL W	SE 1/4 - 1/2 (0.476 mi.)	B10	53
ELEMENTARY SCHOOL (W) Status: No Action Required Facility Id: 31020010	FIDDYMENT ROAD/DEL W	SE 1/4 - 1/2 (0.476 mi.)	B11	55
MIDDLE SCHOOL (W-73) Status: No Action Required Facility Id: 31020012	FIDDYMENT ROAD/DEL W	SE 1/4 - 1/2 (0.476 mi.)	B12	57
W-70 ELEMENTARY SCHO Status: No Action Required Facility Id: 60002124	LOT 15 OF WESTPARK-P	SW 1/2 - 1 (0.938 mi.)	14	64

State and tribal registered storage tank lists

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 3 AST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WESTPLAN SUBSTATION Database: AST, Date of Government Version: 07/06/2016	2200 BLUE OAKS BLVD	SSE 1/8 - 1/4 (0.192 mi.)	3	12
ROSEVILLE ENERGY PAR Database: AST, Date of Government Version: 07/06/2016	5120 PHILLIP	SSW 1/8 - 1/4 (0.227 mi.)	A4	13
ROSEVILLE ENERGY PAR Database: AST, Date of Government Version: 07/06/2016	5120 PHILLIP RD	SSW 1/8 - 1/4 (0.227 mi.)	A7	18

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

SCH: This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category, depending on the level of threat to public health and safety or the environment they pose.

A review of the SCH list, as provided by EDR, and dated 07/29/2019 has revealed that there is 1 SCH

EXECUTIVE SUMMARY

site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ROSEVILLE CITY SD - Facility Id: 60002615 Status: No Action Required	PARCEL F-71 AT FIDDY	0 - 1/8 (0.000 mi.)	1	9

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 08/14/2019 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ROSEVILLE ENERGY PAR	5120 PHILLIP RD	SSW 1/8 - 1/4 (0.227 mi.)	A7	18

Local Lists of Registered Storage Tanks

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 08/14/2019 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ROSEVILLE ENERGY PAR	5120 PHILLIP RD	SSW 1/8 - 1/4 (0.227 mi.)	A7	18

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/24/2019 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ESWAY MOBILE MECHANI EPA ID:: CAL000434855	2501 HAYDEN PKWY UNI	S 1/8 - 1/4 (0.164 mi.)	2	11
CITY OF ROSEVILLE-RO EPA ID:: CAL000328480	5120 PHILLIP RD	SSW 1/8 - 1/4 (0.227 mi.)	A5	13

EXECUTIVE SUMMARY

CA PLACER CO. MS: Placer County Master List of Facilities includes Aboveground Hazardous Material tanks, Underground Storage tanks, Site Clean-up sites.

A review of the CA PLACER CO. MS list, as provided by EDR, and dated 09/03/2019 has revealed that there is 1 CA PLACER CO. MS site within approximately 0.25 miles of the target property.

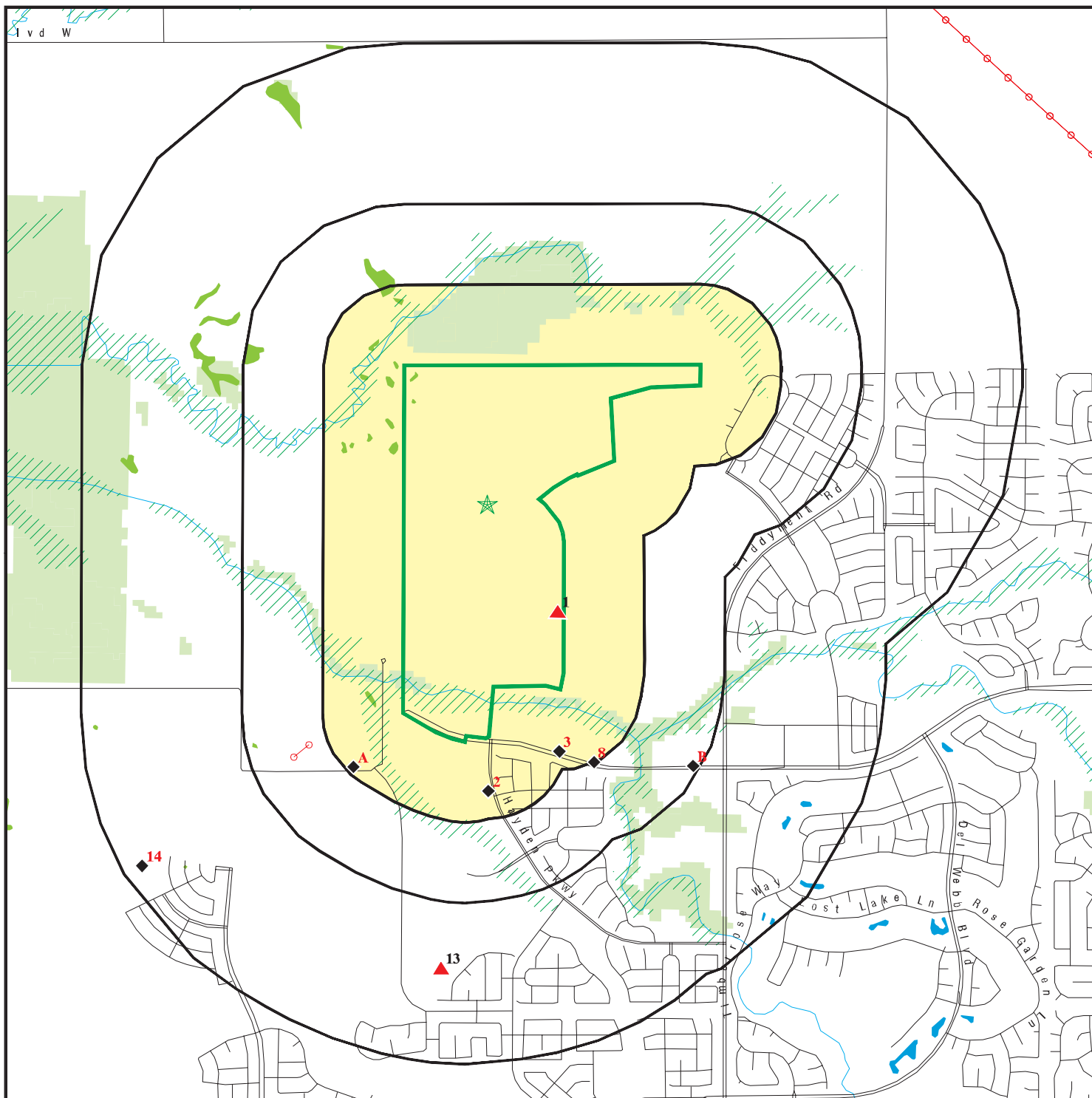
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
VERIZON WIRELESS (FI) Facility Status: Closed Facility Id: FA0004527	2150 BLUE OAKS BLVD	SSE 1/8 - 1/4 (0.249 mi.)	8	40

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

<u>Site Name</u>	<u>Database(s)</u>
ARBORS AT FIDDYMENT RANCH	CIWQS
FIDDYMENT RANCH	CIWQS

OVERVIEW MAP - 05891567.2R



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Areas of Concern

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

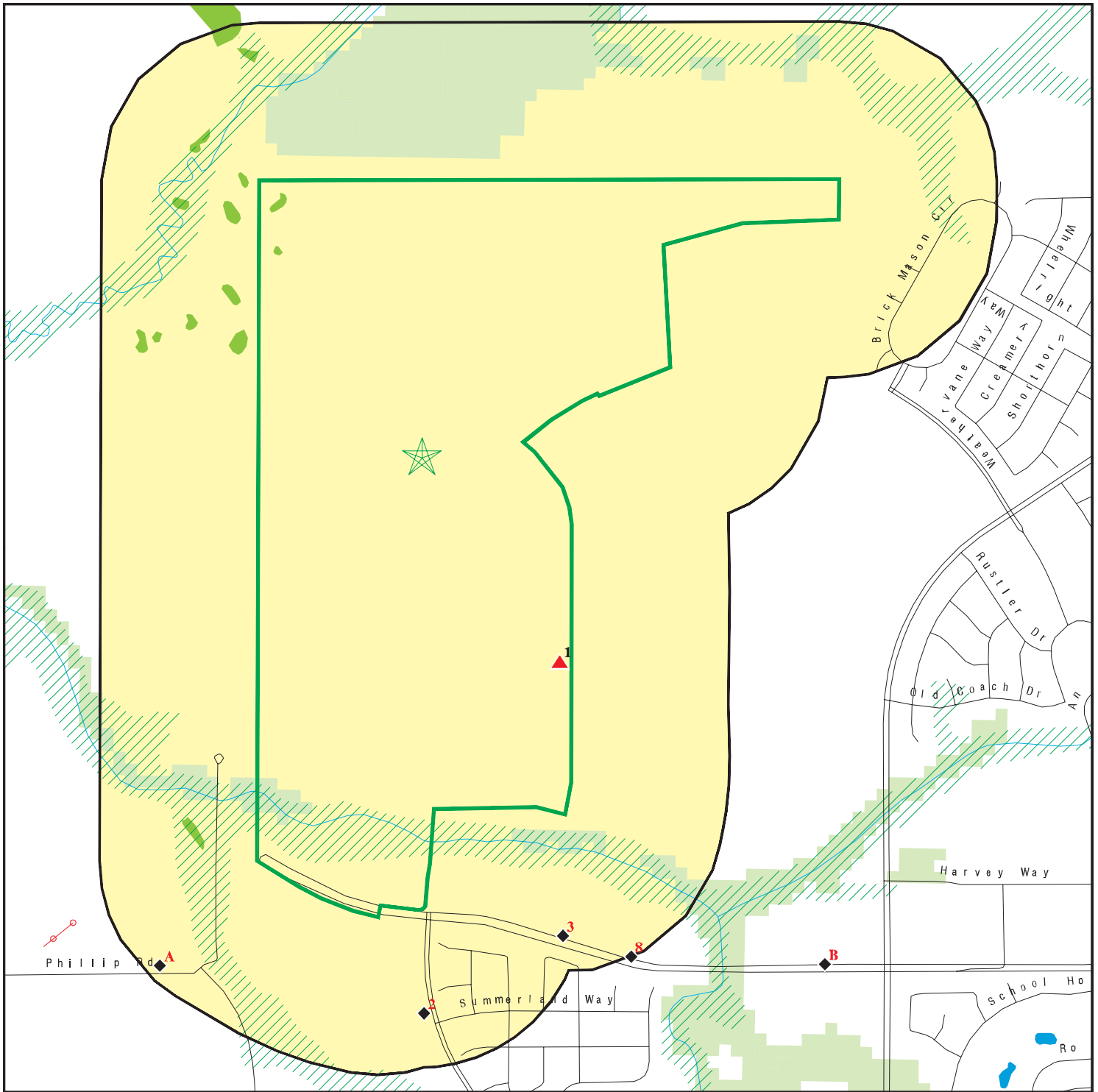
State Wetlands















This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Fiddymment Ranch Phase 3
 ADDRESS: North Hayden Parkway
 Roseville CA 95747
 LAT/LONG: 38.803505 / 121.372247

CLIENT: Engeo Inc.
 CONTACT: Karina Castro
 INQUIRY #: 05891567.2r
 DATE: December 03, 2019 6:02 pm

DETAIL MAP - 05891567.2R



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Power transmission lines
-  Special Flood Hazard Area (1%)
-  0.2% Annual Chance Flood Hazard
-  National Wetland Inventory
-  State Wetlands
-  Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Fiddymment Ranch Phase 3
 ADDRESS: North Hayden Parkway
 Roseville CA 95747
 LAT/LONG: 38.803505 / 121.372247

CLIENT: Engeo Inc.
 CONTACT: Karina Castro
 INQUIRY #: 05891567.2r
 DATE: December 03, 2019 6:03 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		1	0	4	2	NR	7
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	3	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		1	0	NR	NR	NR	1
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	1	NR	NR	NR	1
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	2	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
CA PLACER CO. MS	0.250		0	1	NR	NR	NR	1
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

- Totals --		0	2	9	4	2	0	17
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MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

1	ROSEVILLE CITY SD - F-71 PROPOSED NEW ELEMENTARY S PARCEL F-71 AT FIDDYMENT RANCH ROSEVILLE, CA 95747	ENVIROSTOR SCH	S122221874 N/A
< 1/8 1 ft.			

**Relative:
Higher
Actual:
113 ft.**

ENVIROSTOR:

Name:	ROSEVILLE CITY SD - F-71 PROPOSED NEW ELEMENTARY SCHOOL
Address:	PARCEL F-71 AT FIDDYMENT RANCH
City,State,Zip:	ROSEVILLE, CA 95747
Facility ID:	60002615
Status:	No Action Required
Status Date:	03/15/2018
Site Code:	104776
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	10.7
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Mellan Songco
Supervisor:	Jose Salcedo
Division Branch:	Northern California Schools & Santa Susana
Assembly:	, 06
Senate:	, 04
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	38.79876
Longitude:	-121.3682
APN:	492-010-057-000
Past Use:	NONE
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	No Contaminants found
Potential Description:	NMA
Alias Name:	Roseville City SD - F-71 Proposed New Elementary School
Alias Type:	Alternate Name
Alias Name:	492-010-057-000
Alias Type:	APN
Alias Name:	104776
Alias Type:	Project Code (Site Code)
Alias Name:	60002615
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	03/15/2018
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	03/14/2018
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE CITY SD - F-71 PROPOSED NEW ELEMENTARY SCHOOL (Continued)

S122221874

Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ROSEVILLE CITY SD - F-71 PROPOSED NEW ELEMENTARY SCHOOL
Address: PARCEL F-71 AT FIDDYMENT RANCH
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 60002615
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 10.7
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Mellan Songco
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 104776
Assembly: , 06
Senate: , 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 03/15/2018
Restricted Use: NO
Funding: School District
Latitude: 38.79876
Longitude: -121.3682
APN: 492-010-057-000
Past Use: NONE
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: Roseville City SD - F-71 Proposed New Elementary School
Alias Type: Alternate Name
Alias Name: 492-010-057-000
Alias Type: APN
Alias Name: 104776
Alias Type: Project Code (Site Code)
Alias Name: 60002615
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 03/15/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE CITY SD - F-71 PROPOSED NEW ELEMENTARY SCHOOL (Continued)

S122221874

Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 03/14/2018
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

2
South
1/8-1/4
0.164 mi.
866 ft.

ESWAY MOBILE MECHANIC
2501 HAYDEN PKWY UNIT 413
ROSEVILLE, CA 95747

RCRA NonGen / NLR

1024866271
CAL000434855

Relative:
Lower
Actual:
99 ft.

RCRA NonGen / NLR:
Date form received by agency: 2018-04-10 00:00:00.0
Facility name: ESWAY MOBILE MECHANIC
Facility address: 2501 HAYDEN PKWY UNIT 413
ROSEVILLE, CA 95747
EPA ID: CAL000434855
Contact: ALLAN ESWAY
Contact address: 2501 HAYDEN PKWY UNIT 413
ROSEVILLE, CA 95747
Contact country: Not reported
Contact telephone: 916-969-6902
Contact email: ESWAYMECHANIC@GMAIL.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: ALLAN ESWAY
Owner/operator address: 2501 HAYDEN PKWY UNIT 413
ROSEVILLE, CA 95747
Owner/operator country: Not reported
Owner/operator telephone: 916-969-6902
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported
Owner/operator name: ALLAN ESWAY
Owner/operator address: 2501 HAYDEN PKWY UNIT 413
ROSEVILLE, CA 95747
Owner/operator country: Not reported
Owner/operator telephone: 916-969-6902
Owner/operator email: Not reported
Owner/operator fax: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ESWAY MOBILE MECHANIC (Continued)

1024866271

Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

3
SSE
1/8-1/4
0.192 mi.
1015 ft.

WESTPLAN SUBSTATION
2200 BLUE OAKS BLVD
ROSEVILLE, CA 95747

AST A100426185
N/A

Relative:
Lower
Actual:
90 ft.

AST:
Name: WESTPLAN SUBSTATION
Address: 2200 BLUE OAKS BLVD
City/Zip: ROSEVILLE,95747
Certified Unified Program Agencies: Not reported
Owner: Roseville Electric
Total Gallons: Not reported
CERSID: 10399966
Facility ID: Not reported
Business Name: Roseville Electric Substations
Phone: 916 774-5620
Fax: 916 746-1646
Mailing Address: 2070 Hilltop Cir
Mailing Address City: Roseville
Mailing Address State: CA
Mailing Address Zip Code: 95747
Operator Name: Roseville Electric
Operator Phone: 916 774-5620
Owner Phone: 916 774-5620
Owner Mail Address: 2070 Hilltop Cir
Owner State: CA
Owner Zip Code: 95747
Owner Country: United States
Property Owner Name: Not reported
Property Owner Phone: Not reported
Property Owner Mailing Address: Not reported
Property Owner City: Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

WESTPLAN SUBSTATION (Continued)

A100426185

Property Owner Stat : Not reported
 Property Owner Zip Code: Not reported
 Property Owner Country: Not reported
 EPAID: Not reported

A4
SSW
1/8-1/4
0.227 mi.
1196 ft.

ROSEVILLE ENERGY PARK
5120 PHILLIP
ROSEVILLE, CA

AST A100338020
N/A

Site 1 of 4 in cluster A

Relative:
Lower

AST:

Actual:
94 ft.

Name: ROSEVILLE ENERGY PARK
 Address: 5120 PHILLIP
 City/Zip: ROSEVILLE,
 Certified Unified Program Agencies: Roseville
 Owner: ROSEVILLE ENERGY PARK
 Total Gallons: 29,006
 CERSID: Not reported
 Facility ID: Not reported
 Business Name: Not reported
 Phone: Not reported
 Fax: Not reported
 Mailing Address: Not reported
 Mailing Address City: Not reported
 Mailing Address State: Not reported
 Mailing Address Zip Code: Not reported
 Operator Name: Not reported
 Operator Phone: Not reported
 Owner Phone: Not reported
 Owner Mail Address: Not reported
 Owner State: Not reported
 Owner Zip Code: Not reported
 Owner Country: Not reported
 Property Owner Name: Not reported
 Property Owner Phone: Not reported
 Property Owner Mailing Address: Not reported
 Property Owner City: Not reported
 Property Owner Stat : Not reported
 Property Owner Zip Code: Not reported
 Property Owner Country: Not reported
 EPAID: Not reported

A5
SSW
1/8-1/4
0.227 mi.
1196 ft.

CITY OF ROSEVILLE-ROSEVILLE ENERGY PARK
5120 PHILLIP RD
ROSEVILLE, CA 95747

RCRA NonGen / NLR 1024819167
CAL000328480

Site 2 of 4 in cluster A

Relative:
Lower

RCRA NonGen / NLR:

Actual:
94 ft.

Date form received by agency: 2008-01-07 00:00:00.0
 Facility name: CITY OF ROSEVILLE-ROSEVILLE ENERGY PARK
 Facility address: 5120 PHILLIP RD
 ROSEVILLE, CA 95747-9116
 EPA ID: CAL000328480
 Contact: JAMIE JOHNSON

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CITY OF ROSEVILLE-ROSEVILLE ENERGY PARK (Continued)

1024819167

Contact address: 5120 PHILLIP RD
ROSEVILLE, CA 95747
Contact country: Not reported
Contact telephone: 916-746-1687
Contact email: JJOHNSON@ROSEVILLE.CA.US
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: JAMIE JOHNSON
Owner/operator address: 5120 PHILLIP RD
ROSEVILLE, CA 95747
Owner/operator country: Not reported
Owner/operator telephone: 916-746-1687
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CITY OF ROSEVILLE
Owner/operator address: 311 VERNON ST
ROSEVILLE, CA 95678
Owner/operator country: Not reported
Owner/operator telephone: 916-746-1690
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A6
SSW
1/8-1/4
0.227 mi.
1196 ft.

REP SWITCHYARD
5120 PHILLIP RD
ROSEVILLE, CA 95747

Site 3 of 4 in cluster A

RCRA-SQG 1008402387
FINDS CAR000164665
HAZNET

Relative:
Lower

RCRA-SQG:

Actual:
94 ft.

Date form received by agency: 2005-08-05 00:00:00.0
Facility name: GEMMA POWER SYSTEMS CALIFORNIA
Facility address: 5120 PHILLIP RD
ROSEVILLE, CA 95747
EPA ID: CAR000164665
Contact: FELIPE USCATEGUI
Contact address: 5120 PHILLIP RD
ROSEVILLE, CA 95747
Contact country: US
Contact telephone: 860-234-0555
Contact email: FELIPEU@GEMMAPOWER.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CITY OF ROSEVILLE
Owner/operator address: 311 VERNON ST
ROSEVILLE, CA 95678
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 1999-01-01 00:00:00.0
Owner/Op end date: Not reported

Owner/operator name: GEMMA POWER SYSTEMS CALIFORNIA INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 2005-08-18 00:00:00.0
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

REP SWITCHYARD (Continued)

1008402387

Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110055746607

Environmental Interest/Information System
STATE MASTER

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

HAZNET:

Name: GEMMA POWER SYSTEMS CALIFORNIA
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 957470000
Year: 2007
GEPaid: CAR000164665
Contact: MICHAEL BENNETT/DIR OF SAFETY
Telephone: 8606590509
Mailing Name: Not reported
Mailing Address: 2461 MAIN ST
Mailing City,St,Zip: GLASTONBURY, CT 060330000
Gen County: Placer

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

REP SWITCHYARD (Continued)

1008402387

TSD EPA ID: CAD980884183
TSD County: Sacramento
Tons: 2.7522
CA Waste Code: 791-Liquids with pH <= 2
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Placer

Name: GEMMA POWER SYSTEMS CALIFORNIA
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 957470000
Year: 2007
GEPaid: CAR000164665
Contact: MICHAEL BENNETT/DIR OF SAFETY
Telephone: 8606590509
Mailing Name: Not reported
Mailing Address: 2461 MAIN ST
Mailing City,St,Zip: GLASTONBURY, CT 060330000
Gen County: Placer
TSD EPA ID: CAD980884183
TSD County: Sacramento
Tons: 1.0425
CA Waste Code: 123-Unspecified alkaline solution
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Placer

Name: GEMMA POWER SYSTEMS CALIFORNIA
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 957470000
Year: 2007
GEPaid: CAR000164665
Contact: MICHAEL BENNETT/DIR OF SAFETY
Telephone: 8606590509
Mailing Name: Not reported
Mailing Address: 2461 MAIN ST
Mailing City,St,Zip: GLASTONBURY, CT 060330000
Gen County: Placer
TSD EPA ID: CAD980884183
TSD County: Sacramento
Tons: 0.0625
CA Waste Code: 181-Other inorganic solid waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Placer

Name: GEMMA POWER SYSTEMS CALIFORNIA
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 957470000
Year: 2007
GEPaid: CAR000164665
Contact: MICHAEL BENNETT/DIR OF SAFETY
Telephone: 8606590509
Mailing Name: Not reported
Mailing Address: 2461 MAIN ST
Mailing City,St,Zip: GLASTONBURY, CT 060330000
Gen County: Placer

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

REP SWITCHYARD (Continued)

1008402387

TSD EPA ID: CAD028409019
 TSD County: Los Angeles
 Tons: 1.875
 CA Waste Code: 181-Other inorganic solid waste
 Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
 Facility County: Placer

Name: GEMMA POWER SYSTEMS CALIFORNIA
 Address: 5120 PHILLIP RD
 City,State,Zip: ROSEVILLE, CA 957470000
 Year: 2007
 GEPAID: CAR000164665
 Contact: MICHAEL BENNETT/DIR OF SAFETY
 Telephone: 8606590509
 Mailing Name: Not reported
 Mailing Address: 2461 MAIN ST
 Mailing City,St,Zip: GLASTONBURY, CT 060330000
 Gen County: Placer
 TSD EPA ID: CAD980887418
 TSD County: Alameda
 Tons: 0.072
 CA Waste Code: 214-Unspecified solvent mixture
 Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
 Facility County: Placer

[Click this hyperlink](#) while viewing on your computer to access
 3 additional CA_HAZNET: record(s) in the EDR Site Report.

A7
SSW
1/8-1/4
0.227 mi.
1196 ft.

ROSEVILLE ENERGY PARK
5120 PHILLIP RD
ROSEVILLE, CA 95747
Site 4 of 4 in cluster A

AST **S109425013**
CERS HAZ WASTE
CERS TANKS
NPDES
CIWQS
CERS
N/A

Relative:
Lower

AST:

Actual:
94 ft.

Name: ROSEVILLE ENERGY PARK
 Address: 5120 PHILLIP RD
 City/Zip: ROSEVILLE,95747
 Certified Unified Program Agencies: Not reported
 Owner: City of Roseville
 Total Gallons: Not reported
 CERSID: 10207330
 Facility ID: Not reported
 Business Name: City of Roseville, Roseville Electric
 Phone: 916-774-5600
 Fax: 916-784-3797
 Mailing Address: 5120 Phillip Rd
 Mailing Address City: Roseville
 Mailing Address State: CA
 Mailing Address Zip Code: 95747
 Operator Name: City of Roseville - Roseville Electric
 Operator Phone: 916-774-5600
 Owner Phone: 916-774-5600
 Owner Mail Address: 311 Vernon Street
 Owner State: CA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Owner Zip Code: 95678
Owner Country: United States
Property Owner Name: City of Roseville
Property Owner Phone: 916-774-5600
Property Owner Mailing Address: 311 Vernon Street
Property Owner City: Roseville
Property Owner Stat : CA
Property Owner Zip Code: 95678
Property Owner Country: United States
EPAID: CAL000328480

CERS HAZ WASTE:
Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 400916
CERS ID: 10207330
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 400916
CERS ID: 10207330
CERS Description: Aboveground Petroleum Storage

NPDES:
Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 5S311021340
Regulatory Measure Type: Industrial
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported
Discharge Name: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Status: Active
Status Date: 12/14/2007
Operator Name: City of Roseville Electric Utility
Operator Address: 2090 Hilltop Circle
Operator City: Roseville
Operator State: California

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Operator Zip: 95747
NPDES as of 03/2018:
NPDES Number: CAS000001
Status: Active
Agency Number: 0
Region: 5S
Regulatory Measure ID: 337896
Order Number: 97-03-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 5S311021340
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 12/14/2007
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: City of Roseville Electric Utility
Discharge Address: 2090 Hilltop Circle
Discharge City: Roseville
Discharge State: California
Discharge Zip: 95747
Received Date: Not reported
Processed Date: Not reported
Status: Not reported
Status Date: Not reported
Place Size: Not reported
Place Size Unit: Not reported
Contact: Not reported
Contact Title: Not reported
Contact Phone: Not reported
Contact Phone Ext: Not reported
Contact Email: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported
Operator Contact: Not reported
Operator Contact Title: Not reported
Operator Contact Phone: Not reported
Operator Contact Phone Ext: Not reported
Operator Contact Email: Not reported
Operator Type: Not reported
Developer: Not reported
Developer Address: Not reported
Developer City: Not reported
Developer State: Not reported
Developer Zip: Not reported
Developer Contact: Not reported
Developer Contact Title: Not reported
Constype Linear Utility Ind: Not reported
Emergency Phone: Not reported
Emergency Phone Ext: Not reported
Constype Above Ground Ind: Not reported
Constype Below Ground Ind: Not reported
Constype Cable Line Ind: Not reported
Constype Comm Line Ind: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	5S
Regulatory Measure ID:	337896
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	5S311021340
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	12/14/2007
Status:	Active
Status Date:	12/14/2007
Place Size:	8.9
Place Size Unit:	Acres
Contact:	Julie Manfredi
Contact Title:	Electric Compliance Analyst
Contact Phone:	916-774-5674
Contact Phone Ext:	Not reported
Contact Email:	jmanfredi@roseville.ca.us
Operator Name:	City of Roseville Electric Utility
Operator Address:	2090 Hilltop Circle
Operator City:	Roseville
Operator State:	California
Operator Zip:	95747
Operator Contact:	Julie Manfredi

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Operator Contact Title: Electric Compliance Analyst
Operator Contact Phone: 916-774-5674
Operator Contact Phone Ext: Not reported
Operator Contact Email: jmanfredi@roseville.ca.us
Operator Type: Other
Developer: Not reported
Developer Address: Not reported
Developer City: Not reported
Developer State: California
Developer Zip: Not reported
Developer Contact: Not reported
Developer Contact Title: Not reported
Constype Linear Utility Ind: Not reported
Emergency Phone: 916-774-5674
Emergency Phone Ext: Not reported
Constype Above Ground Ind: Not reported
Constype Below Ground Ind: Not reported
Constype Cable Line Ind: Not reported
Constype Comm Line Ind: Not reported
Constype Commercial Ind: Not reported
Constype Electrical Line Ind: Not reported
Constype Gas Line Ind: Not reported
Constype Industrial Ind: Not reported
Constype Other Description: Not reported
Constype Other Ind: Not reported
Constype Recons Ind: Not reported
Constype Residential Ind: Not reported
Constype Transport Ind: Not reported
Constype Utility Description: Not reported
Constype Utility Ind: Not reported
Constype Water Sewer Ind: Not reported
Dir Discharge Uswater Ind: N
Receiving Water Name: unnamed tributary of Pleasant Grove Creek
Certifier: Shawn Matchim
Certifier Title: Electric Compliance Analyst
Certification Date: 12-OCT-16
Primary Sic: 4911-Electric Services
Secondary Sic: Not reported
Tertiary Sic: Not reported

Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Facility Status: Active
NPDES Number: CAS000001
Region: 5S
Agency Number: 0
Regulatory Measure ID: 337896
Place ID: Not reported
Order Number: 97-03-DWQ
WDID: 5S311021340
Regulatory Measure Type: Enrollee
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 12/14/2007
Termination Date Of Regulatory Measure: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Expiration Date Of Regulatory Measure: Not reported
Discharge Address: 2090 Hilltop Circle
Discharge Name: City of Roseville Electric Utility
Discharge City: Roseville
Discharge State: California
Discharge Zip: 95747
Status: Not reported
Status Date: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported

NPDES as of 03/2018:
NPDES Number: CAS000001
Status: Active
Agency Number: 0
Region: 5S
Regulatory Measure ID: 337896
Order Number: 97-03-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 5S31I021340
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 12/14/2007
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: City of Roseville Electric Utility
Discharge Address: 2090 Hilltop Circle
Discharge City: Roseville
Discharge State: California
Discharge Zip: 95747
Received Date: Not reported
Processed Date: Not reported
Status: Not reported
Status Date: Not reported
Place Size: Not reported
Place Size Unit: Not reported
Contact: Not reported
Contact Title: Not reported
Contact Phone: Not reported
Contact Phone Ext: Not reported
Contact Email: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported
Operator Contact: Not reported
Operator Contact Title: Not reported
Operator Contact Phone: Not reported
Operator Contact Phone Ext: Not reported
Operator Contact Email: Not reported
Operator Type: Not reported
Developer: Not reported
Developer Address: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	5S
Regulatory Measure ID:	337896
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	5S311021340
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	12/14/2007
Status:	Active
Status Date:	12/14/2007
Place Size:	8.9

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Place Size Unit:	Acres
Contact:	Julie Manfredi
Contact Title:	Electric Compliance Analyst
Contact Phone:	916-774-5674
Contact Phone Ext:	Not reported
Contact Email:	jmanfredi@roseville.ca.us
Operator Name:	City of Roseville Electric Utility
Operator Address:	2090 Hilltop Circle
Operator City:	Roseville
Operator State:	California
Operator Zip:	95747
Operator Contact:	Julie Manfredi
Operator Contact Title:	Electric Compliance Analyst
Operator Contact Phone:	916-774-5674
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	jmanfredi@roseville.ca.us
Operator Type:	Other
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	916-774-5674
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	unnamed tributary of Pleasant Grove Creek
Certifier:	Shawn Matchim
Certifier Title:	Electric Compliance Analyst
Certification Date:	12-OCT-16
Primary Sic:	4911-Electric Services
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CIWQS:

Name:	ROSEVILLE ENERGY PARK
Address:	5120 PHILLIP RD
City,State,Zip:	ROSEVILLE, CA 95747

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Agency: City of Roseville Electric Utility
Agency Address: 2090 Hilltop Circle, Roseville, CA 95747
Place/Project Type: Industrial - Electric Services
SIC/NAICS: 4911
Region: 5S
Program: INDSTW
Regulatory Measure Status: Active
Regulatory Measure Type: Storm water industrial
Order Number: 2014-0057-DWQ
WDID: 5S311021340
NPDES Number: CAS000001
Adoption Date: Not reported
Effective Date: 12/14/2007
Termination Date: Not reported
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 38.79345
Longitude: -121.37998

CERS:

Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 400916
CERS ID: 10207330
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 07-02-2008
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit 2007-2008 Annual Report. Section B requires all annual reports to be submitted by July 1st each year. Discharger did not submit report.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 07-02-2009
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit 2008-2009 Annual Report. Section B requires all annual reports to be submitted by July 1st each year. Discharger did not submit report by July 1st.
Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-30-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.
Violation Notes: Returned to compliance on 07/01/2016. Manager has not used monthly inspection form.
Violation Division: Roseville City Fire Department
Violation Program: APSA
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-27-2013
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Description: Haz Waste Generator Program - Release/Leaks/Spills - General
Violation Notes: Returned to compliance on 07/16/2013. Sulfuric Acid pump shows signs of oil leakage - the concrete slab supporting the pump is corroded.
Violation Division: Roseville City Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-27-2013
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 07/16/2013. One spill kit drum lacks identification. Container missing lable in boiler chemical feed room.
Violation Division: Roseville City Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-30-2016
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)
Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan.
Violation Notes: Returned to compliance on 07/22/2016. Update name of emergency contact in CERS.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Violation Division: Roseville City Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-12-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 07/22/2016. Update emergency contact information.

Violation Division: Roseville City Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-26-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-26-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-26-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-27-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-27-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-27-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-29-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-29-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-29-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-30-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-30-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-30-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-30-2008
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:

Site ID: 400916
Site Name: Roseville Energy Park
Site Address: 5120 PHILLIP RD
Site City: ROSEVILLE
Site Zip: 95747
Enf Action Date: 07-23-2009
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: 1st NONC 08/09 Late Annual Report
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 400916
Site Name: Roseville Energy Park
Site Address: 5120 PHILLIP RD
Site City: ROSEVILLE
Site Zip: 95747
Enf Action Date: 08-01-2008
Enf Action Type: Notice of Non-Compliance for Non-Filers
Enf Action Description: Notice of Non-Compliance for Non-Filers
Enf Action Notes: 1st NONC 07/08 Late Annual Report
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:

Site ID: 400916
Facility Name: Roseville Energy Park
Env Int Type Code: APSA
Program ID: 10207330
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.793450
Longitude: -121.379980

Affiliation:

Affiliation Type Desc: CUPA District
Entity Name: Roseville City Fire Dept
Entity Title: Not reported
Affiliation Address: 316 Vernon Street Suite #480
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5800

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Affiliation Type Desc: Environmental Contact
Entity Name: Julie Manfredi
Entity Title: Not reported
Affiliation Address: 5120 Phillip Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95747
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 5120 Phillip Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95747
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Julie Manfredi
Entity Title: Compliance Analyst
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: City of Roseville
Entity Title: Not reported
Affiliation Address: 311 Vernon Street
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Property Owner
Entity Name: City of Roseville
Entity Title: Not reported
Affiliation Address: 311 Vernon Street
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Operator
Entity Name: City of Roseville - Roseville Electric
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Affiliation Zip: Not reported
Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Parent Corporation
Entity Name: City of Roseville, Roseville Electric
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Julie Manfredi
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Owner/Operator
Entity Name: City of Roseville Electric Utility
Entity Title: Operator
Affiliation Address: 2090 Hilltop Circle
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95747
Affiliation Phone: Not reported

Name: ROSEVILLE ENERGY PARK
Address: 5120 PHILLIP RD
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 400916
CERS ID: 708747
CERS Description: Industrial Facility Storm Water

Violations:

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 07-02-2008
Citation: 2014-0057-DWQ - Industrial General Permit
Violation Description: SW - Late Report
Violation Notes: Failure to submit 2007-2008 Annual Report. Section B requires all annual reports to be submitted by July 1st each year. Discharger did not submit report.

Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 07-02-2009
Citation: 2014-0057-DWQ - Industrial General Permit

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Violation Description: SW - Late Report
Violation Notes: Failure to submit 2008-2009 Annual Report. Section B requires all annual reports to be submitted by July 1st each year. Discharger did not submit report by July 1st.

Violation Division: Water Boards
Violation Program: INDSTW
Violation Source: SMARTS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-30-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)

Violation Description: Failure to comply with one or more of the following requirements: 1. Have record of inspections and integrity tests signed by the appropriate supervisor or inspector. 2. Keep written procedures and records of inspections and integrity tests for at least three years. 3. Keep comparison records.

Violation Notes: Returned to compliance on 07/01/2016. Manager has not used monthly inspection form.

Violation Division: Roseville City Fire Department
Violation Program: APSA
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-27-2013
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple

Violation Description: Haz Waste Generator Program - Release/Leaks/Spills - General
Violation Notes: Returned to compliance on 07/16/2013. Sulfuric Acid pump shows signs of oil leakage - the concrete slab supporting the pump is corroded.

Violation Division: Roseville City Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-27-2013
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)

Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.

Violation Notes: Returned to compliance on 07/16/2013. One spill kit drum lacks identification. Container missing lable in boiler chemical feed room.

Violation Division: Roseville City Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-30-2016
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)

Violation Description: Failure to electronically update business plan within 30 days of any

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Violation Notes: one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan. Returned to compliance on 07/22/2016. Update name of emergency contact in CERS.

Violation Division: Roseville City Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 400916
Site Name: Roseville Energy Park
Violation Date: 06-12-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.

Violation Notes: Returned to compliance on 07/22/2016. Update emergency contact information.

Violation Division: Roseville City Fire Department
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018
Violations Found: No

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-14-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-26-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-27-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-27-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-27-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-29-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-29-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-29-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-30-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-30-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Roseville City Fire Department
Eval Program:	APSA
Eval Source:	CERS

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-30-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-30-2008
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Enforcement Action:

Site ID: 400916
Site Name: Roseville Energy Park
Site Address: 5120 PHILLIP RD
Site City: ROSEVILLE
Site Zip: 95747
Enf Action Date: 07-23-2009
Enf Action Type: Industrial Storm Water Enforcement
Enf Action Description: Industrial Storm Water Enforcement
Enf Action Notes: 1st NONC 08/09 Late Annual Report
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Site ID: 400916
Site Name: Roseville Energy Park
Site Address: 5120 PHILLIP RD
Site City: ROSEVILLE
Site Zip: 95747
Enf Action Date: 08-01-2008
Enf Action Type: Notice of Non-Compliance for Non-Filers
Enf Action Description: Notice of Non-Compliance for Non-Filers
Enf Action Notes: 1st NONC 07/08 Late Annual Report
Enf Action Division: Water Boards
Enf Action Program: INDSTW
Enf Action Source: SMARTS

Coordinates:

Site ID: 400916
Facility Name: Roseville Energy Park
Env Int Type Code: APSA
Program ID: 10207330
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 38.793450
Longitude: -121.379980

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Database(s)

EDR ID Number
EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Affiliation:

Affiliation Type Desc: CUPA District
Entity Name: Roseville City Fire Dept
Entity Title: Not reported
Affiliation Address: 316 Vernon Street Suite #480
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5800

Affiliation Type Desc: Environmental Contact
Entity Name: Julie Manfredi
Entity Title: Not reported
Affiliation Address: 5120 Phillip Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95747
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 5120 Phillip Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95747
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Julie Manfredi
Entity Title: Compliance Analyst
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: City of Roseville
Entity Title: Not reported
Affiliation Address: 311 Vernon Street
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Property Owner
Entity Name: City of Roseville
Entity Title: Not reported
Affiliation Address: 311 Vernon Street
Affiliation City: Roseville
Affiliation State: CA

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Database(s)

EDR ID Number
 EPA ID Number

ROSEVILLE ENERGY PARK (Continued)

S109425013

Affiliation Country: United States
 Affiliation Zip: 95678
 Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Operator
 Entity Name: City of Roseville - Roseville Electric
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: (916) 774-5600

Affiliation Type Desc: Parent Corporation
 Entity Name: City of Roseville, Roseville Electric
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
 Entity Name: Julie Manfredi
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Owner/Operator
 Entity Name: City of Roseville Electric Utility
 Entity Title: Operator
 Affiliation Address: 2090 Hilltop Circle
 Affiliation City: Roseville
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: 95747
 Affiliation Phone: Not reported

8
SSE
1/8-1/4
0.249 mi.
1313 ft.

VERIZON WIRELESS (FIDDYMENT)
2150 BLUE OAKS BLVD
ROSEVILLE, CA 95678

EMI
CA PLACER CO. MS
CERS

S113752316
N/A

Relative:
Lower
Actual:
86 ft.

EMI:
 Name: VERIZON WIRELESS - FIDDYMENT
 Address: 2150 BLUE OAKS BLVD
 City,State,Zip: ROSEVILLE, CA 95678
 Year: 2009
 County Code: 31
 Air Basin: SV

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0.0004035
Carbon Monoxide Emissions Tons/Yr: 0.0012106
NOX - Oxides of Nitrogen Tons/Yr: 5.9379000000000003E-3
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.0001153

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95678
Year: 2010
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 4.9778893271184405E-4
Reactive Organic Gases Tons/Yr: 4.1649999999999999E-4
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 6.1285000000000003E-3
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 1.21926229508196E-4
Part. Matter 10 Micrometers and Smlr Tons/Yr:1.1900000000000001E-4

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95678
Year: 2011
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00049778893271
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95678

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Year: 2012
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00049778893271
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95747
Year: 2013
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00049778893271
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95747
Year: 2014
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00047410358566
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95747
Year: 2015
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00047410358566
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95747
Year: 2016
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00047410358566
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: 0.00012192622951
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000119

Name: VERIZON WIRELESS - FIDDYMENT
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95747
Year: 2017
County Code: 31
Air Basin: SV
Facility ID: 9532
Air District Name: PLA
SIC Code: 4813
Air District Name: PLACER COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.00047410358566
Reactive Organic Gases Tons/Yr: 0.0004165
Carbon Monoxide Emissions Tons/Yr: 0.0012495
NOX - Oxides of Nitrogen Tons/Yr: 0.0061285
SOX - Oxides of Sulphur Tons/Yr: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Particulate Matter Tons/Yr: 0.00011971830986
Part. Matter 10 Micrometers and Smllr Tons/Yr:0.000119

PLACER CO. MS:

Name: VERIZON WIRELESS (FIDDYMENT)
Address: 2150 BLUE OAKS BLVD
City,State,Zip: ROSEVILLE, CA 95678
Facility ID: FA0004527
Facility Status: Closed
Program Element Code: 2105
Program: HAZMAT BUSINESS PLAN
Record Num: PR0007736
District Code: 130
Decode for Fstatus: Closed

CERS:

Name: VERIZON WIRELESS FIDDYMENT RANCH
Address: 2150 BLUE OAKS BLVD.
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 405889
CERS ID: 10143209
CERS Description: Chemical Storage Facilities

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-18-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-23-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-29-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Affiliation:

Affiliation Type Desc: Parent Corporation
Entity Name: Verizon Wireless [Northern California]
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Roseville City Fire Dept
Entity Title: Not reported
Affiliation Address: 316 Vernon Street Suite #480
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5800

Affiliation Type Desc: Facility Owner
Entity Name: VERIZON WIRELESS
Entity Title: OWNER
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Steve Skanderson
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: ENVIR COMPLIANCE
Entity Title: ENVIRONMENTAL CONTACT
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Environmental Compliance
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95630
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: NETWORK OPR CONTRL CTR
Entity Title: NOCC
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95630
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: armand delgado
Entity Title: environmental compliance mgr
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Operator
Entity Name: VERIZON WIRELESS
Entity Title: OPERATOR
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: VERIZON WIRELESS FIDDYMENT RANCH
Address: 2150 BLUE OAKS BLVD.
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 405889
CERS ID: 110055837420
CERS Description: US EPA Air Emission Inventory System (EIS)

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-18-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-20-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-23-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-29-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-11-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Roseville City Fire Department
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Parent Corporation
Entity Name: Verizon Wireless [Northern California]
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
Entity Name: Roseville City Fire Dept
Entity Title: Not reported
Affiliation Address: 316 Vernon Street Suite #480
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: (916) 774-5800

Affiliation Type Desc: Facility Owner
Entity Name: VERIZON WIRELESS
Entity Title: OWNER
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Steve Skanderson
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: ENVIR COMPLIANCE
Entity Title: ENVIRONMENTAL CONTACT
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: Environmental Compliance
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95630
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: NETWORK OPR CONTRL CTR

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

VERIZON WIRELESS (FIDDYMENT) (Continued)

S113752316

Entity Title: NOCC
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95630
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95630
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: armand delgado
Entity Title: environmental compliance mgr
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Operator
Entity Name: VERIZON WIRELESS
Entity Title: OPERATOR
Affiliation Address: 255 PARKSHORE DRIVE
Affiliation City: FOLSOM
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

B9
SE
1/4-1/2
0.476 mi.
2512 ft.

ELEMENTARY SCHOOL (F-70)
FIDDYMENT ROAD/BLUE OAKS BOULEVARD
ROSEVILLE, CA 95747

ENVIROSTOR **S118756681**
SCH **N/A**

Site 1 of 4 in cluster B

Relative:
Lower
Actual:
101 ft.

ENVIROSTOR:
Name: ELEMENTARY SCHOOL (F-70)
Address: FIDDYMENT ROAD/BLUE OAKS BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020009
Status: No Action Required
Status Date: 05/24/2004
Site Code: 104406
Site Type: School Investigation
Site Type Detailed: School
Acres: 8.1
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Assembly: 06
Senate: 04
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-ELEMENTARY SCHOOL F-70
Alias Type: Alternate Name
Alias Name: 104406
Alias Type: Project Code (Site Code)
Alias Name: 31020009
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/24/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ELEMENTARY SCHOOL (F-70) (Continued)

S118756681

Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL (F-70)
Address: FIDDYMENT ROAD/BLUE OAKS BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020009
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 8.1
National Priorities List: NO
Cleanup Oversight Agencies: DTSC
Lead Agency: DTSC
Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 104406
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 05/24/2004
Restricted Use: NO
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-ELEMENTARY SCHOOL F-70
Alias Type: Alternate Name
Alias Name: 104406
Alias Type: Project Code (Site Code)
Alias Name: 31020009
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/24/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ELEMENTARY SCHOOL (F-70) (Continued)

S118756681

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

B10
SE
1/4-1/2
0.476 mi.
2512 ft.

ELEMENTARY SCHOOL (W-75)
FIDDYMENT ROAD/DEL WEBB BOULEVARD
ROSEVILLE, CA 95747
Site 2 of 4 in cluster B

ENVIROSTOR **S118757047**
SCH **N/A**

Relative:
Lower
Actual:
101 ft.

ENVIROSTOR:
Name: ELEMENTARY SCHOOL (W-75)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 60000035
Status: No Action Required
Status Date: 05/29/2004
Site Code: 104407
Site Type: School Investigation
Site Type Detailed: School
Acres: 10
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Assembly: 06
Senate: 04
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-ELEMENTARY SCHOOL W-75
Alias Type: Alternate Name
Alias Name: 104407
Alias Type: Project Code (Site Code)
Alias Name: 60000035
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ELEMENTARY SCHOOL (W-75) (Continued)

S118757047

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/29/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL (W-75)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 60000035
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 10
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Site Code: 104407
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 05/29/2004
Restricted Use: NO
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-ELEMENTARY SCHOOL W-75
Alias Type: Alternate Name
Alias Name: 104407
Alias Type: Project Code (Site Code)
Alias Name: 60000035
Alias Type: Envirostor ID Number

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

ELEMENTARY SCHOOL (W-75) (Continued)

S118757047

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Cost Recovery Closeout Memo
 Completed Date: 06/15/2004
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Phase 1
 Completed Date: 05/29/2004
 Comments: Not reported

Future Area Name: Not reported
 Future Sub Area Name: Not reported
 Future Document Type: Not reported
 Future Due Date: Not reported
 Schedule Area Name: Not reported
 Schedule Sub Area Name: Not reported
 Schedule Document Type: Not reported
 Schedule Due Date: Not reported
 Schedule Revised Date: Not reported

B11
SE
1/4-1/2
0.476 mi.
2512 ft.

ELEMENTARY SCHOOL (W-75)
FIDDYMENT ROAD/DEL WEBB BOULEVARD
ROSEVILLE, CA 95747

ENVIROSTOR S118756682
SCH N/A

Site 3 of 4 in cluster B

Relative:
Lower
Actual:
101 ft.

ENVIROSTOR:
 Name: ELEMENTARY SCHOOL (W-75)
 Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
 City,State,Zip: ROSEVILLE, CA 95747
 Facility ID: 31020010
 Status: No Action Required
 Status Date: 05/24/2004
 Site Code: 104407
 Site Type: School Investigation
 Site Type Detailed: School
 Acres: 10
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Not reported
 Supervisor: Mark Malinowski
 Division Branch: Northern California Schools & Santa Susana
 Assembly: 06
 Senate: 04
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: School District
 Latitude: 38.7918
 Longitude: -121.3604
 APN: NONE SPECIFIED
 Past Use: NONE
 Potential COC: NONE SPECIFIED No Contaminants found

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ELEMENTARY SCHOOL (W-75) (Continued)

S118756682

Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ELEMENTARY SCHOOL (W-75)
Alias Type: Alternate Name
Alias Name: 104407
Alias Type: Project Code (Site Code)
Alias Name: 31020010
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/28/2004
Comments: No action required at this time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Sent CRU memo to cost recovery

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELEMENTARY SCHOOL (W-75)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020010
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 10
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Site Code: 104407
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 05/24/2004
Restricted Use: NO
Funding: School District

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ELEMENTARY SCHOOL (W-75) (Continued)

S118756682

Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: NONE
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ELEMENTARY SCHOOL (W-75)
Alias Type: Alternate Name
Alias Name: 104407
Alias Type: Project Code (Site Code)
Alias Name: 31020010
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/28/2004
Comments: No action required at this time.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Sent CRU memo to cost recovery

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

B12
SE
1/4-1/2
0.476 mi.
2512 ft.

MIDDLE SCHOOL (W-73)
FIDDYMENT ROAD/DEL WEBB BOULEVARD
ROSEVILLE, CA 95747

ENVIROSTOR **S118756684**
SCH **N/A**
CERS

Site 4 of 4 in cluster B

Relative:
Lower
Actual:
101 ft.

ENVIROSTOR:
Name: MIDDLE SCHOOL (W-73)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020012
Status: No Action Required
Status Date: 08/01/2005
Site Code: 104408
Site Type: School Investigation
Site Type Detailed: School
Acres: 19.9
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDDLE SCHOOL (W-73) (Continued)

S118756684

Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Assembly: 06
Senate: 04
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-MIDDLE SCHOOL W-73
Alias Type: Alternate Name
Alias Name: 104408
Alias Type: Project Code (Site Code)
Alias Name: 31020012
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/24/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: MIDDLE SCHOOL (W-73)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020012
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 19.9
National Priorities List: NO
Cleanup Oversight Agencies: DTSC

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDDLE SCHOOL (W-73) (Continued)

S118756684

Lead Agency: DTSC
Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 104408
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 08/01/2005
Restricted Use: NO
Funding: School District
Latitude: 38.7918
Longitude: -121.3604
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ROSEVILLE CITY SD-MIDDLE SCHOOL W-73
Alias Type: Alternate Name
Alias Name: 104408
Alias Type: Project Code (Site Code)
Alias Name: 31020012
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 05/24/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/15/2004
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CERS:

Name: MIDDLE SCHOOL (W-73)
Address: FIDDYMENT ROAD/DEL WEBB BOULEVARD
City,State,Zip: ROSEVILLE, CA 95747
Site ID: 371330
CERS ID: 31020012
CERS Description: School Investigation

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

MIDDLE SCHOOL (W-73) (Continued)

S118756684

Affiliation:
 Affiliation Type Desc: Supervisor
 Entity Name: JOSE SALCEDO
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

13
South
1/2-1
0.706 mi.
3726 ft.

COMPREHENSIVE HIGH SCHOOL #6
SOUTHWEST OF THE INTERSECTION OF HIGH SCHOOL ROAD AND HAYDEN
ROSEVILLE, CA 95747

ENVIROSTOR **S118756678**
SCH **N/A**

Relative:
Higher
Actual:
106 ft.

ENVIROSTOR:
 Name: COMPREHENSIVE HIGH SCHOOL #6
 Address: SOUTHWEST OF THE INTERSECTION OF HIGH SCHOOL ROAD AND HAYDEN PARKWAY
 City,State,Zip: ROSEVILLE, CA 95747
 Facility ID: 31020006
 Status: No Action Required
 Status Date: 10/12/2009
 Site Code: 104343
 Site Type: School Investigation
 Site Type Detailed: School
 Acres: 53
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Mellan Songco
 Supervisor: Juan Koponen
 Division Branch: Northern California Schools & Santa Susana
 Assembly: 06
 Senate: 04
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: School District
 Latitude: 38.7827
 Longitude: -121.3749
 APN: 017-101-030-000
 Past Use: AGRICULTURAL - LIVESTOCK
 Potential COC: NONE SPECIFIED No Contaminants found
 Confirmed COC: No Contaminants found
 Potential Description: NMA
 Alias Name: ROSEVILLE JOINT UNION HSD
 Alias Type: Alternate Name
 Alias Name: ROSEVILLE JT UHSD-W. ROSEVILLE HS NO. 6
 Alias Type: Alternate Name
 Alias Name: WEST ROSEVILLE HIGH SCHOOL NO. 6
 Alias Type: Alternate Name
 Alias Name: 017-101-030-000
 Alias Type: APN
 Alias Name: 104343

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMPREHENSIVE HIGH SCHOOL #6 (Continued)

S118756678

Alias Type: Project Code (Site Code)
Alias Name: 31020006
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 06/09/2003
Comments: Phase 1 - Pursuant to an agreement between the Department of Toxic Substances Control (DTSC) and the California Department of Education, DTSC's Site Mitigation Program completed a review of a Phase 1 Environmental Assessment and has made a "No Action" determination for this Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 10/12/2009
Comments: DTSC approved the Phase I with a no action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 07/10/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 06/06/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 09/22/2009
Comments: Requested additional information from the District's consultant.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/22/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 01/05/2011
Comments: DTSC has reviewed the draft EIR for the Westpark Area H.S. project

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMPREHENSIVE HIGH SCHOOL #6 (Continued)

S118756678

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: COMPREHENSIVE HIGH SCHOOL #6
Address: SOUTHWEST OF THE INTERSECTION OF HIGH SCHOOL ROAD AND HAYDEN PARKWAY
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 31020006
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 53
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Mellan Songco
Supervisor: Juan Koponen
Division Branch: Northern California Schools & Santa Susana
Site Code: 104343
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 10/12/2009
Restricted Use: NO
Funding: School District
Latitude: 38.7827
Longitude: -121.3749
APN: 017-101-030-000
Past Use: AGRICULTURAL - LIVESTOCK
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: ROSEVILLE JOINT UNION HSD
Alias Type: Alternate Name
Alias Name: ROSEVILLE JT UHSD-W. ROSEVILLE HS NO. 6
Alias Type: Alternate Name
Alias Name: WEST ROSEVILLE HIGH SCHOOL NO. 6
Alias Type: Alternate Name
Alias Name: 017-101-030-000
Alias Type: APN
Alias Name: 104343
Alias Type: Project Code (Site Code)
Alias Name: 31020006
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 06/09/2003
Comments: Phase 1 - Pursuant to an agreement between the Department of Toxic Substances Control (DTSC) and the California Department of Education, DTSC's Site Mitigation Program completed a review of a Phase 1 Environmental Assessment and has made a "No Action" determination for

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMPREHENSIVE HIGH SCHOOL #6 (Continued)

S118756678

this Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 10/12/2009
Comments: DTSC approved the Phase I with a no action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 07/10/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 06/06/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 09/22/2009
Comments: Requested additional information from the District's consultant.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/22/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 01/05/2011
Comments: DTSC has reviewed the draft EIR for the Westpark Area H.S. project

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

14
SW
1/2-1
0.938 mi.
4955 ft.

W-70 ELEMENTARY SCHOOL
LOT 15 OF WESTPARK-PHASE 4 LARGE LOT SUBDIVISION
ROSEVILLE, CA 95747

ENVIROSTOR S118757292
SCH N/A

Relative:
Lower
Actual:
100 ft.

ENVIROSTOR:
Name: W-70 ELEMENTARY SCHOOL
Address: LOT 15 OF WESTPARK-PHASE 4 LARGE LOT SUBDIVISION
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 60002124
Status: No Action Required
Status Date: 12/24/2014
Site Code: 104735
Site Type: School Investigation
Site Type Detailed: School
Acres: 8.5
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Jose Salcedo
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Assembly: 06
Senate: 04
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 38.7873
Longitude: -121.3921
APN: 496-020-024
Past Use: NONE
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: 496-020-024
Alias Type: APN
Alias Name: 104735
Alias Type: Project Code (Site Code)
Alias Name: 60002124
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 03/19/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 12/24/2014
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

W-70 ELEMENTARY SCHOOL (Continued)

S118757292

Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: W-70 ELEMENTARY SCHOOL
Address: LOT 15 OF WESTPARK-PHASE 4 LARGE LOT SUBDIVISION
City,State,Zip: ROSEVILLE, CA 95747
Facility ID: 60002124
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 8.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Jose Salcedo
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 104735
Assembly: 06
Senate: 04
Special Program Status: Not reported
Status: No Action Required
Status Date: 12/24/2014
Restricted Use: NO
Funding: School District
Latitude: 38.7873
Longitude: -121.3921
APN: 496-020-024
Past Use: NONE
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: 496-020-024
Alias Type: APN
Alias Name: 104735
Alias Type: Project Code (Site Code)
Alias Name: 60002124
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 03/19/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 12/24/2014
Comments: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

W-70 ELEMENTARY SCHOOL (Continued)

S118757292

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ROSEVILLE	S121620806	ARBORS AT FIDDYMENT RANCH	BOB DOYLE & HAYDEN PARKWAYS	95747	CIWQS
ROSEVILLE	S121638330	FIDDYMENT RANCH	HAYDEN PKWY & BELLANCA WY	95747	CIWQS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2019	Source: EPA
Date Data Arrived at EDR: 11/07/2019	Telephone: N/A
Date Made Active in Reports: 11/20/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2019	Source: EPA
Date Data Arrived at EDR: 11/07/2019	Telephone: N/A
Date Made Active in Reports: 11/20/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/04/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/25/2019	Source: EPA
Date Data Arrived at EDR: 11/07/2019	Telephone: 800-424-9346
Date Made Active in Reports: 11/21/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/24/2019	Source: EPA
Date Data Arrived at EDR: 06/26/2019	Telephone: 800-424-9346
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/13/2019	Source: Department of the Navy
Date Data Arrived at EDR: 08/20/2019	Telephone: 843-820-7326
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 02/24/2020
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/19/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/20/2019	Telephone: 703-603-0695
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 11/22/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/09/2020
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/19/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/20/2019	Telephone: 703-603-0695
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 11/22/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/09/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/09/2019

Date Data Arrived at EDR: 09/09/2019

Date Made Active in Reports: 09/23/2019

Number of Days to Update: 14

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 09/09/2019

Next Scheduled EDR Contact: 01/06/2020

Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity.

These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/29/2019

Date Data Arrived at EDR: 07/31/2019

Date Made Active in Reports: 10/08/2019

Number of Days to Update: 69

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/29/2019

Next Scheduled EDR Contact: 02/10/2020

Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/29/2019

Date Data Arrived at EDR: 07/31/2019

Date Made Active in Reports: 10/08/2019

Number of Days to Update: 69

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/29/2019

Next Scheduled EDR Contact: 02/10/2020

Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/12/2019

Date Data Arrived at EDR: 08/13/2019

Date Made Active in Reports: 10/09/2019

Number of Days to Update: 57

Source: Department of Resources Recycling and Recovery

Telephone: 916-341-6320

Last EDR Contact: 11/12/2019

Next Scheduled EDR Contact: 02/24/2020

Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: see region list
Date Made Active in Reports: 10/31/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/19/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/29/2019	Telephone: 415-972-3372
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/01/2019	Source: EPA Region 6
Date Data Arrived at EDR: 07/29/2019	Telephone: 214-665-6597
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/16/2019	Source: EPA Region 10
Date Data Arrived at EDR: 07/29/2019	Telephone: 206-553-2857
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 07/02/2019	Source: EPA Region 7
Date Data Arrived at EDR: 10/16/2019	Telephone: 913-551-7003
Date Made Active in Reports: 10/24/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 8	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/12/2019	Source: EPA Region 4
Date Data Arrived at EDR: 07/29/2019	Telephone: 404-562-8677
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/08/2019	Source: EPA, Region 5
Date Data Arrived at EDR: 07/30/2019	Telephone: 312-886-7439
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/02/2019	Source: EPA Region 8
Date Data Arrived at EDR: 10/22/2019	Telephone: 303-312-6271
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 20	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/11/2019	Source: EPA Region 1
Date Data Arrived at EDR: 07/29/2019	Telephone: 617-918-1313
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019
Date Data Arrived at EDR: 08/28/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 75

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/11/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 09/06/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 916-327-7844
Date Made Active in Reports: 10/31/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 09/09/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/01/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 09/12/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2019	Source: EPA Region 9
Date Data Arrived at EDR: 07/29/2019	Telephone: 415-972-3368
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/02/2019	Source: EPA Region 8
Date Data Arrived at EDR: 10/22/2019	Telephone: 303-312-6137
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 20	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/01/2019	Source: EPA Region 6
Date Data Arrived at EDR: 07/29/2019	Telephone: 214-665-7591
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/08/2019	Source: EPA Region 5
Date Data Arrived at EDR: 07/29/2019	Telephone: 312-886-6136
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/12/2019	Source: EPA Region 4
Date Data Arrived at EDR: 07/29/2019	Telephone: 404-562-9424
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2019	Source: EPA Region 7
Date Data Arrived at EDR: 07/29/2019	Telephone: 913-551-7003
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/11/2019	Source: EPA, Region 1
Date Data Arrived at EDR: 07/30/2019	Telephone: 617-918-1313
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/16/2019	Source: EPA Region 10
Date Data Arrived at EDR: 07/30/2019	Telephone: 206-553-2857
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/29/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/23/2019
Date Data Arrived at EDR: 09/24/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 59

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/01/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 06/13/2019	Telephone: 202-307-1000
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 11/20/2019
Number of Days to Update: 82	Next Scheduled EDR Contact: 03/09/2020
	Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/31/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/08/2019	Last EDR Contact: 10/29/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 02/10/2020
	Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/16/2019	Telephone: 916-255-6504
Date Made Active in Reports: 09/24/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 70	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 08/14/2019	Source: CalEPA
Date Data Arrived at EDR: 08/14/2019	Telephone: 916-323-2514
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 10/22/2019
Number of Days to Update: 7	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing Aboveground storage tank sites

Date of Government Version: 08/01/2019	Source: San Francisco County Department of Public Health
Date Data Arrived at EDR: 08/02/2019	Telephone: 415-252-3896
Date Made Active in Reports: 10/11/2019	Last EDR Contact: 10/31/2019
Number of Days to Update: 70	Next Scheduled EDR Contact: 02/17/2020
	Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 08/14/2019	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 08/14/2019	Telephone: 916-323-2514
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 10/22/2019
Number of Days to Update: 7	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/30/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/29/2019	Last EDR Contact: 12/02/2019
Number of Days to Update: 60	Next Scheduled EDR Contact: 03/16/2020
	Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/25/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/07/2019	Telephone: 202-564-6023
Date Made Active in Reports: 11/20/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/03/2019	Source: DTSC and SWRCB
Date Data Arrived at EDR: 09/04/2019	Telephone: 916-323-3400
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2019	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/26/2019	Telephone: 202-366-4555
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/15/2019	Source: Office of Emergency Services
Date Data Arrived at EDR: 06/24/2019	Telephone: 916-845-8400
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019	Source: State Water Quality Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 10/28/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/15/2019	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 05/21/2019	Telephone: 202-528-4285
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 11/19/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/11/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 10/07/2019
Number of Days to Update: 574	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/08/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 11/16/2018
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 370

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 106

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/23/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2019	Source: EPA
Date Data Arrived at EDR: 11/07/2019	Telephone: 202-564-6023
Date Made Active in Reports: 11/21/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 14	Next Scheduled EDR Contact: 02/17/2020
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019	Source: EPA
Date Data Arrived at EDR: 04/10/2019	Telephone: 202-566-0500
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 10/11/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 10/07/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/20/2019	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 06/20/2019	Telephone: 301-415-7169
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 10/25/2019
Number of Days to Update: 49	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 11/06/2019
Number of Days to Update: 76	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 11/25/2019
Number of Days to Update: 251	Next Scheduled EDR Contact: 03/16/2020
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/30/2017	Telephone: 202-566-0517
Date Made Active in Reports: 12/15/2017	Last EDR Contact: 11/06/2019
Number of Days to Update: 15	Next Scheduled EDR Contact: 02/17/2020
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 11/12/2019
Number of Days to Update: 84	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 85

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/06/2019
Next Scheduled EDR Contact: 01/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/21/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 82

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/15/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/27/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 76

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/27/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/06/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 140

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 37

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/10/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 06/05/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 90

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017	Source: Department of Defense
Date Data Arrived at EDR: 01/17/2019	Telephone: 703-704-1564
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 10/10/2019
Number of Days to Update: 74	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 07/06/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/09/2019	Telephone: 202-564-2280
Date Made Active in Reports: 10/02/2019	Last EDR Contact: 10/08/2019
Number of Days to Update: 85	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/19/2019	Source: EPA
Date Data Arrived at EDR: 08/20/2019	Telephone: 800-385-6164
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 11/19/2019
Number of Days to Update: 83	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/23/2019	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 09/24/2019	Telephone: 916-323-3400
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/01/2019	Source: San Francisco County Department of Environmental Health
Date Data Arrived at EDR: 08/02/2019	Telephone: 415-252-3896
Date Made Active in Reports: 10/09/2019	Last EDR Contact: 10/31/2019
Number of Days to Update: 68	Next Scheduled EDR Contact: 02/17/2020
	Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 55

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 08/28/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 09/27/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 37

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/18/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/22/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 66

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/30/2019
Next Scheduled EDR Contact: 02/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/16/2019	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 08/20/2019	Telephone: 916-341-6066
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 11/07/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 02/24/2020
	Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 05/29/2019	Telephone: 916-255-1136
Date Made Active in Reports: 07/22/2019	Last EDR Contact: 10/11/2019
Number of Days to Update: 54	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/19/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/20/2019	Telephone: 877-786-9427
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 11/19/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/19/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/20/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 11/19/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/07/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/08/2019	Telephone: 916-440-7145
Date Made Active in Reports: 11/07/2019	Last EDR Contact: 10/08/2019
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/09/2019	Source: Department of Conservation
Date Data Arrived at EDR: 09/09/2019	Telephone: 916-322-1080
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 07/19/2019	Source: Department of Public Health
Date Data Arrived at EDR: 09/04/2019	Telephone: 916-558-1784
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/12/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/13/2019	Telephone: 916-445-9379
Date Made Active in Reports: 10/16/2019	Last EDR Contact: 11/12/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/24/2020
	Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 09/03/2019	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 09/04/2019	Telephone: 916-445-4038
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/09/2019	Source: Department of Conservation
Date Data Arrived at EDR: 09/09/2019	Telephone: 916-323-3836
Date Made Active in Reports: 11/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/16/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/18/2019	Telephone: 916-445-3846
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 49	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 08/20/2019	Source: Department of Conservation
Date Data Arrived at EDR: 08/20/2019	Telephone: 916-445-2408
Date Made Active in Reports: 11/18/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 90	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 09/09/2019	Source: State Water Resource Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/01/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 07/11/2018	Telephone: 559-445-5577
Date Made Active in Reports: 09/13/2018	Last EDR Contact: 10/11/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 11/14/2019
Number of Days to Update: 9	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 09/19/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 09/09/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/09/2019	Telephone: 866-480-1028
Date Made Active in Reports: 11/01/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/22/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 10/03/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 34

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List Cupa Facility List

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 51

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 08/05/2019
Date Data Arrived at EDR: 08/07/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/23/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List Cupa facility list.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SL CONTRA COSTA: Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/23/2019
Date Made Active in Reports: 10/22/2019
Number of Days to Update: 60

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List Cupa Facility list

Date of Government Version: 07/30/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 68

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List CUPA facility list.

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/12/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 49

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/11/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA HUMBOLDT: CUPA Facility List CUPA facility list.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/10/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 72

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 10/30/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List Cupa facility list.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/06/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 63

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

LAKE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA LAKE: CUPA Facility List Cupa facility list

Date of Government Version: 08/16/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/15/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List Cupa facility list

Date of Government Version: 07/22/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 09/12/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/26/2019
Date Data Arrived at EDR: 10/04/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 34

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/15/2019
Date Data Arrived at EDR: 07/17/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 71

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/16/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/27/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 04/17/2019	Telephone: 626-458-6973
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 10/18/2019
Number of Days to Update: 42	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/27/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/27/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/15/2019	Source: Community Health Services
Date Data Arrived at EDR: 07/17/2019	Telephone: 323-890-7806
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 10/29/2019
Number of Days to Update: 19	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 10/09/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 10/17/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 07/30/2019	Telephone: 310-618-2973
Date Made Active in Reports: 10/02/2019	Last EDR Contact: 10/17/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/22/2019	Source: Madera County Environmental Health
Date Data Arrived at EDR: 08/26/2019	Telephone: 559-675-7823
Date Made Active in Reports: 10/29/2019	Last EDR Contact: 11/14/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018	Source: Public Works Department Waste Management
Date Data Arrived at EDR: 10/04/2018	Telephone: 415-473-6647
Date Made Active in Reports: 11/02/2018	Last EDR Contact: 09/25/2019
Number of Days to Update: 29	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/29/2019	Source: Merced County Environmental Health
Date Data Arrived at EDR: 05/30/2019	Telephone: 209-381-1094
Date Made Active in Reports: 07/22/2019	Last EDR Contact: 11/14/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Varies

MONO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA MONO: CUPA Facility List CUPA Facility List

Date of Government Version: 08/21/2019
Date Data Arrived at EDR: 09/03/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 58

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/25/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 50

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 09/30/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List CUPA facility list.

Date of Government Version: 07/23/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups Petroleum and non-petroleum spills.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 08/07/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 63

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 08/09/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 61

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 08/06/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 64

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/05/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/05/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 61

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/06/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 37

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/01/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/07/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/08/2019
Number of Days to Update: 38

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/01/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/29/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 67

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/11/2019
Next Scheduled EDR Contact: 12/29/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List Cupa Facility List.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA SANTA CLARA: Cupa Facility List Cupa facility list

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 07/30/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 67

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SOLANO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST SOLANO: Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 08/28/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List

Cupa Facility list

Date of Government Version: 06/18/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 29

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 36

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List

Cupa facility list

Date of Government Version: 07/18/2019
Date Data Arrived at EDR: 07/18/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 70

Source: Stanislaus County Department of Environmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 08/29/2019
Date Data Arrived at EDR: 09/03/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 64

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA TEHAMA: CUPA Facility List Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List Cupa facility list

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List Cupa program facilities

Date of Government Version: 08/12/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 64

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 07/26/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 09/25/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 30

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 07/26/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 69

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/14/2019	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 05/14/2019	Telephone: 860-424-3375
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 11/11/2019
Number of Days to Update: 83	Next Scheduled EDR Contact: 02/24/2020
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 05/01/2019	Telephone: 518-402-8651
Date Made Active in Reports: 06/21/2019	Last EDR Contact: 10/29/2019
Number of Days to Update: 51	Next Scheduled EDR Contact: 02/10/2020
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/19/2019	Telephone: 717-783-8990
Date Made Active in Reports: 09/10/2019	Last EDR Contact: 10/09/2019
Number of Days to Update: 53	Next Scheduled EDR Contact: 12/07/2020
	Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017	Source: Department of Environmental Management
Date Data Arrived at EDR: 02/23/2018	Telephone: 401-222-2797
Date Made Active in Reports: 04/09/2018	Last EDR Contact: 11/14/2019
Number of Days to Update: 45	Next Scheduled EDR Contact: 03/02/2020
	Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018	Source: Department of Natural Resources
Date Data Arrived at EDR: 06/19/2019	Telephone: N/A
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 09/06/2019
Number of Days to Update: 76	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

FIDDYMENT RANCH PHASE 3
NORTH HAYDEN PARKWAY
ROSEVILLE, CA 95747

TARGET PROPERTY COORDINATES

Latitude (North):	38.803505 - 38° 48' 12.62"
Longitude (West):	121.372247 - 121° 22' 20.09"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	641346.8
UTM Y (Meters):	4296022.5
Elevation:	104 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5619746 ROSEVILLE, CA
Version Date:	2012
West Map:	5619742 PLEASANT GROVE, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

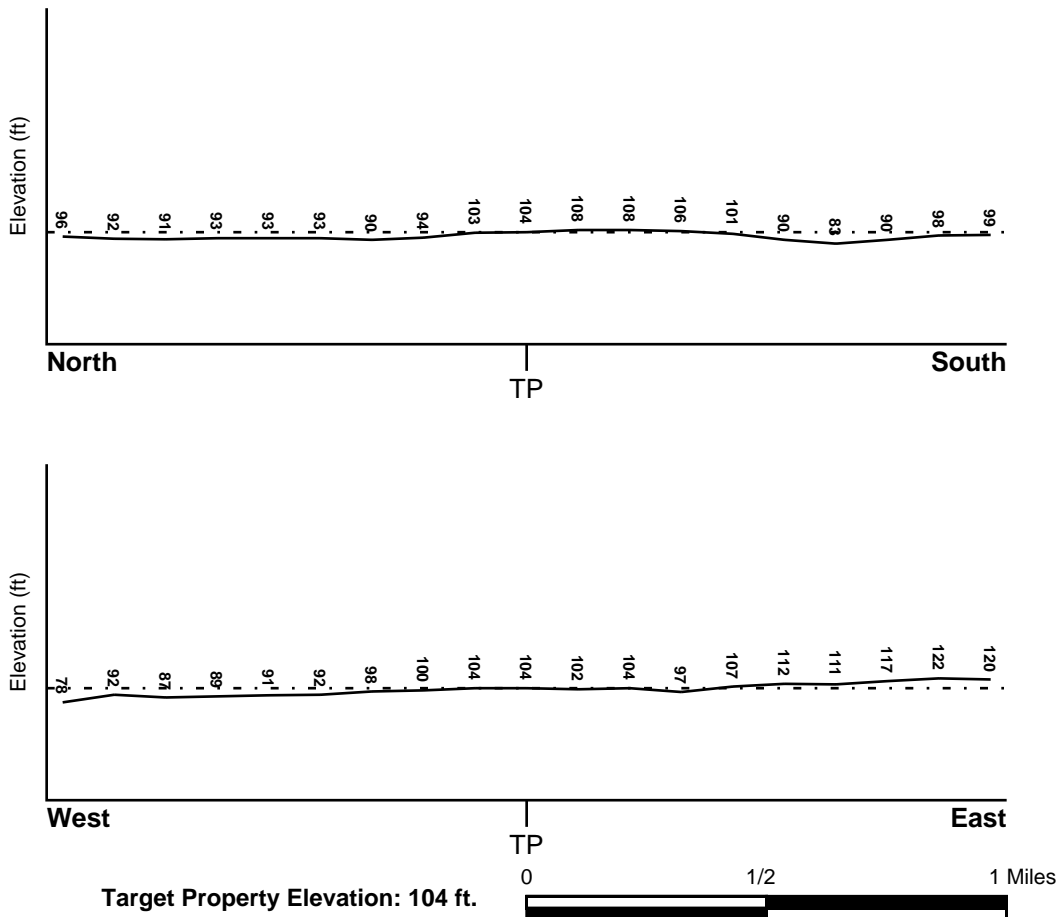
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
0602390400C	FEMA Q3 Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
0602390475E	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ROSEVILLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

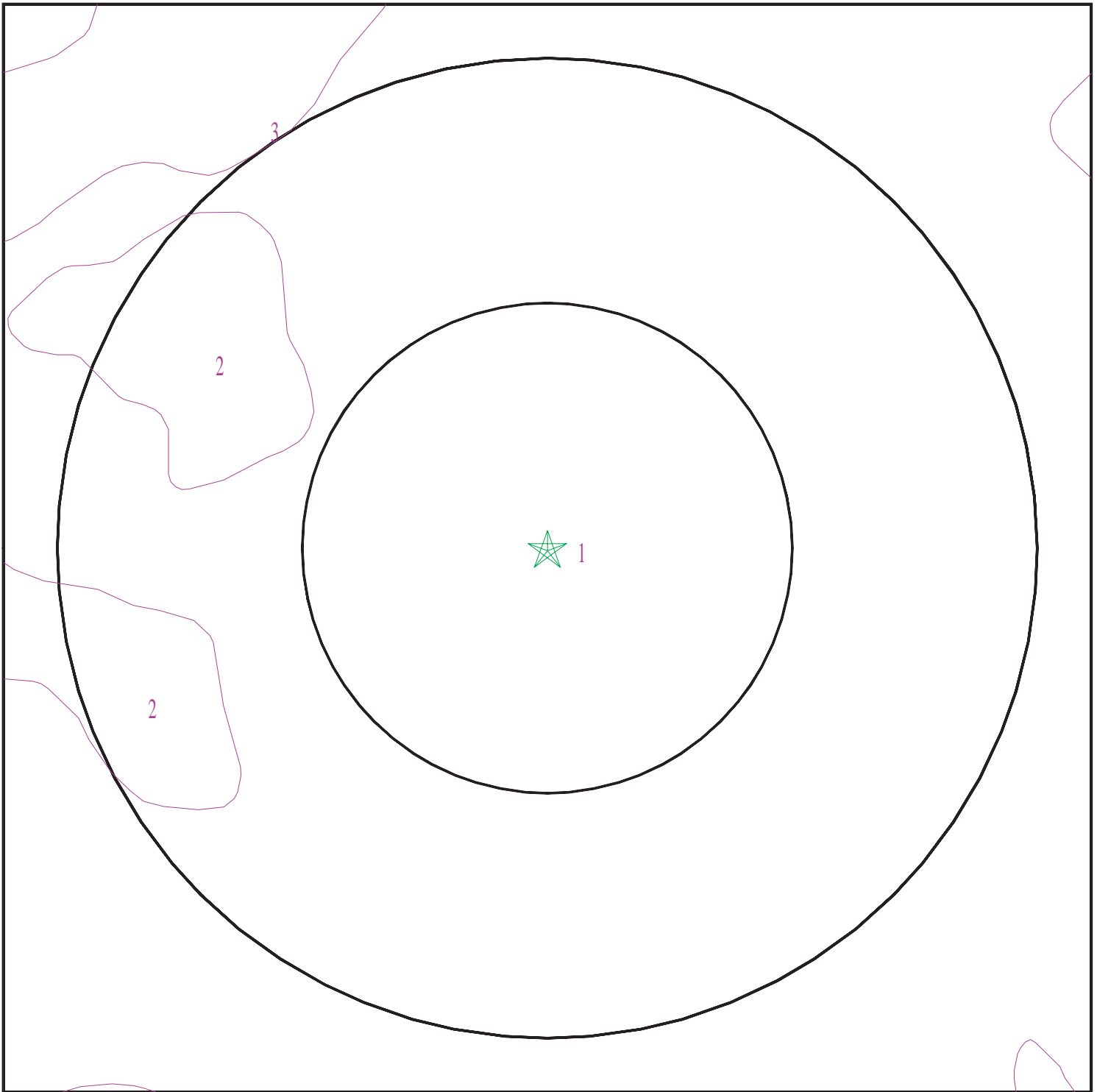
Era: Cenozoic
System: Quaternary
Series: Quaternary
Code: Q (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

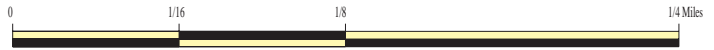
Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 05891567.2r



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Fiddymment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville CA 95747
LAT/LONG: 38.803505 / 121.372247

CLIENT: Engeo Inc.
CONTACT: Karina Castro
INQUIRY #: 05891567.2r
DATE: December 03, 2019 6:03 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: COMETA

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	18 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.6
2	18 inches	29 inches	clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.6
3	29 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.3 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: FIDDYMENT

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	11 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	27 inches	35 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
4	35 inches	38 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: XEROFLUVENTS

Soil Surface Texture: stratified loam to clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	40 inches	stratified loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
2	40 inches	44 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
B4	USGS40000190240	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

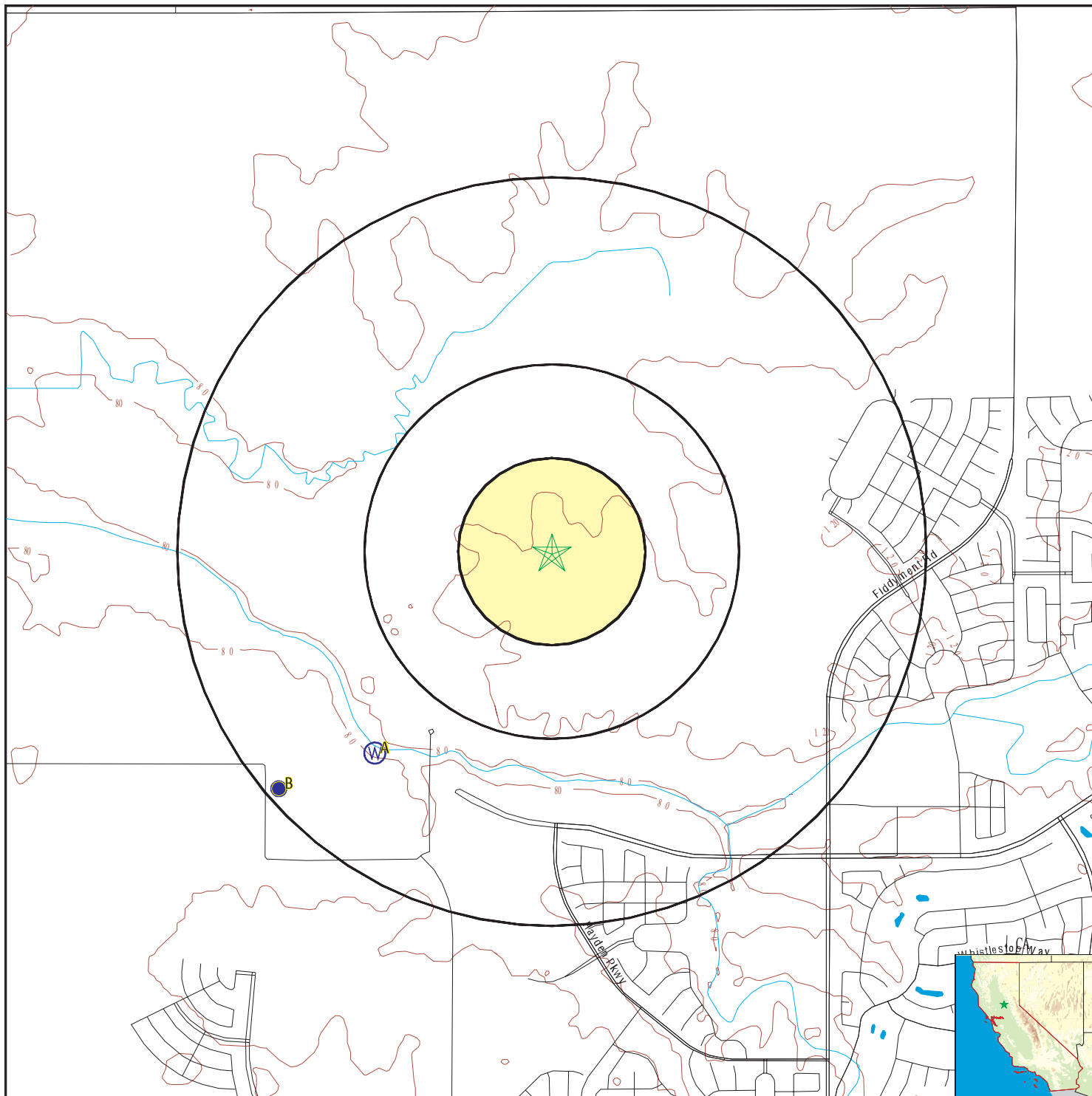
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	CADWR8000039207	1/2 - 1 Mile SW
A2	CADWR8000039206	1/2 - 1 Mile SW
A3	CADWR8000039205	1/2 - 1 Mile SW
B5	CADWR8000039196	1/2 - 1 Mile SW

PHYSICAL SETTING SOURCE MAP - 05891567.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Fiddymment Ranch Phase 3
 ADDRESS: North Hayden Parkway
 Roseville CA 95747
 LAT/LONG: 38.803505 / 121.372247

CLIENT: Engeo Inc.
 CONTACT: Karina Castro
 INQUIRY #: 05891567.2r
 DATE: December 03, 2019 6:03 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A1
SW
1/2 - 1 Mile
Lower

CA WELLS CADWR8000039207

State Well #:	Not Reported	Station ID:	48572
Well Name:	CVMW-1C	Well Use:	Observation
Well Type:	Part of a nested/multi-completion well		
Well Depth:	590	Basin Name:	North American
Well Completion Rpt #:	Not Reported		

A2
SW
1/2 - 1 Mile
Lower

CA WELLS CADWR8000039206

State Well #:	Not Reported	Station ID:	48571
Well Name:	CVMW-1B	Well Use:	Observation
Well Type:	Part of a nested/multi-completion well		
Well Depth:	495	Basin Name:	North American
Well Completion Rpt #:	Not Reported		

A3
SW
1/2 - 1 Mile
Lower

CA WELLS CADWR8000039205

State Well #:	Not Reported	Station ID:	48569
Well Name:	CVMW-1A	Well Use:	Observation
Well Type:	Part of a nested/multi-completion well		
Well Depth:	285	Basin Name:	North American
Well Completion Rpt #:	Not Reported		

B4
SW
1/2 - 1 Mile
Lower

FED USGS USGS40000190240

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	011N005E23B001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	195
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

B5
SW
1/2 - 1 Mile
Lower

CA WELLS CADWR8000039196

State Well #:	11N05E23B001M	Station ID:	11223
Well Name:	O'Brien well	Well Use:	Residential
Well Type:	Single Well	Well Depth:	195
Basin Name:	North American	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95747	15	0

Federal EPA Radon Zone for PLACER County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for PLACER COUNTY, CA

Number of sites tested: 68

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.466 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.500 pCi/L	100%	0%	0%
Basement	3.043 pCi/L	71%	29%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

California Earthquake Fault Lines

Source: California Division of Mines and Geology

The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX B

ENVIRONMENTAL DATA RESOURCES, INC.

Sanborn Map Report

Fiddymment Ranch Phase 3

North Hayden Parkway

Roseville, CA 95747

Inquiry Number: 5891567.3

December 03, 2019

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/03/19

Site Name:

Fiddymment Ranch Phase 3
North Hayden Parkway
Roseville, CA 95747
EDR Inquiry # 5891567.3

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Karina Castro



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Engeo Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # E56B-48C7-B118
PO # 16880.000.000
Project Fiddymment Ranch Phase 3

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: E56B-48C7-B118

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX C

ENVIRONMENTAL DATA RESOURCES, INC.

Historical Topographic Map Report



Fiddymment Ranch Phase 3

North Hayden Parkway

Roseville, CA 95747

Inquiry Number: 5891567.4

December 03, 2019

EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/03/19

Site Name:

Fiddymment Ranch Phase 3
North Hayden Parkway
Roseville, CA 95747
EDR Inquiry # 5891567.4

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Karina Castro



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Engeo Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

Coordinates:

P.O.#	16880.000.000	Latitude:	38.803505 38° 48' 13" North
Project:	Fiddymment Ranch Phase 3	Longitude:	-121.372247 -121° 22' 20" West
		UTM Zone:	Zone 10 North
		UTM X Meters:	641343.13
		UTM Y Meters:	4296230.04
		Elevation:	104.00' above sea level

Maps Provided:

2012	1910
1992	1893
1981	1892
1975	1891
1967	
1953	
1942	
1941	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Roseville
2012
7.5-minute, 24000



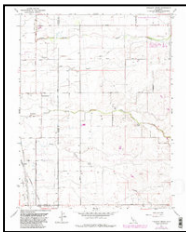
Pleasant Grove
2012
7.5-minute, 24000

1992 Source Sheets



Roseville
1992
7.5-minute, 24000
Aerial Photo Revised 1992

1981 Source Sheets

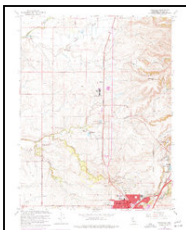


Pleasant Grove
1981
7.5-minute, 24000
Aerial Photo Revised 1978



Roseville
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1975 Source Sheets



Roseville
1975
7.5-minute, 24000
Aerial Photo Revised 1975

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1967 Source Sheets

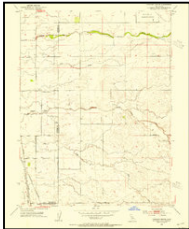


Pleasant Grove
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Roseville
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1953 Source Sheets

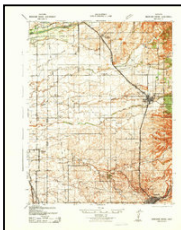


Pleasant Grove
1953
7.5-minute, 24000
Aerial Photo Revised 1949



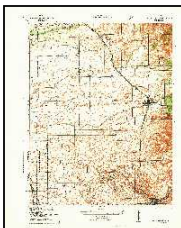
Roseville
1953
7.5-minute, 24000
Aerial Photo Revised 1949

1942 Source Sheets



Markham Ravine
1942
15-minute, 62500
Aerial Photo Revised 1939

1941 Source Sheets



MARKHAM RAVINE
1941
15-minute, 62500

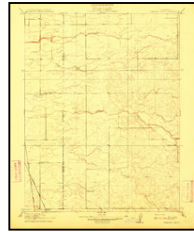
Topo Sheet Key

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1910 Source Sheets

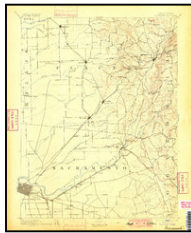


Roseville
1910
7.5-minute, 31680



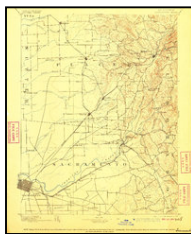
Pleasant Grove
1910
7.5-minute, 31680

1893 Source Sheets



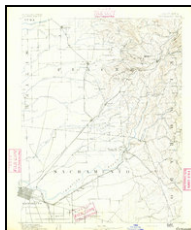
Sacramento
1893
30-minute, 125000

1892 Source Sheets

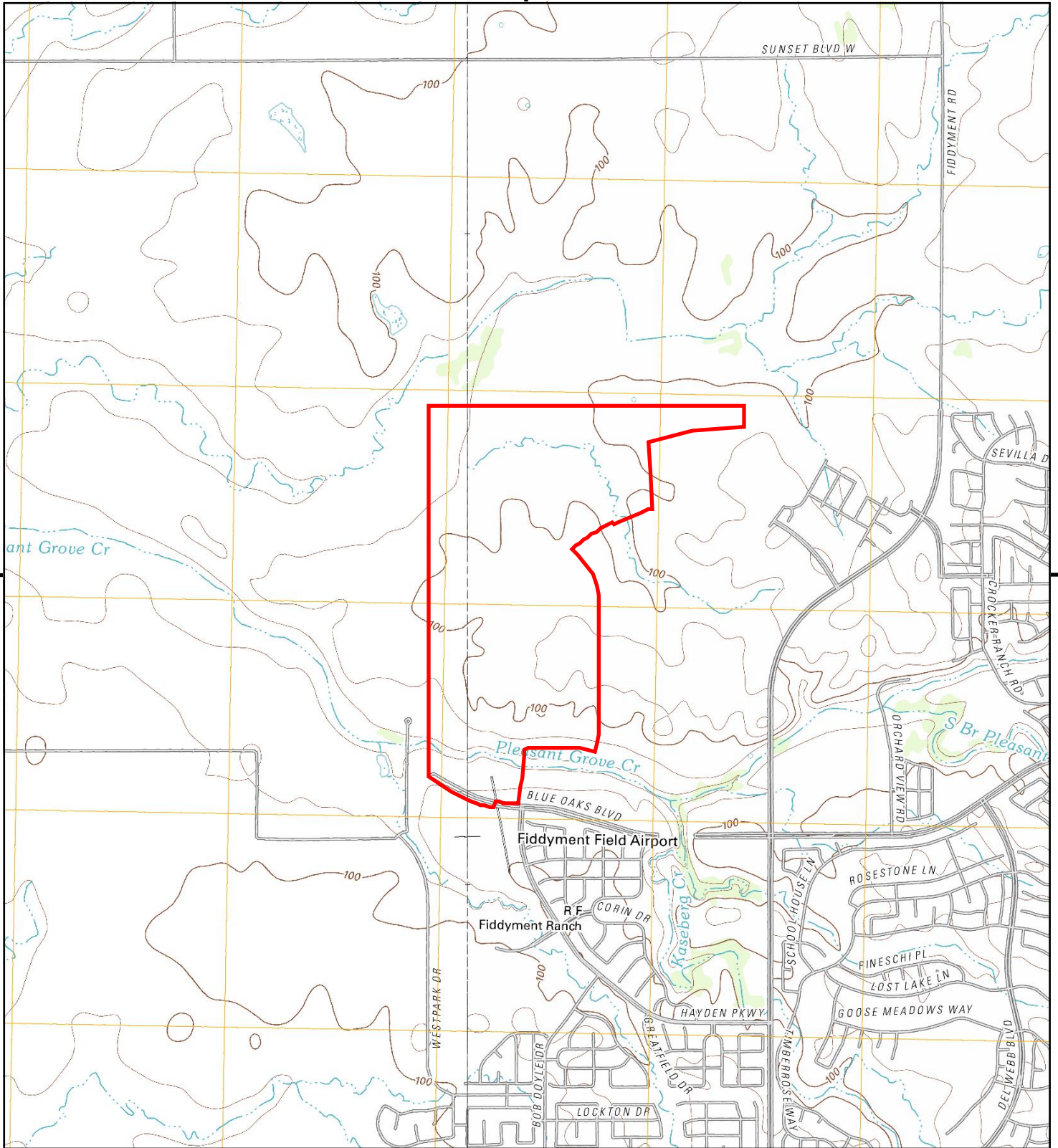


Sacramento
1892
30-minute, 125000

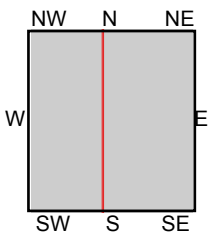
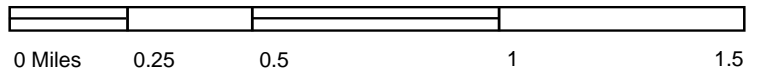
1891 Source Sheets



Sacramento
1891
30-minute, 125000



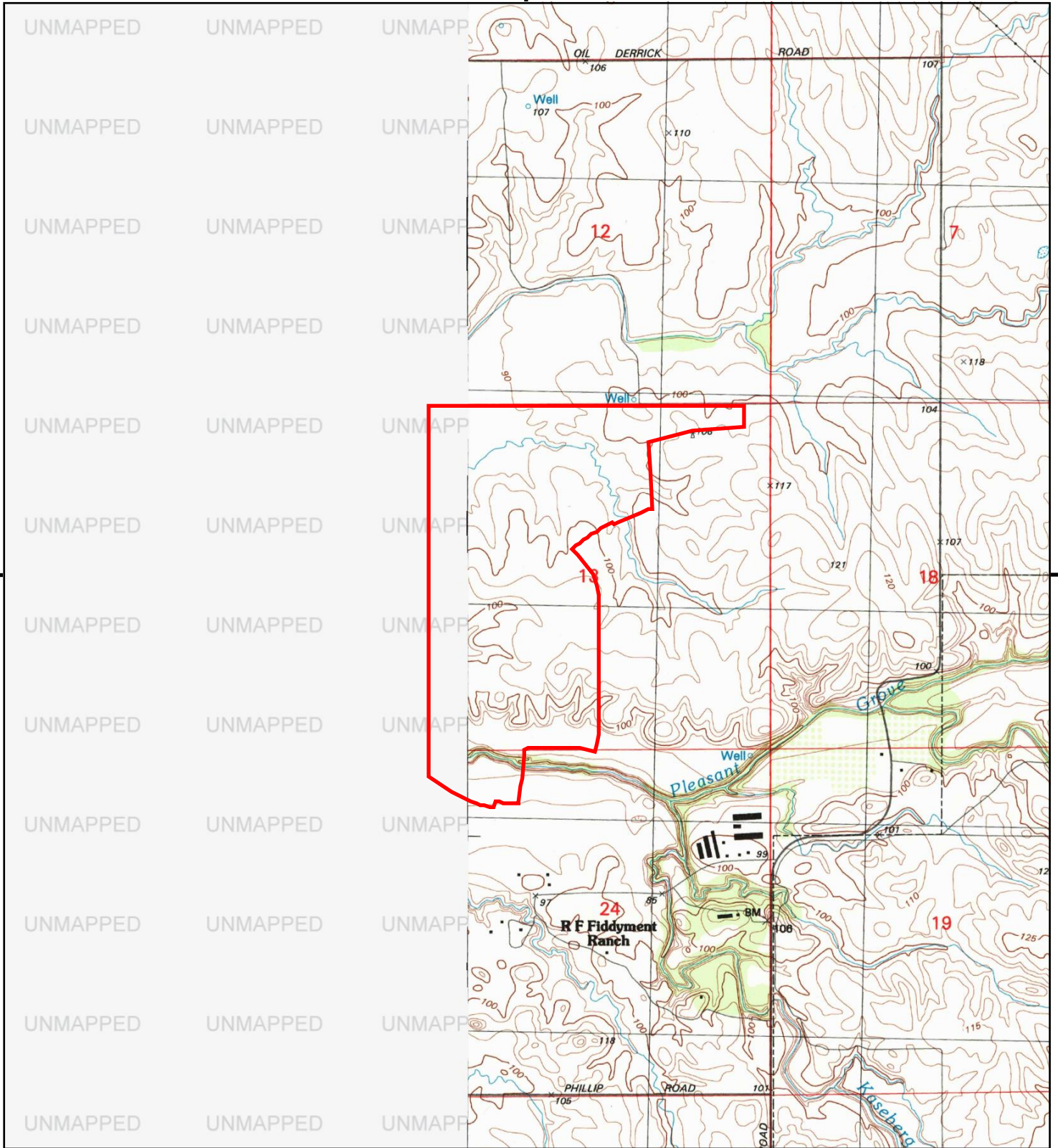
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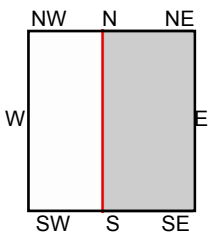
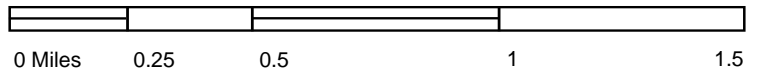
TP, Roseville, 2012, 7.5-minute
W, Pleasant Grove, 2012, 7.5-minute

SITE NAME: Fiddymnt Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





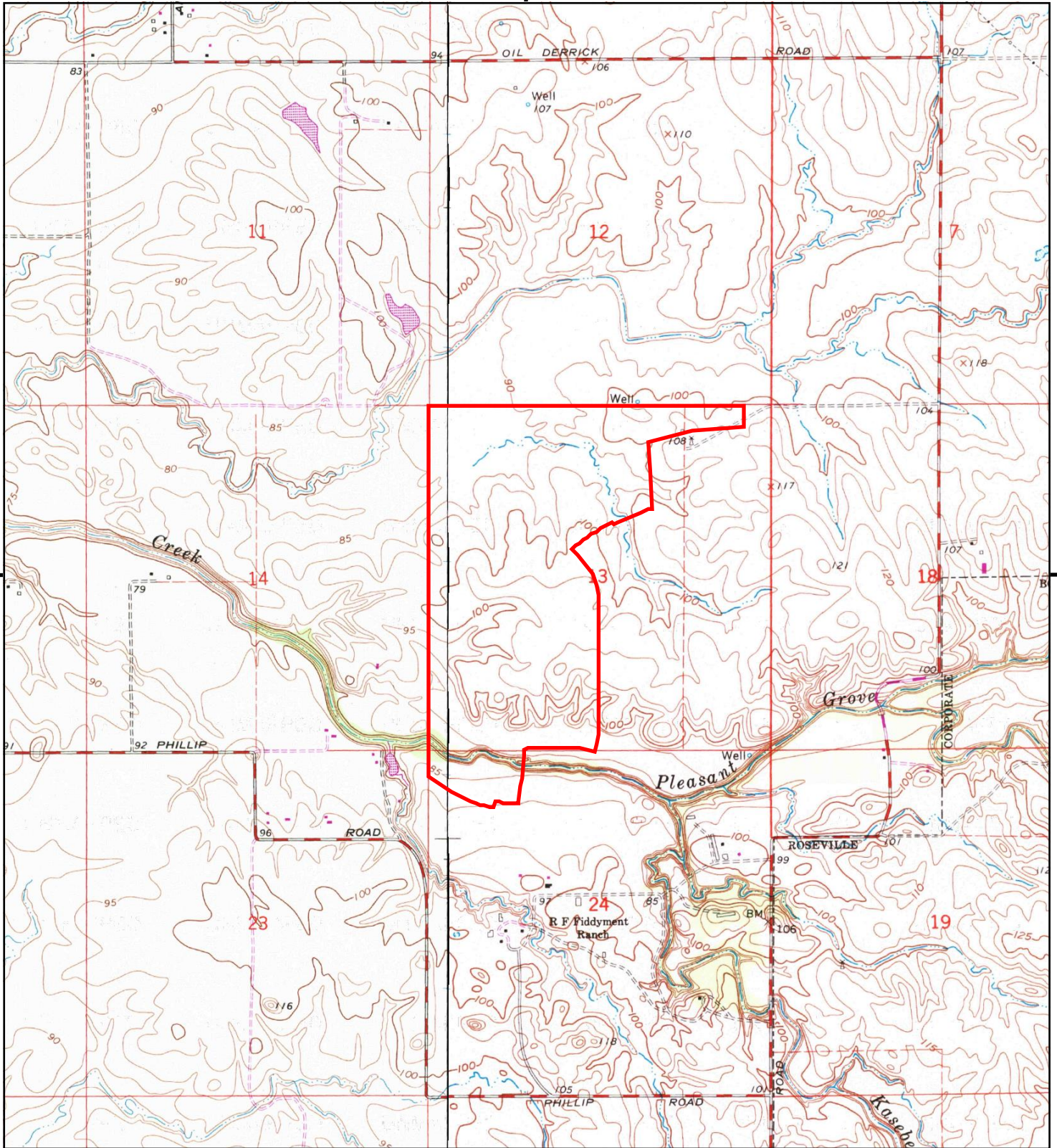
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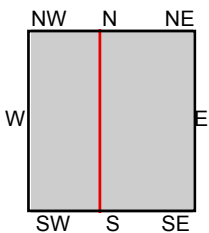
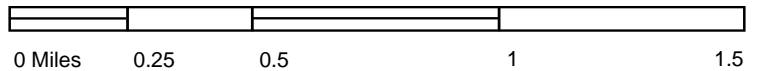
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SITE NAME: Fiddymment Ranch Phase 3
ADDRESS: North Hayden Parkway
 Roseville, CA 95747
CLIENT: Engeo Inc.





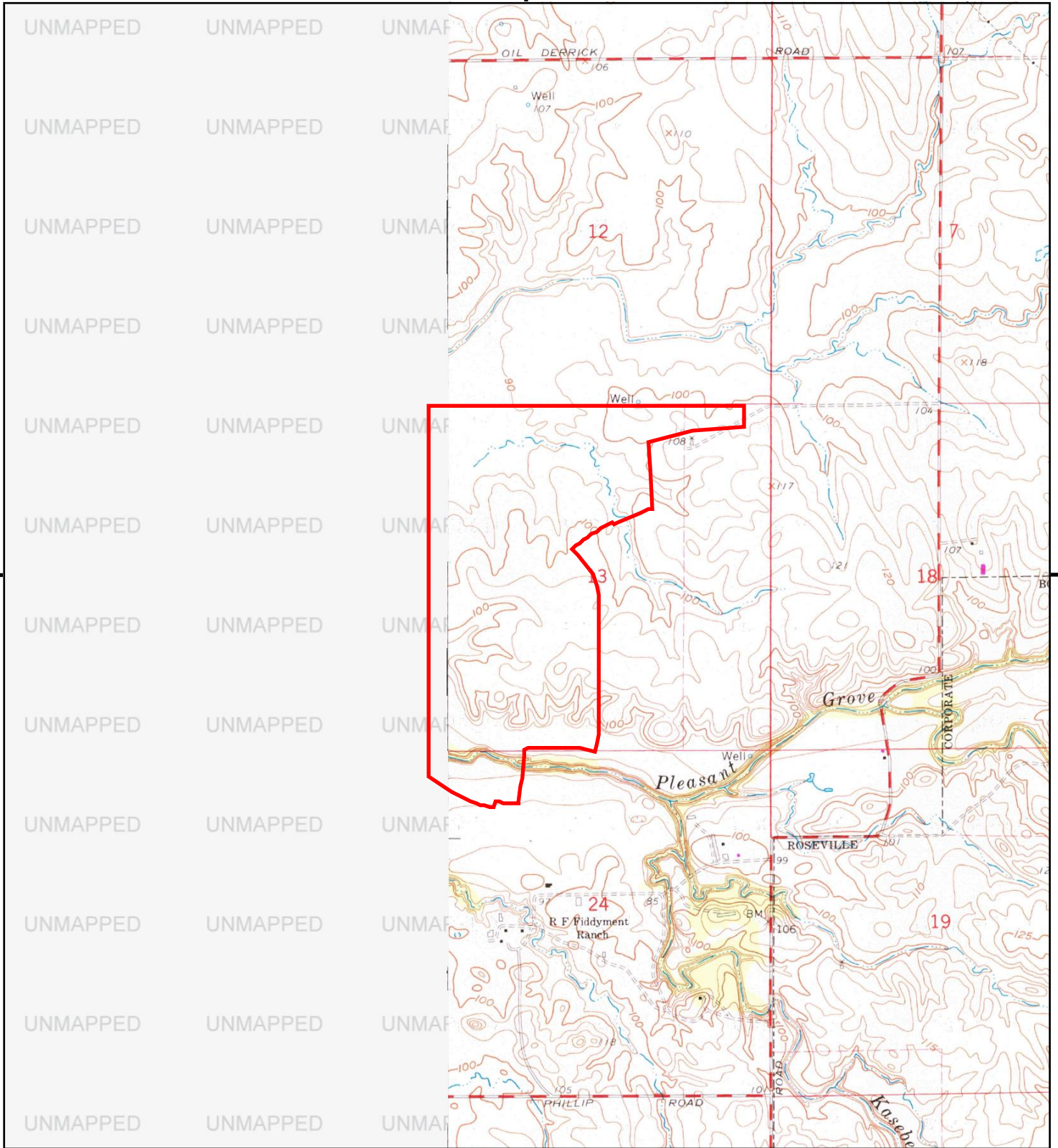
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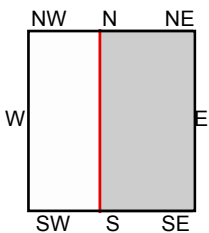
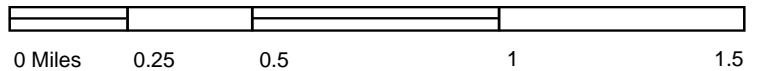
TP, Roseville, 1981, 7.5-minute
W, Pleasant Grove, 1981, 7.5-minute

SITE NAME: Fiddymnt Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





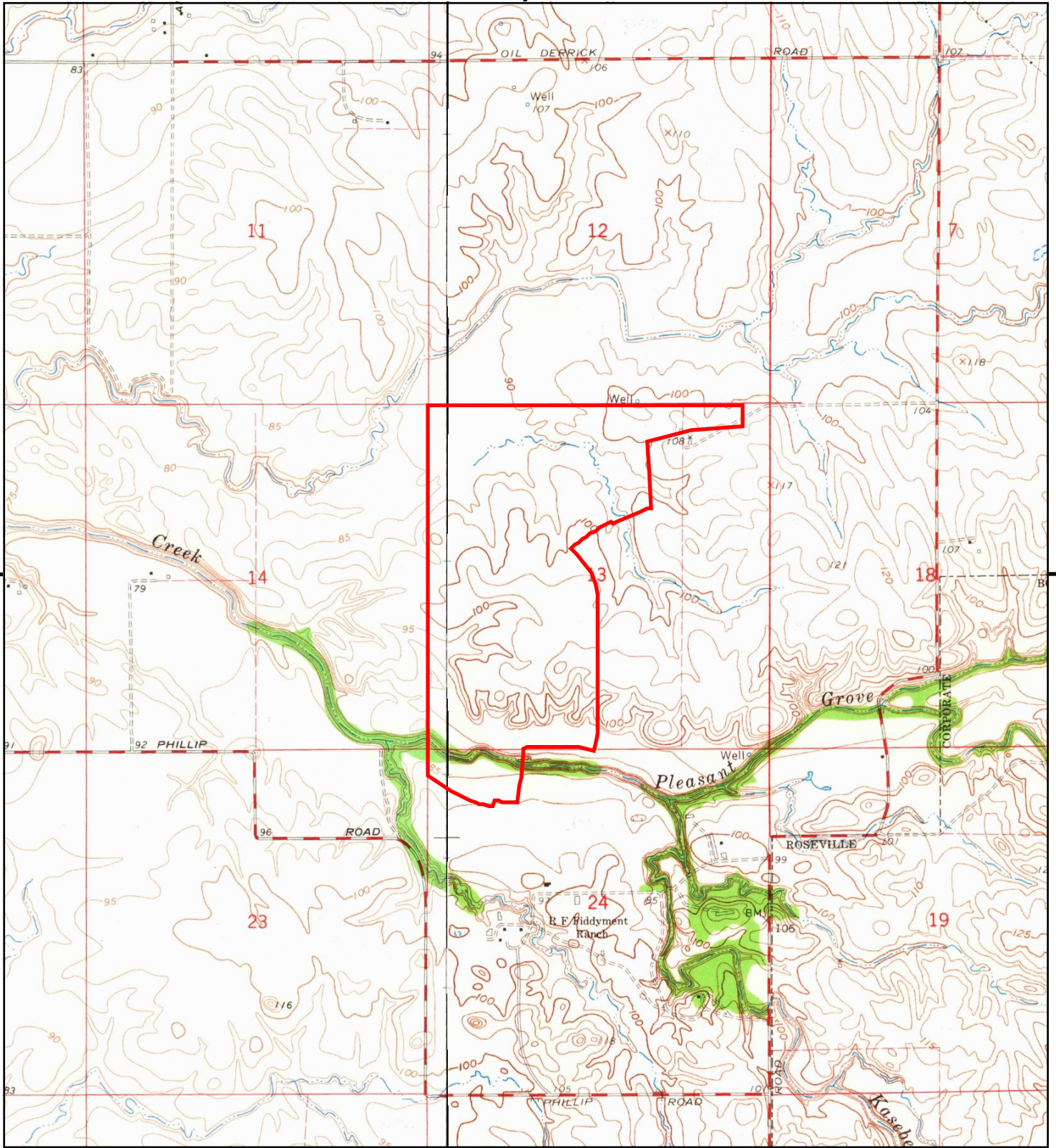
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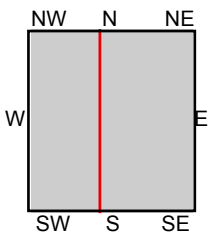
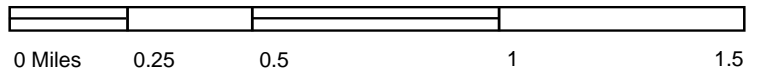
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SITE NAME: Fiddymment Ranch Phase 3
ADDRESS: North Hayden Parkway
 Roseville, CA 95747
CLIENT: Engeo Inc.





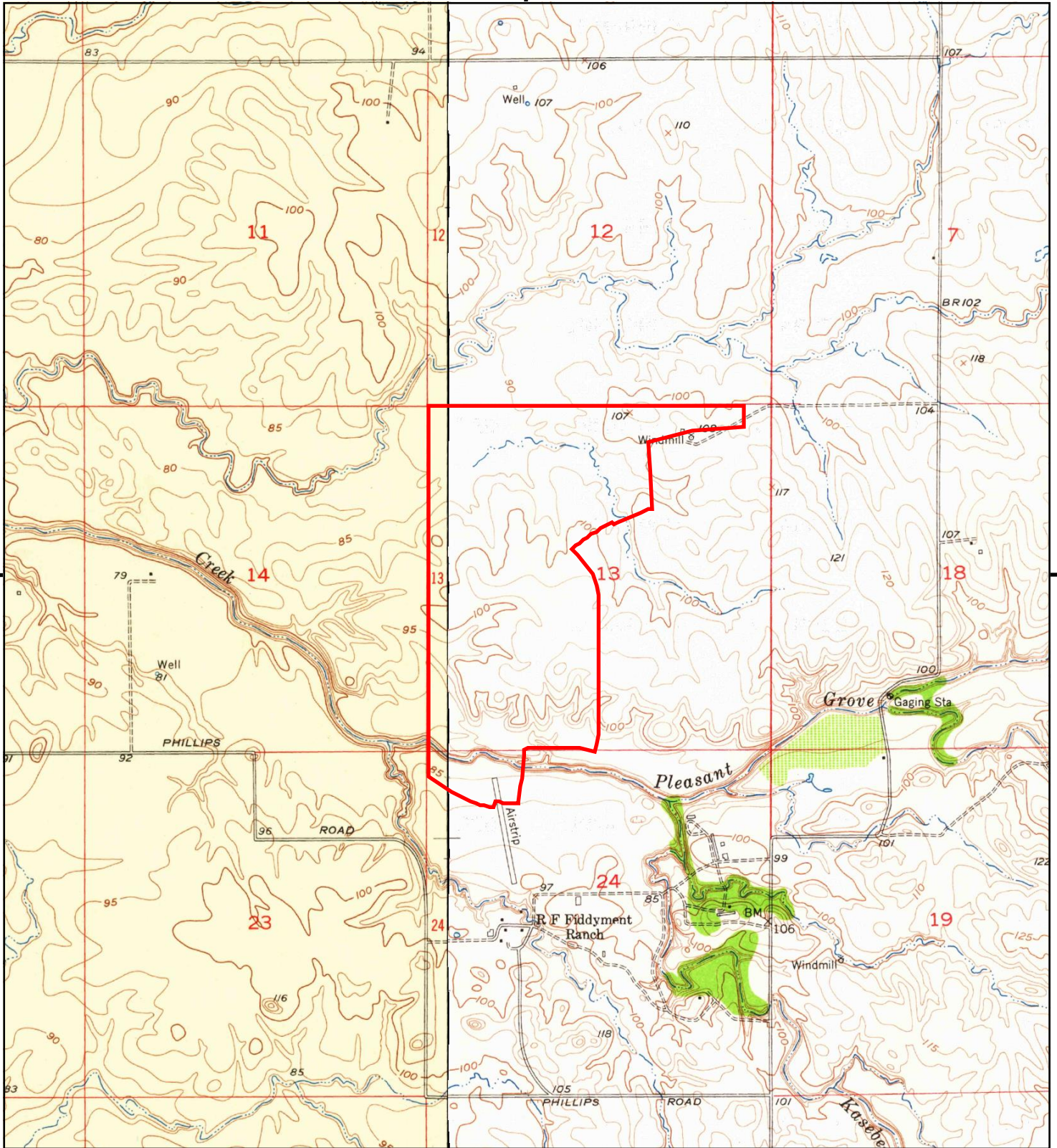
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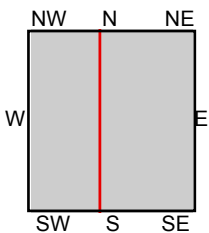
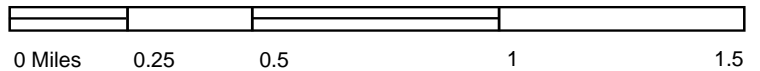
TP, Roseville, 1967, 7.5-minute
 W, Pleasant Grove, 1967, 7.5-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
 Roseville, CA 95747
CLIENT: Engeo Inc.





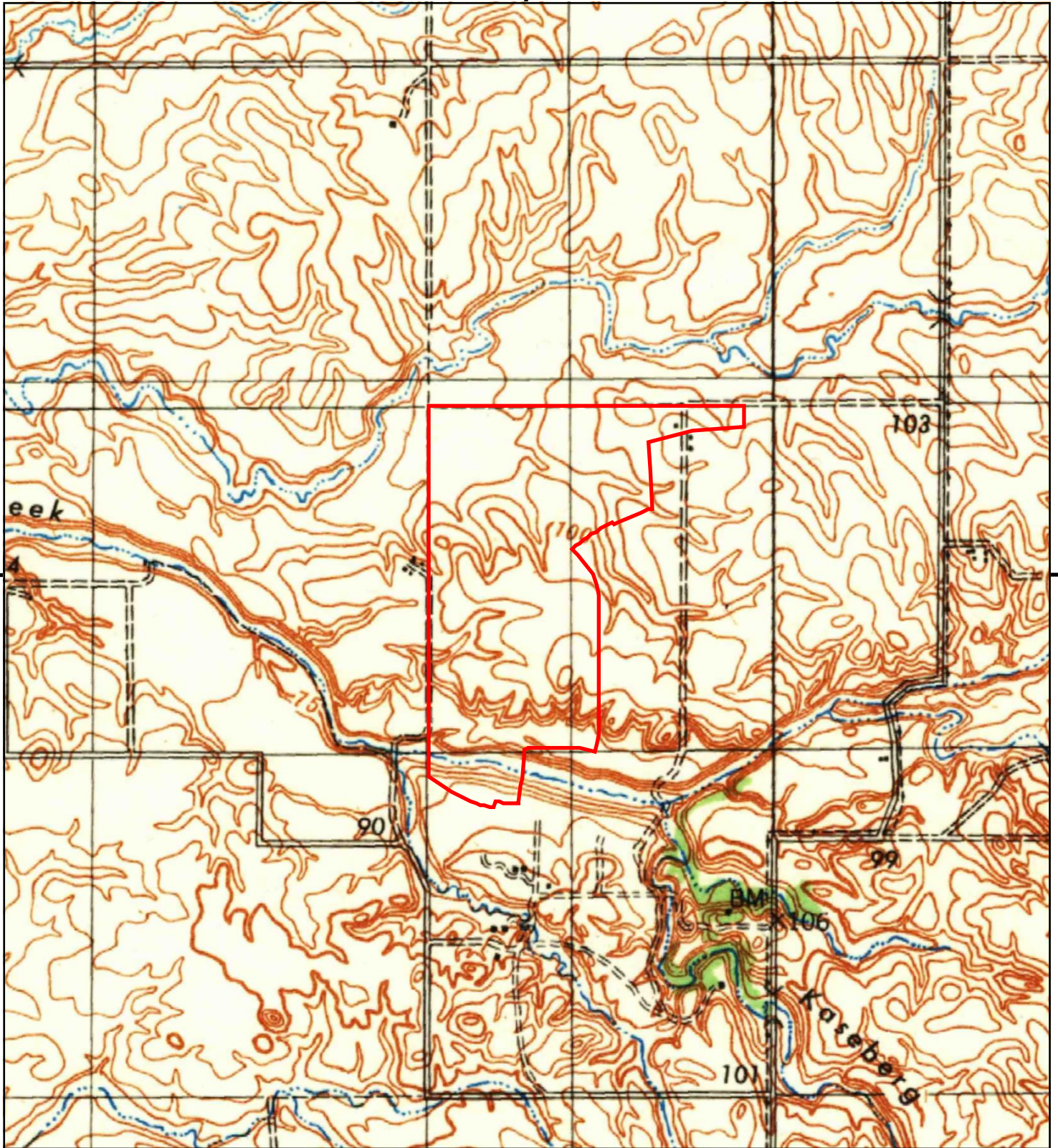
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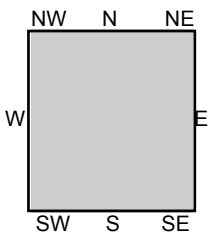
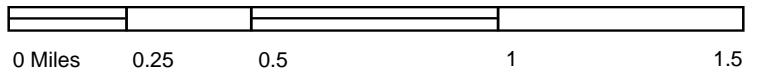
TP, Roseville, 1953, 7.5-minute
 W, Pleasant Grove, 1953, 7.5-minute

SITE NAME: Fiddymnt Ranch Phase 3
ADDRESS: North Hayden Parkway
 Roseville, CA 95747
CLIENT: Engeo Inc.





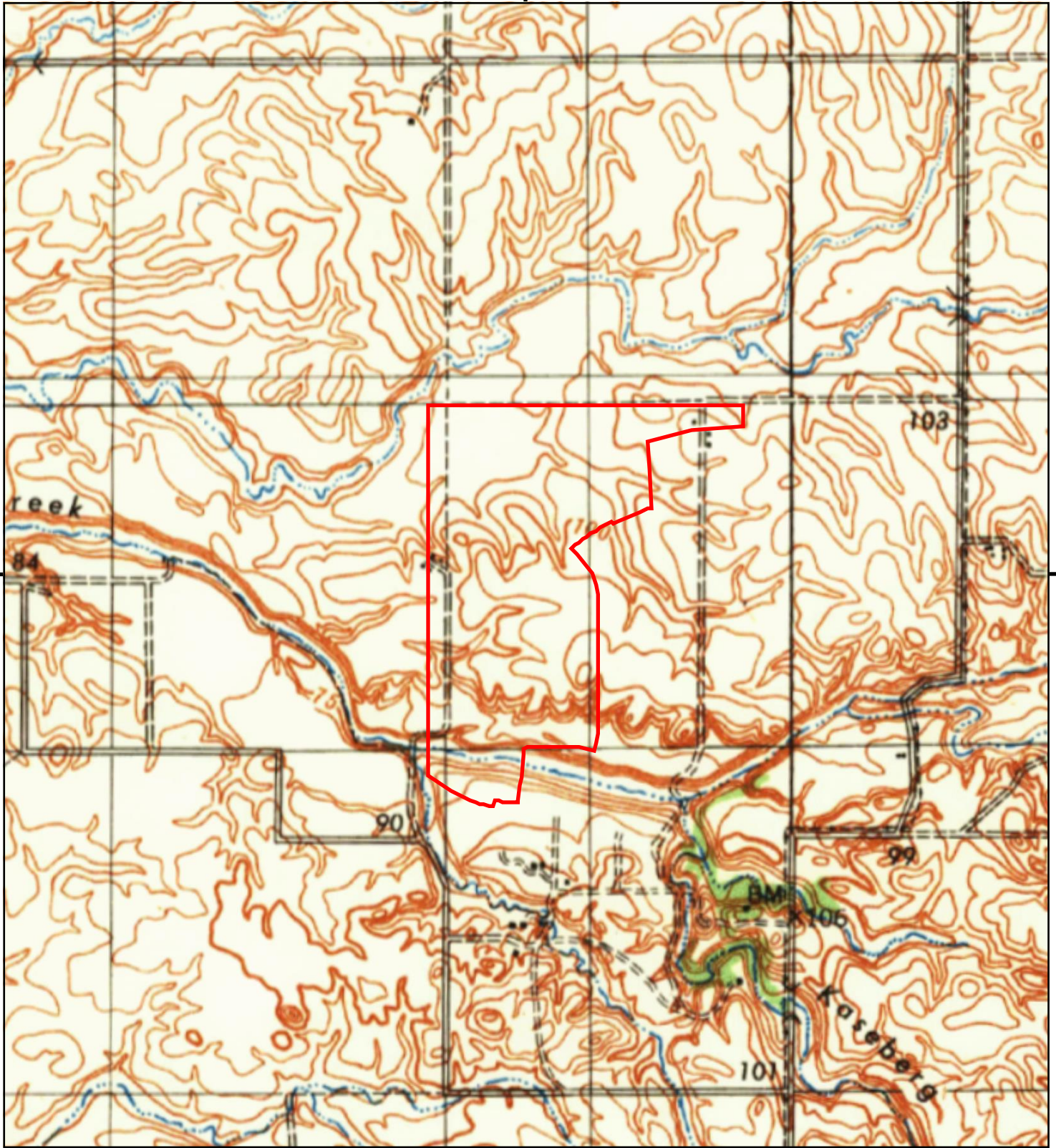
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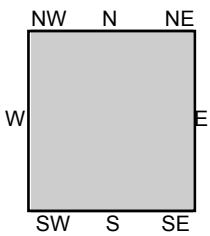
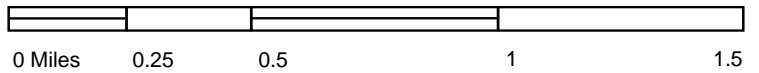
TP, Markham Ravine, 1942, 15-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





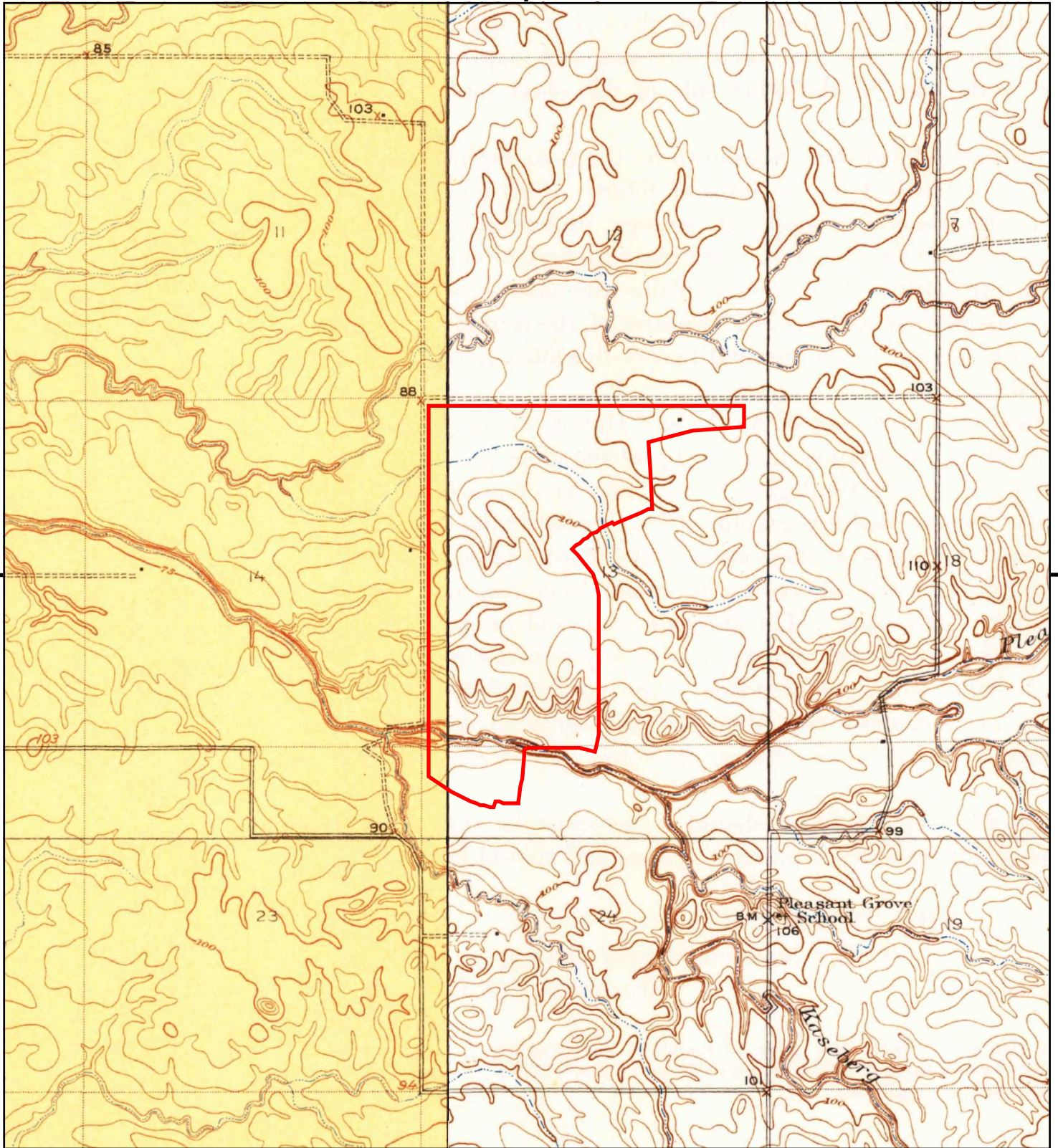
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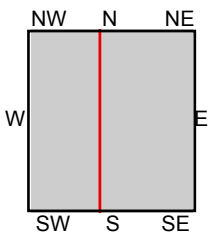
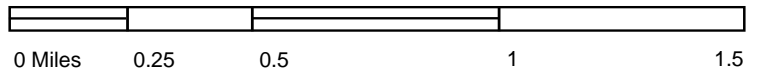
TP, MARKHAM RAVINE, 1941, 15-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





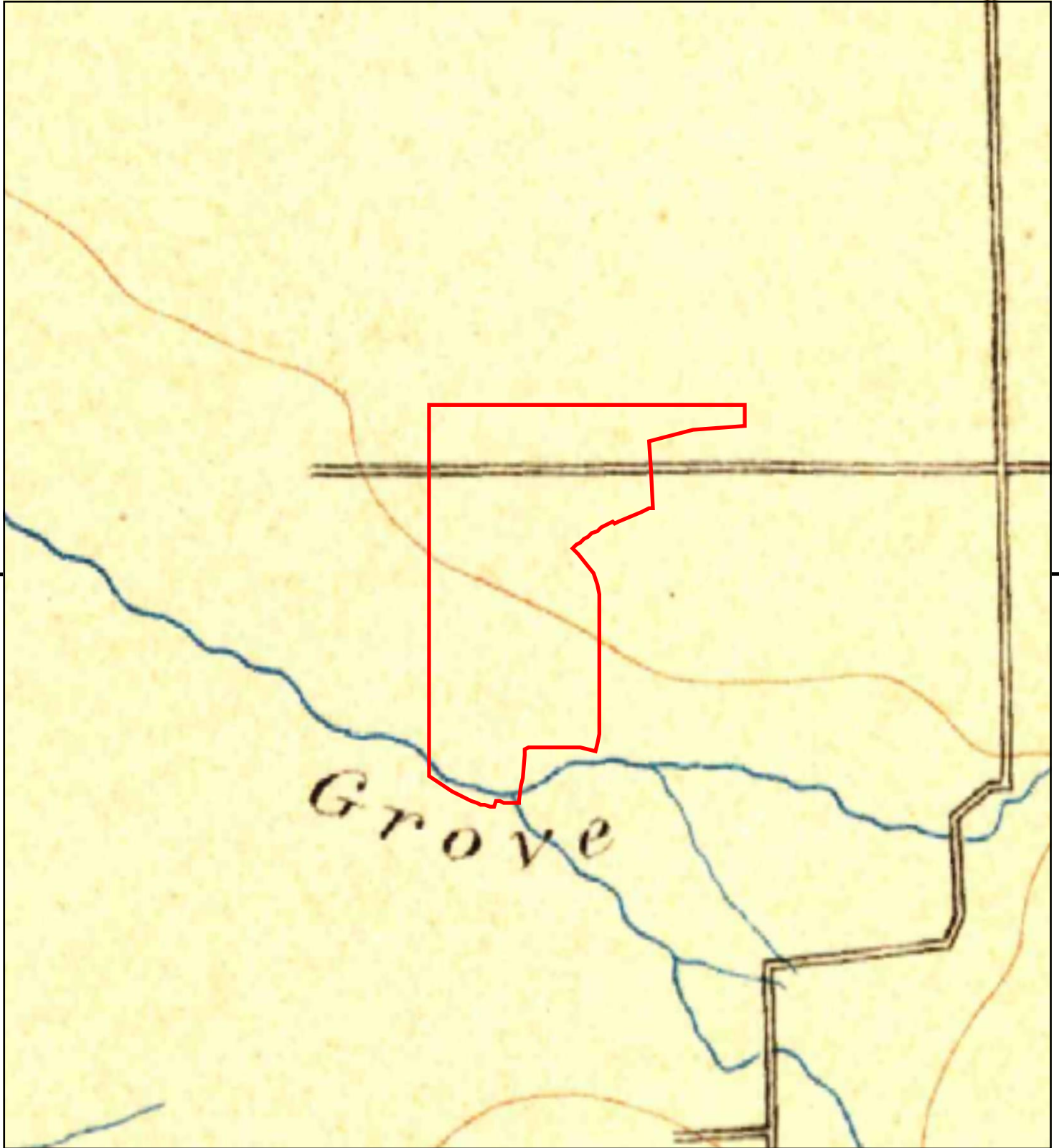
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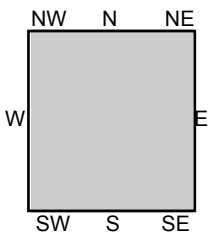
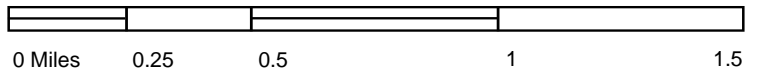
TP, Roseville, 1910, 7.5-minute
W, Pleasant Grove, 1910, 7.5-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





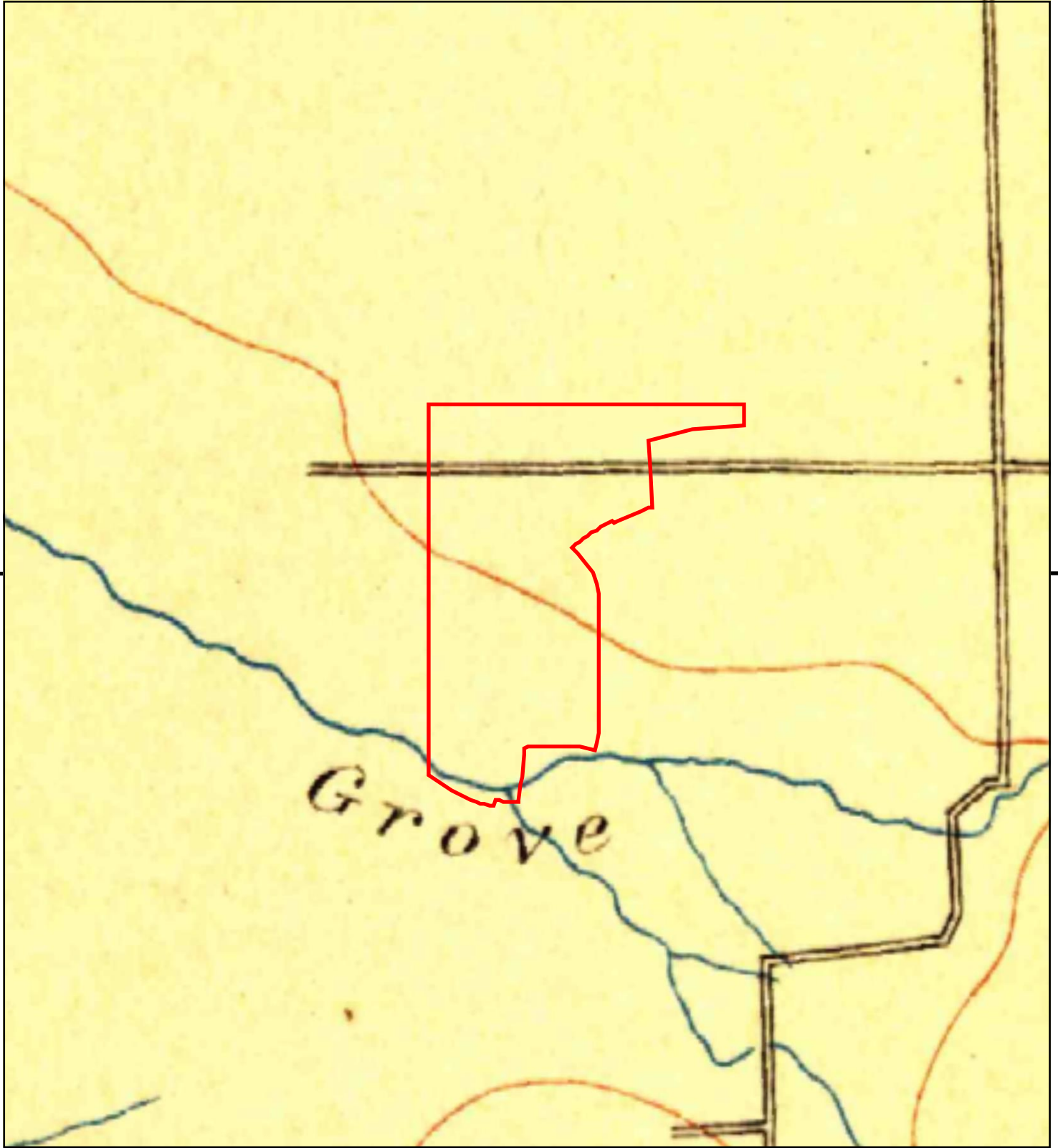
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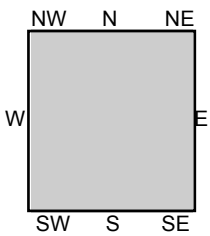
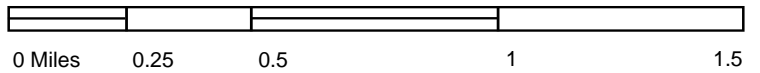
TP, Sacramento, 1893, 30-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





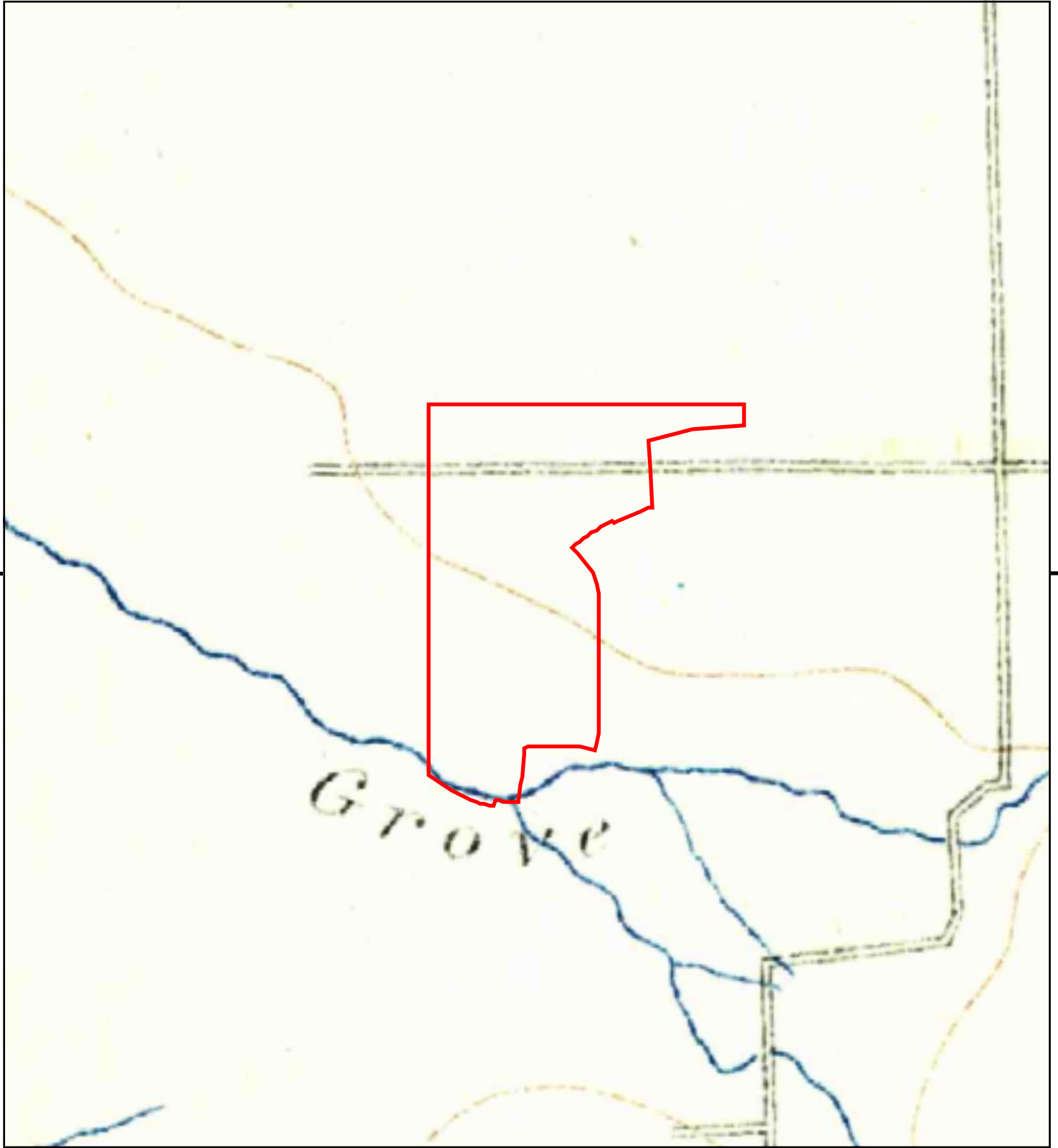
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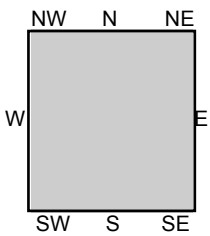
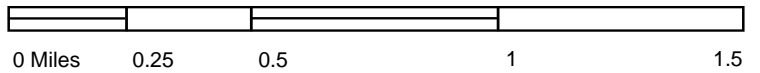
TP, Sacramento, 1892, 30-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





This report includes information from the following map sheet(s).



TP, Sacramento, 1891, 30-minute

SITE NAME: Fiddyment Ranch Phase 3
ADDRESS: North Hayden Parkway
Roseville, CA 95747
CLIENT: Engeo Inc.





APPENDIX D

OLD REPUBLIC TITLE COMPANY

Preliminary Title Report

EXHIBIT A

The land referred to is situated in the County of Placer, City of Roseville, State of California, and is described as follows:

Lots 1 through 10, inclusive as shown and so designated on map titled, "Final Map of Fiddyment Ranch Phase 3 Large Lot Subdivision No. PL-0364", filed for record November 8, 2019 in Book EE of Maps, Page 74, Office of the Placer County Recorder.

APNs: 492-011-016-000 and 492-012-085-000



OLD REPUBLIC
TITLE COMPANY

1420 Rocky Ridge Drive, Suite 100
Roseville, CA 95661
(916) 784-2490 Fax: (916) 760-9011

PRELIMINARY REPORT

Our Order Number 2121042634-TR

ATC REALTY ONE LLC
333 Market Street, 27th Floor
San Francisco, CA 94105

When Replying Please Contact:

Tamara Robledo
tamarar@ortc.com
(916) 784-2490

Property Address:

APN's 492-011-016-000 And 492-012-085-000, Roseville, CA

In response to the above referenced application for a policy of title insurance, OLD REPUBLIC TITLE COMPANY, as issuing Agent of Old Republic National Title Insurance Company, hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said Policy or Policies are set forth in Exhibit I attached. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the Homeowner's Policy of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit I. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit I of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of November 5, 2019, at 7:30 AM

OLD REPUBLIC TITLE COMPANY
For Exceptions Shown or Referred to, See Attached

Page 1 of 16 Pages

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

The form of policy of title insurance contemplated by this report is:

CLTA Standard Coverage Policy -1990. A specific request should be made if another form or additional coverage is desired.

The estate or interest in the land hereinafter described or referred or covered by this Report is:

Fee

Title to said estate or interest at the date hereof is vested in:

ATC Realty One, LLC, a Delaware limited liability company

The land referred to in this Report is situated in the County of Placer, City of Roseville, State of California, and is described as follows:

Lots 1 through 10, inclusive as shown and so designated on map titled, "Final Map of Fiddyment Ranch Phase 3 Large Lot Subdivision No. PL-0364", filed for record November 8, 2019 in [Book EE of Maps, Page 74](#), Office of the Placer County Recorder.

APNs: 492-011-016-000 and 492-012-085-000

At the date hereof exceptions to coverage in addition to the Exceptions and Exclusions in said policy form would be as follows:

1. Taxes and assessments, general and special, for the fiscal year 2018 - 2019, as follows:

Assessor's Parcel No	:	492-011-016-000	
Code No.	:	005-066	
1st Installment	:	\$98,488.87	Marked Paid
2nd Installment	:	\$98,488.87	Marked Paid
Land Value	:	\$4,901,457.00	

Affects Lots 6 through 10, inclusive

2. Taxes and assessments, general and special, for the fiscal year 2018 - 2019, as follows:

Assessor's Parcel No	:	492-012-085-000	
Code No.	:	005-066	
1st Installment	:	\$259,436.62	Marked Paid
2nd Installment	:	\$259,436.62	Marked Paid
Land Value	:	\$14,203,853.00	

Affects Lots 1 through 5, inclusive

3. The lien of supplemental taxes, if any, assessed pursuant to the provisions of Section 75, et seq., of the Revenue and Taxation Code of the State of California.

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

4. Any special tax which is now a lien and that may be levied within the City of Roseville, Fiddymment Ranch Community Facilities District No. 2 (Public Services), Notice(s) for which having been recorded.

Recorded : [October 4, 2004 in Official Records, under Recorder's Serial Number 2004-140666](#)
As Amended : [October 26, 2006 in Official Records, under Recorder's Serial Number 2006-114388](#)
As Amended : [August 1, 2014 in Official Records, under Recorder's Serial Number 2014-52636](#)
As Amended : [October 24, 2019 in Official Records, under Recorder's Serial Number 2019-0083610](#)

NOTE: Among other things, there are provisions in said Notice(s) for a special tax to be levied annually, the amounts of which are to be added to and collected with the property taxes.

NOTE: Further information on said assessment or special tax can be obtained by contacting:

5. Any special tax which is now a lien and that may be levied within the City of Roseville, Municipal Service Community Facilities District No. 3 (Municipal Services), Notice(s) for which having been recorded.

Recorded : [October 22, 2004 in Official Records under Recorder's Serial Number 2004-140669](#)

NOTE: Among other things, there are provisions in said Notice(s) for a special tax to be levied annually, the amounts of which are to be added to and collected with the property taxes.

NOTE: Further information on said assessment or special tax can be obtained by contacting:

6. Any special tax which is now a lien and that may be levied within the City of Roseville Fiddymment Ranch Community Facilities District No. 5 (Public Facilities), a notice of which was recorded as follows:

Instrument Entitled : Notice of Special Tax Lien
Recorded : [March 17, 2016 in Official Records under Recorder's Serial Number 2016-0018885](#)

NOTE: Among other things, there are provisions in said Notice for a special tax to be levied annually, the amounts of which are to be added to and collected with the property taxes.

OLD REPUBLIC TITLE COMPANY
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7. Any right, title, claims, or other interest, and such rights as may be incidental thereto, whether or not shown by the public records to the waters of Kaseberg Creek, Pleasant Grove Creek, South Branch Pleasant Grove Creek and/or any tributary thereof, named and unnamed.
8. Rights of the public, County and/or City, in and to that portion of said land lying within the lines of Blue Oaks Boulevard.
9. An easement affecting that portion of said land and for the purposes stated herein and incidental purposes as provided in the following
- | | | |
|------------|---|---|
| Instrument | : | Easement Deed |
| Granted To | : | City of Roseville |
| For | : | Sewer |
| Dated | : | July 19, 2001 |
| Recorded | : | July 25, 2001 in Official Records under Recorder's Serial Number 2001-0074684 |
| Affects | : | A portion of Lot 5, as shown on filed map |

And re-recorded August 16, 2001 in Official Records under Recorder's Serial Number [2001-0084046](#).

The present ownership of said easement and other matters affecting the interests thereto, if any, are not shown herein.

10. Agreement for : School Mitigation
Executed By : Roseville Fiddymont Land Venture, LLC; 1600 Placer Investors, LP
and Between : Roseville City School District

On the terms, covenants and conditions contained therein,

Dated	:	September 4, 2003
Recorded	:	October 14, 2003 in Official Records under Recorder's Serial Number 2003-0176005

OLD REPUBLIC TITLE COMPANY
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No representation is made as to the present status of the above Agreement or as to matters, if any, affecting rights or obligations with respect thereto, other than the following:

'Addendum No. 1 to School Mitigation Agreement', recorded [February 3, 2006, in Official Records under Recorder's Serial Number 2006-0012498](#).

And as recorded [February 3, 2006, in Official Records under Recorder's Serial Number 2006-0012499](#).

'Addendum No. 2 to School Mitigation Agreement', recorded [April 29, 2014, in Official Records under Recorder's Serial Number 2014-0027052](#).

'Addendum No. 3 to School Mitigation Agreement', recorded [October 5, 2015, in Official Records under Recorder's Serial Number 2015-0087214](#).

'Addendum No. 3 to School Mitigation Agreement', recorded [November 19, 2015 in Official Records under Recorder's Serial Number 2015-0101056](#).

'Addendum No. 4 to School Mitigation Agreement', recorded [June 30, 2016, in Official Records under Recorder's Serial Number 2016-0052363](#).

A document entitled "Assignment and Assumption Agreement Relative to the School Mitigation Agreement by and between The Roseville City School District and Roseville Fiddymment Land Venture, LLC and 1600 Placer Investors, LP Relative to the West Roseville Specific Plan" executed by ATC Realty One, LLC, a Delaware limited liability company and Fiddymment 116 Lots, LLC, a California limited liability company, recorded [September 29, 2016 in Official Records under Recorder's Serial Number 2016-0083406](#).

11. Agreement for : West Roseville Specific Plan/Mutual Benefit High School Mitigation
Executed By : Roseville Fiddymment Land Venture, LLC; 1600 Placer Investors, LP
and Between : Roseville Joint High School District

On the terms, covenants and conditions contained therein,

Dated : December 2, 2033
Recorded : [May 17, 2004 in Official Records under Recorder's Serial Number 2004-0062203](#)

And as modified by an instrument, executed by Roseville Fiddymment Land Venture, LLC; 1600 Placer Investors, LP; and the Roseville Joint Union High School District, recorded [November 17, 2004 in Official Records under Recorder's Serial Number 2004-0153916](#).

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

And as modified by an instrument, executed by Roseville Fiddymment Land Venture, LLC; PL Roseville, LLC; and the Roseville Joint Union High School District, recorded [July 18, 2006 in Official Records under Recorder's Serial Number 2006-0076952](#).

12. Matters as contained or referred to in an instrument,

Entitled : Amended West Roseville Specific Plan/Mutual Benefit High School Mitigation Agreement
Executed By : Roseville Joint Union High School District, a political subdivision of the State of California, Roseville Fiddymment Land Venture, LLC, a Delaware limited liability company and 1600 Placer Investors, L.P., a California limited partnership
Dated : September 20, 2004
Recorded : [November 17, 2004 in Official Records under Recorder's Serial Number 2004-0153916](#)
Which Among Other Things Provides : Reference being made to the record thereof for full particulars.

No representation is made as to the present status of the above Agreement or as to matters, if any, affecting rights or obligations with respect thereto, other than the following:

'First Amendment to Amended West Roseville Specific Plan/Mutual Benefit High School Mitigation Agreement', recorded [July 18, 2006 in Official Records under Recorder's Serial Number 2006-0076952](#).

A document entitled "Assignment and Assumption Agreement Relative to the West Roseville Specific Plan/Mutual Benefit High School Mitigation Agreement" executed by ATC Realty One, LLC, a Delaware limited liability company and Fiddymment 116 Lots, LLC, a California limited liability company, recorded [September 29, 2016 in Official Records under Recorder's Serial Number 2016-0083407](#).

13. Agreement for : Development
Executed By : Roseville Fiddymment Land Venture, LLC
and Between : City of Roseville

On the terms, covenants and conditions contained therein,

Dated : February 18, 2004
Recorded : [June 21, 2004 in Official Records under Recorder's Serial Number 2004-0080708](#)

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

No representation is made as to the present status of the above Agreement or as to matters, if any, affecting rights or obligations with respect thereto, other than the following:

'First Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [March 2, 2006 in Official Records under Recorder's Serial Number 2006-0022488](#).

'Second Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [July 22, 2008 in Official Records under Recorder's Serial Number 2008-0059263](#).

'Third Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [September 10, 2009 in Official Records under Recorder's Serial Number 2009-0078876](#).

'Fourth Amendment of Development Agreement By and Between the City of Roseville and ATC Realty One, LLC Relative to the West Roseville Specific Plan', recorded [August 20, 2013 in Official Records under Recorder's Serial Number 2013-0082174](#).

'Fifth Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [June 18, 2014 in Official Records under Recorder's Serial Number 2014-0040699](#).

'Sixth Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [August 14, 2014 in Official Records under Recorder's Serial Number 2014-0055752](#).

A document entitled "Assignment and Assumption Agreement Relative to West Roseville Specific Plan Development Agreement", executed by ATC Realty One, LLC, a Delaware limited liability company and Fiddyment 116 Lots, LLC, a California limited liability company, recorded [September 29, 2016 in Official Records under Recorder's Serial Number 2016-0083405](#).

'Seventh Amendment of Development Agreement By and Between the City of Roseville and Roseville Fiddyment Land Venture, LLC, Relative to the West Roseville Specific Plan', recorded [September 22, 2017 in Official Records under Recorder's Serial Number 2017-0073441](#).

14. An easement affecting that portion of said land and for the purposes stated herein and incidental purposes as provided in the following

Instrument : Conservation Easement Deed
Granted To : City of Roseville
For : Conservation
Dated : November 19, 2004
Recorded : [November 24, 2004 in Official Records under Recorder's Serial Number 2004-0158160](#)
Affects : A portion of Lots 1 and 5, as shown on filed map

The present ownership of said easement and other matters affecting the interests thereto, if any, are not shown herein.

15. Matters as contained or referred to in an instrument,

Entitled : Conservation Easement Deed
Executed By : Roseville Fiddymment Land Venture, LLC
Dated : November 19, 2004
Recorded : [November 24, 2004 in Official Records under Recorder's Serial Number 2004-0158160](#)
Which Among Other Things Provides : Reference being made to the record thereof for full particulars

16. Matters as contained or referred to in an instrument,

Entitled : Notice of Conveyance Fee and First Amended and Restated Community Benefit Conveyance Fee Agreement
Executed By : Placer Land Trust; 1600 Placer Investors, LP; and Roseville/Fiddymment Land Venture, LLC
Recorded : [July 14, 2005 in Official Records under Recorder's Serial Number 2005-0091542](#)

Which among other things provides for payment of a transfer fee, private charge or assessment to be paid at the time of any conveyance of the land

The affirmative coverage set forth in the Covered Risks as to this matter will not be provided by the policy.

OLD REPUBLIC TITLE COMPANY
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No representation is made as to the present status of the above Agreement or as to matters, if any, affecting rights or obligations with respect thereto, other than the following:

'Notice of First Amendment to First Amended and Restated Community Benefit Conveyance Fee Agreement', recorded [July 14, 2005 in Official Records under Recorder's Serial Number 2005-0091543](#).

'Notice of Second Amendment to First Amended and Restated Community Benefit Conveyance Fee Agreement', recorded [March 9, 2006 in Official Records under Recorder's Serial Number 2006-0025291](#).

For information regarding the current status of said liens and/ or assessments

Contact : Placer Land Trust
11641 Blocker Drive, Suite 220, Auburn, CA 95603
(530) 887-9222

A document entitled "Assignment and Assumption Agreement Relative to the Community Benefit Conveyance Fee Agreement" executed by ATC Realty One, LLC, a Delaware limited liability company and Fiddymment 116 Lots, LLC, a California limited liability company, [recorded September 29, 2016 in Official Records under Recorder's Serial Number 2016-0083408](#).

17. Covenants, Conditions and Restrictions which do not contain express provision for forfeiture or reversion of title in the event of violation, but omitting any covenants or restriction if any, based upon race, color, religion, sex, handicap, familial status, or national origin unless and only to the extent that said covenant (a) is exempt under Title 42, Section 3607 of the United States Code or (b) relates to handicap but does not discriminate against handicapped persons, as provided in an instrument.

Entitled : Declaration of Covenants, Conditions and Restrictions of Fiddymment
Recorded : [July 14, 2005 in Official Records under Recorder's Serial Number 2005-0091545](#)

Modification thereof, but omitting any covenants or restrictions if any, based upon race, color, religion, sex, handicap, familial status, or national origin unless and only to the extent that said covenant (a) is exempt under Title 42, Section 3607 of the United States Code or (b) relates to handicap but does not discriminate against handicapped persons.

Recorded : [August 27, 2007 in Official Records under Recorder's Serial Number 2007-0083896](#)

OLD REPUBLIC TITLE COMPANY
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The herein described property was annexed to the above Covenants, Conditions and Restrictions by Declaration of Annexation,

Recorded : [November 30, 2017 in Official Records under Recorder's Serial Number 2017-0094949](#)

Affects Lots 6 through 10, inclusive

NOTE: "If this document contains any restriction based on race, color, religion, sex, sexual orientation, familial status, marital status, disability, national origin, source of income as defined in subdivision (p) of section 12955, or ancestry, that restriction violates state and federal fair housing laws and is void, and may be removed pursuant to Section 12956.2 of the Government Code. Lawful restrictions under state and federal law on the age of occupants in senior housing or housing for older persons shall not be construed as restrictions based on familial status."

18. An easement affecting that portion of said land and for the purposes stated herein and incidental purposes as provided in the following

Instrument : Grant of Easement
Granted To : City of Roseville
For : Sanitary sewer pipeline
Dated : March 15, 2005
Recorded : [October 5, 2005 in Official Records under Recorder's Serial Number 2005-0134003](#)
Affects : A portion of Lot 5 and other property, as shown on file map

The present ownership of said easement and other matters affecting the interests thereto, if any, are not shown herein.

19. Terms and provisions as contained in an instrument,

Entitled : F-70 Elementary School Construction, Dedication and Reimbursement Agreement and Joint Escrow Instructions
Executed By : Roseville Schools, LLC and the Roseville City School District
Dated : May 4, 2006
Recorded : [May 31, 2006 in Official Records under Recorder's Serial Number 2006-0058423](#)

Reference is made to said instrument for full particulars

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

And as modified by an instrument, executed by Roseville Schools, LLC and the Roseville City School District, recorded [December 17, 2009 in Official Records under Recorder's Serial Number 2009-0107381](#).

20. An easement affecting that portion of said land and for the purposes stated herein and incidental purposes as provided in the following

Instrument : Westpark/Fiddymment Ranch Open Space Preserve Conservation Easement Deed
Granted To : City of Roseville
For : Preserve, protect, sustain, and enhance and/or restore the conservation values of the Protected Property, and incidentals thereto
Recorded : [July 11, 2006 in Official Records under Recorder's Serial Number 2006-0073774](#)
Affects : A portion of Lots 1 and 5, as shown on filed map

The present ownership of said easement and other matters affecting the interests thereto, if any, are not shown herein.

21. Matters as contained or referred to in an instrument,

Entitled : Westpark/Fiddymment Ranch Open Space Preserve Conservation Easement Deed
Executed By : Roseville Fiddymment Land Venture, LLC, a Delaware limited liability company and the City of Roseville
Recorded : [July 11, 2006 in Official Records under Recorder's Serial Number 2006-0073774](#)
Which Among Other Things Provides : Reference is made to said document for full particulars

22. Agreement for : Deferred Improvement Agreement Fiddymment Ranch Phase 2 & 3 Offsite Trunk Sewer - Air Pump Sump Pump
Executed By : City of Roseville, a municipal corporation
and Between : ATC Realty One, LLC, a Delaware limited liability company

On the terms, covenants and conditions contained therein,

Recorded : [December 14, 2018 in Official Records under Recorder's Serial Number 2018-0089796](#)

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

23. Agreement for : Right of Entry and Construction License Agreement
Executed By : ATC Realty One, LLC, a Delaware limited liability company
and Between : Anthem United Homes Construction, LP, a Washington limited
partnership

On the terms, covenants and conditions contained therein,

Recorded : [April 26, 2019 in Official Records under Recorder's Serial Number
2019-0026651](#)

24. Matters as contained or referred to in an instrument,

Entitled : F-71 Elementary School Construction, Dedication and Reimbursement
Agreement and Joint Escrow Instructions

Executed By : Roseville Schools, LLC, an California limited liability company, and
Roseville City School District

Recorded : [June 3, 2019 in Official Records under Recorder's Serial Number
2019-0037208](#)

Which Among
Other Things : Reference is made to said instrument for full particulars.
Provides

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

25. Irrevocable Offer of Dedications in fee and easements, together with rights incidental thereto, and other matters as contained or referred to on the filed map including but not necessarily limited to the following:

Of/for : Irrevocable Offer of Dedication of Public Utility Easement designated as "IOD/PUE" as shown on the map.

Affects : All Lots with variable widths

Of/for : As Right-of Way, the strips of land designated as Irrevocable Offer of Dedication "IOD/RW", as shown on the map, in Fee

Affects : All Lots with variable widths

Of/for : 50 foot strip of land for access, construction and maintenance of Trail Facilities designated as "TRAIL ESMT" as shown on the map

Affects : Lots 1 and 5

Of/for : 9' x 12' Bus Shelter Easement designated as "BUS SHELTER EASEMENT", as shown on map

Affects : Lots 4 and 9

Of/for : Public Easement for pedestrian access designated as "PE", as shown on map

Affects : Lots 1 through 4, inclusive, Lot 6, Lots 9 and 10 with variable widths

Of/for : Open Space

Affects : Lots 1 and 5

Of/for : Public Park

Affects : Lot 9

The Roseville City Council rejected the above Irrevocable offers of Dedications, Rights of Way and Public Utility Easements at the time the map was filed, but has reserved the right to accept the same at a later date.

26. An easement affecting that portion of said land and for the purposes stated herein and incidental purposes as shown on the file map.
- For : 25' Public Utility Easement(s) and Pedestrian Easement(s) designated as "PUE/PE"
- Affects : Lot 5
NOTE: Said easement(s) also shown on filed map [Book AA of Maps, Page 10](#)
- For : 25' and 50' Public Utility Easement(s) and Pedestrian Easement(s) designated as "PUE/PE"
- Affects : Lot 5
NOTE: Said easement(s) also shown on filed map [Book BB of Maps, Page 24](#)
- For : Sanitary Sewer Easement(s) designated as "SSE"
- Affects : Lots 4 through 7, inclusive
NOTE: Said easement(s) also shown on filed map [Book DD of Maps, Page 88](#)
27. A reservation for public purposes to be dedicated in fee in the future as a Public School Site.
Affects Lot 8
28. Any rights, easements, interests or claims that may exist or arise by reason of, or reflected by, recitals shown or noted in the filed map(s) referenced in the legal description herein.
29. Prior to the issuance of any policy of title insurance, the Company will require the following with respect to: ATC Realty One, LLC
1. Satisfactory evidence be furnished of its due formation and continued existence as a limited liability company under the laws of Delaware.
 2. A copy of any management or operating agreements and any amendments thereto, together with a current list of all members of said LLC.
 3. Furnishing a current certified copy of the Certificate of Status – Foreign Limited Liability Company (LLC-5) from the State of California Office of the Secretary of State.
 4. Recording a certified copy of said LLC-5 and any "amendments thereto".

30. Prior to the issuance of any policy of title insurance, the Company requires the following with respect to Taylor Builders, LLC, a California Limited Liability Company:
1. A copy of any management or operating agreements and any amendments thereto, together with a current list of all members of said LLC.
 2. A certified copy of its Articles of Organization (LLC-1), any Certificate of Correction (LLC-11), Certificate of Amendment (LLC-2), or Restatement of Articles of Organization (LLC-10).
 3. Recording a Certified copy of said LLC-1 and any "amendments thereto".
31. Any claim of lien for services, labor or material arising from an improvement or work under construction or completed at the date hereof.
32. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
33. The requirement that this Company be provided with an opportunity to inspect the land (the Company reserves the right to make additional exceptions and/or requirements upon completion of its inspection).
34. The requirement that this Company be provided with a suitable Owner's Declaration (form ORT 174). The Company reserves the right to make additional exceptions and/or requirements upon review of the Owner's Declaration.

----- **Informational Notes** -----

- A. The applicable rate(s) for the policy(s) being offered by this report or commitment appears to be section(s) 1.1.

OLD REPUBLIC TITLE COMPANY
ORDER NO. 2121042634-TR

B. NOTE: The last recorded transfer or agreement to transfer the land described herein is as follows:

Instrument
Entitled : Trustee's Deed Upon Sale
By/From : First American Title Insurance Company
To : ATC Realty One, LLC, a Delaware limited liability company
Dated : May 17, 2012
Recorded : [May 18, 2012 in Official Records under Recorder's Serial Number 2012-0044503](#)

**CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY - 1990
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.-

(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;.
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy; or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments Which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims Which are not shown by the public records but which could be ascertained by an inspection of the land which may be asserted by persons in possession thereof,
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.



**WHAT DOES OLD REPUBLIC TITLE
DO WITH YOUR PERSONAL INFORMATION?**

Why?	Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.
What?	<p>The types of personal information we collect and share depend on the product or service you have with us. This information can include:</p> <ul style="list-style-type: none"> • Social Security number and employment information • Mortgage rates and payments and account balances • Checking account information and wire transfer instructions <p>When you are no longer our customer, we continue to share your information as described in this notice.</p>
How?	All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons Old Republic Title chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	Does Old Republic Title share?	Can you limit this sharing?
For our everyday business purposes — such as to process your transactions, maintain your account(s), or respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes — to offer our products and services to you	No	We don't share
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes — information about your transactions and experiences	Yes	No
For our affiliates' everyday business purposes — information about your creditworthiness	No	We don't share
For our affiliates to market to you	No	We don't share
For non-affiliates to market to you	No	We don't share

Go to www.oldrepublictitle.com (Contact Us)

Who we are	
Who is providing this notice?	Companies with an Old Republic Title name and other affiliates. Please see below for a list of affiliates.

What we do	
How does Old Republic Title protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings. For more information, visit http://www.OldRepublicTitle.com/newnational/Contact/privacy .
How does Old Republic Title collect my personal information?	<p>We collect your personal information, for example, when you:</p> <ul style="list-style-type: none"> • Give us your contact information or show your driver's license • Show your government-issued ID or provide your mortgage information • Make a wire transfer <p>We also collect your personal information from others, such as credit bureaus, affiliates, or other companies.</p>
Why can't I limit all sharing?	<p>Federal law gives you the right to limit only:</p> <ul style="list-style-type: none"> • Sharing for affiliates' everyday business purposes - information about your creditworthiness • Affiliates from using your information to market to you • Sharing for non-affiliates to market to you <p>State laws and individual companies may give you additional rights to limit sharing. See the "Other important information" section below for your rights under state law.</p>

Definitions	
Affiliates	<p>Companies related by common ownership or control. They can be financial and nonfinancial companies.</p> <ul style="list-style-type: none"> • Our affiliates include companies with an Old Republic Title name, and financial companies such as Attorneys' Title Fund Services, LLC, Lex Terrae National Title Services, Inc., Mississippi Valley Title Services Company, and The Title Company of North Carolina.
Non-affiliates	<p>Companies not related by common ownership or control. They can be financial and non-financial companies.</p> <ul style="list-style-type: none"> • Old Republic Title does not share with non-affiliates so they can market to you
Joint marketing	<p>A formal agreement between non-affiliated financial companies that together market financial products or services to you.</p> <ul style="list-style-type: none"> • Old Republic Title doesn't jointly market.

Other Important Information

Oregon residents only: We are providing you this notice under state law. We may share your personal information (described on page one) obtained from you or others with non-affiliate service providers with whom we contract, such as notaries and delivery services, in order to process your transactions. You may see what personal information we have collected about you in connection with your transaction (other than personal information related to a claim or legal proceeding). To see your information, please click on "Contact Us" at www.oldrepublictitle.com and submit your written request to the Legal Department. You may see and copy the information at our office or ask us to mail you a copy for a reasonable fee. If you think any information is wrong, you may submit a written request online to correct or delete it. We will let you know what actions we take. If you do not agree with our actions, you may send us a statement.

Affiliates Who May be Delivering This Notice

American First Abstract, LLC	American First Title & Trust Company	American Guaranty Title Insurance Company	Attorneys' Title Fund Services, LLC	Compass Abstract, Inc.
eRecording Partners Network, LLC	Genesis Abstract, LLC	Kansas City Management Group, LLC	L.T. Service Corp.	Lenders Inspection Company
Lex Terrae National Title Services, Inc.	Lex Terrae, Ltd.	Mara Escrow Company	Mississippi Valley Title Services Company	National Title Agent's Services Company
Old Republic Branch Information Services, Inc.	Old Republic Diversified Services, Inc.	Old Republic Exchange Company	Old Republic National Title Insurance Company	Old Republic Title and Escrow of Hawaii, Ltd.
Old Republic Title Co.	Old Republic Title Company of Conroe	Old Republic Title Company of Indiana	Old Republic Title Company of Nevada	Old Republic Title Company of Oklahoma
Old Republic Title Company of Oregon	Old Republic Title Company of St. Louis	Old Republic Title Company of Tennessee	Old Republic Title Information Concepts	Old Republic Title Insurance Agency, Inc.
Old Republic Title, Ltd.	Republic Abstract & Settlement, LLC	Sentry Abstract Company	The Title Company of North Carolina	Title Services, LLC
Trident Land Transfer Company, LLC				



APPENDIX E

ENVIRONMENTAL DATA RESOURCES, INC.

Aerial Photo Decade Package



Fiddymment Ranch Phase 3

North Hayden Parkway

Roseville, CA 95747

Inquiry Number: 5891567.8

December 05, 2019

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/05/19

Site Name:

Fiddymment Ranch Phase 3
North Hayden Parkway
Roseville, CA 95747
EDR Inquiry # 5891567.8

Client Name:

Engeo Inc.
2010 Crow Canyon Place
San Ramon, CA 94583
Contact: Karina Castro



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2016	1"=875'	Flight Year: 2016	USDA/NAIP
2012	1"=875'	Flight Year: 2012	USDA/NAIP
2009	1"=875'	Flight Year: 2009	USDA/NAIP
2006	1"=875'	Flight Year: 2006	USDA/NAIP
1998	1"=875'	Acquisition Date: August 18, 1998	USGS/DOQQ
1993	1"=875'	Flight Date: May 23, 1993	USGS
1984	1"=875'	Flight Date: June 08, 1984	USDA
1975	1"=875'	Flight Date: August 25, 1975	USGS
1966	1"=875'	Flight Date: August 04, 1966	USGS
1952	1"=875'	Flight Date: July 18, 1952	USDA
1947	1"=875'	Flight Date: July 28, 1947	USGS
1937	1"=875'	Flight Date: September 01, 1937	USDA

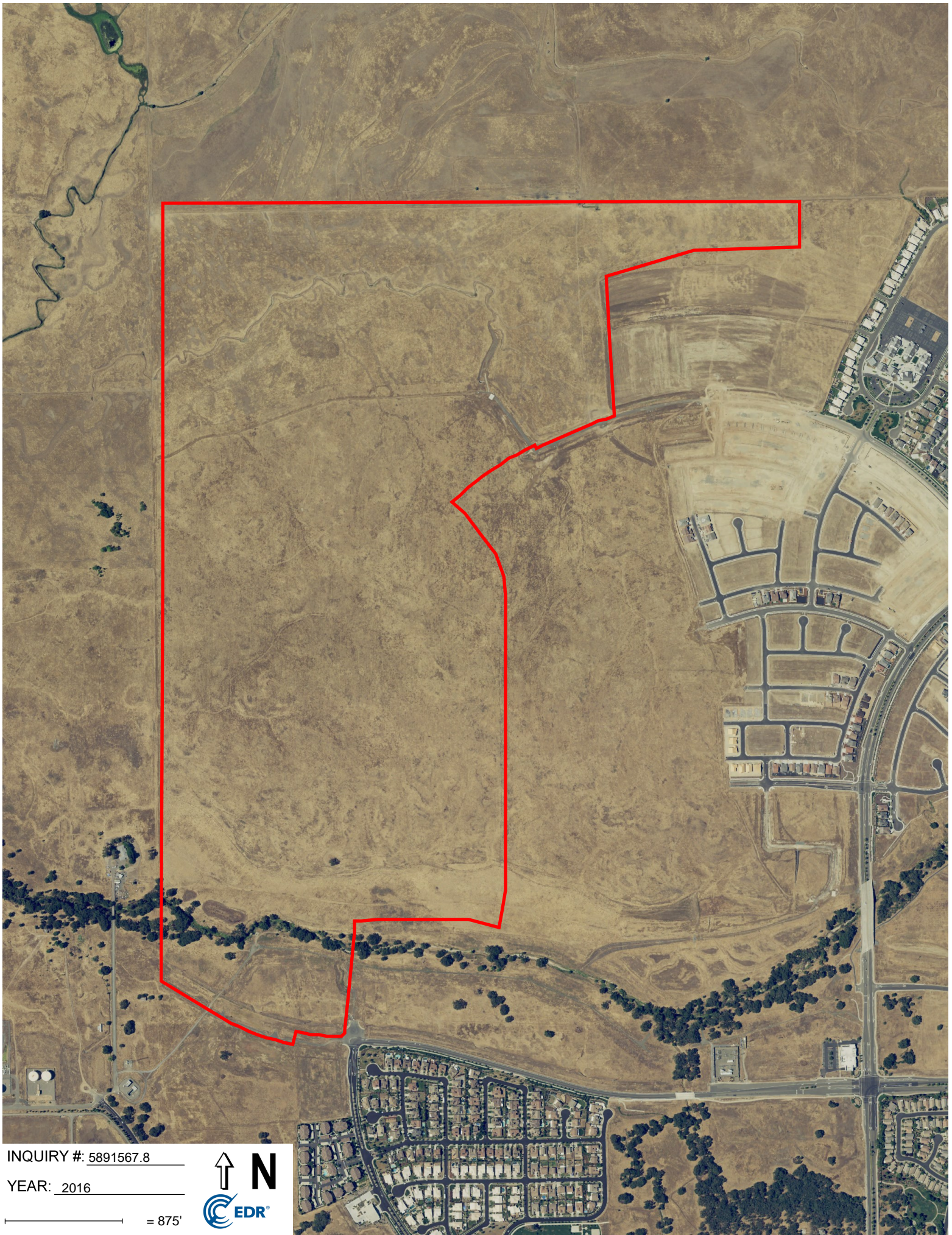
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

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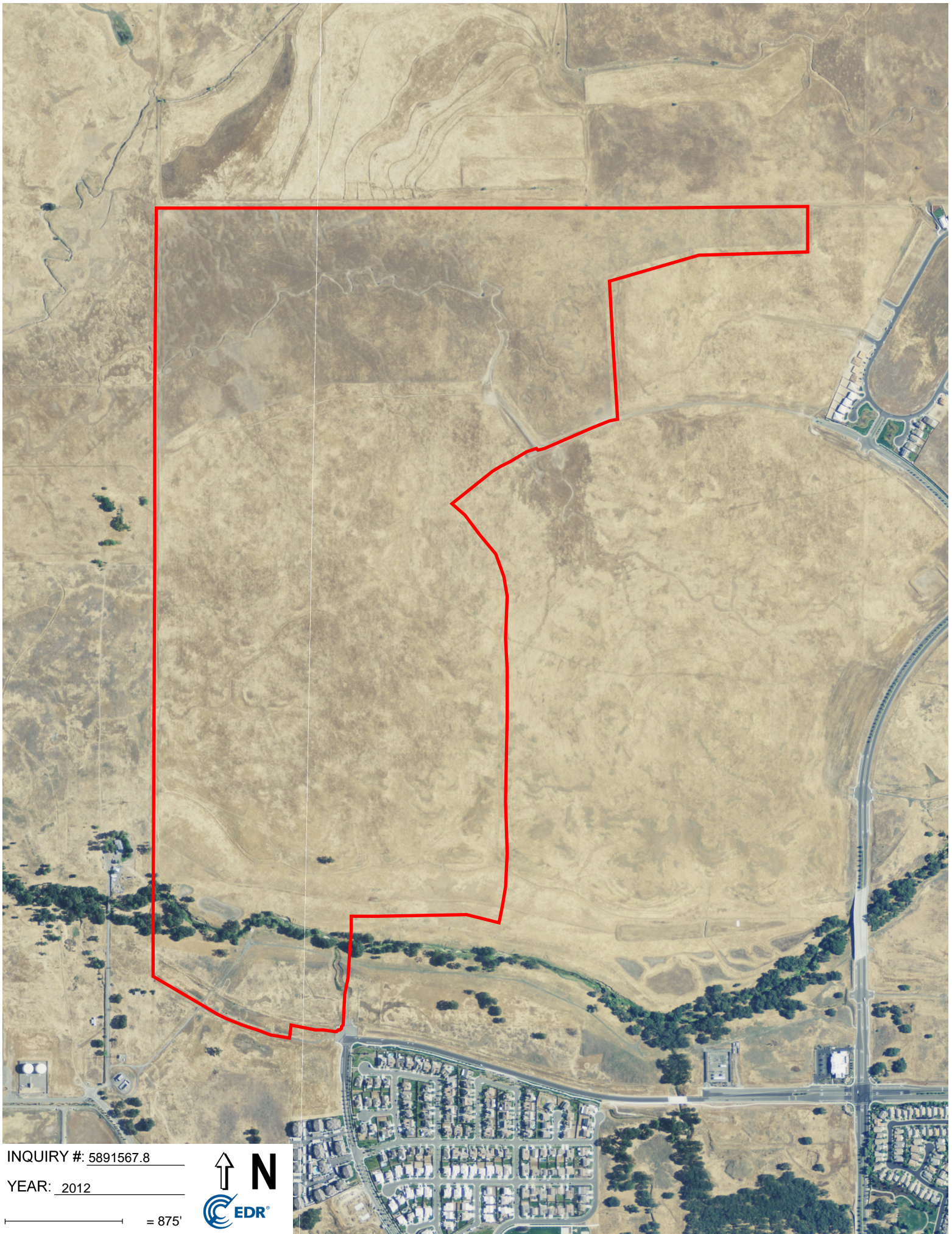


INQUIRY #: 5891567.8

YEAR: 2016

— = 875'



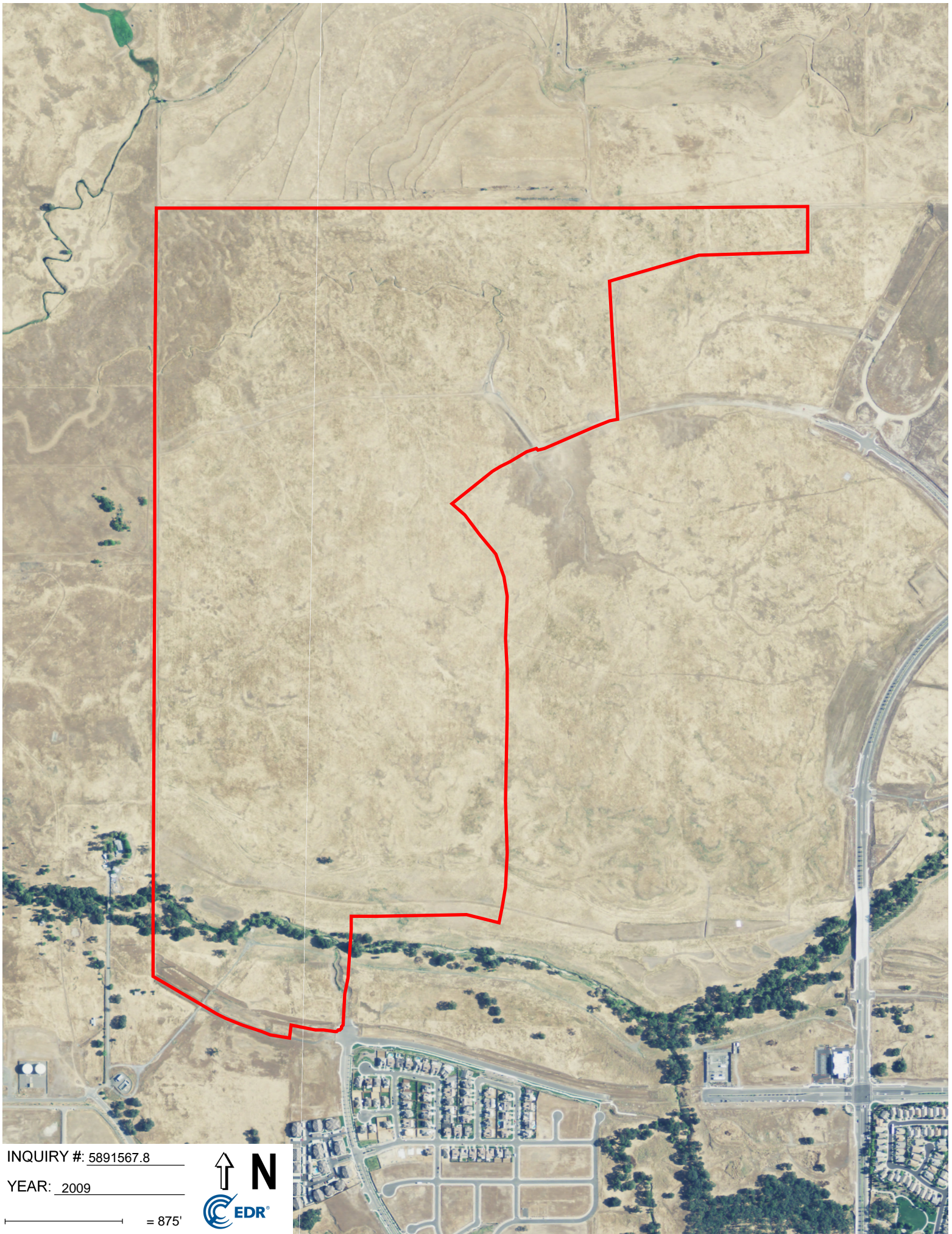


INQUIRY #: 5891567.8

YEAR: 2012

 = 875'



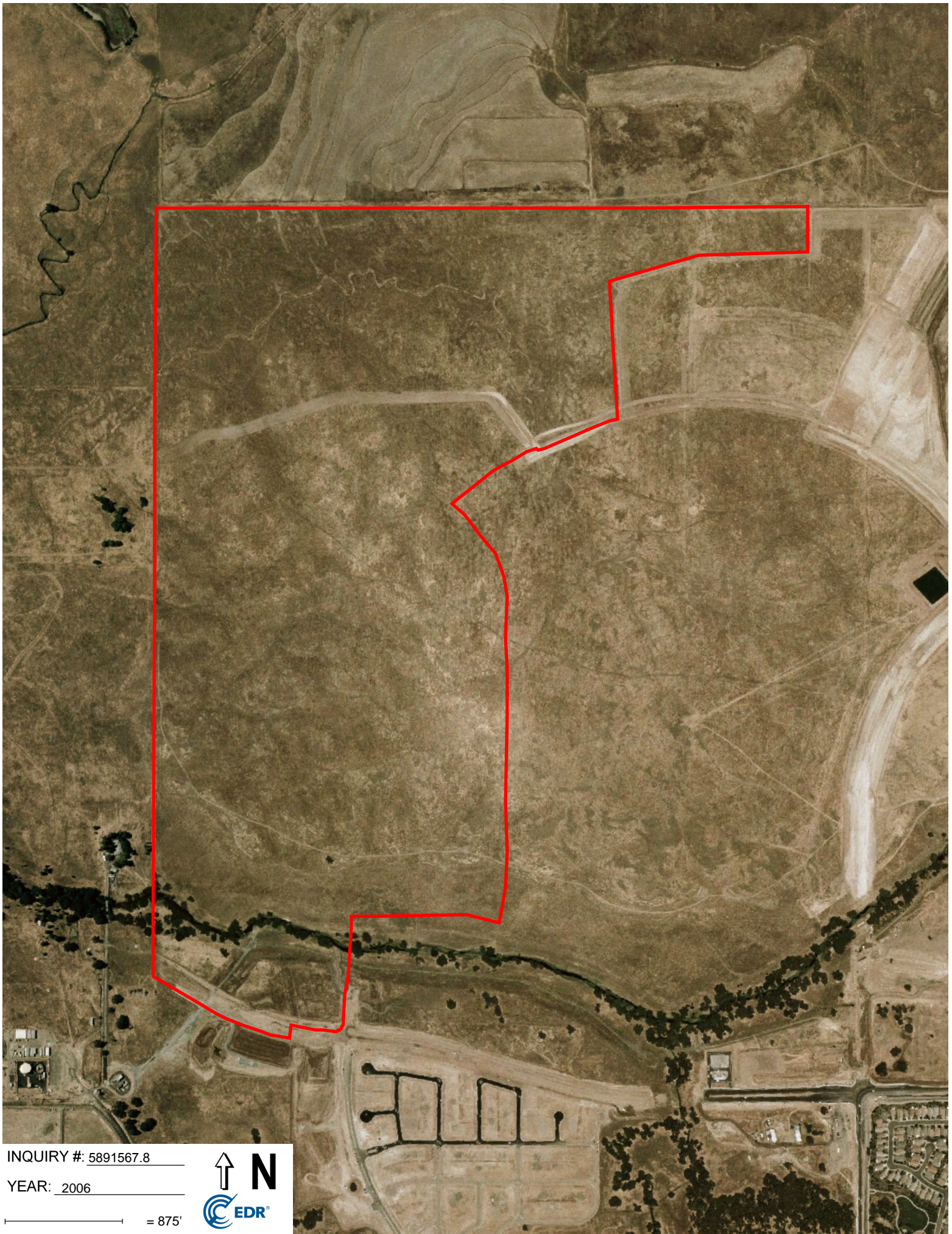


INQUIRY #: 5891567.8

YEAR: 2009

— = 875'



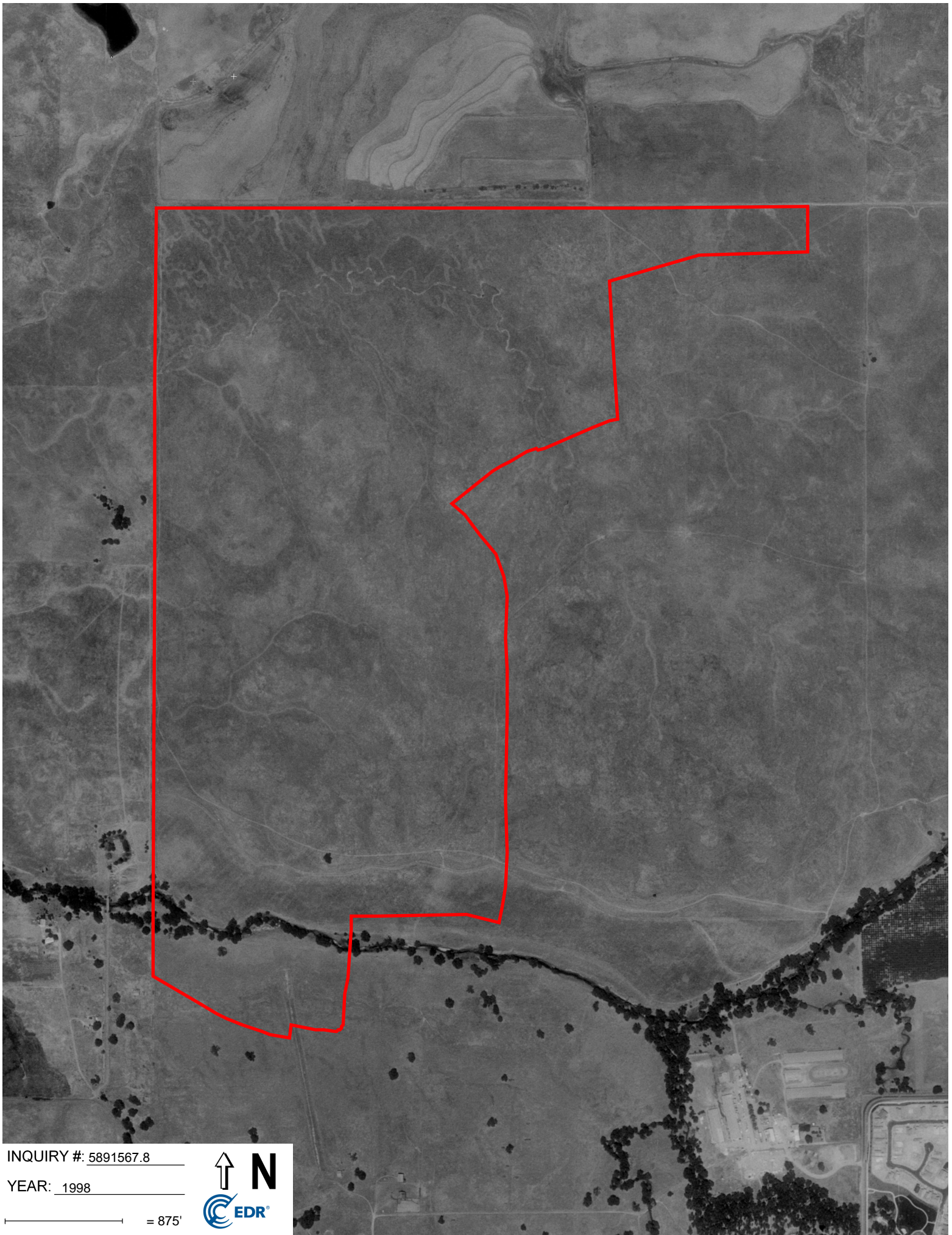


INQUIRY #: 5891567.8

YEAR: 2006

— = 875'



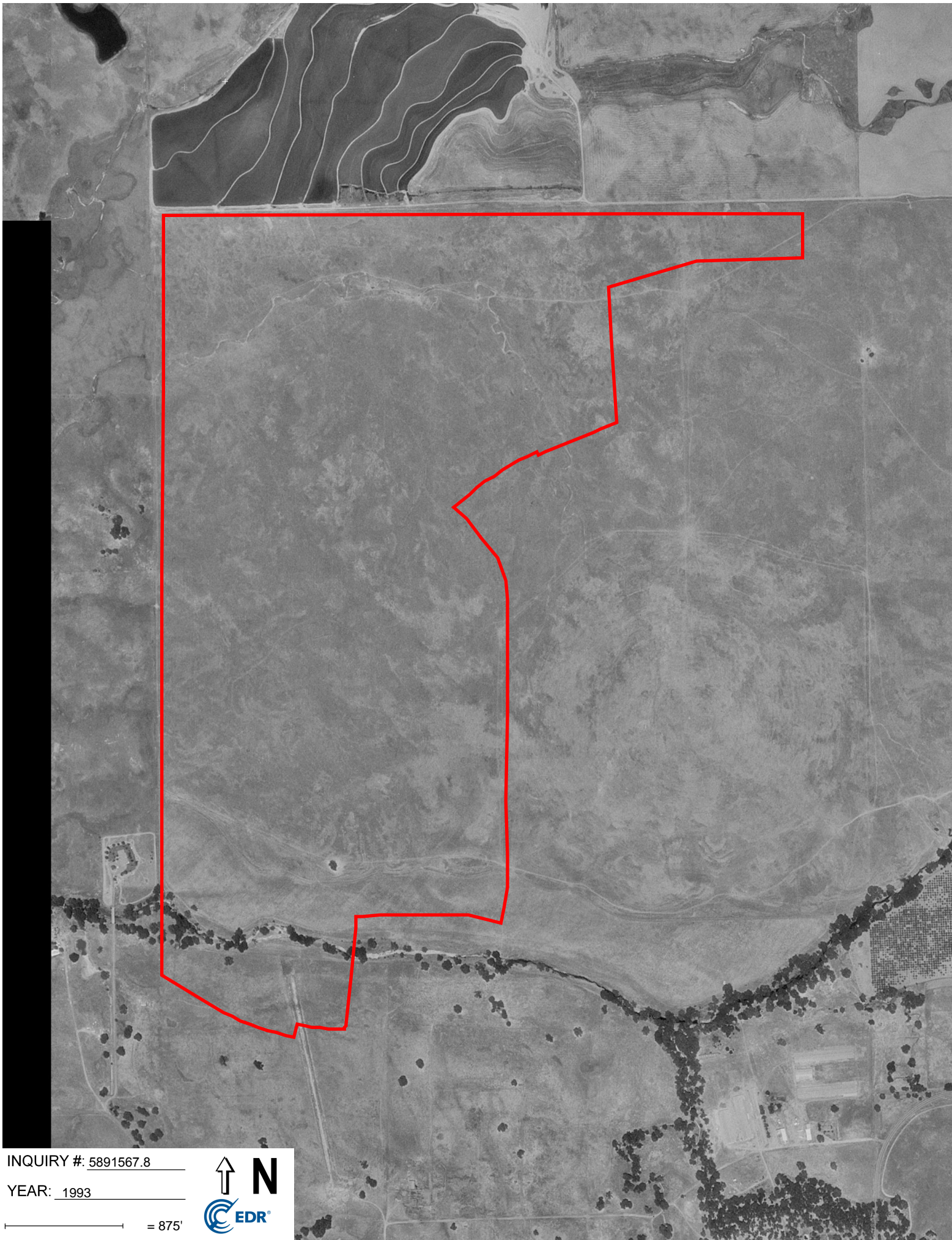


INQUIRY #: 5891567.8

YEAR: 1998

— = 875'





INQUIRY #: 5891567.8

YEAR: 1993

— = 875'



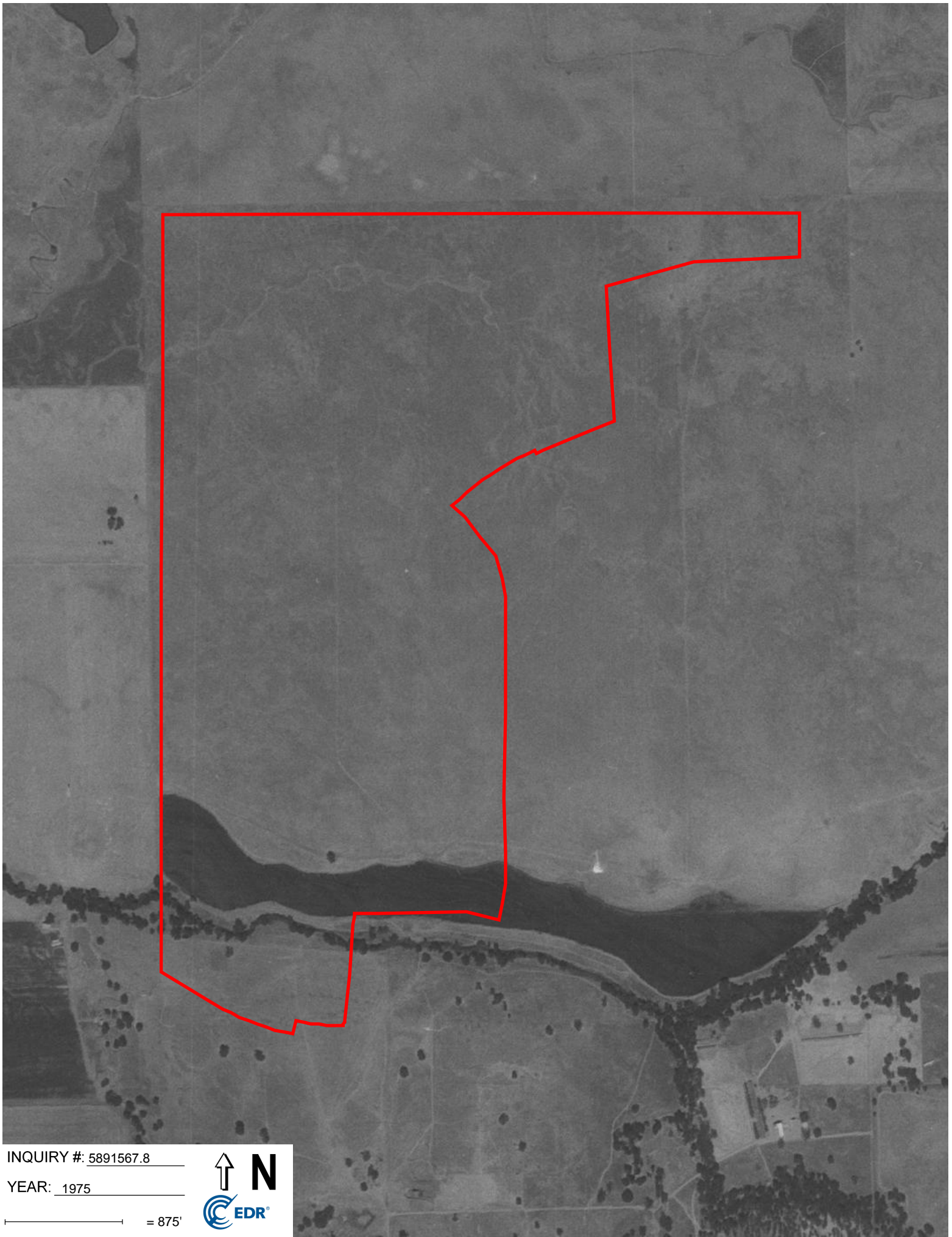


INQUIRY #: 5891567.8

YEAR: 1984

— = 875'



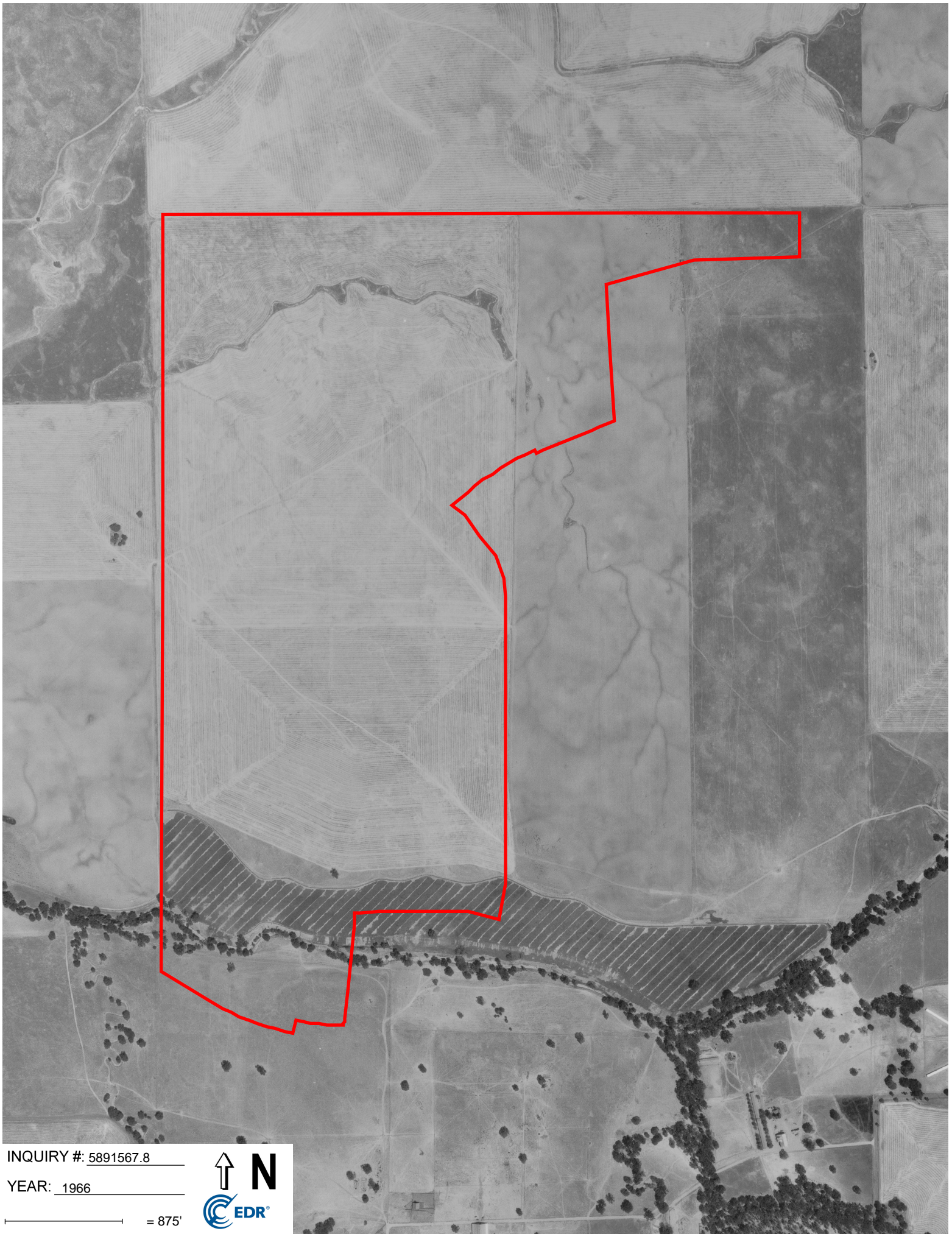


INQUIRY #: 5891567.8

YEAR: 1975

— = 875'



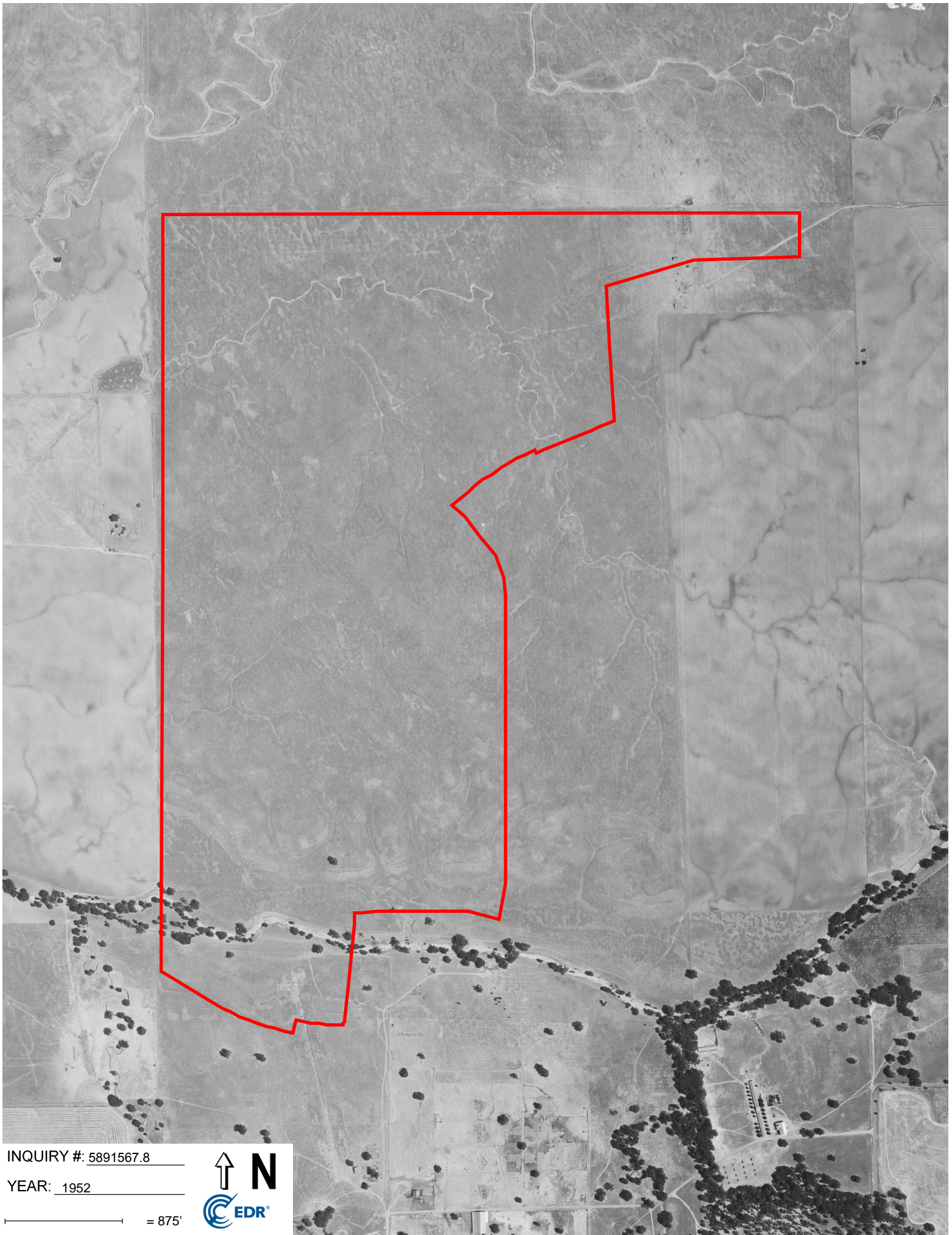


INQUIRY #: 5891567.8

YEAR: 1966

— = 875'





INQUIRY #: 5891567.8

YEAR: 1952

— = 875'



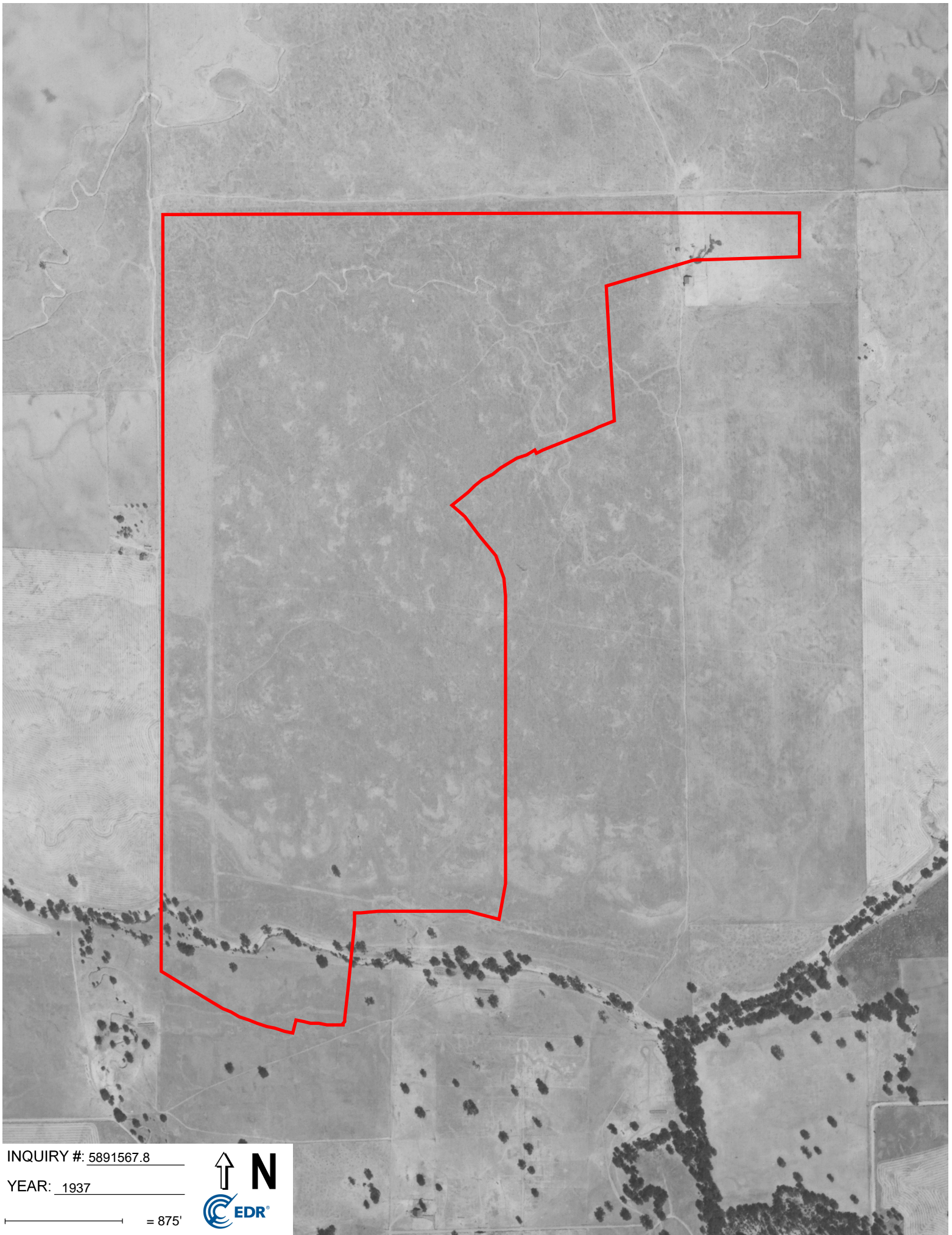


INQUIRY #: 5891567.8

YEAR: 1947

— = 875'





INQUIRY #: 5891567.8

YEAR: 1937

— = 875'





APPENDIX F

ENVIRONMENTAL DATA RESOURCES, INC.

City Directory

Fiddymment Ranch Phase 3

North Hayden Parkway
Roseville, CA 95747

Inquiry Number: 5891567.5
December 09, 2019

The EDR-City Directory Image Report

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by

infoUSA[®]

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2005	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
2001	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1994	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1989	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1985	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1980	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1974	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1970	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

North Hayden Parkway
Roseville, CA 95747

Year

CD Image

Source

HAYDEN PKWY

2014	pg A2	EDR Digital Archive	
2010	pg A4	EDR Digital Archive	
2005	-	Haines Criss-Cross Directory	Street not listed in Source
2001	-	Haines Criss-Cross Directory	Street not listed in Source
1994	-	Haines Criss-Cross Directory	Street not listed in Source
1989	-	Haines Criss-Cross Directory	Street not listed in Source
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1974	-	Haines Criss-Cross Directory	Street not listed in Source
1970	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

HAYDEN PKWY 2014

2501 ANDERSON, VERSIE L
AVERY, BEV K
BLAIR, CAMMERA R
BREWSTER, JOANNA M
BRIONES, LOUIS R
BUKATY, LEAH
BULA, VLADIMIR E
BUNYAK, LARYSA
CHAMBERS, KRYSTIN
CHIRKA, VITALII
CHUMBLEY, JERMILLA S
CHUN, KAITLYN
CRAMER, CURTIS B
CURRIER, JAMIE N
DAVYDYUK, NATALIYA
DEMCHUCK, NATALIE
DUMONT, EILEEN K
FELIX, ANDREW
GARCIA, RICHARD L
GAVRILOV, NIKOLAY
GEER, PAUL
GIBBS, ROBINANN A
GOLOVANOVA, INNA
GOMEZ, JOANNE
HADDEN, KENNETH C
HAN, HONG
HARRIS, MICHELE R
HARVEL, KEITH R
HENRIKSON, MARK A
HILL, LAURA L
HRYTSAK, V
JEN, MERISSA E
JOHNSON, KATIE M
KALINOVSKIY, VADIM
KARSSIES, LAMBERT C
KATSEL, LIDIYA
KEEFE, TAYLOR
KILGORE, TERRA L
KLIMKIV, ANGELICA
KUZYANOV, SHELEE
LAVOR, VADIM S
LEE, CARISA M
LEVCHUK, IGOR
LUNARDI, RACHAEL E
MAFTEI, AURAM
MARTIN, JEFFREY R
MARTINEZ, MARC
MARTINEZ, TERRI E
MATHEWS, MICHAEL R
MAYMON, HILARY R

HAYDEN PKWY 2014 (Cont'd)

2501 MAYS, CHAVIS
MCCORMICK, EILEEN B
MCFARLAND, HARVEY M
MCKINNON, NATHANIEL L
MCKISSICK, MICHAEL C
MULLEN, BRIAN K
MUNOZ, JENNY L
MURRAY, CHERREE
MYKHAYLENKO, DZIYANA
NUCKELS, IRINA K
ORLANDO, DEBRA A
OROURKE, TIMOTHY J
PEOPLES, KENNETH S
POLIVI, N Y
QAUEEMI, SOFIA
RASTELLI, LOUIS J
REYNOLDS, CHRISTINE J
ROBERTSON, COREY
RODRIGUEZ, CECILIA
ROSA, ROBERTA
RUSSELL, NAN
SCHUMACHER, LAURA
SEVILLE, KAYLA
SHANKS-SMITH, THIA E
SHESHURIAK, VASYL
SHVETS, ELINA
SIENA APARTMENTS
SILVAS, STEPHANIE A
SIMPTON, JOSEPH M
SOKIL, VALENTINA
STEELE, MARCUS A
STROH, LAURA
TARASOVA, OLENA
TARASYUK, NADEZHDA
TARR, YOLANDA
TKACHUK, CHRISTINA
UHLIANITSA, MIKHAIL
VEGA, CYNTHIA
WATTIER, LAUREN
WEAVER, KAYLA J
WEISS, GRANT M
WILLIAMS, TEELA
WISE, CHARLEEN R
WOOD, BRANDON T
YGLESIAS, RONALD A

HAYDEN PKWY 2010

2501 ATKINSON, ADAM M
BABY, LYUDMILA
BARONE, LISA
BOWEN, BRENDA D
BRACKETT, TIM D
BRIONES, LOUIS R
BUKATY, ANNA N
CHAMBERS, KRYSTIN
CHAO, NAIYOON
CHERNYETSKY, IGOR
CHUN, KAITLYN
CONNEALY, TANYA A
CRUZ, VERONICA P
DAVENPORT, JEFF
DAVYDYUK, NATALIYA
DEANDA, LAURA E
DUMONT, EILEEN K
FLOWERS, MARGARET E
GAMEL, NANCY E
GEER, PAUL
GERFEN, AMANDA N
GIBBS, ROBINANN A
HART, THOMAS
HASAPIS, N
HELLAR, KYLE R
HINZEY, DANIEL C
KENNEDY, DAVID L
KLIMKA, ALA
KLIMKIV, ESTHER
KUZNETSOVA, YEKATERINA
LEE, CARISA M
LITTLE, MISHALINDA
MAKITRIN, AIMEE
MARKINA, YULIYA
MARTYNYUK, SERGEY V
MCCORMICK, EILEEN B
MCFARLAND, VERONICA
MULLEN, BRIAN
NELSON, GALEN W
ORLANDO, DEBRA A
POLIVI, N Y
POLOVIN, TATYANA A
QAUEEMI, SOFIA
RENCHER, TAMMEY J
RODRIGUEZ, RUTH
ROSLER, KIMBERLY
RUSSELL, NAN
SHANKS-SMITH, THIA
SIENA APARTMENTS
SIMON, BARBARA E

HAYDEN PKWY 2010 (Cont'd)

2501 STEELE, MELODY
STROH, LAURA
THOMAS, HAYDEN
UHLIANITSA, MIKHAIL
VALENZUELA, MARIA G



APPENDIX G

ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE

Project Name: Fiddymment Ranch - Phase 3

Project No. 16880.000.000



**ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE
FOR CLIENT**

To evaluate the potential for possible environmentally related impacts and site contamination the following information is requested. This questionnaire is to be completed by the user of the phase one environmental site assessment, or their authorized representative.

PART I

1. Property address and Assessor's Parcel Number (APN):

APN's 492-011-016-000 And 492-012-085-000, Roseville, CA

2. Current property owner (name, address, voice/fax number):

ATC REALTY ONE LLC
333 Market Street, 27th Floor San Francisco, CA 94105
Steve Hicks
shicks@signhomes.com or (916) 240-2752

3. Date current property owner assumed title of property:

May 17, 2012

4. Current property development/improvements:

Vacant land with infrastructure stubbed to the site for master plan development.

5. Past property use, development/improvements:

Grazing and poultry related agriculture

6. Neighboring property uses:

Subdivision and open space

PART II

1. Are you aware of any environmental cleanup liens against the *property* that are filed under federal, tribal, local or state law? Yes No
2. Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state or local law? Yes No
3. Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the *property* or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? Yes No
4. If a property transaction is occurring in conjunction with this environmental assessment, does the purchase price of this *property* reasonably reflect the fair market value of the *property*? Yes No
5. If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*? Yes No N/A
6. Are you aware of any commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,
- (a) do you know of specific chemicals that are present or once were present at the *property*? Yes No
- (b) do you know of spills or other chemical releases that have taken place at the *property*?
- (c) do you know of any environmental cleanups that have taken place at the *property*?
7. Based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*? Yes No

If a "Yes" response was provided to any of the above questions, please provide details below:

I certify that the information herein is true and correct to the best of my knowledge as of the date signed below.

Name (Printed/Typed): Clifton Taylor

Signature:



Date: December 4, 2019



APPENDIX H

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

SHAWN MUNGER, CHG
Principal Geologist

EDUCATION

BS, Geology, U.C. Davis, 1985

EXPERIENCE

Years with ENGEO: 31
Years with Other Firms: 0

**REGISTRATIONS &
CERTIFICATIONS**

Certified Hydrogeologist, CA, 413
8 Hour HAZWOPER Training, CA,
160115576014
Professional Geologist, CA, 5810
Certified Environmental Manager,
NV, 1332
40 Hour HAZWOPER Training, CA,
100830513934

SPECIALIZATIONS

- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

Since joining ENGEO in 1985, Shawn has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, Phase I and II Site Assessment projects, UST site investigations, risk based corrective action (RBCA), VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager for environmental and hazardous materials projects involving groundwater hydrology, contaminant fate and transport, and remediation. He is Principal-in-Charge of the environmental components of our on-call contracts with the City of Sacramento and the County of Sacramento.

Select Project Experience

14234 Saratoga Sunnyvale Road—Saratoga, CA

Project Geologist. Shawn performed Principal review of ENGEO's environmental documents. This 2.2-acre townhome site is planned for a new multi-family development comprising up to 20 units in 8 buildings. The site immediately borders Saratoga Creek and contains numerous mature trees, many of which are to be saved. Site challenges include shallow groundwater, creek bank stability, and the potential for liquefaction and lateral spreading.

Lenihan Dam Outlet Modification—Los Gatos, CA

Principal Geologist. Shawn provided technical advice, coordination, consultation, and review of ENGEO's documents to provide quality mitigation measures. The findings were presented to SCVWD and it was concluded that the stockpile was sufficient for transportation. This analysis led to significant project budget savings by avoiding removal and disposal at a solid waste disposal facility. The project consisted of a stockpile approximately 6,000 cubic yards that required profiling as requested by Santa Clara Valley Water District before use of as site backfill.

199 River Oaks Parkway—San Jose, CA

Principal in Charge. Shawn provided principal oversight, data analysis, and consultation regarding site characterization, risk evaluation, and demolition observation plans. The project consists of a proposed six-story podium structure with one level to be constructed below grade. The property is a former semiconductor facility that has received conditional closure from the Regional Water Quality Control Board and is approved for construction.

Riverside Avenue Property—Roseville, CA

Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Assessments and site

characterization. The project site consists of an active auto sales and service facility. The historic use of the facility for industrial purposes resulted in soil and groundwater impacts beneath the site. The City of Roseville revised its plans for acquiring and redeveloping the site due to the identified soil and groundwater impacts.

1301 Standard Oil Ave—Pittsburg, CA

Principal in Charge. Shawn provided principal oversight of a Phase II Environmental Site Characterization. The property is an abandoned wastewater treatment plant with processing buildings, clarifier tanks, and sludge beds.

Pleasant Hill BART Station—Walnut Creek, CA

Principal in Charge. Shawn provided oversight, data analysis and consultation during the preparation of a Phase II Environmental Site Assessment. The property is an existing BART station that encompasses 20 acres, including the platform/station area, electrical facilities, a parking garage and additional paved parking areas.

County Crossings Property—Antioch, CA

Principal in Charge. Shawn provided environmental consultation and data review with regard to soil and groundwater contamination. Constituents of concern include petroleum hydrocarbons, nitrates and manganese. The approximately 264-acre site includes several former industrial facilities and petroleum pipelines. Soil and groundwater at the site has been impacted with petroleum hydrocarbons, nitrates and manganese. Planned uses include commercial, residential, retail, and a BART-oriented transit village. The center, which is currently in the entitlement phase, is estimated to break ground in 2011.

620 North Ninth Street—San Jose, CA

Principal in Charge. Shawn provided oversight of soil, groundwater and soil gas characterizations, risk evaluations and Remedial Action Plan preparation. Shawn also closely interacted with RWQCB staff to achieve approval for residential development. The property is a former fruit packing plant and food preparation facility. The proposed development consists of a single-family residential subdivision.

Westshore—Richmond, CA

Project Manager. Shawn conducted Phase I and II Site Assessments, risk evaluations and prepared a soil management plan. The property was a former automotive manufacturing plant proposed for a multi-unit condominium development, including a 6-story podium structure to include five residential floors with 269 units and one parking floor.

Mills Ranch—King City, CA

Principal in Charge. Shawn provided principal oversight of Phase I/II Environmental Site Assessments and risk evaluations. The approximate 80-acre property is used for agricultural cultivation and commercial uses. The proposed mixed-use development includes over 400 single-family residential lots.

Select Foods Site/Cross Creek—Hayward, CA

Principal in Charge. Shawn provided principal oversight, consultation, and data analysis. The property was a former processed food facility, a drum recycling business, battery manufacturing operation and a bus assembly plant. Following completion of soil remediation under RWQCB oversight, the property was developed into a single-family residential subdivision.

Arroyo Crossing—Livermore, CA

Principal in Charge. Shawn provided oversight, data analysis and regulatory consultation while ENGEO provided geotechnical and environmental engineering services for this 34-acre site. This former corporation yard and quarry site was developed into a single-family residential subdivision.

Renaissance Square—Concord, CA

Project Manager. Shawn provided consultation, data analysis, and field observation. This former automotive dealership was redeveloped as a five-story multi-family residential structure supported on slab-on-grade foundations, with two levels of below-grade parking. Petroleum hydrocarbon-impacted soil was encountered during excavation of the parking structure, which required characterization and remediation. Soil impacts were attributed to former sumps, USTs and hydraulic lifts.

Union Pacific Railroad Corridor—San Jose, CA

Project Manager. Shawn prepared a Phase I and II Environmental Site Assessment. Work included a site reconnaissance, historical records research and recovery of soil samples with laboratory analysis. Lead impacted soil was identified which required risk evaluation. This former 1800 lineal foot section of the former Union Pacific Railroad Corridor was proposed for mixed-use development.

Former SFPP Alignment—Concord, CA

Project Manager. Shawn prepared a Phase I and II Environmental Site Assessment. The site was a former ±6,500-foot corridor formerly occupied by the Southern Pacific Railroad. Kinder Morgan petroleum pipelines existed within an easement along the property. The southern portion of the site was crossed by East Bay Municipal Utilities District water distribution lines and a multi-lane highway overpass. The corridor was developed as a self-storage facility. Work included the recovery of soil and groundwater samples along the SP right of way.

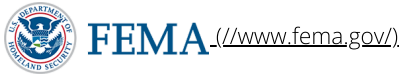
Hercules Property—Hercules, CA

Project Manager. Shawn provided oversight of a Phase I Environmental Site Assessment, site asbestos survey, site characterization, and demolition observation/contaminant assessment. The project area consists of ±167 acres located near and along the southeastern shore of San Pablo Bay in Hercules. The property was once a portion of a 1300-acre manufacturing facility that was operated by DuPont from 1879 to 1913 and Hercules Incorporated from 1913 to 1979. The planned development includes single/multi-family residential development with some commercial components.

Highlands Ranch—Antioch, CA

Principal in Charge. Shawn provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.





FEMA Flood Map Service Center: Search By Address

Navigation

Search

Languages

MSC Home (/portal/)

MSC Search by Address (/portal/search)

MSC Search All Products (/portal/advanceSearch)

MSC Products and Tools (/portal/resources/productsandtools)

Hazus (/portal/resources/hazus)

LOMC Batch Files (/portal/resources/lomc)

Product Availability (/portal/productAvailability)

MSC Frequently Asked Questions (FAQs) (/portal/resources/faq)

MSC Email Subscriptions (/portal/subscriptionHome)

Contact MSC Help (/portal/resources/contact)

Enter an address, place, or coordinates: ?

Hayden Parkway, Roseville, CA

Whether you are in a high risk zone or not, you may need [flood insurance](https://www.fema.gov/national-flood-insurance-program) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than \$400 per year. Call your insurance agent today and protect what you've built. Learn more about [steps you can take](https://www.fema.gov/what-mitigation) to reduce flood risk damage.

Search Results—Products for ROSEVILLE, CITY OF

Show ALL Products » (<https://msc.fema.gov/portal/availabilitySearch?addcommunity=060243&communityName=ROSEVILLE, CITY OF#searchresultsanchor>)

The flood map for the selected area is number **06061C0936H**, effective on **11/02/2018** ?

DYNAMIC MAP



PRINT MAP/
FIRMette

MAP IMAGE



[https://msc.fema.gov/portal/downloadProduct?](https://msc.fema.gov/portal/downloadProduct?productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06061C0936H)

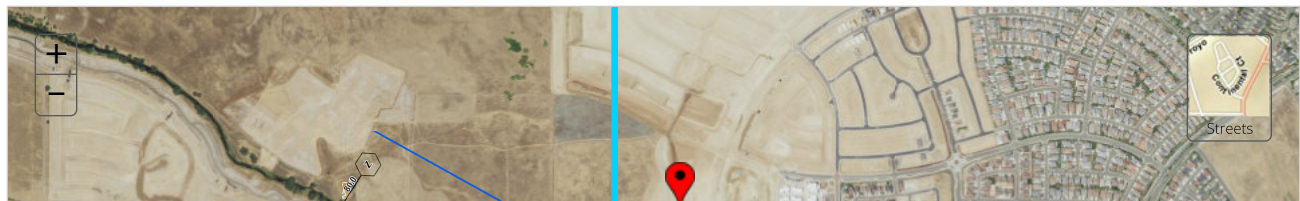
[productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06061C0936H](https://msc.fema.gov/portal/downloadProduct?productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06061C0936H))

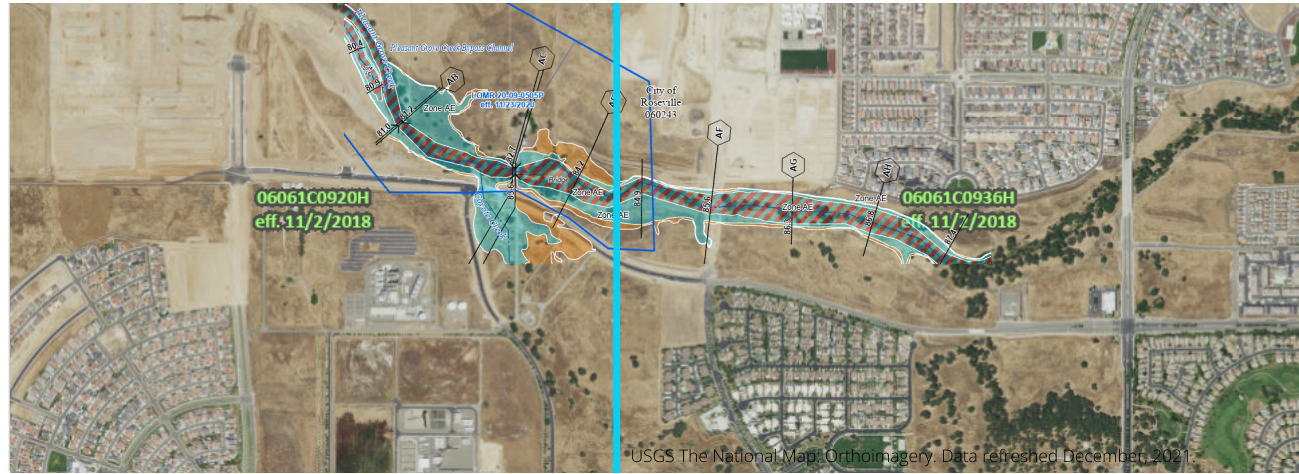
Changes to this FIRM ?

- Revisions (2)
- Amendments (0)
- Revalidations (1)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMette.

Go To NFHL Viewer » (<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-121.383>)





PIN

- Approximate location based on user input and does not represent an authoritative property location

MAP PANELS

- Selected FloodMap Boundary
- Digital Data Available
- No Digital Data Available
- Unmapped

OTHER AREAS

- Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D
- Otherwise Protected Area
- Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth
- Regulatory Floodway Zone AE, AO, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes, Zone X
- Area with Flood Risk due to Levee Zone D

OTHER FEATURES

- 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
- 17.8 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

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[Ready.gov \(//www.ready.gov\)](http://www.ready.gov/) [USA.gov \(//www.usa.gov\)](http://www.usa.gov/) [DisasterAssistance.gov \(//www.disasterassistance.gov/\)](http://www.disasterassistance.gov/)



[\(https://www.oig.dhs.gov/hotline\)](https://www.oig.dhs.gov/hotline)

 Official website of the Department of Homeland Security

National Risk Index



September 21, 2022

Placer County, California

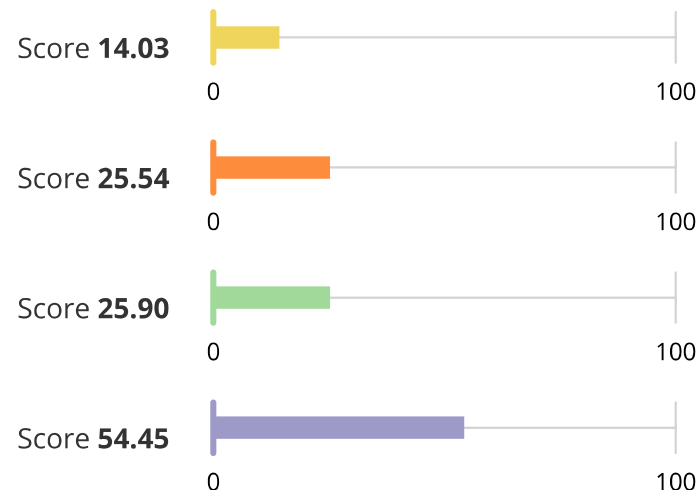
Summary

Risk Index is **Relatively Moderate**

Expected Annual Loss is **Relatively Moderate**

Social Vulnerability is **Relatively Low**

Community Resilience is **Relatively Moderate**

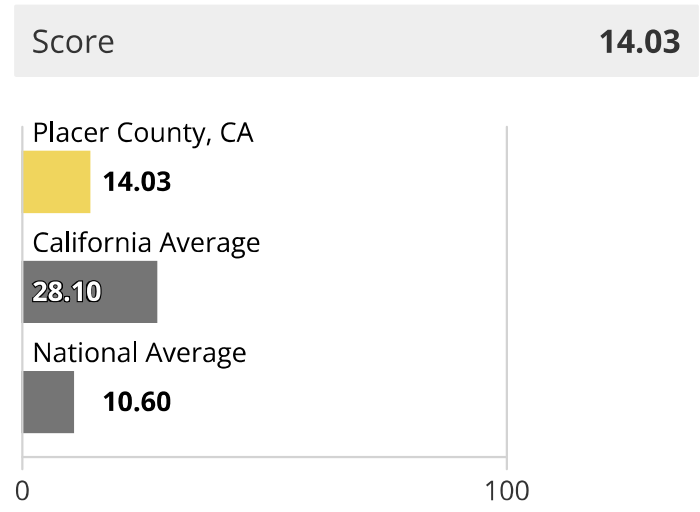
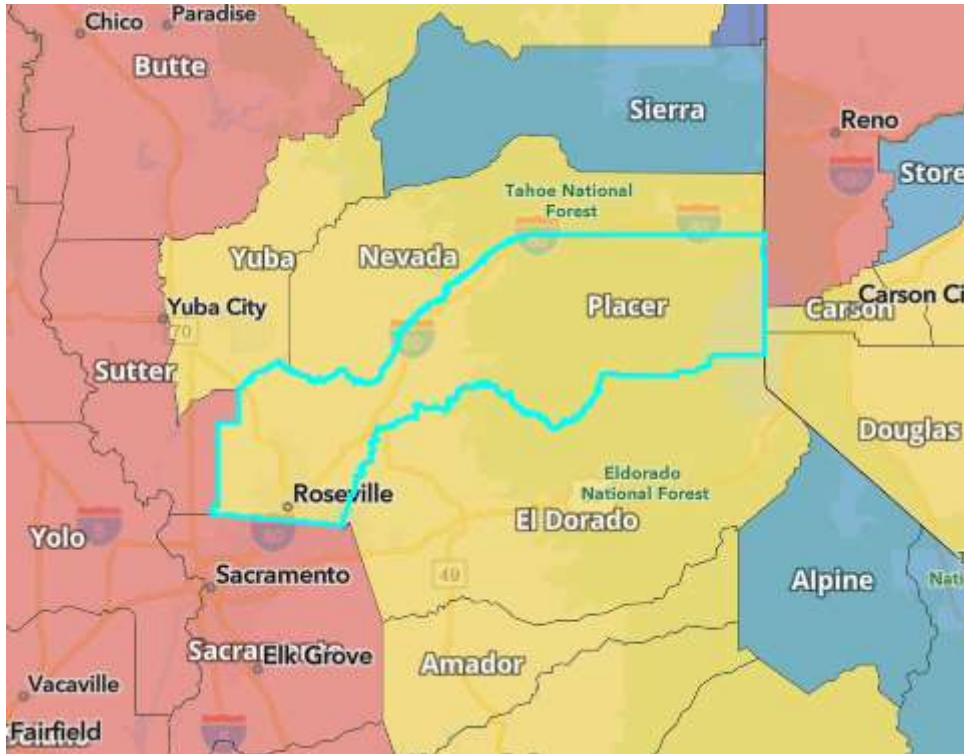


While reviewing this report, keep in mind that low risk is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience.

For more information about the National Risk Index, its data, and how to interpret the information it provides, please review the **About the National Risk Index** and **How to Take Action** sections at the end of this report. Or, visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Risk Index

The Risk Index rating is **Relatively Moderate** for **Placer County, CA** when compared to the rest of the U.S.



81.0% of U.S. counties have a lower Risk Index

12.0% of counties in California have a lower Risk Index

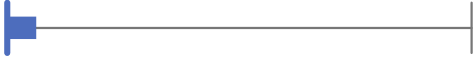
Risk Index Legend

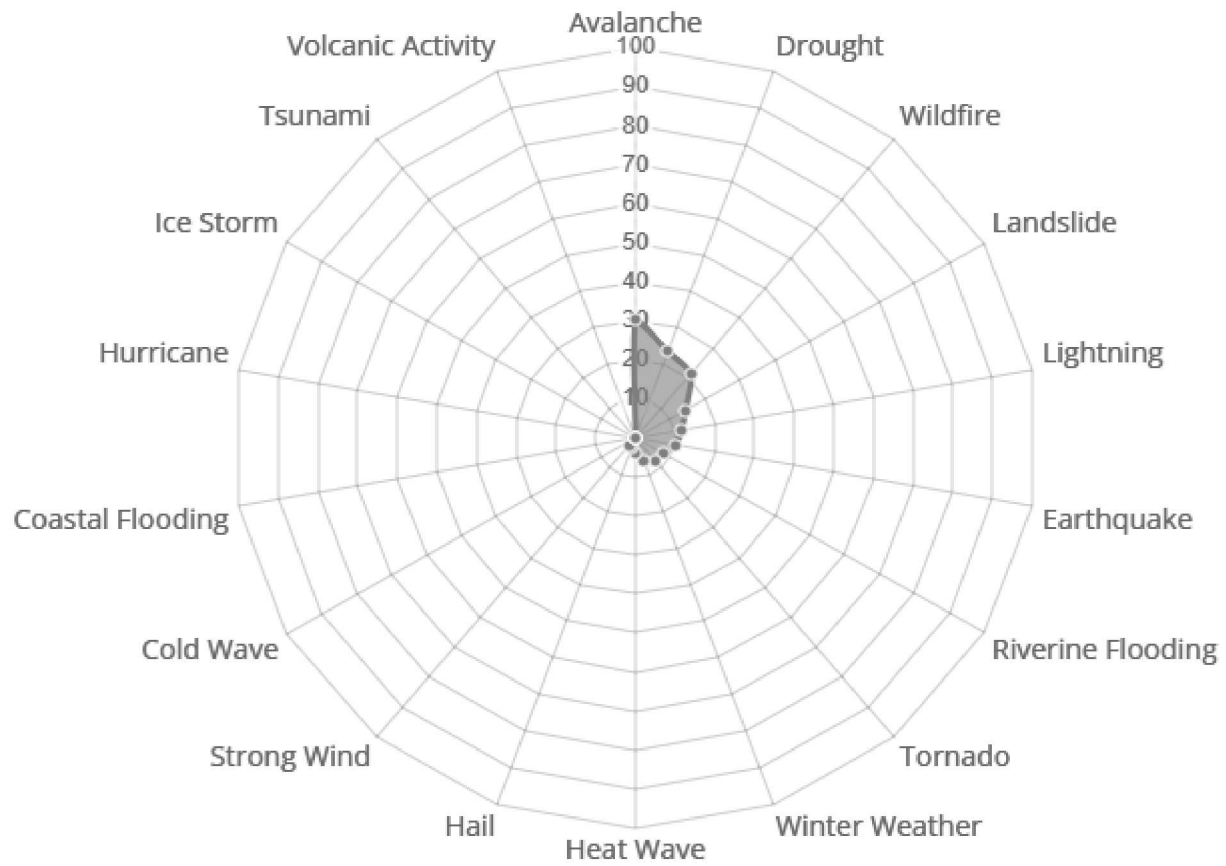
- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- No Rating
- Not Applicable
- Insufficient Data

Hazard Type Risk Index

Hazard type Risk Index scores are calculated using data for only a single hazard type, and reflect a community's relative risk for only that hazard type.

Hazard Type	Risk Index Rating	Risk Index Score	0	100
Avalanche	Relatively Moderate	30.47		100
Coastal Flooding	Not Applicable	--		
Cold Wave	No Rating	0.00		100
Drought	Relatively High	23.75		100
Earthquake	Relatively Moderate	10.07		100
Hail	Very Low	2.72		100
Heat Wave	Relatively Low	3.92		100
Hurricane	Not Applicable	--		
Ice Storm	Not Applicable	--		
Landslide	Relatively Moderate	14.29		100
Lightning	Relatively Low	11.49		100
Riverine Flooding	Relatively Low	8.27		100
Strong Wind	Very Low	2.56		100

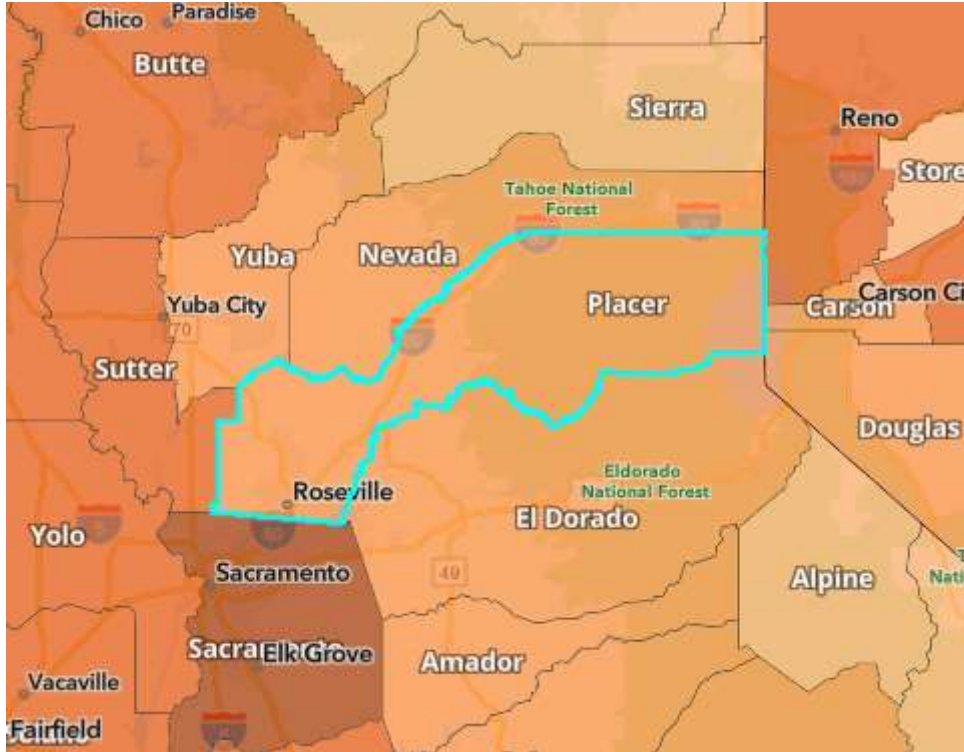
Hazard Type	Risk Index Rating	Risk Index Score		
Tornado	Very Low	7.60	0	
Tsunami	Not Applicable	--		
Volcanic Activity	Not Applicable	--		
Wildfire	Relatively Moderate	21.49	0	
Winter Weather	Very Low	6.44	0	



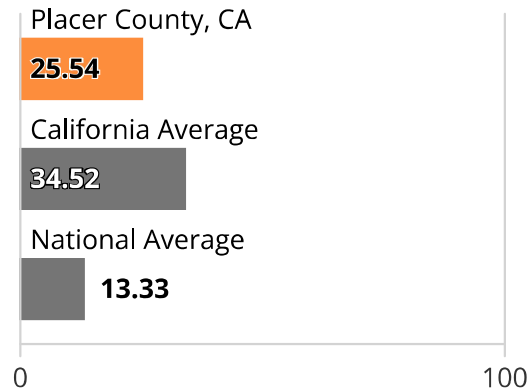
The chart above demonstrates the relative distribution of hazard type Risk Index scores for **Placer County, CA**. Risk Index scores are plotted for each hazard type included in the National Risk Index. Higher relative risk corresponds to larger colored areas inside a given hazard type chart slice.

Expected Annual Loss

In **Placer County, CA**, expected loss each year due to natural hazards is **Relatively Moderate** when compared to the rest of the U.S.



Score **25.54**



93.8% of U.S. counties have a lower Expected Annual Loss

34.4% of counties in California have a lower Expected Annual Loss

Expected Annual Loss Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- No Expected Annual Losses
- Not Applicable
- Insufficient Data

Composite Expected Annual Loss		\$27,796,437.27
Building Value	\$15,235,967.53	Population 0.21 fatalities
Population Equivalence	\$1,587,114.45	Agriculture Value \$10,973,355.29

Expected Annual Loss for Hazard Types

Expected Annual Loss scores for hazard types are calculated using data for only a single hazard type, and reflect a community's relative expected annual loss for only that hazard type. **13 of 18** hazard types contribute to the expected annual loss for **Placer County, CA**.

Hazard Type	Expected Annual Loss Rating	Expected Annual Loss Score	0	100
Avalanche	Relatively High	40.11		100
Coastal Flooding	Not Applicable	--		
Cold Wave	No Expected Annual Losses	0.00		100
Drought	Relatively High	35.54		100
Earthquake	Relatively Moderate	18.31		100
Hail	Very Low	4.63		100
Heat Wave	Relatively Low	6.81		100
Hurricane	Not Applicable	--		
Ice Storm	Not Applicable	--		
Landslide	Relatively High	28.51		100
Lightning	Relatively Moderate	26.94		100
Riverine Flooding	Relatively Moderate	12.95		100
Strong Wind	Very Low	6.93		100

Hazard Type	Expected Annual Loss Rating	Expected Annual Loss Score
Tornado	Relatively Low	11.90
Tsunami	Not Applicable	--
Volcanic Activity	Not Applicable	--
Wildfire	Relatively High	33.63
Winter Weather	Relatively Low	12.56

Expected Annual Loss Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	\$447,476	\$791	\$446,685	0.06	n/a
Coastal Flooding	--	--	--	--	--
Cold Wave	\$0	\$0	\$0	0.00	\$0
Drought	\$10,955,542	n/a	n/a	n/a	\$10,955,542
Earthquake	\$8,612,880	\$7,862,101	\$750,780	0.10	n/a
Hail	\$6,644	\$80	\$6,371	0.00	\$193
Heat Wave	\$22,191	\$20	\$21,764	0.00	\$408
Hurricane	--	--	--	--	--
Ice Storm	--	--	--	--	--
Landslide	\$201,497	\$120,946	\$80,551	0.01	n/a
Lightning	\$177,475	\$2,667	\$174,807	0.02	n/a
Riverine Flooding	\$1,087,088	\$1,049,426	\$20,558	0.00	\$17,104
Strong Wind	\$5,959	\$3,268	\$2,688	0.00	\$4
Tornado	\$239,949	\$172,717	\$67,128	0.01	\$105

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	\$6,026,966	\$6,023,530	\$3,437	0.00	\$0
Winter Weather	\$12,770	\$423	\$12,347	0.00	\$0

Exposure Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	\$39,000,000	\$1,000,000	\$38,000,000	5.00	n/a
Coastal Flooding	--	--	--	--	--
Cold Wave	\$0	\$0	\$0	0.00	\$0
Drought	\$54,468,450	n/a	n/a	n/a	\$54,468,450
Earthquake	\$2,693,045,123,000	\$44,961,923,000	\$2,648,083,200,000	348,432.00	n/a
Hail	\$2,693,100,019,000	\$44,961,923,000	\$2,648,083,200,000	348,432.00	\$54,896,000
Heat Wave	\$491,345,185,461	\$8,332,022,257	\$483,009,221,221	63,553.84	\$3,941,983
Hurricane	--	--	--	--	--
Ice Storm	--	--	--	--	--
Landslide	\$821,942,894,910	\$15,518,935,445	\$806,423,959,464	106,108.42	n/a
Lightning	\$2,693,045,123,000	\$44,961,923,000	\$2,648,083,200,000	348,432.00	n/a
Riverine Flooding	\$59,009,186,854	\$1,108,187,152	\$57,893,637,469	7,617.58	\$7,362,233
Strong Wind	\$2,693,100,019,000	\$44,961,923,000	\$2,648,083,200,000	348,432.00	\$54,896,000
Tornado	\$2,693,100,019,000	\$44,961,923,000	\$2,648,083,200,000	348,432.00	\$54,896,000

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	\$222,410,294,781	\$3,971,627,564	\$218,430,014,003	28,740.79	\$8,653,213
Winter Weather	\$594,546,932,657	\$12,655,555,244	\$581,887,381,132	76,564.13	\$3,996,281

Annualized Frequency Values

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Avalanche	0.2 events per year	10	1960-2019 (60 years)
Coastal Flooding	--	--	--
Cold Wave	0 events per year	0	2005-2017 (12 years)
Drought	49 events per year	1,001	2000-2017 (18 years)
Earthquake	0.524% chance per year	n/a	2017 dataset
Hail	0.2 events per year	7	1986-2017 (32 years)
Heat Wave	0.3 events per year	35	2005-2017 (12 years)
Hurricane	--	--	--
Ice Storm	--	--	--
Landslide	0.1 events per year	10	2010-2019 (10 years)
Lightning	2.5 events per year	55	1991-2012 (22 years)
Riverine Flooding	0.9 events per year	22	1996-2019 (24 years)
Strong Wind	0.1 events per year	4	1986-2017 (32 years)
Tornado	0.1 events per year	3	1986-2019 (34 years)
Tsunami	--	--	--

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Volcanic Activity	--	--	--
Wildfire	0.590% chance per year	n/a	2016 dataset
Winter Weather	13.4 events per year	660	2005-2017 (12 years)

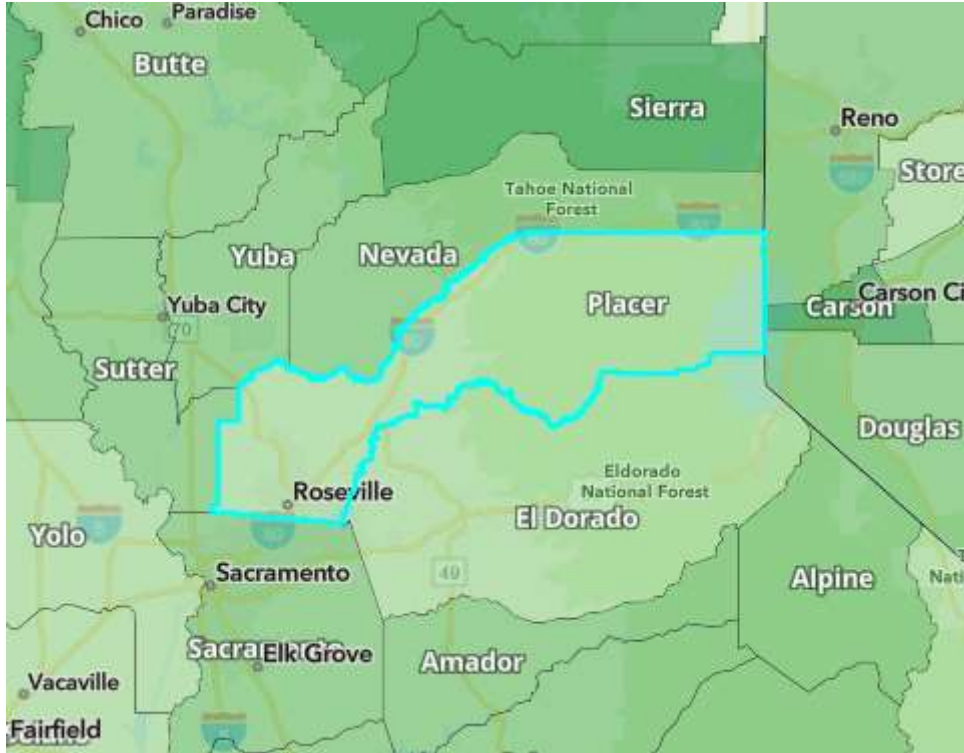
Historic Loss Ratios

Hazard Type	Overall Rating	Building Value	Population	Agriculture Value
Avalanche	Relatively Low	\$4.75 per \$1K	7.05 per 100	n/a
Coastal Flooding	--	--	--	--
Cold Wave	No Rating	\$3.04 per \$10M	1.85 per 1M	\$7.67 per \$1K
Drought	Very Low	n/a	n/a	\$4.62 per \$1K
Earthquake	Relatively Low	\$1.14 per \$1K	3.60 per 100K	n/a
Hail	Very Low	\$1.08 per \$100M	1.50 per 100M	\$2.27 per \$100K
Heat Wave	Very Low	\$2.55 per \$1B	4.71 per 100M	\$1.06 per \$10K
Hurricane	--	--	--	--
Ice Storm	--	--	--	--
Landslide	Very Low	\$2.00 per \$10K	2.87 per 1M	n/a
Lightning	Relatively Moderate	\$4.38 per \$100M	5.83 per 100M	n/a
Riverine Flooding	Very Low	\$1.03 per \$1K	3.87 per 10M	\$2.53 per \$1K
Strong Wind	Very Low	\$1.43 per \$1M	2.51 per 100M	\$2.06 per \$1M
Tornado	Very Low	\$2.73 per \$100K	1.80 per 10M	\$1.35 per \$100K
Tsunami	--	--	--	--

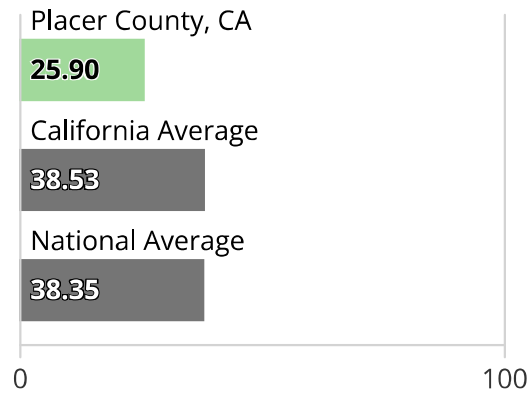
Hazard Type	Overall Rating	Building Value	Population	Agriculture Value
Volcanic Activity	--	--	--	--
Wildfire	Very Low	\$4.00 per \$10	4.12 per 1M	\$8.47 per \$10M
Winter Weather	Very Low	\$4.12 per \$1B	4.07 per 1B	\$2.44 per \$1T

Social Vulnerability

Social groups in **Placer County, CA** have a **Relatively Low** susceptibility to the adverse impacts of natural hazards when compared to the rest of the U.S.



Score **25.9**



10.9% of U.S. counties have a lower Social Vulnerability

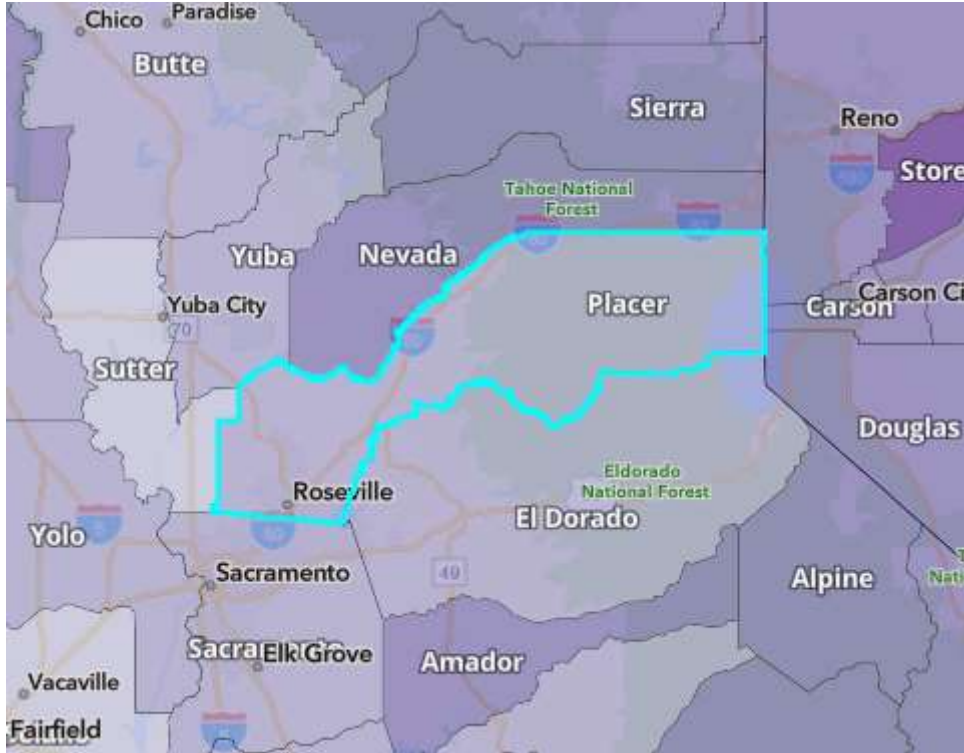
10.3% of counties in California have a lower Social Vulnerability

Social Vulnerability Legend

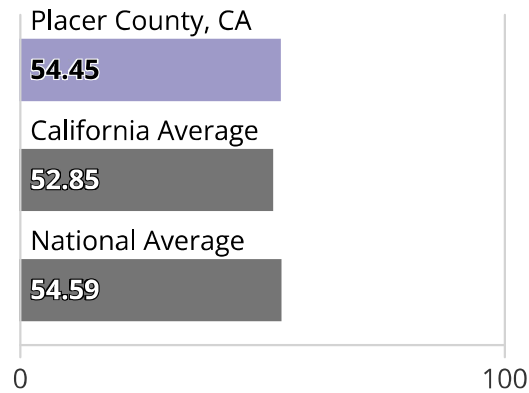
- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

Community Resilience

Communities in **Placer County, CA** have a **Relatively Moderate** ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.



Score **54.45**



52.4% of U.S. counties have a higher Community Resilience

15.6% of counties in California have a higher Community Resilience

Community Resilience Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

About the National Risk Index

The National Risk Index is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hail, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather.

The National Risk Index leverages available source data for Expected Annual Loss due to these 18 hazard types, Social Vulnerability, and Community Resilience to develop a baseline relative risk measurement for each United States county and Census tract. These measurements are calculated using average past conditions, but they cannot be used to predict future outcomes for a community. The National Risk Index is intended to fill gaps in available data and analyses to better inform federal, state, local, tribal, and territorial decision makers as they develop risk reduction strategies.

Explore the National Risk Index Map at hazards.fema.gov/nri/map.

Visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Calculating the Risk Index

Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability and Community Resilience:

$$\text{Risk Index} = \text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience}$$

Risk Index scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/determining-risk.

Calculating Expected Annual Loss

Expected Annual Loss scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios for 18 hazard types:

$$\text{Expected Annual Loss} = \text{Exposure} \times \text{Annualized Frequency} \times \text{Historic Loss Ratio}$$

Expected Annual Loss scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/expected-annual-loss.

Calculating Social Vulnerability

Social Vulnerability is measured using the Social Vulnerability Index (SoVI) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).

For more information, visit hazards.fema.gov/nri/social-vulnerability.

Calculating Community Resilience

Community Resilience is measured using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).

For more information, visit hazards.fema.gov/nri/community-resilience.

How to Take Action

There are many ways to reduce natural hazard risk through mitigation. Communities with high National Risk Index scores can take action to reduce risk by decreasing Expected Annual Loss due to natural hazards, decreasing Social Vulnerability, and increasing Community Resilience.

For information about how to take action and reduce your risk, visit hazards.fema.gov/nri/take-action.

Disclaimer

The National Risk Index (the Risk Index or the Index) and its associated data are meant for planning purposes only. This tool was created for broad nationwide comparisons and is not a substitute for localized risk assessment analysis. Nationwide datasets used as inputs for the National Risk Index are, in many cases, not as accurate as available local data. Users with access to local data for each National Risk Index risk factor should consider substituting the Risk Index data with local data to recalculate a more accurate risk index. If you decide to download the National Risk Index data and substitute it with local data, you assume responsibility for the accuracy of the data and any resulting data index. Please visit the [Contact Us](#) page if you would like to discuss this process further.

The methodology used by the National Risk Index has been reviewed by subject matter experts in the fields of natural hazard risk research, risk analysis, mitigation planning, and emergency management. The processing methods used to create the National Risk Index have produced results similar to those from other natural hazard risk analyses conducted on a smaller scale. The breadth and combination of geographic information systems (GIS) and data processing techniques leveraged by the National Risk Index enable it to incorporate multiple hazard types and risk factors, manage its nationwide scope, and capture what might have been missed using other methods.

The National Risk Index does not consider the intricate economic and physical interdependencies that exist across geographic regions. Keep in mind that hazard impacts in surrounding counties or Census tracts can cause indirect losses in your community regardless of your community's risk profile.

Nationwide data available for some risk factors are rudimentary at this time. The National Risk Index will be continuously updated as new data become available and improved methodologies are identified.

The National Risk Index Contact Us page is available at hazards.fema.gov/nri/contact-us.

HUMAN SERVICES

News & Updates

Accessing Services During COVID

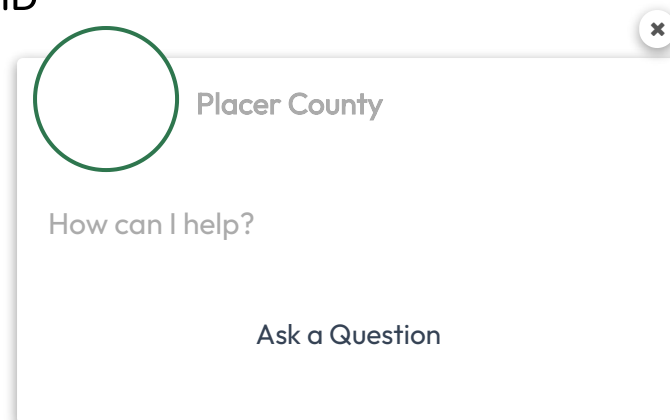
NEWS

Volunteers needed for tax assistance program

[Read on...](#)

CalFresh Recipients Impacted by Mosquito Fire

[Read on...](#)



Placer County

How can I help?

Ask a Question

The chatbot interface consists of a white rounded rectangle with a thin grey border. In the top right corner, there is a small grey circle containing a white 'x' icon. On the left side, there is a green circle. The text 'Placer County' is positioned to the right of the green circle. Below it, the text 'How can I help?' is displayed. At the bottom center, the text 'Ask a Question' is displayed.

[Options to Access Services](#)

Home Page

Your safety and the safety of our staff are important to us. All of our office locations are open to the public however, most of your needs can be met online or by phone. We appreciate your help to keep us all safe.

- You do not have to come into our office to apply for benefits.
- You can turn in your verifications online or in the drop boxes located in the front of our buildings 24 hours per day, 7 days per week.
- In-person assistance is available Monday through Friday if you are unable to use phone or online options.

For more information on Placer County's response to the COVID-19/Coronavirus please see the following page <https://www.placer.ca.gov/coronavirus>

To apply for benefits you may submit an application:

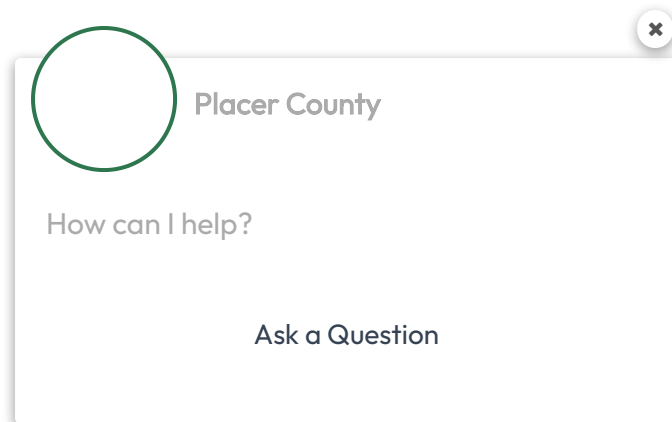
- Online-www.mybenefitscalwin.org
- By Fax- (916) 784-6100
- By Mail- P.O. Box 20400, Auburn CA 95604

To get general benefit information, ask case questions, or speak to an Eligibility Specialist, you may call our Call Center at:

1-888-385-5160

You may also use this number to:

- Request forms
- Request a new BIC or EBT card
- Get benefit information or a status update on your case
- Request an application for benefits
- Add someone to your case
- Change your address
- Help with your Mybenefits Calwin account



A chat widget for Placer County. It features a green circular icon on the left, the text "Placer County" in the top right, and a close button (an 'x' in a circle) in the top right corner. The main text reads "How can I help?" and there is a button labeled "Ask a Question" at the bottom right.

Select Language ▼

Human Services provides a variety of programs to help Placer County families and individuals have a better future through access to healthy nutrition, healthcare, affordable housing, and training and temporary assistance when times are difficult. We are dedicated to ensuring a better and healthy quality of life for the residents of Placer County. We strive to provide the highest quality of public service to meet the needs of Placer County families and single adults, veterans, seniors and persons with disabilities.

Healthcare
Coverage

Healthcare Coverage

Helps pay for health and medical care for children and families, seniors, and adults with disabilities. Find information about healthcare by going to [Covered CA, California's healthcare marketplace](#).



Food &
Nutrition
Assistance

The [Affordable Care Act](#) provides affordable medical coverage to adults. [Medi-Cal](#) provides medical, dental, vision and mental health care to eligible individuals and families at little or no cost. [Medical Care Services Program \(MCSP\)](#) provides medical services to adults that are not eligible to services through Medi-Cal or Medicare Expansion.

Cash
Assistance

Food & Nutrition Assistance

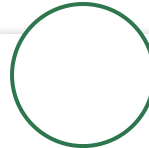
[CalFresh](#) - Food Stamps - formerly known as Food Stamps, provides monthly food benefits to assist low income households in purchasing the food they need. If you are finding it difficult to afford the nutritious food that you and your family needs, the CalFresh program may be able to help.

Housing
Assistance

[Women, Infants, and Children Program \(WIC\)](#) - WIC operates under the funded health and nutrition program for women, infants, and children.

Are you receiving Unemployment Insurance Benefits?

Here's a link to information about how to access your UI benefit payment in



Placer County

How can I help?

Ask a Question

Cash Assistance

[CalWORKs and Employment Services](#), provides time-limited cash aid and employment services that promote self-sufficiency for families with children. Employment Services can assist you in finding work through the [Business Advantage Network](#). Receive daily job leads and information on job fairs and recruiting events.

Select Language 

General Relief provides time-limited cash aid for those who do not have dependent children. You must apply in person at a Human Services office.

Cash Assistance Program for Immigrants (CAPI) is a 100 percent state-funded program designed to provide monthly cash benefits to aged, blind, and disabled non-citizens who are ineligible for SSI/SSP solely due to their immigrant status.

Housing Assistance

The Housing Choice Voucher Program, formerly known as the Section 8 Voucher Program, provides rental assistance to help low income families, persons with disabilities, and seniors live in affordable, safe, and decent housing.

Contact Us

Human Services

[Contact Human Services](#)

Mailing Address

P.O. Box 20400
Auburn, CA 95604

Phone: Toll free 1-888-385-5160

[Directory](#)

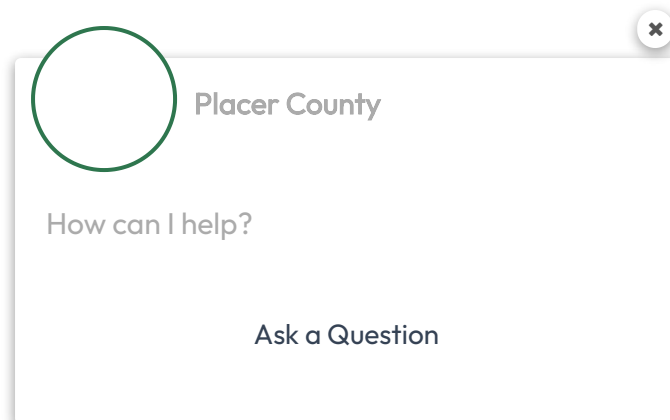
Human Services Office in Rocklin

Physical Address

1000 Sunset Boulevard
220

Rocklin, CA 95765

Select Language ▼



Placer County

How can I help?

Ask a Question

The chat widget features a green circular icon on the left, a close button (an 'x' in a circle) in the top right corner, and the text 'Placer County' in a grey font. Below the icon is the question 'How can I help?' and at the bottom is the button 'Ask a Question'.

Phone: 916-784-6000

Fax: 916-784-6100

Human Services Office in Auburn

Physical Address

11542 B Avenue
Auburn, CA 95603

Phone: 530-889-7610

Fax: 530-889-7608

Human Services Office in North Lake Tahoe

Physical Address

5225 N Lake Boulevard
Carnelian Bay, CA 96140

Phone: 530-546-1900

Fax: 530-546-1912

Calendar

Oct (October)

26

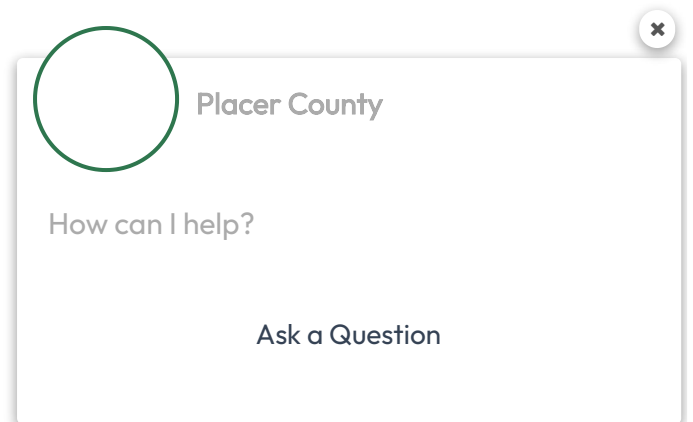
Nov (November)

23

Human Services Offices Closed

Human Services Offices Closed

Select Language ▼



Placer County

How can I help?

Ask a Question

The chat widget is a white rounded rectangle with a thin grey border. It features a green circular icon on the left side. In the top right corner, there is a small grey circle containing a white 'x' icon. The text 'Placer County' is displayed in a grey font, followed by 'How can I help?' and 'Ask a Question' in a black font.

More Community Resources



Tweets from @211Placer

211 Placer

@211Placer · Sep 30



The local Veterans Service Office will help you with any claim filed through it to the VA:

placer.ca.gov/1875/Veterans #PlacerVets



↻ 211 Placer Retweeted

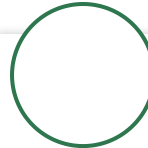

American Red Cross California Gold...

@ARCGoldCountry · Sep 26



[vious](#)

Select Language ▼

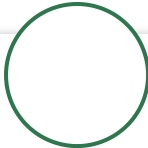


Placer County

How can I help?

Ask a Question


Select Language ▼



Placer County

How can I help?

Ask a Question



PM₁₀

CO₂

ROG

O₃

SF₆

NO_x

CO₂E

CH₄

N₂O

H₂O

CH₄

HFC

ROG

O₃

SF₆

NO_x

SF₆

NO_x

CO₂E

CH₄

PM₁₀

CO₂

ROG

O₃

SF₆

Chapter 1: Project Review & Analysis

Project Review & Analysis

1.1. What is CEQA?

The California Environmental Quality Act (CEQA), enacted in 1970, is the foundation of the environmental review of land use development in California. CEQA encourages the protection of all aspects of the environment (e.g., water quality, noise, land use, natural resources, transportation, energy, human health, and air quality) by requiring state and local agencies to prepare environmental impact analyses and to make decisions based on those studies' findings regarding the environmental effects of the proposed project and/or action. CEQA applies to projects undertaken by a government entity itself, or projects that are either funded by, or require an entitlement through a public agency that may cause either a direct physical change in the environment, or a reasonable foreseeable indirect physical change in the environment¹.

The agency with primary responsibility for the preparation of an environmental document is known as the **lead agency**. As defined by CEQA, a lead agency means the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment². Examples of possible "lead agencies" include state agencies, local city and county governments, local school districts, special districts, etc. During the preliminary review of a project, the lead agency must determine whether CEQA applies to the project being evaluated. A project is only subject to CEQA if it involves the exercise of an agency's discretionary powers, and falls within the definition of a "project" as defined by CEQA Guidelines³. If an action taken is considered a project under CEQA, some analysis must be done, but it could simply mean that the project requires a minimum level of review because it may qualify for an exemption.

A "CEQA project" means an activity/action which may have a potential to result in either a direct physical change or a reasonably foreseeable indirect change in the environment and will involve the exercise of a lead agency's discretionary powers.

Once an agency has determined that an action is considered a project and that it is not eligible for an exemption, the agency, in consultation with other relevant agencies, prepares a preliminary analysis, known as an Initial Study in order to determine the level of significance for a project's potential environmental impacts and what type of environmental document is needed. If the Initial Study concludes that the project may have a significant effect on the environment, an Environmental Impact Report (EIR) will be prepared; otherwise, a Negative Declaration or Mitigated Negative Declaration with mitigation measures will be prepared.

A lead agency is required to consult with some agencies, and is authorized to consult informally with other agencies depending on the lead agency's jurisdiction over resources affected by the proposed project⁴. The purpose of the interagency consultation is to ensure that all affected agencies have a voice in the process. For any given project many agencies and groups may be involved in the CEQA process as they serve in different roles for different projects. When determining whether to prepare an EIR, the lead agency is required to formally consult with responsible agencies, trustee agencies, and/or commenting agencies.

¹ California Public Resources Code §21065

² California Public Resources Code §21067

³ California Public Resources Code §15378

⁴ California Public Resources Code §21082.1

PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
CO₂
ROG
O₃
SF₆

A **responsible agency**, as defined by CEQA, means a public agency, other than a lead agency, which has responsibility for carrying out or approving a project⁵. An example of a responsible agency would be a local water district, fire district, air district, etc. which issues permits for specific approvals related to that agency's rules and requirements. Although most often the District is a commenting agency, it may act as a responsible agency when a project or a portion of a project is required to obtain a District operating permit. A **trustee agency** means a state agency that has jurisdiction by law over natural resources affected by a project which that are held in trust for the people of the State of California⁶. Examples of "trustee agencies" includes the State Department of Fish and Game, State Department of Parks and Recreation, etc.

Public agencies with jurisdiction by law over a specific natural resource area, but which do not fit into one of the three categories above are commonly known as **commenting agencies**. A commenting agency can be any state agency, board or commission, county, city, regional agency, public district, redevelopment agency, or other public agency defined by CEQA⁷. In most cases this is the role held by the District. Figure 1-1 shows the participants in the CEQA review process. The following section describes the District's role in the CEQA review process in more detail.



Figure 1-1: Participants in the CEQA Process

Under CEQA, lead agencies are encouraged to seek comments from responsible agencies along with any public agency that has jurisdiction by law over resources that may be affected by a land use project⁸. Local air districts in California were established by the California Health and Safety Code (HSC) as a public agency having primary responsibility for overseeing and regulating air pollution within a jurisdictional area⁹. To attain federal and state ambient air quality standards, California air districts implement certain regulations and programs for controlling air pollutant emissions from industrial and other emissions sources in order to improve air quality.

⁵ California Public Resources Code §21069
⁶ California Public Resources Code §21070
⁷ California Public Resources Code §21063
⁸ California Public Resources Code §21153
⁹ California Health and Safety Code §40000

The District has the responsibility of managing air quality within Placer County to protect and promote public health through education, regulation, voluntary emission reduction programs, and by funding activities that reduce air pollutants. The District believes that there is a nexus between air quality and how land is developed and utilized throughout Placer County. In order to fulfill this responsibility, the District takes an active role in the inter-governmental review process under CEQA to assist lead agencies with environmental review when a project would result in air pollutant emissions within Placer County.

1.2. Current Environmental and Regulatory Settings in Placer County

Environmental Setting

Placer County is located in northeastern California and covers approximately 1,500 square miles of diverse geography with elevations from 45 to over 6,000 feet between Sacramento County and the Nevada State border. Placer County is unique in that it is the only county which includes portions of three (3) different air basins: the Sacramento Valley Air Basin, the Mountain Counties Air Basin, and the Lake Tahoe Air Basin, as shown in Figure 1-2. Each air basin within Placer County has its own geographical and meteorological features.

Sacramento Valley Air Basin (SVAB)

The western part of Placer County is located within the Sacramento Valley Air Basin (SVAB), which is bounded by the coast ranges on the west and the Sierra Nevada Mountains on the east. The weather is characterized by hot, dry summers and mild, wet winters.

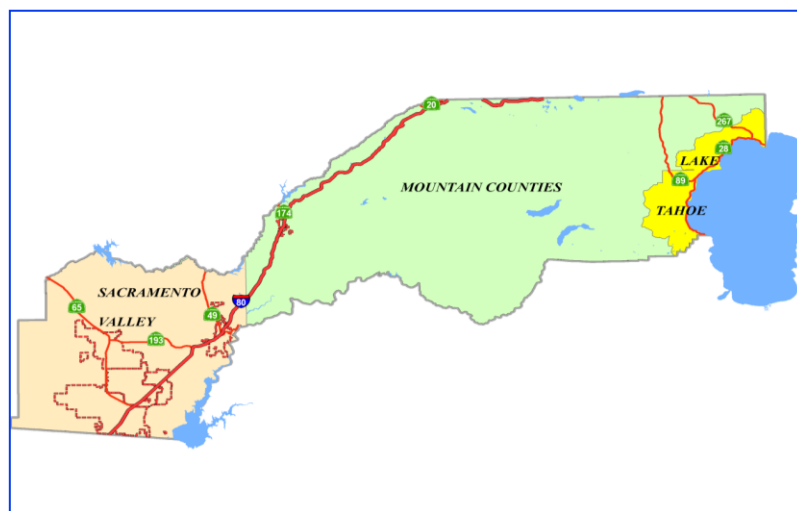
Mountain Counties Air Basin (MCAB)

The central part of Placer County is within the Mountain Counties Air Basin (MCAB). The MCAB includes the central and northern Sierra Nevada mountain range with elevations ranging from several hundred feet in the foothills to over 6,000 feet above mean sea level along the Sierra Crest. The MCAB generally experiences warm, dry summers and wet winters.

Lake Tahoe Air Basin (LTAB)

The eastern part of Placer County is within the Lake Tahoe Air Basin (LTAB). Lake Tahoe lies in a depression between the crests of the Sierra Nevada and Carson ranges on the California-Nevada border, with the mountains approximately 8,000-9,000 feet in height on average surrounding the Lake. The LTAB is shared between the states of California and Nevada. Because of its special geographical features, the LTAB develops its own special meteorological regime which is characterized by weak calm winds and a strong inversion layer. The LTAB generally has cooler, dry summers and cold, wet winters.

Figure 1-2: Placer County Air Basins



PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

PM₁₀

Ambient air quality in each air basin is generally determined by climatological conditions, the topography of the air basin, and the type and amounts of pollutants emitted.

CO₂

Regulatory Setting

The District has responsibility for controlling air pollution emissions including “criteria air pollutants” and “toxic air pollutants” from direct sources (such as factories) and indirect sources (such as land-use projects) to improve air quality within Placer County. To do so, the District adopts rules, regulations, policies, and programs to manage the air pollutant emissions from various sources. The District’s goal is to achieve and maintain the ambient air quality standards throughout Placer County. [APPENDIX A](#) summarizes the District’s rules and regulations that might be applicable to land use projects.

ROG

O₃

SF₆

NO_x

CO₂E

Ambient air quality standards are established to protect human health with an adequate margin of safety for the individuals in our communities. The United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have set standards for allowable levels of criteria pollutants’ concentrations in the air. Typically, the standards established by U.S. EPA are referred to as the federal standards ([National Ambient Air Quality Standards](#), or NAAQS) and the standards established by CARB are referred to as the state standards ([California Ambient Air Quality Standards](#), or CAAQS). Air monitoring data gathered from either the state or local air monitoring networks helps determine if an area attains or violates a particular air quality standard.

CH₄

N₂O

H₂O

CH₄

A nonattainment area is an area where the measured air pollutant’s concentration is above either the federal and/or state ambient air quality standards. Depending on the level of severity, a classification will be designated to a nonattainment area. Table 1-1 shows the current attainment/nonattainment status for the federal and state air quality standards for the three air basins in Placer County. Portions of Placer County are within the Sacramento federal nonattainment area for ozone and PM2.5. The District works with the other local air districts within the Sacramento area to develop the regional air quality management plan. The Sacramento regional air quality management plan is a part of the State Implementation Plan (SIP) which describes and demonstrates how the Sacramento Region proposes to attain the federal air quality standards. One of the proposed mitigation strategies in the SIP is to recommend and implement mitigation measures through the review of local land use projects.

HFC

ROG

O₃

SF₆

NO_x

SF₆

NO_x

CO₂E

CH₄

PM₁₀

Ozone

The Sacramento area has been designated as nonattainment for the 2008 federal 8-hour ozone standards (0.075 ppm). Currently, the District, as well as the other air districts within the Sacramento regional ozone nonattainment area, are working on the plan which describes and identifies mitigation strategies on how the Sacramento area can attain the federal 2008 8-hour ozone standard with an attainment deadline in 2026. On October 1, 2015, U.S. EPA lowered the 8-hour ozone standard to 0.070 ppm. Based on this revised standard, a new area classification with attainment deadline will be given to the Sacramento area and another ozone SIP will be prepared for this revised standards.

CO₂

ROG

O₃

SF₆

What is a SIP?

- A State Implementation Plan (SIP) is a comprehensive plan required by the federal Clean Air Act that describes how a nonattainment area will attain national ambient air quality standards by the specific deadline.
- The SIP includes development of a baseline emission inventory, computer modeling analysis, evaluation of the federal, state and local regulations, mitigation commitments, and an attainment demonstration.
- The SIP which is prepared by local air districts needs to meet the statutory deadlines for the submittal to CARB and the U.S. EPA for review and approval.
- All of the SIP mitigation commitments are valid until fully implementation.

Table 1-1: Ambient Air Quality Standards & Area Designations

Ambient Air Quality Standards & Designations									
Pollutants	Average Time	State Standards	State Attainment Status			Federal Standards	Federal Attainment Status		
			S V A B	M C A B	L T A B		S V A B	M C A B	L T A B
Ozone	1 hr	0.09 ppm	N	N	A	None	--	--	--
	8 hr	0.070 ppm	N	N	N	0.070 ppm*	N**	N**	U**
Particulate Matter PM ₁₀	24 hr	50 ug/m ³	N	N	N	150 ug/m ³	A	A	A
	Annual	20 ug/m ³	N	N	N	None	--	--	--
Fine Particulate Matter PM _{2.5}	24 hr	None	--	--	--	35 ug/m ³	N	U	U
	Annual	12 ug/m ³	A	U	A	12 ug/m ³	A	U	U
Carbon Monoxide (CO)	1 hr	20 ppm	A	U	A	35 ppm	A	A	A
	8 hr	9 ppm	A	U	A	9 ppm	A	A	A
	Tahoe 8 hr	6 ppm	--	--	A	None	--	--	--
Nitrogen Dioxide (NO ₂)	1 hr	0.18 ppm	A	A	A	100 ppm	U	U	U
	Annual	0.030 ppm	A	A	A	0.053 ppm (100 ug/m ³)	A	A	A
Sulfur Dioxide (SO ₂)	1 hr	0.25 ppm	A	A	A	0.075 ppm (196 ug/m ³)	A	A	A
	24 hr	0.04 ppm	A	A	A	0.14 ppm	A	A	A
	Annual	None	A	U	A	0.030 ppm	A	A	A
Lead	30 day average	1.5 ug/m ³	A	A	A	None	--	--	--
	Calendar Quarter	None	--	--	--	1.5 ug/m ³	A	A	A

*U.S. EPA revised the 8-hour ozone standard from 0.075 to 0.070 ppm on October 1, 2015.

**The attainment status is based on the 2008 8-hour ozone standard (0.075 ppm).

Attainment status: A= Attainment, N=Non-Attainment, U=Unclassified

PM_{2.5}

The Sacramento area was designated as nonattainment for the federal 24-hour PM_{2.5} standard in 2009. Because of regional collaborative efforts, the Sacramento area's local air districts were able to submit a clean data finding report to the U.S. EPA in May 2012, and were issued an attainment determination by U.S. EPA for the Sacramento PM_{2.5} nonattainment area in 2013.

According to the attainment determination made by U.S. EPA in 2013, the Sacramento area should submit the formal area redesignation request and implementation/maintenance plan to U.S. EPA for final approval. This plan is different than the Sacramento Regional Ozone SIP. It requests the U.S. EPA to redesignate the Sacramento federal PM_{2.5} nonattainment area as attainment based on the clean data verification and provides the demonstration that the Sacramento area will continue to maintain the attainment status for next 10 years.

The draft implementation/maintenance plan was approved by each air district within the Sacramento area in 2014. However, the U.S. EPA suspended the review of the locally approved plan due to a unique weather pattern which occurred in December 2013 that resulted in increased PM_{2.5} readings at various monitoring stations within the nonattainment area. Currently, the local air districts are working with CARB to revise the existing

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implementation/maintenance plan based on the latest 3 year PM_{2.5} monitoring data from the region.

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More information regarding the federal and state ambient air quality standards, air monitoring data in California, area designation, and regional air quality plans can be found at the following websites:

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- ✓ The most current state and federal air quality standards are available at: <http://www.arb.ca.gov/research/aqgs/aqgs2.pdf> (updated 5/4/16).
- ✓ The current area designations for the federal and state ambient air quality standards are available at: <https://www.arb.ca.gov/desig/adm/adm.htm>.
- ✓ CARB's AQMIS (Air Quality and Meteorological Information System) for air monitoring data is available at: <https://www.arb.ca.gov/aqmis2/aqmis2.php>.
- ✓ CARB iADAM: air quality statistics are available at: <https://www.arb.ca.gov/adam/index.html>.
- ✓ More information regarding the Sacramento Regional Air Quality Plan can be found at: <http://www.airquality.org/air-quality-health/air-quality-plans/federal-planning>

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1.3. The Role of the District in CEQA

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The District is responsible for improving air quality within Placer County by assisting lead agencies in the review of land development proposals which have the potential to result in direct or indirect adverse air quality impacts and are subject to CEQA. Air quality impacts, from vehicle and fuel combustion activities, could potentially result in substantial air pollutant emissions which would hinder the District's efforts in attaining and maintaining the Federal and State ambient air quality standards. Other air quality impacts, such as those associated with greenhouse gases, odors, and special health related impacts, are also considered during the environmental review process for a project.



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As a commenting agency, the District receives environmental documents such as Notice of Preparation (NOP), Mitigated Negative Declaration (MND), Draft Environmental Impact Report (DEIR), or Final Environmental Impact Report (FEIR) prepared by lead agencies for land use projects. The District reviews and, when necessary, comments on these environmental documents, regarding the analysis and discussion related to potential air quality impacts from land use projects. If requested by the lead agency, the District may also provide informal comments on an Administrative Draft Environmental Impact Report (ADEIR). This Handbook's primary focus is on the District's role as a commenting agency for land use projects.

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In addition to being a commenting agency, the District may act as a responsible agency when a project or a portion of a project is required to obtain an operating permit from the District. For example, if a proposed discount superstore has a gasoline service station as part of the proposal, an Authority to Construct/Permit to Operate would be required by the District; thus the District would then be considered a responsible agency during the review process.

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Although rare, in some cases the District may act as a lead agency. The District may decide to change its CEQA role from a responsible agency to a lead agency if (1) the primary lead agency fails to prepare an environmental analysis for air quality impacts as required under CEQA, (2) the District determines that a subsequent EIR is required to further evaluate the

project's related air quality impacts, (3) the District determines that the air quality impacts' conclusion written for an adopted/certified environmental document was inadequate, or (4) if a Special District or City or County agree that the District should be the primary lead agency for a particular project.

It is important to note that when the District acts as a commenting agency, the District's comments made during the environmental review process are **recommended** to the lead agency. It is the lead agency's responsibility to incorporate all, some, or none of the District's recommendations on any given project.

1.4. Early Consultation

The District encourages local jurisdictions and project applicants to address air quality impacts as early as possible in the planning process. Addressing land use and site design issues while a proposed project is still in the conceptual stage increases the opportunities to incorporate design features that minimize land use compatibility issues and air quality impacts before significant resources (public and private) have been devoted to the project. By the time a project completes the initial study process, it is usually more costly and time-consuming to redesign and incorporate mitigation measures. Early consultation may be achieved by including a formal step in the jurisdiction's development review procedures or by simply discussing air quality concerns by making an initial contact with the District regarding the proposed development.



The following considerations may warrant particular attention during early consultation between lead agencies and project proponents:

- Special land use and design features that could provide alternatives to motor vehicles, fuel consumption, as well as energy conservation to reduce project related emissions;
- Land use zoning conflicts and exposure of sensitive receptors to odors, toxics and criteria pollutants;
- Permit requirements from applicable federal, state and special districts, including potentially the District itself; and
- Special analysis needed to identify feasible mitigation.

1.5. Preferred Project Information Needed for District Review

Early consultation with the District can ensure that the CEQA document adequately addresses air quality issues. In order to facilitate the District's review of the proposed project, the following information should be provided:

- Detailed project description;
- Written document such as an air impact analysis report or a chapter of air quality impacts within the environmental document;
- Modeling outputs if available, for both construction and operational phase emissions (criteria pollutants and greenhouse gas (GHG)) with different seasons (summer, winter, and annual);
- List of mitigation measures proposed by the project;

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- Any relevant environmental documents previously associated with a project, including any previously prepared Initial Studies, NDs, MNDs, EIRs, etc.; and
- Other technical analyses that relate to air quality, including but not limited to traffic analysis, growth impact projections, land use elements, maps, health risk assessments, sensitive receptor locations etc.

1.6. Types of Projects Generally Subject to Air Quality Analysis

The lead agency can forward any project which is subject to CEQA to the District for review. In general, it is recommended that any proposed project which would result in **short-term construction and/or long-term operational criteria pollutants and GHG emissions**, as discussed in this Handbook, be submitted to the District for review. The District will assist the lead agency to prepare the appropriate analysis in order to determine the level of significance on air quality impacts, and recommend feasible mitigation measures if needed.

- ✓ See [CHAPTER 2](#) for further detail on significance thresholds.
- ✓ See [CHAPTER 3](#) for further detail on construction emissions.
- ✓ See [CHAPTER 4](#) for further detail on operational criteria pollutant emissions.
- ✓ See [CHAPTER 5](#) for further detail on operational GHG emissions.
- ✓ See [CHAPTER 6](#) for further detail on special concerns.

Types of projects generally subject to Air Quality Analysis include:

- General Plan Updates and Amendments
- Specific Plans
- Use Permits
- Tentative Subdivision/Parcel Maps
- Design Reviews (i.e., tiered from a previously approved specific plan)
- Public Works Projects
- Clearing or grading of land
- Improvements to existing public structures
- Enactment and amendment of zoning ordinances

1.7. District Process in Reviewing a Project

The vast majority of CEQA documents that are reviewed by the District staff are done under the District's role as a "commenting agency". Figure 1-3 shows the steps summarizing the District's internal process as a commenting agency. More detailed discussion for each step is described in the following chapters.



Figure 1-3: District Steps in Reviewing Land Use Projects

Step 1: Reviewing Project Information

When the District receives an environmental document or an application forwarded by the lead agency for a proposed project, the District starts with an evaluation of it for potential air quality impacts. Potential impacts that should be considered during the initial review typically include summarizing existing air quality conditions and regulatory requirements within the planning area, identifying emission sources associated with the project, and/or

verifying any potential conflicting neighboring land uses. The initial review will also consider all phases of project planning, construction and operational impacts, as well as cumulative impacts.

Step 2: Evaluating Air Quality Analysis

An air quality analysis for a project, which uses the project's specific data and appropriate computer model, is the key foundation in identifying the project's related air quality impacts and in determining the impact conclusions. When there is the potential for a proposed project to generate substantial amounts of criteria pollutants emissions, a computer model can be used to estimate the project's related air pollutant emissions. District staff reviews the modeling results, provided by the lead agency, to verify that the project's air quality impacts analysis has been done appropriately.

When reviewing the project's modeling results, District staff evaluate the associated sections or chapters of the environmental document (e.g., project description, land use, traffic analysis, and utility usage projection) to verify if the appropriate modeling settings are consistent with the project's proposals and modeling results along with any environmental conclusions that are based on those results. District staff also verify that the modeling analysis has included all of the emission sources associated with the project, the feasible mitigation measures for the project, and the neighboring land uses which should be considered. In some cases, District staff may, at their discretion, prepare an internal modeling analysis, for the project under review, to further assist in refining the analysis provided from the lead agency.

If the preliminary information received from the lead agency is not complete or not sufficient to evaluate the project's air quality analysis, the District may request that the lead agency obtain additional information from the applicant. If the additional requested information is not received, then the District will not be able to review the project. In such cases, the District may notate this in their comments on the project.

Please note that District staff recommend that consultants contact the District in advance regarding the special model setting requirements and assumptions used for their project's air quality impact analysis.

Step 3: Analyzing Air Quality Impacts

Air pollutant emissions from the modeling results are compared to the thresholds of significance, selected by the lead agency, to determine the significance for project related construction, operational, and cumulative impacts of criteria pollutants as well as GHG impacts. Since the District's Board adopted the CEQA significance thresholds for criteria pollutants and GHG in October 2016, the District recommends that lead agencies, within Placer County, consider using the adopted significance thresholds for new projects subject to CEQA. The District also recognizes that any thresholds adopted and used by a lead agency pursuant to CEQA Section 15064.7 (b)(c) can be used to determine the project's air

What information should be included in a modeling analysis?

A modeling analysis for a project should be based on the project's specific information including, but not limited to:

- Proposed location and special project design features;
- Proposed timeframes for construction and operation;
- Reasonable modeling assumptions with supporting citations;
- Description of energy source providers, land use and climate zone settings applicable to the project area; and
- Consistency with project specific data (e.g., VMT from the project's traffic study or water usage from the project's water study).

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quality impacts. For more information and discussion on the District's significance thresholds, please see [CHAPTER 2](#).

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The District recommends against using any measures that are implemented to comply with federal, state, and the District's rules and regulations as mitigation measures to mitigate the project's air quality impacts. Federal, state, and the District's regulatory compliance should be part of the project's baseline conditions to determine the project's related emissions before mitigation. It is at the lead agency's discretion as to whether that the local jurisdiction's rules and regulations are reflected within the project's related emissions, either before or after mitigation, in the modeling analysis results. [APPENDIX A](#) summarizes the District's rules and regulations which may be applied to the land use projects.

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If the modeling results from an appropriately conducted analysis show that the project-related emissions after regulatory compliance will be less than the significance thresholds, no mitigation measures would be required and a less-than-significant conclusion can be determined by the lead agency. If the modeling results demonstrate that the project-related emissions would exceed the thresholds, the project related air quality impacts may be potentially significant and mitigation measures should be implemented to mitigate air quality impacts.

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Step 4: Identifying Mitigation Measures

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Mitigation measures should be proposed when project related emissions are determined to exceed the significance thresholds. Proposed mitigation measures will be evaluated to determine if the project related emissions can be mitigated to below the significance thresholds. The District may assist the lead agency in evaluating if the proposed mitigation is sufficient enough to demonstrate that the project related emissions can be mitigated below the significance thresholds. If it appears that the proposed mitigation is not sufficient to mitigate the emissions below the significance thresholds, the District will recommend to the lead agency the identification of additional on-site measures, or participation in the District's Off-Site Mitigation Program. More information on the District's Off-Site Mitigation Program can be found at the District website.

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- ✓ PCAPCD Off-site Mitigation Program. <http://www.placerair.org/landuseandceqa>

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NOTE: When identifying mitigation measures, it is the District's recommendation that the lead agency should consider **all feasible on-site measures** first, then the off-site mitigation measures if there are insufficient feasible on-site mitigation measures to mitigate the project's related air quality impacts to the less-than-significant level.

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- ✓ See [APPENDIX C](#) for construction mitigation measures;
- ✓ See [APPENDIX E](#) for criteria pollutant operational mitigation measures; and
- ✓ See [APPENDIX F](#) for GHG operational mitigation measures.

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Step 5: Preparing District's Response

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After the review, District staff may provide a comment letter to the lead agency. The letter will summarize the District's findings, issues found, and any recommendations regarding the air quality analysis, conclusion determination, or mitigation measure identification. This may assist the lead agency in refining its air quality impact analysis or identifying further reductions of potential air quality impacts associated with a project.

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Please note that the District may not respond to every application received from the lead agency if the District has no comment on the application. Many times, the District may have no comment on an application when it is determined as "Categorically Exempt" by the lead agency or an application for minor use permit, variance, and design review.

1.8. Additional Analysis in Environmental Documents

Additional analyses may be recommended by the District when the proposed project may result in potential special impacts and need further evaluation. More detailed discussion for the analyses of special project impacts can be found in [CHAPTER 6](#).

Depending on the proposed project, stationary source(s) may be included in which the associated emissions should be estimated. The most appropriate emission factors should be used to calculate the potential emissions from the proposed stationary sources. U.S. EPA document AP-42 "[Compilation of Air Pollutant Emission Factors](#)" would be one of the reference sources for emission factors. If there is an existing stationary source involved, please contact the District for the current permit requirements. Please note that the emission calculation for the existing stationary source should be the actual emissions, not the potential maximum emissions on permits.

A project with the potential to emit toxic or hazardous air pollutants, including diesel exhaust, and that would be located in close proximity to sensitive receptors, may result in potential health impacts due to an increase of toxic emissions which could raise the cancer and acute non-cancer risk on the affected population, even at very low levels of emissions. Such projects will have recommendation to prepare a health risk assessment to determine the potential level of risk associated with their operations. The District should be consulted on any project with the potential to emit toxic or hazardous air pollutants. Pursuant to the requirements of California HSC Section 42301.6 (AB 3205) and Public Resources Code Section 21151.8, subd. (a)(2), any new school site or any proposed industrial or commercial project site located within 1000 feet of a school should be referred to the District for review.

CARB has developed an [Air Quality and Land Use Handbook](#) which provides recommendations regarding the siting of new land uses involving sensitive receptors/groups¹⁰ near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities¹¹. These sources may raise the health risk on proposed sensitive receptors to an unacceptable level due to their toxic air contaminants emissions. If a proposed project is located in close proximity to any of these sources, a health risk screening and/or assessment should be performed to assess the potential risk on sensitive receptors within the development. The California Air Pollution Control Officers Association (CAPCOA) developed a [Health Risk Assessments for Proposed Land Use Projects Guidance](#) to assist lead agencies in assessing the health impacts of toxic contaminants. To further address and reduce the air pollution impacts from nearby roadways, CARB released a [Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways Guide](#) to provide mitigation strategies that land use planners can use to provide guidance on protecting public health in developments when they are close to freeways.

- ✓ [CARB Air Quality and Land Use Handbook](#)
- ✓ [CAPCOA Health Risk Assessment Guidance](#)
- ✓ [CARB Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways Guide](#)

Naturally-occurring asbestos (NOA), is often found in ultramafic or serpentine rock formations, and is present in several foothill areas of Placer County. When this material is disturbed asbestos fibers may be released, becoming airborne, and thereby creating a potential health hazard. The project should identify, in the environmental document, if it is located in areas where ultramafic or serpentine rock formations are most likely found. District NOA maps show where ultramafic or

¹⁰ <https://www3.epa.gov/region1/eco/uep/sensitivereceptors.html>

¹¹ Please see CARB Air Quality and Land Use Handbook Table 1-1 on page 4. <https://www.arb.ca.gov/ch/handbook.pdf>

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serpentine rock formations could be found in Placer County. A Naturally-Occurring Asbestos Dust Mitigation Plan (ADMP) will need to be developed to comply with the requirements listed in the CARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations if the project is located in a map area where NOA is most likely to be found or if ultramafic rock or serpentine rock are found on the project site. The ADMP guidance can be reviewed on the District's website.

- ✓ [Placer NOA Maps](#)
- ✓ [Placer ADMP guidance](#)
- ✓ [CARB Asbestos ATCM](#)

If it is determined by the lead agency that an EIR is the appropriate environmental document then it should include a range of alternatives to the proposed project that could effectively minimize air quality impacts. Please note that air quality impacts associated with any "Alternatives" in a DEIR could be analyzed on a *qualitative* basis, while the proposed project (*i.e.*, Preferred Alternative) could be reviewed on a *quantitative* basis. All calculations and assumptions used should be fully documented in an appendix in the DEIR. The District recommends that the EIR consultant contact District staff if additional information or guidance is needed.

1.9. Use of a Previously Certified EIR

Tiering is defined as, "using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan, specific plan, or a policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the *general discussions* from the broader EIR; and concentrating the later EIR or negative declaration *solely on the issues* specific to the later project."¹² If a project is tiering the previous certified EIR, the lead agency should require the project to implement mitigation measures which were identified by the previous certified EIR in order to mitigate air quality impacts. However, the previous certified EIR could be outdated due to the time lag between its environmental analysis and newer more restrictive ambient air quality standards as well as emission analysis model updates. Mitigation measures initially identified in the previous certified EIR may be outdated or infeasible making them insufficient to offset the project's related air quality impacts in today's environment. If that is the case, an addendum, supplement or subsequent environmental document should be required for the new project to satisfy CEQA¹³.

The District will assist lead agencies in reviewing the projects that propose tiering of a previously certified EIR to determine whether or not the previously certified EIR adequately addresses all pertinent air quality issues.

1.10. Baseline Considerations

The Baseline is one of the elements for evaluating a project under CEQA. Although there is no precise definition in statute or guidelines, the description of the "Environmental Setting" under the CEQA Guidelines could be used as guidance on how to determine the baseline for a project: "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no

¹² CEQA Guidelines §15152
¹³ CEQA Guidelines §15152 (f)

notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective.¹⁴

The District recommends that the “physical environmental conditions” for a land use project should be considered whether or not there is an existing activity/operation which occurred on the planning area that generated air pollution. For example, a hotel innovation project may involve a boiler or generator which are currently operated by the hotel. Its operation will be considered as the existing physical conditions for the proposed project. Another case could be an amendment of a specific plan or general plan that has the vehicle miles traveled (VMT) from existing residential and commercial activities. The VMT from the existing motor vehicle operation is considered with the physical conditions for the proposed amendment. Several court cases with various opinions have made this topic complicated. The District is available to assist lead agencies to identify the appropriate baseline for the project's related air quality impact determination.

¹⁴ CEQA Guidelines §15125 (a)

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Chapter 2: Thresholds of Significance

Thresholds of Significance

2.1. Significance Thresholds for CEQA Projects

Thresholds of Significance are used to determine if a land use project's construction and/or operational emissions would result in potential air quality impacts. CEQA encourages each public agency to develop and publish thresholds of significance to use in the determination of significance of environmental effects. The development of the thresholds of significance should be supported by substantial scientific evidence.

On October 13, 2016, the District's Board of Directors adopted the [Review of Land Use Projects under CEQA Policy](#) (Policy).

The Policy established the thresholds of significance for criteria pollutants as well as greenhouse gases (GHG). In setting these thresholds, the District considered the health-based air quality standards, strategies for attaining air quality standards, historical CEQA project review data in Placer County, statewide regulations to achieve emission reduction targets for GHG, and Placer County's special geographic and land use features.

The District recommends that lead agencies, within Placer County, consider using the District's adopted thresholds for determining the significance of criteria pollutants and GHG impacts from new projects subject to CEQA. The lead agency can adopt its own significance thresholds pursuant to CEQA Section 15064.7 (b)(c) and the District will recognize and use them in the CEQA review process.

Factors to Consider

- Direct effects
- Reasonably foreseeable indirect effects
- Expert disagreement
- "Considerable" contribution to cumulative effects
- Special thresholds for historical and archaeological resources

2.2. District Adopted Significance Thresholds for Criteria Pollutants

Placer County is located within the Sacramento Federal Ozone Nonattainment Area (SFONA) – an area where the air quality does not currently meet the federal 8-hour ozone standard. This standard was established by U.S. EPA, as a requirement of the federal Clean Air Act, to adopt standards for pollutants harmful to public health and the environment.

It is the District's position that any "nonattainment designation" based on the federal or state air quality standards is a significant air quality environmental issue since all sources in the area, including direct and indirect sources, contribute emissions that result in air quality deterioration. Therefore, the nonattainment status should be addressed in environmental documents within the CEQA process as a basis to establish thresholds of significance. The questions which evaluate air quality impacts on the CEQA Guideline's "Environmental Checklist Form"¹⁵ affirms this position.

The District has concluded that there is a direct nexus between "direct" emissions from stationary sources and "indirect" emissions associated with land use sources, where the emissions from a stationary source are no different than the emissions from a land use project. It is indistinguishable if the pollution is emitted by a stationary facility, or land use project vehicle activities. The impacts from either one or both sources influences the region's ability to attain health-based air quality standards.

Historically, the District has applied its new source review (NSR) rule requirement as the recommend significance thresholds for criteria pollutants under the CEQA review program. The NSR rule requires stationary sources to offset emissions when they emit pollutants in excess of the

15 CEQA Guideline Appendix G "Environmental Checklist Form", Section III-Air Quality question (c). http://resources.ca.gov/ceqa/guidelines/Appendix_G.html

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identified emission offset threshold requirements which are based on the nonattainment classification for the air quality standards. The current emission offset thresholds of 10 tons per year (or 55 pounds per day) for ROG and NOx and 15 tons per year (or 82 pounds per day) for PM10 are required by District Rule 502¹⁶. These offset requirements are the most stringent of both the federal and state regulations. This is the foundation of the criteria pollutant's significance thresholds for CEQA projects within Placer County. Please note that the unit of pounds per day will be referred to as lbs/day in the following discussion.

The District evaluated the current regional goal to attain the federal and state ambient air quality standards, the CEQA projects reviewed by the District over the last thirteen years (2003-2015), and the CEQA significance thresholds adopted by other air districts in the Sacramento area. District staff was able to demonstrate that the NSR emission offset requirements are appropriate in addressing the potential air quality impacts from new land use projects in Placer County.

The detailed analyses and justification report can be found at <http://www.placerair.org/landuseandceqa/ceqathresholdsandreviewprinciples>. Table 2-1 shows the construction phase project-level, and cumulative-level significance thresholds, adopted by the District, related to the air quality impacts of construction and operational emissions associated with land use projects.

Table 2-1: PCAPCD Significance Thresholds for Criteria Pollutants

Construction Phase Project-Level			Operational Phase Project-Level			Operational Phase Cumulative-Level		
ROG	NOx	PM10	ROG	NOx	PM10	ROG	NOx	PM10
(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)
82	82	82	55	55	82	55	55	82

Table 2-2 presents the approximate size of a project for selected land use categories which would result in NOx operational emissions equal to the threshold of 55 lbs/day. The detailed modeling scenario assumptions, settings, and modeling outputs are presented in the [PCAPCD Threshold Justification Report Appendix B](#). This table serves as the preliminary screening methodology and it does not include ROG operational emissions. It may be used in place of an air quality analysis with appropriate discussion to determine the level of significance for a project's air quality impacts. Please note that, depending on the location of the project as well as the project's proposed land use categories, design features, and buildout year, different conclusions may be reached other than the ones shown in Table 2-2.

Table 2-2: Corresponding Size of a Project for 55 lbs/day of NOx Emissions

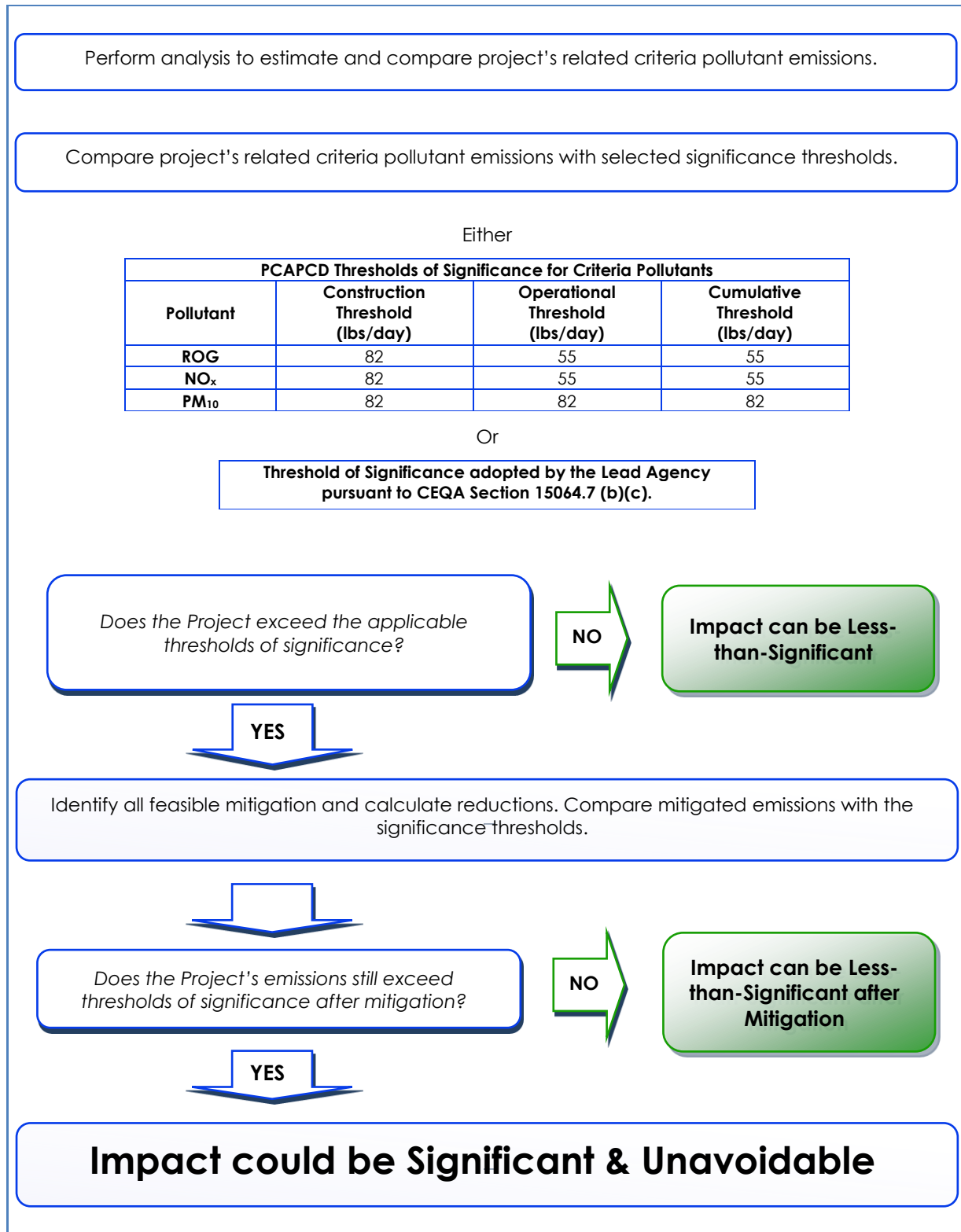
Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
617	868	911	249,099	648,661	894,262

16 PCAPCD Rule 502 New Source Review Section 303.1 Emission Offset Requirements <http://www.placerair.org/~media/apc/documents/rules/reg%205/rule502newsourcereview.pdf?la=en>

2.3. Significance Determination for Criteria Pollutant Impacts

Figure 2-1 represents the general steps for evaluating and determining the level of significance for a project's related air quality impacts.

Figure 2-1: Significance Determination Flowchart for Criteria Pollutants



PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

2.4. District Adopted Significance Thresholds for Greenhouse Gases

On June 1, 2005, Governor Arnold Schwarzenegger issued Executive Order S-3-05¹⁷. Although it was not included in state law, Executive Order S-3-05 set an ultimate goal for California to reduce GHG emissions to 80 percent below 1990 levels by 2050.

The California Global Warming Solutions Act (AB32) signed into law in September 2006, required statewide GHG emissions to be reduced to 1990 levels by 2020¹⁸. AB32 established regulatory, reporting, and market mechanisms to achieve this goal and provide guidance to help attain quantifiable reductions in emissions efficiently, without limiting population and economic growth. CARB is the state agency primarily responsible for implementing AB32. In order to implement AB32, CARB adopted a Scoping Plan in 2008¹⁹ that outlined actions necessary to reduce statewide GHG emissions. The Scoping Plan estimated that California would need to reduce emissions by 29 percent from a “business as usual” scenario to achieve AB32 emission reduction goals.

With the enactment of Senate Bill (SB) 97, California’s lawmakers identified the need to analyze greenhouse gas emissions as a part of the CEQA process. The Office of Planning and Research (OPR) amended the CEQA Guidelines to include the analysis and mitigation of GHG emissions, which became effective on March 18, 2010²⁰. Even in the absence of adopted CEQA thresholds for GHG emissions, lead agencies are required to analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.

Senate Bill (SB) 32 was signed by Governor Jerry Brown, on September 8, 2016, to establish a California GHG reduction target of 40 percent below 1990 levels by 2030²¹. California is on track to meet or exceed this current target, as established in the California Global Warming Solutions Act of 2006 (AB 32). This new emission reduction target will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050.

To develop the GHG significance thresholds, the District considered the following factors: 1) the significance thresholds adopted by the other air districts, 2) the CEQA projects reviewed by the District over the last 13 years, 3) the applicable statewide regulatory requirements required by 2030, and 4) the special geographic features in Placer County. The District’s adopted GHG significance thresholds include three components: 1) Bright-line Thresholds of 10,000 metric tons (MT) of carbon dioxide equivalent per year (CO₂e/yr), 2) Efficiency Matrix for residential and non-residential development, and 3) De Minimis Level for the operational phase of 1,100 MT CO₂e/yr).

Table 2-3 shows the District’s adopted Bright-line thresholds for different projects’ construction phase and the stationary source projects’ operational phase GHG emissions. The Bright-line threshold is the point at which a project would be deemed to have a cumulatively considerable²² contribution to global climate change. Table 2-4 shows the adopted 3-tier significance thresholds for the land use operational phase GHG emissions. Detailed technical analyses for the GHG significance threshold development can be found at <http://www.placerair.org/landuseandceqa/ceqathresholdsandreviewprinciples>.

¹⁷ California Executive Order S-3-05, (June 2005) <https://www.gov.ca.gov/news.php?id=1861>

¹⁸ California Assembly Bill No. 32 <https://www.arb.ca.gov/cc/docs/ab32text.pdf>

¹⁹ AB32 required CARB to adopt a Scoping Plan to describe the approach that California will take to reduce statewide GHG emissions to 1990 levels by 2020. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

²⁰ https://www.opr.ca.gov/s_ceqaandclimatechange.php

²¹ California Senate Bill No. 32 https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

²² CEQA Guidelines §15064 (h)(1)

PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

Table 2-3: PCAPCD GHG Significance Thresholds for Different Construction and Stationary Source Operational Phases

All Construction Project-Level	Stationary Source Operational Project-Level
10,000 MT CO ₂ e/yr	

Table 2-4: PCAPCD GHG Significance Thresholds for Land Use Operational Phase Only

Bright-Line Thresholds			
10,000 MT CO ₂ e/yr			
Efficiency Matrix			
Residential		Non-Residential	
urban	rural	urban	rural
(MT CO ₂ e/capita)		(MT CO ₂ e/1,000 sf)	
4.5	5.5	26.5	27.3
De Minimis Level			
1,100 MT CO ₂ e/yr			

The District's Bright-line GHG Threshold of 10,000 MT CO₂e/yr is applied to land use projects' construction phase and stationary source projects' construction and operational phases. In general, GHG emissions from a project (either the construction or operational phase) that exceed 10,000 MT CO₂e/yr would be deemed to have a cumulatively considerable contribution to global climate change.

The Efficiency Matrix and De Minimis Level are only applied to a land use project's operational phase. For a land use project, it can be considered as less than cumulatively considerable and be excluded from future GHG impact analysis if its operational phase GHG emissions are equal to or less than 1,100 MT CO₂e/yr. A land use project with GHG operational emissions between 1,100 MT and 10,000 MT CO₂e/yr can still be found less than cumulatively considerable when the results of the project's related efficiency analysis meets one of conditions in the efficiency matrix for that applicable land use setting and land use type. The detailed discussion of GHG efficiency matrix development in Placer County is presented in the [PCAPCD Threshold Justification Report Appendix C](#).

Tables 2-5 and 2-6 presents the approximate size of a project for some of the land use categories which would result in GHG operational emissions equal to the Bright-line threshold of 10,000 MT CO₂e/yr and the De Minimis Level of 1,100 MT CO₂e/yr. The detailed modeling scenario assumptions, settings, and modeling outputs are presented in the [PCAPCD Threshold Justification Report Appendix D](#). These two tables serve as a preliminary screening methodology and should not be used in place of an analysis to determine the level of significance for a project's related GHG impact. Please note that, depending on the location of the project as well as the project's proposed land use categories and design features, different conclusions may be reached other than the ones shown in Tables 2-5 and 2-6.

PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
PM₁₀
CO₂
ROG
O₃
SF₆

Table 2-5: Corresponding Size of a Project for Bright-Line Thresholds of 10,000 MT CO₂e/yr

Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
646	957	1,044	323,955	756,170	901,709

Table 2-6: Corresponding Size of a Project for De Minimis Level of 1,100 MT CO₂e/yr

Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
71	105	115	35,635	83,180	99,189

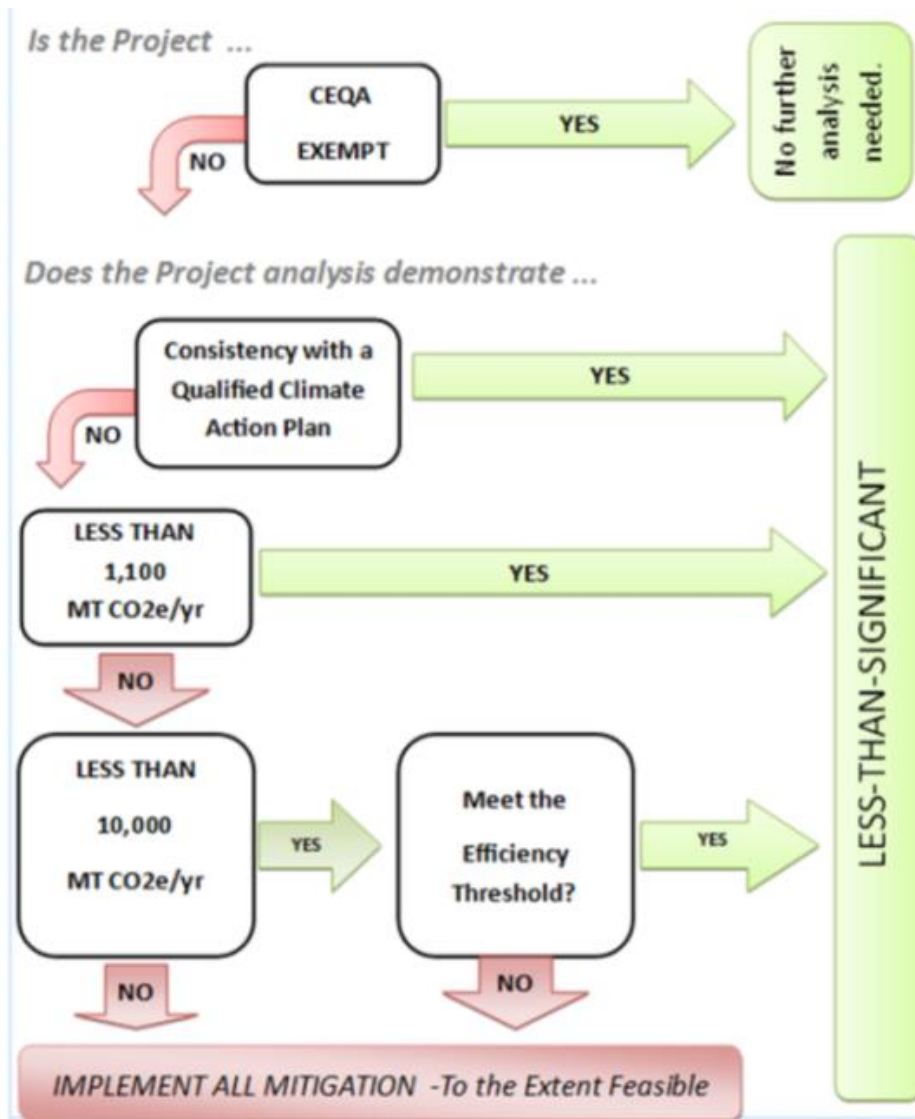
The District believes that the adopted GHG thresholds which were developed based on Placer County's special conditions can facilitate a uniform process for local jurisdictions in Placer County to analyze and identify potentially significant GHG impacts from land use projects. This uniform process will assist local jurisdictions in demonstrating a balance between the future growth in Placer County and the assumed responsibility in assisting California to achieve its GHG reduction goals.

2.5. Qualified Climate Action Plan

Alternatively, in lieu of applying the District's adopted GHG significance thresholds, local jurisdictions in Placer County can develop their own climate action plans pursuant to the CEQA requirement. If a jurisdiction has a qualified climate action plan (CAP) or greenhouse gas reduction plan (GHGRP) that meets all the criteria stated in CEQA Guidelines Section 15183.5 (b), the qualified plan can be used to determine the project's GHG impact in lieu of applying the District's adopted GHG significance thresholds. If a land use project can demonstrate consistency with the mitigation strategies identified in that jurisdiction's qualified CAP or GHGRP, the project can be deemed as less than cumulatively considerable for its associated GHG impacts.

Figure 2-2 represents the general steps for evaluating and determining the level of significance for a project's related GHG impacts

Figure 2-2: Significance Determination Flowchart for GHGs



PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

PM₁₀

CO₂

ROG

O₃

SF₆

NO_x

CO₂E

CH₄

N₂O

H₂O

CH₄

HFC

ROG

O₃

SF₆

NO_x

SF₆

NO_x

CO₂E

CH₄

PM₁₀

CO₂

ROG

O₃

SF₆

Chapter 3: Analyzing Construction Emissions

Analyzing Construction Emissions

3.1. Assessing Construction Impacts for Criteria Pollutants and GHG

Construction emissions are generated from activities associated during the construction phase of a project. Construction activities are typically short-term or temporary in duration. These activities include the operation of heavy on-road and off-road equipment for soil hauling and material delivery or soil disturbance, grading, moving, piling construction materials, open storage piles and both active and inactive disturbed surface areas. The emissions of criteria air pollutants and GHG may occur as a result of these related activities. Sometimes a project's construction-related emissions can have a significant impact with respect to air quality and/or global climate change.

The use of heavy equipment and earth moving operations during project construction can generate fugitive dust along with engine combustion emissions which may have substantial temporary impacts on local air quality. Particulate matter with a particle size that is less than ten microns in size (PM₁₀) can come from fugitive dust sources including open fields, roadways, storage piles, earthwork, etc. Fugitive dust emissions results from land clearing, demolition, ground excavation, cut and fill operations and equipment traffic usage on temporary roads at the construction site.



Most construction equipment uses diesel-fueled engines. Diesel exhaust is an emission source that can have a significant effect on health. In July 1999, the CARB listed diesel particulate matter (DPM) from diesel exhaust as a toxic air contaminant, with both chronic and carcinogenic public health risks. In addition to DPM, diesel exhaust also includes emissions of criteria pollutant such as NO_x and ROG as well as GHG. Emissions are most significant with the use of large, diesel-fueled scrapers, loaders, bulldozers, haul trucks, compressors, generators and other heavy equipment. Emissions from both fugitive dust and/or combustion sources can vary substantially day-to-day depending on the level of activity, the specific type of operation, moisture content of soil, use of dust suppressants and the prevailing weather conditions.

3.2. Determining Project Construction Emissions

When calculating emissions for construction activities (NO_x, ROG, DPM, GHG and fugitive PM), specific information about each activity and/or phase of the construction project is needed. Information required for calculating construction emissions, which requires increasingly detailed information to produce more accurate results, is described below.

The project specific information for calculating the construction emissions are listed but not limited to:

- Duration (years) of the entire project's construction period (starting and ending year)
- Proposed construction phases (demolition, site preparation, etc.),
- Duration (days) of each construction phase if available,
- Daily disturbed acreage,
- Quantities of soil imported/exported if proposed,
- Size of units being demolished if proposed,

- Types of off-road/construction equipment,
- Detailed equipment operation information if possible (horsepower, loading factors, daily operation hours, engine manufacturer year, etc.),
- Trips and VMT from construction workers, and
- Assumption and emission rates applied for dust from material movement, on-road fugitive dust, and architectural paint application.

Please note that the developer can use the model's default settings (discussed in the following section) to calculate the project-related construction impacts without knowing the exact construction duration of each phase along with the equipment fleet involved in the project.

3.3. Estimating Project Construction Emissions

For proposed land use development projects, the District recommends using the latest version of **California Emission Estimator Model** (CalEEMod) modeling analysis tools to quantify construction-related criteria air pollutants and GHG emissions. CalEEMod includes the CARB's OFFROAD 2011 and U.S. EPA AP-42 emission factors for calculating construction related emissions. It provides an estimation of construction related combustion and fugitive dust emissions based on the project's proposed construction activities and the modeling outputs including peak daily emissions of ROG, NOx, PM, and annual GHG emissions.

CalEEMod has default construction phases and a construction list which are from the construction site survey data developed by the South Coast Air Quality Management District (SCAQMD) to provide user-friendly functionality when there is no detail project-specific information available. The user can overwrite the CalEEMod default values to get a more accurate emission estimation if there is project-specific information available. Modeling results with all assumptions, estimates, and calculation methods should be provided to the District for the review of the project.

If the proposed project includes soil importing/exporting or demolition activities, the user needs to select the necessary phases to calculate off-site hauling trips with the associated emissions. Quantities of the soil imported/exported or the size of the unit for demolition will need to be entered into the model. In addition, the trip length associated with the construction workers or hauling trucks will need to be entered into the model. This hauling component is an important step and is often overlooked resulting in an under-estimation of emissions. If the hauling fleet is unknown at the time of modeling, the default settings can be used with it notated in the CEQA document. [APPENDIX B](#) summarizes the District's modeling recommendations for the project's CalEEMOD analysis.

- ✓ For further information on CalEEMod visit: <http://www.caleemod.com>
- ✓ [APPENDIX B: PCAPCD Tips for Using CalEEMod](#)

As described previously, CalEEMod is recommended to quantify a project's related construction emissions. However, CalEEMod may not be suitable to estimate linear construction projects such as the construction of a new roadway, road widening, a roadway overpass, levee, or pipeline. The District recommends the use of the most recent version of the [Roadway Construction Emissions Model](#) developed by Sacramento Metropolitan Air Quality Management District (SMAQMD). The Roadway Construction Emissions Model is a spreadsheet-based model that is able to use basic project information (e.g., total construction months, project type, total project area) to estimate exhaust emissions from heavy-duty construction equipment, haul trucks, and worker commute trips associated with linear construction projects, as well as fugitive dust. Users shall refer to the Instructions worksheet in the Roadway Construction Emissions Mode.

- ✓ SMAQMD Roadway Construction Emission Model
<http://www.airquality.org/residents/ceqa-land-use-planning/ceqa-guidance-tools>

3.4. Diesel Idling Restrictions for Construction Phases

The CARB and local jurisdictions recognize the public health risk reductions that can be realized by idling limitations for on-road and off-road equipment. The following summarizes the special idling restriction requirements from CARB and local jurisdictions for construction activity, including the use of both on-road (i.e., dump truck) and off-road (i.e., backhoe) equipment:

Idling Restriction Requirements from state agency and local jurisdictions

- Off-road diesel equipment shall comply with the five minute idling restriction identified in Section 2449(d)(3) of the CARB's In-Use Off-Road Diesel regulation:
www.arb.ca.gov/regact/2007/ordies107/frool.pdf. (pdf)
- The following local jurisdictions have specific code requirements to limit an off-road equipment operator to not cause or allow an off-road piece of equipment to idle at any location for more than five consecutive minutes:
 - [City of Auburn](#), City Municipal Code Section 71.78
 - [City of Lincoln](#), City Code of Ordinance Section 10.14
 - [Placer County](#), Code Section 10.14

3.5. Disposal of Vegetation by Burning During Construction

During construction, if the disposal of vegetation is to be by burning, it may only take place with a District burn permit issued under the conditions set forth in Rule 304 - Land Development Smoke Management. While the rule provides for this type of burning, in most cases for development projects the burning of vegetation may not be approved, dependent upon the availability of alternatives to burning, site location, and/or the distance to sensitive receptors. Vegetation can be removed to a disposal or a composting site, such as a landfill, or can be chipped and used on site.



If the burning of vegetation is proposed for a project during construction, the modeling analysis should include these emissions along with any mitigation of potentially significant impacts associated with this activity.

3.6. Permits for Construction

Portable equipment and engines 50 horsepower (hp) or greater, used during construction activities, require either a registration certificate issued by CARB, based on the [California Statewide Portable Equipment Registration Program \(PERP\)](#) or a District permit to operate. The following is a partial list of equipment that may require a permit:

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- Construction related internal combustion engines;
- Unconfined abrasive blasting operations;
- Concrete batch plants;

PM₁₀
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O₃
SF₆
NO_x
CO₂E
CH₄
PM₁₀
CO₂
ROG
O₃
SF₆

- Rock and pavement crushing;
- Tub grinders;
- Trommel screens; and,
- Asphalt batch plants.

More information regarding the CARB and the District's PERP permit can be found at the following websites:

- ✓ For CARB PERP information visit: <https://www.arb.ca.gov/portable/portable.htm>
- ✓ For PCAPCD PERP information visit: <http://www.placerair.org/perppermittinandregistration>

3.7. Significance Thresholds for Project-Level Construction Emissions

Table 3-1 shows the significance thresholds adopted by the District's Board of Directors on October 13, 2016 for a project's related construction criteria pollutants and GHG emissions (as shown in Table 2-1 and 2-3). Please note that the thresholds for criteria pollutants are daily emissions (pounds per day) and the threshold for GHG is annual emissions (metric tons per year).

Construction Phase Project-Level			
ROG	NOx	PM10	GHG
(lbs/day)	(lbs/day)	(lbs/day)	(MT CO ₂ e/yr)
82	82	82	10,000

3.8. Steps in Determining Significance for Construction Emissions

The following steps should be considered when determining the significance of construction related criteria pollutants and GHG emissions.

Step 1: Emissions Quantification

The project's CEQA document should identify its analytical methodology for estimating the project's related construction emissions. The District recommends using the most current version of CalEEMod to quantify construction emissions for proposed land use development projects. APPENDIX B summarizes the District's modeling recommendations for the project's CalEEMod analysis.

Step 2: Comparison of Unmitigated Construction Emissions with the District's Significance Thresholds

Following the quantification of the project-related construction emissions, the maximum daily emissions for each criteria pollutant and annual emissions for GHG should be compared with the applicable thresholds of significance. For instance, with respect to PM₁₀ and PM_{2.5}, compare the total amount of emissions from both the exhaust and fugitive sources with the applicable thresholds of significance. If the construction-related emissions have been quantified using multiple models or model runs, calculate the criteria air pollutants and GHG from each where the said activities would overlap. In those cases where the exact timing of the construction activities is not known, the conservative approach would be to calculate any phases that could potentially overlap. At this step, the project-related construction emissions should consider all the state and federal rules and regulations.

If the maximum daily criteria pollutant emissions and annual GHG emissions do not exceed any of the significance thresholds presented in Table 3-1, the project would result in a less-than-significant impact to air quality (for construction impacts). If any pollutant would exceed its corresponding threshold, the proposed project would result in a significant impact to air quality and would require mitigation measures for emission reductions.

Step 3: Identification of Mitigation Measures and Emission Reductions

For all proposed projects, the District recommends the implementation of all applicable mitigation measures and compliance with the District and local jurisdiction's Rules and Regulations associated with construction activity. APPENDIX A contains the related District's rules and regulations. Mitigation measures can be included from the following sources:

- special commitment within the Project Description,
- recommended measures within the CEQA-compliant environmental document, and
- regulatory measures as required by the District and local jurisdictions.

Please note that any commentments made within the project's design features that serve to mitigate impacts should be fully evaluated within the related impact analysis and mitigation discussion, to ensure that the feature does in fact mitigate the project's potential adverse impacts²³. The inclusion of mitigation measures within the environmental document will result in those measures being included as conditions of approval during the entitlement phase of project approval, which may also include a mitigation monitoring reporting plan (MMRP). In addition, it is at the lead agency's discretion as to whether that the local jurisdiction's rules and regulations are reflected within the project related emissions, either before or after mitigation, in the modeling analysis for the project's construction impacts.

- ✓ APPENDIX A: PCAPCD Rules and Regulations
- ✓ APPENDIX C: PCAPCD Recommended Construction mitigation measures

Step 4: Impact Significance Determination

The project's CEQA document should include the total daily emissions for ROG and NOx and annual emissions for GHG in order to evaluate whether it exceeds the significance threshold. The project's mitigated emissions will need to be identified. If the implementation of the mitigation measures reduces all construction related criteria air pollutants and GHG emissions to the level below thresholds, the impact to air quality and GHG impacts would then be mitigated to a less than significant level. If any criteria air pollutant or GHG emissions still exceeds its corresponding thresholds after mitigation implementation, the project's related construction impact would remain significant and unavoidable.

Figure 3-1 summarizes the steps recommended by the District in determining potential significance of construction impacts from criteria pollutants and GHGs.

²³ Trisha Lee Lotus v. Department of Transportation (2014) 223 Cal. App. 4th 645

PM₁₀
CO₂
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O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

PM₁₀
CO₂
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
N₂O
H₂O
CH₄
HFC
ROG
O₃
SF₆
NO_x
CO₂E
CH₄
PM₁₀
CO₂
ROG
O₃
SF₆



Figure 3-1: Steps in Determining Potential Significance of Construction Impacts

3.9. Dust Control Plan

Fugitive dust is particulate matter discharged into the atmosphere from construction activities. Examples of dust sources are excavating and trenching, drilling, boring, earthmoving and grading operations, pavement or masonry cutting operations, brush clearing, travel on unpaved roads inside and/or outside construction sites, and wind-blown dust from uncovered graded areas and storage piles. District [Rule 228, Fugitive Dust](#) establishes the minimum dust mitigation and control requirements along with the standards to be met from the activities that generate fugitive dust. Rule 228's minimum dust mitigation and control requirements must be used for all construction and grading activities.

In addition to Rule 228, the District may recommend that lead agencies require land use projects to prepare a dust control plan (DCP) if a land use project proposes to disturb an area greater than one acre. A DCP should identify the fugitive dust sources at the construction site and describe all of the dust control measures to be implemented before, during, and after any dust generating activities for the duration of a land use project. If a DCP is required for a land use project it must be submitted to and approved by the District prior to any construction activities.

The District has developed a dust control plan application which can be filled out online. Completion of the DCP application and subsequent approval by the District satisfies the mitigation requirements for a dust control plan. Failure to submit and implement the plan is subject to enforcement through the Conditions of Approval.

- ✓ District Rule 228 Fugitive Dust can be downloaded from <http://www.placerair.org/rules>
- ✓ District Dust Control Requirements: <http://www.placerair.org/dustcontrolrequirements>
- ✓ District Dust Control Plan on-line form: <http://www.placerair.org/dustcontrolrequirements/dustcontrolform>

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CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

PM₁₀

CO₂

ROG

O₃

SF₆

NO_x

CO₂E

CH₄

N₂O

H₂O

CH₄

HFC

ROG

O₃

SF₆

NO_x

SF₆

NO_x

CO₂E

CH₄

PM₁₀

CO₂

ROG

O₃

SF₆

Chapter 4: Analyzing Operational Criteria Pollutant Emissions

Analyzing Operational Criteria Pollutant Emissions

4.1. Assessing Operational Impacts for Criteria Pollutants

Operational criteria pollutants emissions are generated from activities associated with the operational phase of a project. Usually, the project's operational emissions would be considered long-term impacts since the impacts occur repeatedly in the project's lifetime. The amount and type of pollution produced, along with the potential to cause significant impacts depends on the type and level of operational activities proposed. Several sources of emissions are considered when evaluating the operational emissions from a proposed project.

Motor vehicle operation, from land use development projects, is often referred to as an "indirect source". The emissions from motor vehicle travel to and from the development are not considered direct emissions from the onsite activities. Some of these projects include shopping centers, office buildings, and residential subdivisions. On the other hand, a development's onsite activities are referred as "direct sources". Direct source projects include refineries, power plants, asphalt batch plants, quarries, and gasoline stations where the equipment or devices operate onsite.

In addition to indirect and direct source emissions, many land use projects also generate "area source" emissions. Area sources include water and space heaters, fireplaces, wood burning appliances, lawn maintenance equipment, and the application of paints and solvents. These sources individually emit a fairly small amount of air pollutants, but cumulatively may represent a significant quantity of emissions. To assess the project's operational emissions, all related indirect, direct, and area sources shall be identified with the potential operational emissions calculated.



The project's indirect operational GHG emissions analysis from electricity usage, solid waste disposal, vegetation planting and/or removal, and water use will be discussed in [CHAPTER 5](#).

4.2. Determining Project Operational Emissions

When estimating emissions from a project's operational activities, each type of source/device should be identified with its specific activity information. Information required for calculating emissions are described below, with each requiring increasingly detailed information to produce more accurate results. If there are existing operational activities on the site, the District recommends that emissions from the existing operation be quantified as the baseline condition and used to identify net emissions between the existing and proposed operation on the site.

The project specific information for calculating the operational emissions are listed but not limited to:

- Proposed project characteristics such as the location and land use setting,
- Proposed land use types and sizes,
- Project specific traffic study if available with the daily trip, traveling distance, or total VMT,
- Project related energy consuming data such as natural gas or propane usage,

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PM₁₀

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- Project related area sources such as fireplaces/wood burning appliances, consumer products, lawn maintenance equipment, and architectural coating application,
- Project related direct sources/devices such as industrial processes, power generators, boilers, or fuel dispensing equipment, and
- Assumptions and emission rates applied to mobile source emissions, area source emissions, and direct/point source emissions calculations.

For land use development projects, the District recommends using the latest version of CalEEMod to quantify operational emissions for criteria air pollutants (NO_x, ROG, CO, and PM). For the industrial related projects, the District recommends the applicant/consultant contact the District regarding the proposed industrial processes or devices' specialties prior to calculating the emission estimation. All assumptions, modeling settings, modeling outputs, or special calculation methods for industrial projects should be provided for the District review of the project's operational emission calculation.

4.3. Estimating Motor Vehicle Related Emissions

Motor vehicles are a primary source of long-term operational emissions from residential, commercial, institutional, and industrial land uses. These land uses often do not emit substantial amounts of air pollutants directly, but may cause or attract motor vehicle trips that produce significant emissions. Motor vehicle emissions are calculated on the project's daily trip rate for that land use, type of trips, traveling distance for each trip, fleet mix, and emission rates. CalEEMod provides an user-friendly platform which incorporates the most recent vehicle emission factors from the EMFAC model, developed by CARB, along with trip generation factors published by the Institute of Transportation Engineers (ITE). The latest version of CalEEMod can be found at: www.caleemod.com. APPENDIX B summarizes the District's modeling recommendations for the project's CalEEMod analysis.

In addition to CalEEMod, motor vehicle emissions can also be calculated by using EMFAC model directly when only the project's total VMT data is available for the analysis. The most recent EMFAC version web database can be accessed at www.arb.ca.gov/emfac/. When special vehicle activities data is used, information on the vehicle classes, vehicle population, and traveling speeds should be provided as part of the District's CEQA review process. APPENDIX D presents the methods recommended by the District to calculate the project related motor vehicle emissions directly from the EMFAC model.

4.4. Determining Local CO Emission Impact at Roadway Intersection

Air pollutant emissions from a land use project are predominantly generated from vehicle trips on roadways. These land use motor vehicle related emissions do not typically result in high localized carbon monoxide (CO) concentrations since vehicle trips are not occurring at a single location. However, traffic congestion near a roadway's intersection with vehicles moving slowly or idling will result in local CO emissions at that intersection (hotspot), due to a vehicle engine's inefficient combustion. Accordingly, a land use project could result in potential local CO hotspot impact at roadway intersections if the project generates substantial traffic impacts. The Level of Service (LOS) has been commonly used by the lead agency to assess the potential traffic impacts during the environmental review for a land use project. This is a measure of a vehicle delay at intersections or on roadway segments and the result is expressed with a letter grade ranging from A to F. The LOS can be used to evaluate whether or not a project's traffic impact would cause a potential localized CO impact at any given intersection. The District recommends using the following screening criteria to determine whether the evaluation of local CO emission impact should be conducted.

When a project's CO emissions from vehicle operation are more than 550 lbs/day²⁴ **and** if either of the following scenarios is true for any intersection affected by the project traffic, the project should conduct a site-specific CO dispersion modeling analysis to evaluate the potential local CO emission impact at roadway intersections:

- A traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or
- A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where a delay would increase by 10 seconds or more when project-generated traffic is included.

If a project is identified to have potential CO impacts, for any intersection affected by the project which already has traffic mitigation incorporated, the District would recommend the applicant/consultant conduct a CO dispersion modeling analysis using the CALINE-4 dispersion model to identify potential CO concentrations at the impacted street(s) or intersection(s). The CALINE-4 dispersion model is used to estimate local CO concentrations resulting from motor vehicle emissions. It was developed by the California Department of Transportation (Caltrans) and is available from the Caltrans Environmental Division's web page at http://www.dot.ca.gov/hq/env/air/main_sections/analysistools.htm.

CALINE-4 requires the user to supply specific input parameters. These inputs should be those recommended in the CO Protocol. If other inputs are used instead of those recommended in the Caltrans CO Protocol, they should be documented in the environmental document.

Senate Bill (SB) 743, signed by the Governor on September 27, 2013, requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts, with the selected alternative promoting the reduction of GHG emissions. The considerable alternatives include VMT, VMT per capita, vehicle trip generation rates, and vehicle trips generated. Currently, OPR is working on the draft CEQA Guidelines amendment and technical advisory, to be used statewide, which proposes that VMT is the primary metric for transportation impact analysis. Accordingly, the CAPCOA and local air districts are also studying how VMT would be applied into addressing the local CO emission impact. The District will update the above screening criteria when the OPR finalizes the CEQA Guideline amendment.

The following are information regarding SB 743 requirements:

- ✓ [Senate Bill \(SB\) 743: Environmental Quality](#)
- ✓ [OPR's SB 743 Updates](#)
- ✓ [OPR's Revised proposal on Updates to the CEQA Guidelines](#)

4.5. Non-vehicular Emissions from Residential/Commercial Developments

Non-vehicular emission sources associated with residential and commercial development include water heaters, boilers, or space heating equipment, evaporative emissions from paints, solvents, consumer products, fuel combustion by lawnmowers, leaf blowers and other small utility

²⁴ The recommended screening criteria of 550 lbs/day is referred by the District's NSR rule's emission offset threshold for CO emissions.

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equipment, fireplace/residential wood burning, household products, and other small sources. Collectively, these are referred to as “area sources” and are important from a cumulative standpoint even though they may appear insignificant when viewed individually. CalEEMod provides emission estimations from area sources based on land use types.

Within CalEEMod, the default setting under “Hearths” emission module is used for wood burning devices and can result in substantial emissions from wood burning devices for a project. This setting should be carefully modified to be consistent with the project’s design - whether or not the project includes wood burning devices.

4.6. Industrial Emission Sources

From an emissions standpoint, industrial facilities and operations are typically categorized as “point” or “aggregated point” sources. Point sources are stationary and generally located on a site that has one or more emission sources at a facility. (e.g., power plant, refinery, etc.). Aggregated point sources can be stationary, manufacturing processes, or mobile and are typically related but individually may be small within the stationary facility operation but may significant as a group. This includes:

- Devices/equipment/processes along with proposed facilities whose emissions are small individually, but may be significant as a group (e.g., gasoline dispensing devices, kilns, heaters, etc.);
- Sources whose emissions emanate from a broad area (e.g., fugitive dust from storage piles and dirt roads, landfills, etc.); and,
- Mobile equipment used in industrial operations (e.g., drill rigs, loaders, haul-trucks, etc.).



Please note that both industrial-related point and aggregated point sources are subject to the District’s regulatory and control requirements. An “Authority to Construct” permit may be required from the District for the source/device.

During the CEQA analysis, all air quality impacts are evaluated including the stationary point, area and mobile sources if they are part of the proposed land use project. While a specific piece of equipment or process may be covered by a District permit it is not excluded from the CEQA evaluation process.

If the industrial source could emit air toxics, a Health Risk Assessment (HRA) or a “T-Screen” evaluation (less detailed than a HRA) may be required as a part of the review process, depending on the scope and complexity of the proposal. Further discussion of a HRA can be found in [CHAPTER 6](#).

4.7. Significance Thresholds for Project-Level Operational Emissions

Table 4-1 shows the significance thresholds, adopted by the District’s Board of Directors on October 13, 2016. Criteria pollutant emissions are calculated based on the appropriate mitigation levels and then are compared to the thresholds to determine the project’s significance. (as shown in Table 2-1).

Table 4-1: PCAPCD Significance Thresholds for Criteria Pollutants

Operational Phase Project-Level			Operational Phase Cumulative-Level		
ROG	NOx	PM10	ROG	NOx	PM10
(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)
55	55	82	55	55	82

Most of the long-term operational mitigation strategies suggested in this chapter focus on methods to reduce vehicle trips along with travel distance, including site design standards that encourage pedestrian and bicycle-friendly transit-oriented development. In addition, the recommendations include design strategies for residential and commercial buildings that address energy conservation and other concepts that reduce total project emissions. These recommendations are not all inclusive and are provided as examples among many possibilities.

4.8. Steps in Determining Significance of Operational Impacts from Criteria Pollutants

The following steps are recommended to determine the significance of criteria pollutants and precursors emissions impacts related to operational emissions:

Step 1: Emissions Quantification

The project's CEQA document should identify the sources which would contribute to the project's operational emissions. Next, an analytical methodology should be identified for estimating the project's operational emissions. The District recommends using the most current version of CalEEMod (previous versions will not be accepted). Using the CalEEMod modeling default settings or the project specific operational activity information, CalEEMod can provide a quantitative analysis to estimate the project's related criteria pollutant emissions from motor vehicle and area sources.

- ✓ For more information and to download the software please go to: www.caleemod.com.
- ✓ **APPENDIX B: PCAPCD Tips for Using CalEEMod**

When a project proposes a conversion for its existing operation or involves the District's permitted devices, the lead agency should plan to consult with the District in identifying a strategy related to the baseline conditions and how such conditions are described within the project's description. Refer to [Section 1.10](#) for further information on baseline conditions.

Step 2: Comparison of Unmitigated Operational Emissions with the District's Significance Thresholds for Criteria Pollutants

The project's air quality analysis should calculate the estimated emissions for the area, mobile, and stationary sources (if any) for each pollutant as explained above and compared to the daily maximum emissions of each criteria pollutant and their precursors with the significance thresholds. At this step, the project's operational emissions should consider all the state and federal rules and regulations. If any of the daily maximum operational-related emissions after state and federal regulatory compliance are below the threshold, the project would then result in a less than significant impact to air quality. If the quantified emissions of operational-related criteria air pollutants or precursors exceeds the threshold, the proposed project may result in a significantly considerable impact to air quality.

Step 3: Identification of the Mitigation Measures and Emission Reductions

When the operational-related emissions exceed the applicable Thresholds of Significance, lead agencies are responsible for identifying all feasible mitigation measures for operational emissions, as they deem necessary, to reduce a project's air quality impacts. Mitigation measures can be

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from 1) special features or designs included within the project description; 2) proposed measures within the CEQA-compliant environmental document; 3) identified measures from previously approved CEQA documents, and 4) regulatory measures as required by the District and local jurisdiction. [APPENDIX A](#) contains the related District's rules and regulations and [APPENDIX E](#) contains examples of mitigation measures that may be applied to projects. For proposed projects, the District recommends identifying all feasible mitigation measures to the maximum extent possible.

- ✓ [APPENDIX A](#): PCAPCD Rules and Regulations
- ✓ [APPENDIX E](#): PCAPCD Recommended Operational Mitigation Measures for Criteria Pollutants

Please note that any commentments made within the project's design features that serve to mitigate impacts should be fully evaluated within the related impact analysis and mitigation discussion, to ensure that the feature does in fact mitigate the project's potential adverse impacts. In addition, it is at the lead agency's discretion that the local jurisdiction's rules and regulations are reflected within the project related emissions, either before or after mitigation, in the modeling analysis for the project's operational impacts.

The District recommends the proposed mitigation measures to reduce operational emissions be as detailed as possible and should clearly identify who is responsible for implementation, funding, monitoring, enforcement, and any required maintenance activities. In cases where operational emission reduction measures relate directly or indirectly to policies within a local jurisdiction's General or Community Plan, the District encourages discussion in the CEQA document on the relationship between the General Plan or Community Plan policy and the proposed reduction measures.

The District recommends that mitigation measures identified in the CEQA document be included as conditions of approval during the entitlement phase of the project approval. In addition, any mitigation monitoring plan (MMP) should also be included as a condition of approval during the entitlement phase.

At the very least, the project's mitigated emissions after the mitigation implementation should be quantified and disclosed in its CEQA document.

Step 4: Impact Significance Determination

The project's CEQA document should provide the calculated project's mitigated emissions after mitigation implementation and compared to the total daily mitigated emissions with the significance thresholds. If the implementation of the mitigation measures, including on-site and off-site mitigation, reduces the operational related criteria air pollutants and precursors to levels below thresholds, the impact to air quality would be reduced to a less than significant level.

If mitigated levels of any criteria air pollutant or precursor still exceeds thresholds, the project's operational impact to air quality would be considered significant and unavoidable.

Figure 4-1 summarizes the steps recommended by the District in determining the potential significance of a project's operational impacts from criteria pollutants.



Figure 4-1: Steps in Determining the Potential Significance of Operational Impacts

4.9. Options for a Project's Operational Impact Mitigation

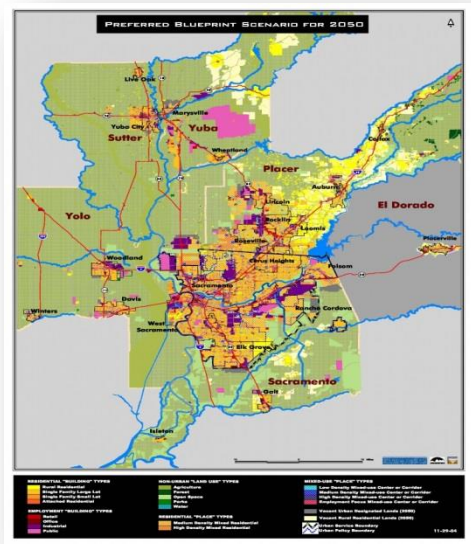
When the operational related emissions exceed a significance threshold, lead agencies are responsible for identifying all feasible mitigation measures to reduce the project's operational emissions. The air quality analysis should quantify the reduction of emissions associated with any proposed mitigation measures and include this information in the project's CEQA document.

The project's mitigation measures can include special features such as green building designs or site designs such as mixed-use, proposed measures within the CEQA-compliant environmental document, identified measures from previously approved CEQA documents, and measures that are required by local rules and regulations. Emissions from motor vehicles that travel to and from residential, commercial, and industrial land uses can generally be mitigated by reducing the vehicle activity through site design (e.g., transit oriented design, infill, mixed use, etc.), implementing transportation demand management measures, using clean fuels and vehicles, and/or off-site mitigation projects.

In addition, area source operational emissions from energy consumption from land uses can be mitigated by improving energy efficiencies, conservation measures and use of alternative energy sources. The mitigation measures discussed in this section are intended to reduce emissions of ROG, NO_x, and Diesel PM (DPM). Greenhouse gas mitigation measures will be discussed in [CHAPTER 5](#). The following categories best capture the types of mitigation measures that can reduce air quality impacts from project operational operations.

Site Design Mitigation Measures

Site design and project layout can be effective methods for mitigating air quality impacts from development. Land use development which incorporates urban infill, higher density, mixed use and walk-able, bike-able, and transit oriented designs can significantly reduce vehicle activity and associated air quality impacts. As early as possible in the scoping phase of a project, the District recommends that the applicant contact the District staff to discuss the project layout and design factors which can influence indirect source emissions and reduce mobile source emissions.



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Energy Efficiency Mitigation Measures

Residential and commercial energy used for lighting, heating and cooling is a significant source of direct and indirect air pollution nationwide. Reducing site and building energy demand reduces emissions at the power plant source along with natural gas combustion in homes and commercial buildings. Commercial and residential buildings' energy efficiency can be improved by orienting buildings to maximize natural heating, enhancing the buildings' insulation beyond the California Building Codes' requirements, and installing energy efficiency appliances.



Transportation Demand Mitigation Measures

Vehicle emissions are often the largest continuing emissions source from the development's operational phase. Reducing the demand for single-occupancy vehicle trips is a simple, cost-effective means of reducing vehicle emissions. In addition, using cleaner fueled vehicles or retrofitting equipment with emission control devices can reduce the overall emissions without impacting operations. Currently clean fuel and vehicle technologies exist for both passenger and heavy-duty applications.

- ✓ See [APPENDIX E](#) for additional mitigation measures for operational impacts



Neighborhood Electric Vehicle (NEV)

Off-Site Mitigation

The District prefers that land use projects implement all feasible on-site mitigation measures. It is understandable that many on-site mitigation measures may not all be suitable for a land use project. If this occurs, off-site mitigation measures would be an option for the project if there are insufficient on-site feasible mitigation measures to mitigate the project's related air quality impacts. Therefore, it is important for the applicant, developer, lead agency, and the District to work closely together whenever off-site mitigation is considered for a project.

When off-site mitigation is an option used to mitigate the project's operational impacts, emission reductions achieved from off-site sources should be equal to the required emission reductions related to the land use project's on-site impacts. This can provide the proper nexus for air quality mitigation under CEQA. For example, excessive NO_x emissions from a land use project's grading activities could be reduced by a project which will generate the same amount of NO_x emission reductions, such as implementing the re-powering of heavy-duty diesel logging equipment used within the region (outside of the project site) as long this equipment is not required by any state and local regulation to be repowered.

When an off-site mitigation measure is required for a land use project, the offsite mitigation measure should explicitly identify the required emission reduction and the implementing method. The project applicant has two options to implement the off-site mitigation measure: 1) proposing their own offsite mitigation project, or 2) paying a mitigation fee into the District's Off-Site Mitigation Fee Program.

If the applicant chooses to implement an offsite mitigation project, the proposed mitigation project should be verified by the District prior to implementation to ensure that the project can

result in an equivalent reduction required by the on-site mitigation measure. If the developer chooses to pay a mitigation fee, the fee will be collected and managed through the District's Off-Site Mitigation Fee Program.

The District's Board of Directors adopted the [Air Quality Mitigation Funds Policy](#) in 2001 (amended in 2008) to establish guidelines for the use of air quality mitigation funds paid by Land Use Applicants. In 2016, the District's Board of Directors adopted the [Review of Land Use Projects under the District's CEQA Policy](#) with the provisions further clarified how the off-site mitigation fee should be calculated by the selected mitigation scenarios, to offset the land use project's related operational emissions. Based on these policies, the District established the Off-Site Mitigation Fee Program as an option for land use applicants to offset their related operational air quality impacts from a land use development project.

The fee rate is calculated from the emission reductions required by the off-site mitigation measures and the cost-effectiveness factor reported by the latest CARB Carl Moyer Program Guideline²⁵. The cost-effectiveness factor may be adjusted to reflect the current emission reduction market conditions. The mitigation fee received will be managed through the District's annual Clean Air Grants program which funds eligible emission reduction projects in close proximity to the land use project.

- ✓ [PCAPCD Air Quality Mitigation Funds Policy](#)
- ✓ [PCAPCD Review of Land Use Projects under CEQA Policy](#)

Examples off-site mitigation projects include, but are not limited to, the following:

- Modernize older transit and school buses with new and cleaner models;
- Modernize or repower heavy-duty diesel construction equipment or on-road vehicles;
- Repower or contribute funding towards clean diesel locomotive engines;
- Install or contribute funding towards alternative fueling infrastructure (e.g., fueling stations for compressed natural gas and electric vehicle charging); and
- Fund the expansion of existing transit services.

When the option of paying a mitigation fee is chosen, the timeframe for the mitigation fee payment will be based on discussions between the lead agency and the District. The District recommends that payment be provided either prior to construction or grading activities. The District is also open to other avenues for the collection of fees such as "prior to final map for a subdivision" or "prior to building issuance for a commercial building permit".

²⁵ CARB's Carl Moyer Memorial Air Quality Standards Attainment Program.
<http://www.arb.ca.gov/msprog/moyer/moyer.htm>

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Chapter 5: Analyzing Operational Greenhouse Gas Emissions

Analyzing Operational Greenhouse Gas Emissions

5.1. Greenhouse Gases (GHG)

Unlike criteria air pollutants, greenhouse gasses (GHGs) are regional or even global pollutants. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one to several days), GHGs have long atmospheric lifetimes (one to a hundred years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Since GHGs trap heat radiating from Earth toward space, the surface of the Earth and the lower atmosphere warms up from the trapped heat with the average global temperature increased. This is called the “global warming” effect. The regional or global climate pattern would then be changed (called climate change) due to the changing of the average global temperature. Therefore, increases of GHG emissions would be associated with the global warming effect and ultimately result in climate change. Although the detailed regime between GHG emissions and climate change is not precisely verified, it is clear that the quantity of emissions is enormous and no single project alone would measurably contribute to a noticeable incremental change in the local, regional or global climate pattern.

Global Warming and Climate Change

Global Warming – An increase in GHG emissions leading to an increase in average global temperature.

Climate Change – A change in global or regional climate pattern possibly caused by global warming.

The California Global Warming Solution Act of 2006 (Assembly Bill 32) defines six (6) gaseous compounds as GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HCFs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃)²⁶. In addition, California Senate Bill 605 defined three (3) short-lived climate pollutants (black carbon, fluorinated gases or F-gases, and methane) and requires CARB to establish statewide GHG emission inventories along with adopting rules and regulations to achieve the maximum, technological feasible, and cost-effective GHG emission reductions²⁷. These are the current gaseous compounds considered by California to be associated with climate change.

Climate change is considered a global problem which could potentially impact the natural environment in California and the world in the following ways:

- ✓ Rising sea levels along the California coastline, particularly in San Francisco and the Sacramento–San Joaquin River Delta due to ocean thermal expansion and melting of glacial ice, which could cause flooding and saltwater intrusion in low-lying areas;
- ✓ Changing extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent;
- ✓ Increasing wildfire frequency and intensity;
- ✓ Decreasing snow pack and stream flow in the Sierra Nevada Mountain Range, decreasing winter recreation opportunities and summer water supplies;
- ✓ Increasing the severity of winter storms, causing higher peak stream flows and increased flooding;
- ✓ Changing growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and

²⁶ California Assembly Bill 32 Overview. <https://www.arb.ca.gov/cc/ab32/ab32.htm>

²⁷ California Senate Bill 605. <https://www.arb.ca.gov/cc/shortlived/meetings/11282016/appendixa.pdf>

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- ✓ Changing the distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

With the enactment of Senate Bill 97, California's lawmakers identified the need to analyze GHG emissions as a part of the CEQA review process. As part of the mandates in SB 97, effective on March 18, 2010²⁸, the Office of Planning and Research (OPR) amended the CEQA Guidelines to include the analysis and mitigation of GHG emissions. From the CEQA standpoint, GHG impacts from a land use project are inherently cumulative.

5.2. Assessing Operational Impacts from GHG Emissions

Operational GHG emissions are generated from activities associated with the activities in the project's operational phase. The project's operational GHG emissions are from combustion activities and would be considered as causing long-term cumulative climate change impacts since the impacts occur repeatedly in the project's lifetime. The amount of GHG emissions, along with the potential to cause substantial impacts depends on the type and level of operational activities proposed. Several sources of emissions should be considered when evaluating the operational emissions from a proposed project such as motor vehicle operation, fireplaces and wood burning appliances, water heaters and boilers, power generators, lawn maintenance equipment, and combustion processes operated by industrial facilities.

Motor vehicle operation, from land use development projects, are often referred to as an "indirect source" because of the GHG emissions from motor vehicle travel to and from a development's proposed location. Some of these projects include shopping centers, office buildings, and residential subdivisions. A development's on-site activities are called "direct sources". Direct source projects also include projects such as refineries, power plants, or asphalt batch plants in which equipment and devices operate onsite.

In addition to indirect and direct source emissions, land use projects also generate "area source" emissions. GHG area sources include water and space heaters, fireplaces, wood burning appliances, and lawn maintenance equipment which involve fuel combustion processes. These sources individually emit a fairly small amount of GHGs, but cumulatively may represent a significant quantity of emissions. In addition to the similar sources with criteria pollutants, the project also needs to analyze the indirect GHG emissions from electricity usage, solid waste disposal, vegetation planting and/or removal, and water usage.

5.3. Determining Project Operational GHG Emissions

When estimating GHG emissions from a project's operational activities, each type of source/device should be identified with its specific activity information. Information required for calculating the GHG emissions are described below, with each requiring increasingly detailed information to produce more accurate results. If there are existing operational activities on site, the District recommends that the GHG emissions from the existing operation be quantified as the baseline condition and used to identify the net emissions between the existing and proposed operation on site.

The project specific information for calculating the operational emissions are listed but not limited to:

²⁸ California Governor's Office of Planning & Research. https://www.opr.ca.gov/s_ceqaandclimatechange.php

- Proposed project characteristics such as the location and land use setting,
- Proposed land use types and sizes,
- Project specific traffic study if available with the daily trip, traveling distance, or total VMT,
- Project related energy consuming data for electricity, natural gas, or propane usage,
- Project related area sources such as fireplaces /wood burning appliances, and lawn maintenance equipment,
- Project related direct sources/devices such as industrial processes, power generators, and boilers, and
- Assumption and emission rates applied for mobile source emissions, area source emissions, and direct/point source emissions calculation.

For the land use development projects, the District recommends using the latest version of CalEEMod to quantify operational GHG emissions. (Previous versions will not be accepted.) For the industrial related projects, the District recommends consulting with the District staff regarding the proposed industrial processes or device specialties prior to conducting the GHG emission estimation. All assumptions, modeling settings, modeling outputs, or special calculation methods for industrial projects should be provided in order for the District staff to review the project's operational GHG emission calculation.

5.4. Estimating Motor Vehicle Related GHG Emissions

Motor vehicles are a primary source of long-term operational emissions from residential, commercial, institutional, and industrial land uses. These land uses often do not emit substantial amounts of air pollutants directly, but may cause or attract motor vehicle trips that produce significant emissions. Motor vehicle emissions are calculated based on the project's daily trip rate for its land uses, the type of trips, traveling distance for each trip, the fleet mix, and emission rates. CalEEMod provides an user-friendly platform which incorporates the most recent vehicle emission factors from the EMFAC model developed by CARB along with trip generation factors published by the Institute of Transportation Engineers (ITE). The latest version of CalEEMod can be found at: www.caleemod.com. APPENDIX B summarizes the District's modeling recommendations for the project's CalEEMod analysis.

In addition to CalEEMod, motor vehicle emissions can also be calculated by using the EMFAC model directly when only the project's total VMT data is available for the analysis. The most recent EMFAC version is can be accessed online at www.arb.ca.gov/emfac/ . When special vehicle activities data is used, information on the vehicle classes, vehicle population, and traveling speeds should be provided as part of the District's CEQA review process. APPENDIX D presents the methods recommended by the District to calculate the project related motor vehicle emissions directly from the EMFAC model.

5.5. Non-Vehicular Emissions from Residential/Commercial Developments

Non-vehicular GHG emission sources associated with residential and commercial development include energy use to power lights, appliances, water heaters, space heating and cooling equipment, fuel combustion by lawnmowers, leaf blowers and other small utility equipment, residential wood burning, and other small sources. Collectively, these are referred to as "area sources" and are important from a cumulative standpoint even though they may appear insignificant when viewed individually. CalEEMod provides emission estimations from area sources based on land use types.

Please note that the default setting under CalEEMod "Hearths" emission module is used for wood burning devices and can result in substantial GHG emissions from wood burning devices

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NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
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ROG
O₃
SF₆

for a project. This setting should be carefully modified to be consistent with the project's design whether the project includes wood burning devices. In addition, indirect GHG emissions from electricity energy use, water and space heating, solid waste disposal, vegetation planting and/or removal, and water usage should be analyzed as the part of total GHG emissions from a project.

5.6. Industrial Emission Source Projects

From an emissions standpoint, industrial facilities and operations are typically categorized as "point" or "aggregated point" sources. Point sources are stationary and generally refer to a site that has one or more emission sources at a facility within an identified location (e.g., power plant, refinery, etc.). Aggregated point sources can be stationary, a manufacture process, or mobile and are typically related, but individually small within the stationary facility operation however they may be significant as a group. This includes:



- Devices/equipment/processes along with proposed facilities whose emissions are small individually, but may be significant as a group (e.g., gasoline dispensing devices, kilns, heaters, etc.);
- Sources whose emissions emanate from a broad area (e.g., fugitive dust from storage piles and dirt roads, landfills, etc.); and
- Mobile equipment used in industrial operations (e.g., air compressors, drill rigs, loaders, haul-trucks, etc.).

Please note that both industrial-related point and aggregated point sources are subject to the District's regulatory and/or control requirements. An "Authority to Construct" permit may be required from the District for the source/device. In addition, if the "direct" GHG emissions from an industrial project exceed 10,000 MT CO₂e/yr, the project would be subject to the CARB's Mandatory Greenhouse Gas Emission Reporting Regulation²⁹ and the Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation³⁰. These are statewide regulations and compliance requirements are applied to industrial projects.

Furthermore, all GHG emission sources should be evaluated under CEQA including the stationary point, area and mobile sources if they are part of the proposed industrial project. While a specific piece of equipment or process may be covered by a District permit or statewide regulations it is not excluded from the CEQA evaluation process.

5.7. Significance Thresholds for Operational GHG Emissions

Table 5-1 shows the significance thresholds adopted by the District's Board of Directors on October 13, 2016, which are used to determine the significance and appropriate mitigation level for project-related operational GHG emissions (as shown in Table 2-3 and Table 2-4). Please note that the Bright-line threshold (10,000 MT CO₂e/yr) is applied to **both** the land use development projects and to the stationary projects. The Efficiency Matrix and De Minimis level

²⁹ <https://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr-regulation.htm>

³⁰ <https://www.arb.ca.gov/regact/2016/capandtrade16/capandtrade16.htm>

(1,100 MT CO₂e/yr) are **only** applied to land use projects as they are not applicable for stationary (Industrial) projects and construction-only projects such as roadway, pipeline, or levee construction projects.

Table 5-1: PCAPCD Significance Thresholds for Project Operational GHG Emissions

Bright-Line Thresholds for Land Use and Stationary Project 10,000 MT CO₂e/yr			
Efficiency Matrix (for Land Use Project only)			
Residential		Non-Residential	
urban	rural	urban	rural
<small>(MT CO₂e/capita)</small>		<small>(MT CO₂e/1,000 sf)</small>	
4.5	5.5	26.5	27.3
De Minimis Level 1,100 MT CO₂e/yr			

The District suggests that the efficiency for residential projects (MT CO₂e/capita) can be calculated based on the default household size of 2.83 in CalEEMod or the specific value identified by the lead agency. The efficiency for non-residential projects is calculated based on its proposed floor footage and presented as MT CO₂e/1,000 square feet (s.f.). For a mixed-use type project, the District suggests that the lead agency decides which land use component (residential or non-residential) in its mixed-use proposal would be used to calculate the project's efficiency, either as MT CO₂e per capita or per 1,000 s.f., in order to meet one of GHG efficiency matrix shown in Table 5-1.

Most of the long-term operational mitigation strategies suggested in this chapter focuses on methods to reduce vehicle trips along with travel distance, including site design standards that encourage pedestrian and bicycle-friendly transit-oriented development. In addition, the recommendations include design strategies for residential and commercial buildings that address energy conservation and other concepts that reduce the total project's GHG emissions. These recommendations are not all inclusive and are provided as examples among many possibilities.

5.8. Steps in Determining Significance of Operational Impacts from GHG

The following steps are recommended by the District on how to determine the significance of GHG emissions operational impacts.

Step 1: Emissions Quantification

The project's CEQA document should identify sources which would contribute to the project's operational GHG emissions. An analytical methodology should be identified to estimate the project's operational GHG emissions. The District recommends using the most current version of CalEEMod. (No previous versions will be accepted.) With the CalEEMod modeling default settings or the project specific operational activity information, CalEEMod can provide a quantitative analysis that estimates the project's related GHG emissions from its related operational activities.

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ROG
SF₆
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NO_x
CO₂E
CH₄
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SF₆
NO_x

- ✓ For more information and to download the software please go to: www.caleemod.com.
- ✓ **APPENDIX B:** PCAPCD Tips for Using CalEEMod

When a project proposes a conversion from its existing operation or involves District permitted devices, the lead agency should plan to consult with the District to identify a strategy related to the baseline conditions and how such conditions in the project description are described. Refer to [Section 1.10](#) for further information on baseline conditions.

Step 2: Comparison of Unmitigated Operational GHG Emissions with the District's GHG Significance Thresholds

The total annual GHG emissions should be estimated from the project's operational activities which includes electricity and natural gas use, motor vehicle operation, water and waste water treatment, solid waste treatment, and stationary sources (if any). At this step, the project's total annual GHG emissions should consider all state and federal rules and regulations and should then be compared to the District's GHG operational significance thresholds.

- 1) Total GHG emissions are less than the De Minimis Level of 1,100 MT CO₂e/yr
The project can be considered as less than cumulatively considerable since its contribution is relatively small compared to the cumulative GHG emissions in Placer County. No further GHG analysis will be required. However, the project will still be required to be in compliance with state and local regulations such as building codes and energy efficiency standards.
- 2) Total GHG emissions are between 1,100 MT CO₂e/yr (De Minimis Level) and 10,000 MT CO₂e/yr (Bright-line threshold)
The project is required to conduct an efficiency analysis to further identify if its efficiency would meet one of conditions in Efficiency Matrix based on the proposed location and land use type. If the project cannot meet the associated efficiency condition, the lead agency should identify appropriate mitigation measures for the project. Please note that the Efficiency Matrix is only applied for land use projects with residential and/or commercial components. A stationary project or construction-only project such as roadway construction is not required to meet the efficiency condition.
- 3) Total GHG emissions exceed the Bright-line threshold of 10,000 MT CO₂e/yr
The project's related GHG impacts are considered cumulatively considerable and all feasible mitigation measures should be identified to mitigate the project's related GHG emissions.

Step 3: Identification of Mitigation Measures and Emission Reductions

When the operational GHG emissions exceed the Bright-line thresholds or exceeds the Efficiency Matrix thresholds, a lead agency is responsible in identifying the necessary feasible mitigation measures for the operational GHG emissions, to reduce the project's related GHG impacts. Mitigation measures can be from 1) special features or designs included within the project description; 2) proposed measures within the CEQA-compliant environmental document; 3) identified measures from previously approved CEQA documents, and 4) regulatory measures as required by the District and local jurisdiction. [APPENDIX A](#) summarizes the District's rules and regulation applicable to the land use projects and [APPENDIX F](#) contains examples of feasible mitigation measures and a chart regarding the potential reduction of mitigation measures for GHG emissions. In addition, CAPCOA published the [Quantifying Greenhouse Gas Mitigation Measures](#) Report which provides a resource for local government in assessing emission reductions from GHG mitigation measures. For the project the District recommends identifying all feasible mitigation measures to the maximum extent.

- ✓ **APPENDIX A:** PCAPCD Rules and Regulations

- ✓ [APPENDIX F: PCAPCD Recommended GHG Mitigation Measures and Reduction Chart](#)
- ✓ [CAPCOA Quantifying Greenhouse Gas Mitigation Measure Report](#)

Please note that any commentments made within the project's design features that serve to mitigate impacts should be fully evaluated within the related impact analysis and mitigation discussion, to ensure that the feature does in fact mitigate the project's potential adverse impacts. In addition, it is at the lead agency discretion that the local jurisdiction's rules and regulatons are reflected within the project related emissions, either before or after mitigation, in the modeling anlysis for the project's operational GHG emissions impacts.

The District recommends that the proposed mitigation measures to reduce operational GHG emissions be as detailed as possible and should explicitly identify who is responsible for implementation, funding, monitoring, enforcement, and any required maintenance activities. In cases where the GHG emission reduction measures relate directly or indirectly to policies within a local jurisdiction's General or Community Plan, the District encourages discussion in the CEQA document on the relationship between the General Plan or Community Plan's policy and proposed reduction measures. If the land agency is planning to amend its General Plan or a Community Plan, CAPCOA has published the [Model Policies for Greenhouse Gases in General Plans](#) which can be a resource for local government to incorporate General Plan policies to reduce GHG emissions.

- ✓ [CAPCOA Model Policies for Greenhouse Gases in General Plans](#)

The District recommends that mitigation measures identified in the CEQA document be included as conditions of approval during the entitlement phase of project approval. In addition, any mitigation monitoring reporting plan (MMRP) should also be included as a condition of approval during the entitlement phase.

At the very least, the project's mitigated emissions after the mitigation implementation should be quantified and disclosed in its CEQA document.

Step 4: Impact Significance Determination

The project's CEQA document should determine its mitigated operational GHG emissions after mitigation implementation and compare the total mitigated GHG emissions with the applicable thresholds. If the implementation of mitigation measures, including on-site and off-site mitigation, reduces the operational GHG emissions to the level below thresholds, the project's related GHG emissions impacts would be reduced to a less than cumulatively considerable.

If the mitigated GHG emissions still exceed the bright-line threshold, the project would be considered to have a cumulative considerable contribution to global climate change impacts.

Figure 5-1 summarizes the steps recommended by the District in determining the potential significance of the operational GHG impacts.



Figure 5-1: Steps in Determining Potential Significance of GHG Operational Impacts

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CO₂
ROG
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CH₄
N₂O
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ROG
O₃
CO₂
ROG
SF₆
NO_x
SF₆
NO_x
CO₂E
CH₄
PM₁₀
O₃
SF₆
SF₆
NO_x

5.9. Options for Project's Operational GHG Impact Mitigation

When the operational related emissions exceeds an applicable significance threshold, lead agencies are responsible for identifying all feasible mitigation measures to reduce the project's operational GHG emissions. The GHG emission analysis should quantify the reduction of emissions associated with any proposed mitigation measure and include the information in project's CEQA document.

The project's mitigation measures can include special features or site designs, proposed measures within the CEQA-compliant environmental document, identified measures from previous approved CEQA documents, and measures as required by local rules and regulations. Emissions from motor vehicles that travel to and from residential, commercial, and industrial land uses can generally be mitigated by reducing vehicle activity through site design (e.g., transit oriented design, infill, mixed use, etc.), implementing transportation demand management measures, using clean fuels and vehicles, and/or off-site mitigation projects.

In addition, area source operational emissions from energy consumption from land uses can be mitigated by improving energy efficiencies, conservation measures and the use of alternative energy sources. The mitigation measures discussed in this section are intended for GHG emissions but will also benefit in reducing emissions of ROG, NO_x, and Diesel PM (DPM). The following categories best capture the types of mitigation measures that can reduce GHG emissions from project operational operations.



Site Design Mitigation Measures

Site design and project layout can be effective methods for mitigating GHG emission impacts from development. Land use development which incorporates urban infill, higher density, mixed use and walk-able, bike-able, and transit oriented designs can significantly reduce vehicle activity and associated air quality impacts. As early as possible in the scoping phase of a project, the District recommends that developers contact the District staff to discuss the project layout and design factors which can influence indirect source emissions and reduce mobile source emissions.

Energy Efficiency Mitigation Measures

Residential and commercial energy used for lighting, heating and cooling is a significant source of direct and indirect GHG emissions nationwide. Reducing site and building energy demand reduces emissions at the power plant source along with natural or propane gas combustion in homes and commercial buildings. Commercial and residential buildings' energy efficiency can be improved by orienting buildings to maximize indirect heating and cooling, enhancing the buildings' insulation beyond building code requirements, installing energy efficiency appliances, incorporating the on-site electrical generation such as solar panels, or applying energy from renewable sources such as electricity from wind mills or biomass energy facilities.



Transportation Demand Mitigation Measures

Vehicle emissions are often the largest continuing emissions source from a development's operational phase. Reducing the demand for single-occupancy vehicle trips is a simple, cost-effective means of reducing vehicle emissions. In addition, using cleaner fueled vehicles or retrofitting equipment with emission control devices can reduce the overall emissions without impacting operations. Currently clean fuel and vehicle technologies exist for both passenger and heavy-duty applications.

- ✓ [Appendix F](#) Recommended Mitigation Measures and Reduction Chart for GHGs



Neighborhood Electric Vehicle (NEV)

Off-Site Mitigation

The District prefers that land use projects implement all feasible on-site mitigation measures. It is understandable that many on-site mitigation measures may not be suitable for a land use project. If this occurs, off-site mitigation measures would be an option for the project if there are insufficient on-site feasible mitigation measures to mitigate the project's related air quality impacts. Therefore, it is important for the applicant, developer, lead agency, and the District to work closely together whenever off-site mitigation is considered for a project.

When off-site mitigation is an option used to mitigate the project's operational impacts, emission reductions achieved from off-site sources should be equal to the required emission reductions related to the land use project's on-site impacts. This can provide the proper nexus for GHG emission mitigation under CEQA. For example, excessive GHG emissions from a land use project's energy usage could be reduced by a project which will generate the same amount of GHG emission reductions by utilizing landfill gas to generate renewable electricity.

If an off-site mitigation measure is required for a land use project, that mitigation measure should explicitly identify the required GHG emission reduction and the implementation method. The District's Board of Directors adopted the [Review of Land Use Projects under CEQA Policy](#) in 2016 which outlines the principles on how the GHG off-site mitigation measures should be implemented, by the selected mitigation scenarios, to offset the land use project's related operational GHG emissions. The project applicant has two options to implement off-site mitigation measures for GHG emissions: 1) proposing their own offsite mitigation project, or 2) purchasing carbon credits from recognized carbon credit registries. Please note that there is no mitigation fee option for GHG off-site mitigation since there is no fee rate or cost-effectiveness factor established by a statewide incentive program.

- ✓ [PCAPCD Review of Land Use Projects under CEQA Policy](#)

The applicant can choose to implement an offsite mitigation project. Prior to implementation, the applicant should consult with the District and demonstrate that the project met all the conditions required by a selected carbon credit protocol approved by CAPCOA, CARB, or other similar entities determined acceptable by the District. If the applicant chooses to purchase carbon credits, the credits should be registered under the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR), or other similar carbon credit registry as determined acceptable by the District. The requirement will ensure that the proposed mitigation project or carbon credit purchase can result in an equivalent GHG reduction required by the offsite mitigation measure. In addition, the District encourages the applicant to consider generating or purchasing **local and California-only** carbon credits as the



PM₁₀

preferred mechanism to implementing the GHG off-site mitigation measure which helps facilitate the State toward achieving the GHG emission reduction goal.

CO₂

The following links are well-recognized entities that have approved carbon offset protocols and/or registered carbon credits which can be applied towards a land use project's GHG emission reductions.

ROG

- ✓ [CAPCOA GHG Reduction Exchange Program \(GHG Rx\)](#)
- ✓ [CARB Compliance Offset Protocols](#)
- ✓ [American Carbon Registry](#)
- ✓ [Climate Action Registry](#)

O₃

SF₆

NO_x

Please note that the District will not be involved with any carbon credit purchase agreements; the District is only assisting the lead agency with verification of the carbon credits to ensure that they are real, permanent, quantifiable, verifiable, enforceable, and additional.

CO₂E

CH₄

N₂O

H₂O

CH₄

HFC

ROG

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Chapter 6: Special Circumstances for a Project

Special Circumstances for a Project

6.1. Projects with Existing or New Stationary Source Operations

Occasionally, a land use project may include equipment or a process that is considering a stationary source operation which means that a permit from the District is required. Emissions from stationary source operations should be part of the project's air quality analysis. The District strongly recommends that the project's applicant consult with the District prior to attempting any emission calculations.

If there is an existing operational stationary source associated with the project, it may already be under a District Permit to Operate, depending on the type of stationary source and the District's regulatory requirements. A Permit to Operate includes the type of equipment/process/device being regulated, the equipment/process operational conditions, emission limitations, and associated emission factors used to determine the equipment/process emissions. The project's air quality analysis should identify the emissions from its stationary source operation as the baseline condition, which can be determined by the historical operational emissions from related stationary sources. The District can provide the historical emissions data through a [public information request](#). Please note that the existing stationary source emissions identified in the project's baseline conditions should be based on the actual emissions, not the allowed or the potential maximum emissions that may be identified in the District's permit.

- ✓ For more information regarding the Request for Public Information please go to: <http://www.placerair.org/publicrecordsrequest>.

If a project proposes to install new equipment, a device or a new process that will release air pollutants as part of the project, it will be subject to the District's permitting program and must apply for and obtain an Authority to Construct and Permit to Operate before installation or operation. The District's engineer will need to evaluate the proposed device/equipment/process to determine the potential emissions since the District will act as a responsible agency.

The emission estimation for the proposed stationary source should get concurrence from the District. For this reason, the project applicant should contact the District's engineer prior to conducting an analysis to ensure that the emission calculation will be consistent with the results from the District's permit evaluation. Please note that the emission estimation presented in the project's CEQA document will be used during the District's permit application evaluation process unless changes to the project have occurred since the last CEQA document was produced and in that case any significant inconsistencies may require an update to the CEQA document.

- ✓ For more information regarding the Request for the District permit requirement, please go to: <http://www.placerair.org/Placer%20Air/PermitsandFAQ>

6.2. Projects with Toxic Air Contaminants Emissions

Toxic Air Contaminants (TACs) or hazardous air pollutants (HAPs) are airborne pollutants that may be expected to result in "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health"³¹. TACs can be emitted by a wide range of sources from industrial plants to households which emit but are not classified as criteria air pollutants with no ambient air quality standards established for them. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, or genetic damage or short-term acute effects such as watering eyes, respiratory irritation, throat pain, or headaches.

³¹ California Health and Safety Code §39655

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Both federal and state agencies have established processes to identify toxic air contaminants and regulate them through risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. The following are the web links to both the federal and state air toxics program:

- ✓ [National Air Toxics Assessments](#)
- ✓ [California Air Toxic program](#)
- ✓ [California Toxic Air Contaminant Identification List](#)

TACs can be separated into carcinogens and non-carcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. Carcinogens are defined as the substances that cause cancer to humans. Non-carcinogens are the substances that are not associated with human cancer but will cause acute and chronic health effects such as birth defects, organ damage, or death.

The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588), which is known as the “Air Toxics Hot Spots” program, was enacted in 1987³². The Act requires that California air districts evaluate existing stationary sources of emissions (i.e. facilities and businesses) for significant risks to the public, and if significant, the Act requires a reduction in risk to non-significant levels. The Act also requires updated reviews of potentially significant emission sources every four years and the evaluation of new stationary sources after 12 months of operation. The District Board has adopted the significant risk threshold of 10 in a million³³. This risk threshold is used by the District to evaluate potential risks for both existing and new stationary sources in Placer County.

When a land use project proposes a new stationary source that will emit TACs, the project might be required to identify its potential risk to the nearby communities. Common stationary source types which emit TAC emissions include gasoline stations, dry cleaners, and diesel backup generators. These are also subject to District permit requirements along with an evaluation for TACs.

A project may also involve other associated non-stationary sources that may discharge TAC emissions such as diesel delivery trucks and off-road construction equipment. Stationary sources and non-stationary sources of TACs as well as consumer products all contribute to TACs in the air. Each of these sources may contribute a minor increase in risk individually but the risks from all sources could become a cumulatively considerable health impact to the communities. Screening tools such as a Health Risk Assessment (HRA) for the evaluation of associated cumulative community risk and hazard impacts should be considered. The following are common land use proposals which may be required to conduct a HRA for its TAC emissions:

- Goods Distribution Centers,
- Refineries,
- Power Generation Facilities,
- Chrome Platers,
- Dry Cleaners using Perchloroethylene, and
- Gasoline Dispensing Facilities.

³² CARB AB 2588 Air Toxics “Hot Spots” Program. <https://www.arb.ca.gov/ab2588/ab2588.htm>

³³ PCAPCD Board adopted the significant toxic risk thresholds in April 2002.

In order to ascertain the risk evaluation appropriately, the Office of Environmental Health Hazard Assessment (OEHHA) developed a guidance manual which describes the algorithms, exposure variates, and modeling protocols needed to prepare a HRA. The latest guidance manual was released by OEHHA on March 6, 2015. The CARB along with the CAPCOA updated the guidance document that provides procedures for the performance of risk assessments, incorporating the new OEHHA health risk assessment methodology. These two documents are references for a project in which might a health risk assessment for potential toxic emissions needs to be prepared.

- ✓ [OEHHA Air Toxics Hot Spots Program Guidance Manual \(March 2015\)](#)
- ✓ [CARB/CAPCOA Risk Management Guidance for Stationary Sources of Air Toxics \(July 2015\)](#)

The project specific information needed to prepare a HRA are listed but not limited to:

- Proposed equipment/process,
- Types of TACs emitted by the proposed equipment/process and associated health variates,
- Emission factors of TACs applied to the proposed equipment/process,
- Proposed operational duration such as number of hours per day or seasons,
- Location of equipment or process staging area,
- Distance to the nearest sensitive receptors such as schools, day-care centers, hospitals, or residential areas,
- Selected computer models, and
- Meteorological data including predominant wind direction, speed, mixing heights, and temperature for the modeling analysis.



Prior to conducting a HRA, the project applicant/consultant should discuss with the District the data inputs and modeling techniques to ensure the HRA evaluates the project's health risk appropriately.

6.3. Projects Siting in the Vicinity of Existing TAC Sources

Unlike stationary source projects, a project proposing new residential houses, apartments, schools, or day care facilities may not involve any stationary device or emissions from its stationary device component are small and would not cause considerable health concerns. However, sometimes these types of land use proposals may be located in an area surrounded by nearby existing TAC sources which could cause long-term serious health problems to future house owners, children, students, or patients. Although the District does not establish any health risk related thresholds for such types of land use projects, it is especially important that lead agencies be aware of the potential health impacts with the proposed land use projects.



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For the above reason, the CARB prepared the [Air Quality and Land Use Handbook](#) (CARB Land Use Handbook) which characterizes some common air pollution sources and provides recommendations to lead agencies to avoid siting sensitive land uses such as residences, schools, day care centers, playgrounds, and medical facilities near these types of air pollution sources. These common air pollution sources identified by the CARB Land Use Handbook are as follows:

- High Traffic Freeways and Roads,
- Goods Distribution Centers,
- Rail Yards,
- Ports,
- Refineries,
- Chrome Plating Facilities,
- Dry Cleaners using Perchloroethylene, and
- Large Gasoline Dispensing Facilities.

From the review of related scientific studies, the CARB Land Use Handbook recommends buffer distances between those air pollution sources and sensitive land uses. Table 6-1 summarizes the CARB Handbook's recommendations³⁴. Please note that these recommendations with qualitative analysis are advisory, lead agencies may have to balance other considerations.

Table 6-1: CARB Recommended Minimum Separations for Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
	Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.
	Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air Districts or the CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air Districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air District.
	Do not site new sensitive land uses in the same building with Perc dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

In April 2017, CARB released a technical advisory as a supplement to its previous Land Use Handbook. This advisory is to provide planners and other stakeholders involved in land use

³⁴ CARB Air Quality and Land Use Handbook Table 1-1. <https://www.arb.ca.gov/ch/handbook.pdf>

planning and decision-making with information on scientifically based strategies to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice. Strategies to reduce exposure include practices and technologies that reduce traffic emissions, increasing dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air. The document compiles a list of recommended strategies including detailed discussion. The technical advisory can be downloaded from the following:

- ✓ [CARB Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways Guide](#)

In addition to the CARB Handbook, CAPCOA has also developed the [Health Risk Assessments for Proposed Land Use Projects](#) guidance which describes when and how a health risk assessment should be prepared and what to do with the results. The CAPCOA guidance outlines the recommended procedures to identify when a project should undergo further risk evaluation, how to conduct a HRA, how to engage the public, what to do with the results from the HRA, and what mitigation measures may be appropriate for various land use projects under CEQA. [APPENDIX G](#) summarizes the procedures from the CAPCOA guidance on preparing HRAs for land use projects. Detailed information regarding the CAPCOA guidance can be found in the following:

- ✓ [CAPCOA Health Risk Assessments for Proposed Land Use Projects](#)

Recently, the California Supreme Court ruled that lead agencies are not required by CEQA to analyze the impact of the existing environmental conditions on a project's future users or residents unless the project will exacerbate the existing environmental hazards or conditions³⁵. Some lead agencies may limit their CEQA analysis of existing TAC source impacts on a proposed project's new users, but the District maintains that siting new sensitive land uses within the vicinity of existing TAC sources could cause potential health concerns. Specifically, if a project involves the purchase of a school site or the construction of a new elementary or secondary school, the project's environmental document shall identify whether any existing TAC sources are around the proposed school site which would result in potential public health concerns, pursuant to Public Resources Code requirements³⁶. The District recommends that these situations be analyzed and necessary measures be identified to reduce the potential health impacts through the lead agency's CEQA review process, or least within their use permit structure. The District is available to work with lead agencies closely to identify existing TAC sources near the proposed project and provide any necessary assistance for its health risk assessment.

6.4. Projects Siting in an Area with Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by the CARB. NOA is located in many parts of California and is commonly associated with ultramafic rocks, according to the California Department of Geology's special publication titled [Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California](#). Asbestos is the common name for a complete group of naturally occurring fibrous silicate minerals that can be separated into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed, at the surface by geologic uplift and erosion, ultramafic rocks may be partially altered into a type of metamorphic rock called serpentinite. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks or along their boundaries.

³⁵ California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369

³⁶ California Public Resources Code §21151.8 (a)(2)

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For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposures to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt, dust raised from unpaved roads and driveways covered with crushed serpentine, grading and earth disturbance associated with construction activity, quarrying, gardening, and other human activities.

People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (quantity of fibers), and also increases with time since first exposure. Although there are a number of factors that influence the disease causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens.

NOA is present in several foothill areas of Placer County. The District recommends the applicant should identify if the proposed project is located in areas where NOA is most likely found. District NOA maps show where serpentine rock formations could be found in Placer County. If a project located within the most likely to contain NOA area and the project involves earth-disturbing construction activity, the project may have the potential to expose people to airborne asbestos. A Naturally-Occurring Asbestos Dust Mitigation Plan (ADMP) will need to be developed to comply with the requirements listed in the CARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. The ADMP guidance can be reviewed on the District's website. The following are websites which contain NOA information for the land use projects in Placer County:

- ✓ [Placer NOA Maps](#)
- ✓ [Placer ADMP guidance](#)
- ✓ [CARB Asbestos ATCM](#)

6.5. Projects with Odors or Siting Near to Existing Odor Sources



The District is responsible for odor complaints/nuisance. The types of facilities that can cause odor complaints are varied and can range from small commercial facilities to large industrial facilities, and may include waste disposal and recycling operations. Odors can cause health symptoms such as nausea and headaches. Some common sources of odors emitted by facilities are sulfur compounds, organic solvents, and the decomposition/digestion of biological materials. With the subjective nature of a receptor's sensitivity to a particular type of odor, there is no specific rule for assigning appropriate separations from odor sources. Under the right meteorological conditions, some odors may still be offensive several miles from the source.

Certain facilities such as sanitary landfills, paint and/or coating operations, and wastewater treatment facilities might have the potential to cause significant odor impacts. The followings are the common land use types that typically generate significant odor impacts:

- Wastewater Treatment Plants,
- Sanitary Landfills,
- Composting/Green Waste Facilities,
- Recycling Facilities,
- Chemical Manufacturing Plants,
- Painting/Coating Operations,

- Agricultural Operations, and
- Slaughterhouse/Food Packaging Plants.

If a land use project proposes any of the above type of land uses, which have the potential to cause significant odor impacts, the odor impacts should be identified and discussed in the environmental document so mitigation measures may be identified. New development projects such as residential subdivisions or other sensitive receptors may also have the potential to be affected when the project is located downwind of the above types of land uses. In this case, the District recommends that odor issues are discussed early in the site design process so that any potential odor impacts could be mitigated.

One of the most important factors influencing odor impacts is the distance between the odor source and receptors, referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less odor impact when it reaches the receptor. Table 6-2 is a recommended Odor Screening Distances table used by a neighboring air district³⁷ in the Sacramento Region which lists suggested buffer distances for a variety of odor-generating facilities. In addition to distance, the potential for a significant odor impact relies on a variety of factors. Lead agencies should not apply the recommended screening distances as the only factor to determine the significance of the potential odor impact.

Table 6-2: Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	2 miles
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	4 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile

Source: SMAQMD: CEQA Guide to Air Quality Assessment, Chapter 7, Odors / Recommended Odor Screening Distances.

The District recommends that a significance determination for odor impact be made on a case-by-case basis with all the parameters considered. The parameters include distance, the downwind/upwind situation, dominant wind direction, and a facilities odor compliant history. Lead agencies should clearly present the evidence in the discussion to support its significance determination. Please note that the issuance of a land use permit cannot prevent a third party from bringing a nuisance action against another party, and the outcomes of such litigation would be based on the facts of the situation.

³⁷ Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Guide Chapter 7 Odor Screening Table <http://www.airquality.org/LandUseTransportation/Documents/Ch7ScreeningDistancesFINAL12-2009.pdf>

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SF₆
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Mission

To be the leading provider of vital on-site health, education, and employment services to families, children, and seniors living in affordable and workforce housing communities.

Vision

Project Access envisions that all residents of affordable housing communities have the opportunity to achieve self-sufficiency and maximize their full potential.

Our Programs

Project Access services are provided at on-site Resource Centers at each individual community. Our comprehensive presence:

- Allows residents to build a trusting relationship with Project Access staff
- Serves as a one-stop center for resources and assistance
- Reduces barriers to transportation

We recruit and hire talent that match the unique needs of the community. Staff are culturally competent and often bilingual. Click below to learn more:

[LEARN MORE](#)

Take a Tour of a Resource Center

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780 S. Lyon St. - Warwick Square Resource Center

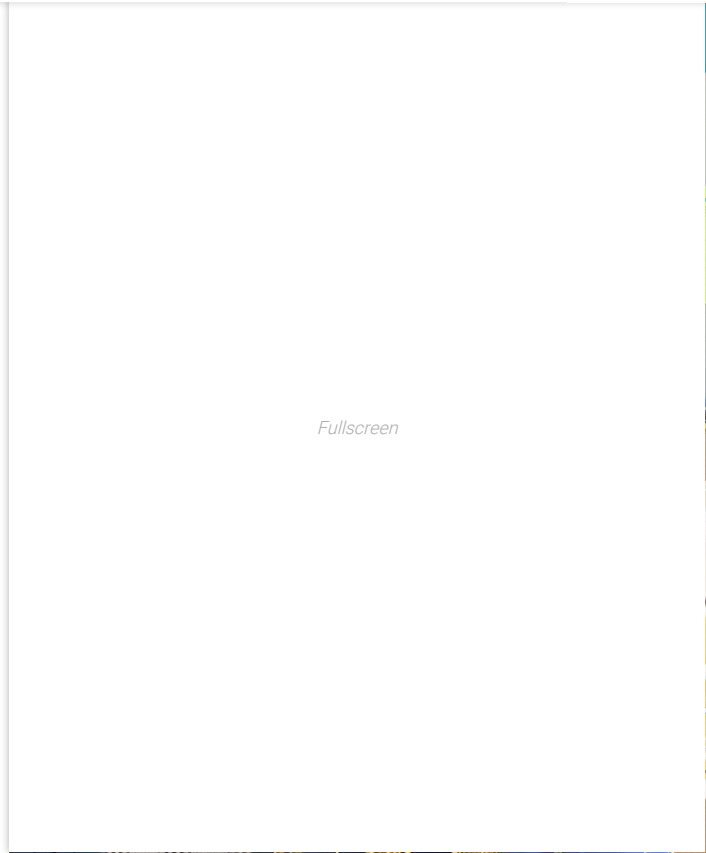


Explore 3D Space



2021 Project Access Annual Report

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Financial Documents

 [2021 Audited Financials](#)

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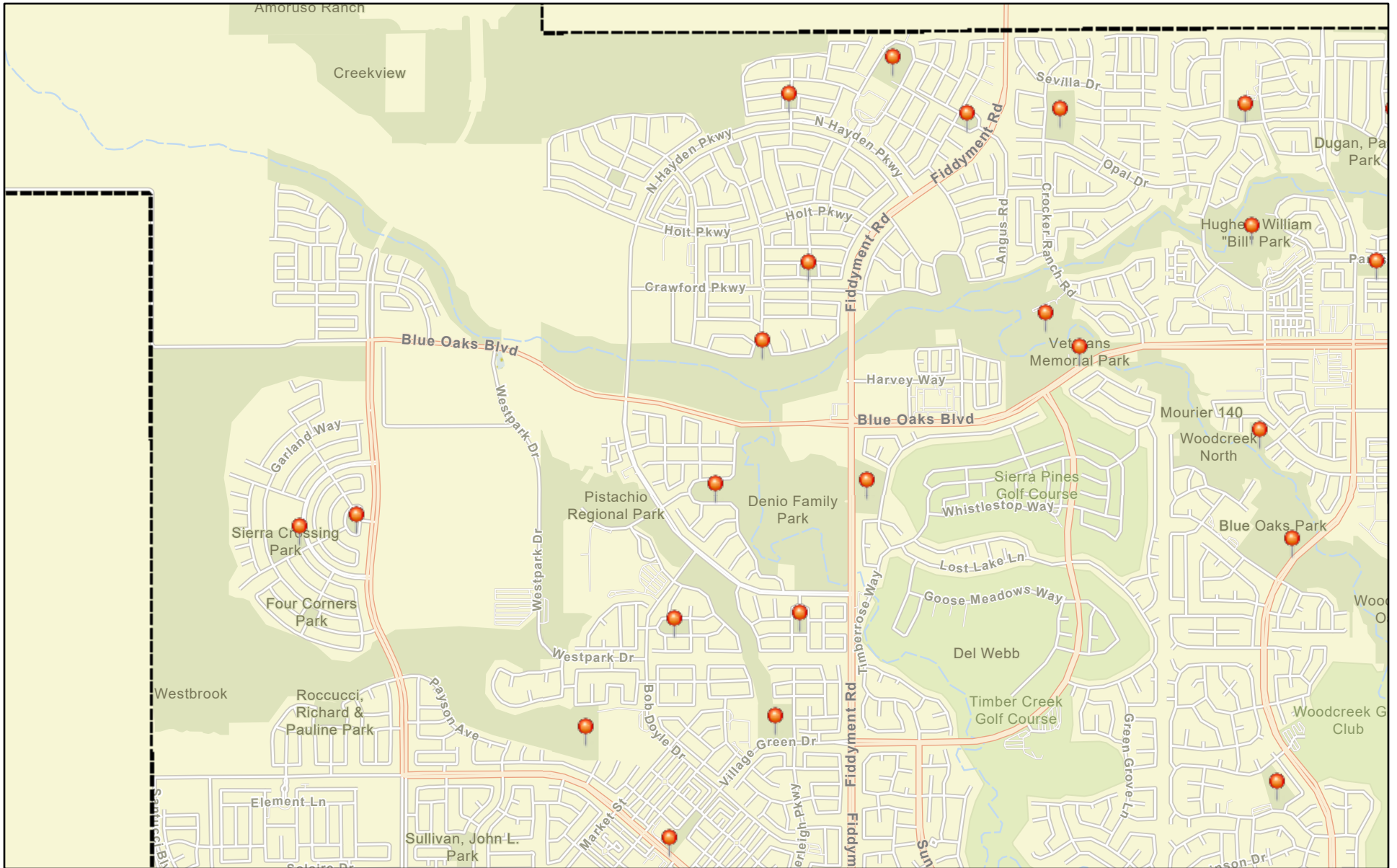
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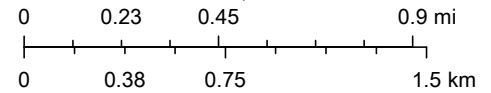
Park Location



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----- City Boundary

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SACOG Regional Housing Needs Plan

Cycle 6 (2021-2029)

Adopted March 2020



SACOG

Sacramento Area
Council of
Governments

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SACOG MISSION

Provide leadership and a dynamic, collaborative public forum for achieving an efficient regional transportation system, innovative and integrated regional planning, and high quality of life within the greater Sacramento region.

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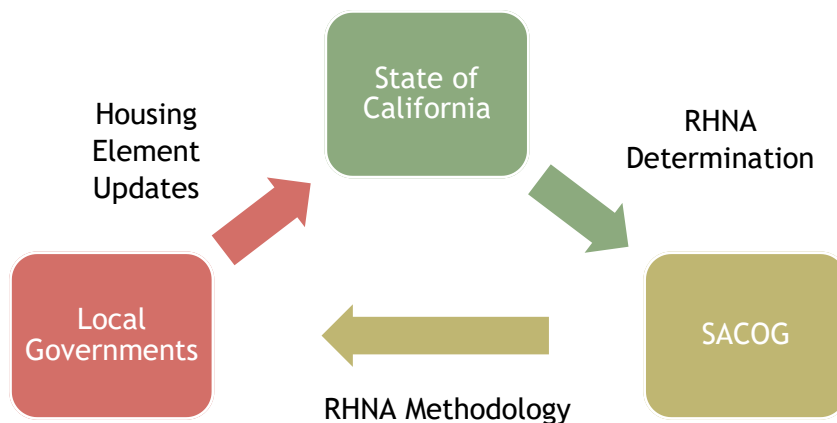
- A. Regional Housing Needs Determination Letter from HCD
- B. Tahoe Regional Planning Agency Memo
- C. RHNA Methodology Consistency Determination from HCD
- D. Draft RHNA Methodology Menu
- E. Comment Letters on Draft RHNA Methodology Menu and SACOG Responses
- F. Affirmatively Furthering Fair Housing Survey Results
- G. Excerpts from California Government Code Section 65584

EXECUTIVE SUMMARY

PROCESS

The Regional Housing Needs Allocation (RHNA) is the California state-required process that seeks to ensure cities and counties are planning for enough housing to accommodate all economic segments of the community. The process is split into three steps:

1. *Regional Determination:* The State Department of Housing and Community Development (HCD) provides each region a Regional Determination of housing need, which includes a total number of units split into four income categories. HCD provided SACOG a Regional Determination for Cycle 6 of RHNA (2021-2029) of 153,512 units.
2. *RHNA Methodology:* Councils of Governments, including SACOG, are responsible for developing a RHNA Methodology for allocating the Regional Determination to each city and county in the COG's region. This methodology must further a series of state objectives.
3. *Housing Element Updates:* Each city and county must then adopt a housing element that demonstrates, among other things, how the jurisdiction can accommodate its assigned RHNA number through its zoning. The state reviews each jurisdiction's housing element for compliance with state law.



This document provides an overview of the RHNA state process and describes the Adopted RHNA Methodology, including the RHNA objectives and factors, methodology framework, adjustment factors, and resulting allocations by income category.

IMPORTANCE OF RHNA FOR LOCAL GOVERNMENTS

The RHNA methodology will assign housing units to each jurisdiction in the SACOG region, broken down into four income categories: very low-, low-, moderate- and above moderate-income (see table below for a breakdown of how these categories are defined in terms of median income). Following the assignment of housing units, jurisdictions in the SACOG region must adopt a housing element by August 2021 that demonstrates, among other things, how they can accommodate the assigned RHNA numbers through zoning.

Income Category	Household Income Bucket (Based on Area Median Income)
Above Moderate Income	(120+%)
Moderate Income	(80-120%)
Low Income	(50-80%)
Very Low Income	(<50%)

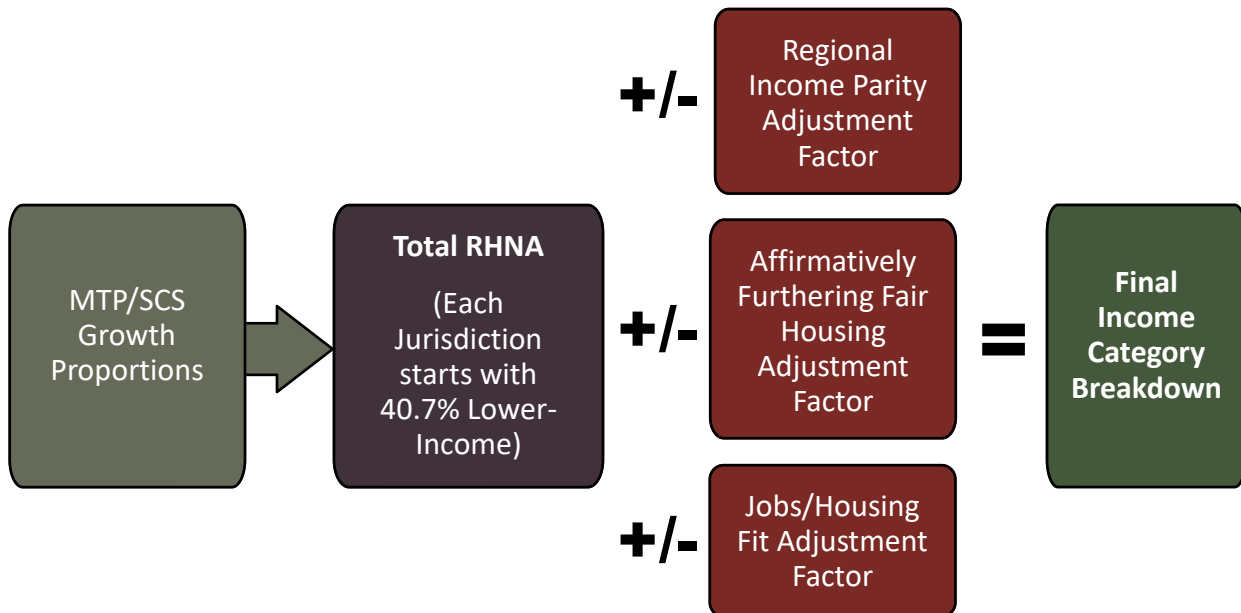
A key assumption of the RHNA requirements is that the higher the allowed density in the zoning, the more likely it is to be able to accommodate affordable housing. While above moderate-income RHNA can be accommodated on single family zoned sites, the lower income categories (very low- and low-income) can only be accommodated on sites zoned for higher densities (typically 20 or 30 units per acre). If a jurisdiction does not have enough zoning capacity to accommodate all income categories of its RHNA, it must identify sites and rezone them by 2024.

ADOPTED RHNA METHODOLOGY

On November 21, 2019, the SACOG Board adopted the Cycle 6 2021-2029 RHNA Methodology (Adopted RHNA Methodology). This methodology represents the culmination of input from the public, local housing planners, and housing stakeholders across the region over a 14-month period. The methodology is oriented around furthering the five RHNA objectives outlined in state law and discussed in Section 2. The Adopted RHNA Methodology uses a two-step process to:

- 1) Calculate each jurisdiction’s total RHNA based on their proportion of growth in SACOG’s adopted 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)
- 2) Calculate the percentage of lower-income units in each jurisdiction based on three adjustment factors

This process is summarized in the graphic below and the resulting allocations are provided on the following page.



ADOPTED CYCLE 6 (2021-2029) RHNA METHODOLOGY SUMMARY TABLE

Jurisdiction	Lower Income Units				Higher Income Units		Total RHNA
	Very Low	Low	Very Low + Low	% of Total RHNA (VL+L)	Moderate	Above Moderate	
Placerville	56	34	90	34.7%	50	119	259
El Dorado County Uninc Tahoe Basin	91	55	146	40.7%	63	150	359
El Dorado County Unincorporated	1,350	813	2,163	43.3%	840	1,991	4,994
Auburn	68	41	109	35.2%	60	141	310
Colfax	17	11	28	28.9%	21	48	97
Lincoln	1,496	902	2,398	46.8%	807	1,915	5,120
Loomis	117	71	188	53.4%	49	115	352
Rocklin	1,911	1,151	3,062	54.1%	771	1,828	5,661
Roseville	3,855	2,323	6,178	51.2%	1,746	4,142	12,066
Placer County Uninc Tahoe Basin	110	67	177	40.7%	77	181	435
Placer County Unincorporated	2,017	1,215	3,232	43.6%	1,242	2,945	7,419
Citrus Heights	132	79	211	30.3%	144	342	697
Elk Grove	2,661	1,604	4,265	51.6%	1,186	2,812	8,263
Folsom	2,226	1,341	3,567	56.1%	829	1,967	6,363
Galt	404	243	647	33.6%	379	900	1,926
Isleton	5	3	8	28.6%	6	14	28
Rancho Cordova	2,115	1,274	3,389	37.4%	1,684	3,994	9,067
Sacramento	10,463	6,306	16,769	36.8%	8,545	20,266	45,580
Sacramento County Unincorporated	4,466	2,692	7,158	33.6%	4,186	9,928	21,272
Live Oak	73	44	117	28.4%	87	208	412
Yuba City	756	455	1,211	36.6%	622	1,475	3,308
Sutter County Unincorporated	177	107	284	39.0%	132	313	729
Davis	580	350	930	44.8%	340	805	2,075
West Sacramento	2,287	1,378	3,665	38.7%	1,722	4,084	9,471
Winters	125	75	200	36.2%	104	248	552
Woodland	663	399	1,062	34.4%	601	1,424	3,087
Yolo County Unincorporated	14	9	23	40.4%	10	24	57
Marysville	38	23	61	36.5%	31	75	167
Wheatland	105	64	169	33.9%	98	232	499
Yuba County Unincorporated	621	374	995	34.5%	561	1,331	2,887
Total	38,999	23,503	62,502	40.7%	26,993	64,017	153,512

RHNA KEY DATES

Year	Month	Key Dates
2019	January-March	SACOG surveyed member jurisdictions regarding the RHNA objectives and factors
	June	SACOG and HCD held a consultation process to ensure Regional Determination fairly reflected state law
	July	HCD issued SACOG its RHNA Determination (see Appendix A)
	September	SACOG issued Draft RHNA Methodology Menu (see Appendix D)
	October	The SACOG Board held a public hearing to solicit input from the public on the Draft RHNA Methodology Menu
	November	HCD provided SACOG a letter that confirmed the Draft RHNA Methodology Menu was consistent with the statutory requirements of RHNA law
	November	The SACOG Board adopted Option C as the Final RHNA Methodology
2020	January	The formal appeal deadline expires with no appeals
	March	SACOG Board adoption of the Final RHNA Plan

ORGANIZATION OF THIS PLAN

Section 1: Introduction to RHNA

This section provides an overview of the RHNA state law, the implications for local governments, and the process to develop the RHNA.

Section 2: RHNA Objectives and Factors

This section describes the statutory objectives/factors and how the Adopted RHNA Methodology furthers or considers them.

Section 3: Regional RHNA Determination

This section describes the process by which HCD developed and issued the RHNA Determination to SACOG.

Section 4: Adopted RHNA Methodology

This section describes, in detail, how the Adopted RHNA Methodology distributes the Regional Determination to each city and county in the SACOG region.

Section 5: Appendices

- The appendices include a variety of background documents including frequently asked questions, all letters received from HCD throughout the process, the full Draft RHNA Methodology Menu released for public review, comment letters and staff responses on said menu, and results from SACOG's affirmatively furthering fair housing survey.

SECTION 1: INTRODUCTION TO THE REGIONAL HOUSING NEEDS ALLOCATION CYCLE 6 (2021-2029)

CALIFORNIA STATE LAW AND RHNA

Since 1969, California has required that all local governments (cities and counties) adequately plan to meet the housing needs of everyone in the community. SACOG plays a significant role in how this is done through the Regional Housing Needs Allocation (RHNA) process for the six-county Sacramento region, comprised of the cities and counties within the counties of Placer, Sacramento, Sutter, Yolo and Yuba Counties, and the El Dorado County except for the city of South Lake Tahoe.

The California Housing and Community Development Department (HCD) issues a Regional Housing Needs Determination to SACOG's six-county region for the planning period of October 31, 2021 to October 31, 2029, which is the sixth cycle of RHNA. HCD determined that the region must zone for 153,512 housing units during this period. HCD calculates the regional determination using information provided by the California Department of Finance. The regional determination includes an overall housing need number, as well as a breakdown of the number of units required in four income distribution categories, as further defined below.

Based on the regional determination provided by HCD, the RHNA process breaks down the allocations for each of the cities and counties in the region, both overall number and by the four income categories. The allocations are formally adopted into this document, the Regional Housing Needs Plan (RHNP). The RHNA process, adopted through the RHNP, establishes the total number of housing units that each city and county must plan for within the eight-year planning period. Based on the adopted RHNA, each city and county must update its housing element to demonstrate how the jurisdiction will meet the expected growth in housing need over this eight-year planning period.

California Government Code Section 65584 et seq. encompasses the RHNA process.

IMPLICATIONS FOR CITIES AND COUNTIES

Once cities and counties received their allocations, each jurisdiction must then update the housing element of its general plan to demonstrate how zoning will accommodate the RHNA. General plans serve as the local government's "blueprint" for how a city or county will grow and develop and include seven elements: land use, transportation, conservation, noise, open space, safety, and housing. The law mandating that housing be included as an element of each jurisdiction's general plan is known as "housing-element law."

California's housing-element law acknowledges that, in order for the private market to adequately address the housing needs and demand of Californians, local governments must adopt plans and regulatory systems that provide opportunities for (and do not unduly constrain), housing development. As a result, housing policy in California rests largely upon the effective implementation of local general plans and, in particular, local housing elements.

SACOG'S ROLE IN RHNA

SACOG is required to develop and approve a RHNA and RHNP for its six-county region, including the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, and their 22 cities. The RHNA and RHNP must also include the Tahoe Basin portions of El Dorado and Placer counties, which are not normally within SACOG's planning area, except for the city of South Lake Tahoe (the State of California will address the city directly).

SACOG's responsibility is to coordinate with HCD prior to its determination of the regional housing need. Once SACOG receives the regional determination, including the overall need number and the income category distribution, it must adopt a methodology for distributing the regional growth number throughout the region. The methodology is the basis for the final RHNA and RHNP that SACOG ultimately adopts.

ALLOCATIONS – OVERALL AND FOUR INCOME CATEGORIES

The Regional Housing Needs Allocation has two parts as required by State law:

1. Overall Allocation: SACOG received 153,512 total housing unit number for growth during the planning period in the six-county SACOG region (minus the city of South Lake Tahoe) from HCD. This overall number is broken down into four income categories.
2. Income Category Distributions: HCD also breaks up the total regional housing units into four income levels.
 - very low income (less than 50 percent median family income [MFI]);
 - low income (50 to 80 percent MFI);
 - moderate income (80 to 120 percent MFI);
 - moderate income (above 120 percent MFI).

Section 3 addresses how the State developed these allocations in the Regional Determination.

FOUR INCOME CATEGORIES

The four income categories listed above must be addressed in a jurisdiction's housing element. Specifically, accommodations must be made to ensure that the jurisdiction provides sufficient zoning capacity to accommodate the projected housing need in each income category.

It is important to note that each jurisdiction is responsible for providing sufficient zoning capacity for the units allocated to all four economic income categories but is NOT responsible for the construction of these units. The intent of the Housing Element Law is to ensure that jurisdictions do not impede the construction of housing in any income category. Other factors, such as market forces, are well beyond a jurisdiction's control and have considerable influence over whether housing units in each income category are actually constructed.

RELATIONSHIP TO SACOG’S TRANSPORTATION PLANNING

The SACOG 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) plans for the projected growth in the region by 2040 and where it will take place. State law requires that the MTP/SCS be consistent with the RHNA. As such, the RHNA is an attempt to plan for the projected growth between 2021 and 2029 using the land use forecast and underlying data used in the MTP/SCS.

RHNA OBJECTIVES AND FACTORS

State law requires that five objectives be considered during the development of the methodology to allocate housing needs in the region:

- 1) Increase Housing Supply and Mix of Housing Types
- 2) Promote Infill, Equity, and Environment
- 3) Ensure Jobs Housing Balance and Fit
- 4) Promote Regional Income Parity
- 5) Affirmatively Further Fair Housing

The RHNA objectives provide the guiding framework for how SACOG must develop the methodology. SACOG is required to demonstrate how its methodology “furthers” each of the objectives. This requires proactive inclusion of each objective into the analysis and represents a higher standard than in previous cycles, which required allocations methodologies to be “consistent” with state objectives.

In addition, there are twelve RHNA factors (some with multiple parts) that SACOG must consider when distributing each jurisdiction’s overall and income category allocations. The RHNA factors must be “incorporated” into the methodology. State law mandates that each of the factors be included to the extent that sufficient data is available.

Section 2 of this document describes both the RHNA Objectives and the RHNA Factors and how they were furthered or considered.

METHODOLOGY: PROCESS FOR ALLOCATION

The RHNA methodology is the formula by which SACOG will allocate the number of housing units each city and county in the SACOG region must zone for between 2021 and 2029. The SACOG region must divide up the 153,512 dwelling units that was assigned by the California Housing and Community Development Department (HCD). The amount of lower income housing units that each jurisdiction must zone is of particular interest to local governments and stakeholders. The number of affordable, or lower income, units allocated to a jurisdiction is the amount that it must zone for higher densities. In the SACOG region, the default density standard for accommodating lower income RHNA units is either 20 or 30 units per acre, depending on the jurisdiction. Section 4 of this document describes the Adopted RHNA Methodology.

SECTION 2: RHNA OBJECTIVES AND FACTORS

RHNA OBJECTIVES AND RHNA FACTORS

Adopting the RHNA Methodology is the only step of the RHNA cycle for which SACOG has direct discretion. However, state statute requires SACOG to consider or further a series of objectives and factors, many of which have been amended by state legislation in 2018.

RHNA Objectives
<ul style="list-style-type: none">•The RHNA objectives provide the guiding framework for how regions must develop the RHNA methodology. SACOG is required to demonstrate how its methodology “furthers” each of the objectives. This language requires proactive inclusion of each objective into the analysis and is a higher legal bar than “consistency.”

RHNA Factors
<ul style="list-style-type: none">•The RHNA factors include a longer list of considerations that must be considered or incorporated into the methodology. Each of the factors should be included to the extent that sufficient data is available.

RHNA OBJECTIVES (§65584.D)

OBJECTIVE 1. INCREASE HOUSING SUPPLY AND MIX OF HOUSING TYPES

"Increasing the housing supply and the mix of housing types, tenure, and affordability in all cities and counties within the region in an equitable manner, which shall result in each jurisdiction receiving an allocation of units for low- and very low-income households."

This objective is inherently addressed through a methodology that assigns units at different income categories to each jurisdiction across the region. The Adopted RHNA Methodology accomplishes this by ensuring each jurisdiction receives an allocation for lower income units. The three adjustment factors all support this objective by adjusting the percentage of lower income units as a means of accomplishing specific policy goals outlined in state statute.

In its review, HCD noted that the Adopted RHNA Methodology “allocates more lower income RHNA to jurisdictions that have higher housing costs. Six of the seven cities with the highest housing costs in the region also receive the seven largest shares of lower income RHNA. Additionally, there is fairly close alignment between the ranking of housing costs and share of lower income RHNA across all jurisdictions. This outcome helps to facilitate a mix of affordability, housing types, and tenure throughout the region.”

OBJECTIVE 2. PROMOTE INFILL, EQUITY, AND ENVIRONMENT

"Promoting infill development and socioeconomic equity, the protection of environmental and agricultural resources, the encouragement of efficient development patterns, and the achievement of the region's greenhouse gas reductions targets provided by the State Air Resources Board pursuant to Section 65080."

This objective shares many of the same goals as the MTP/SCS, which forms the basis for the total RHNA calculation for each jurisdiction. Among other things, the MTP/SCS forecasted development pattern promotes infill housing and supports a compact development pattern that will achieve the ambitious climate goals given to SACOG by the state. Since the MTP/SCS furthers these objectives and forms the basis for the total RHNA calculation, no additional adjustment factors are necessary to further this objective. More about how the MTP/SCS informs the RHNA is described below in the "Total RHNA Calculation" section. In addition, the jobs/housing fit adjustment factor supports this objective by working to create more affordable housing where there are high ratios of low-wage jobs to units that are affordable to low-wage workers. This will help to reduce the vehicle trip distances and increase the potential for non-auto commute options for lower income residents.

In its review, HCD noted that the Adopted RHNA Methodology "furthers the infill and environmental principles of this objective, as the overall allocation is based on SACOG's infill and job focused MTP combined with adjustment factors, such as the jobs-housing adjustment factor, which further direct lower income RHNA toward low-wage job centers, encouraging "jobs-housing fit," efficient development patterns, greater housing access for low-wage workers, and greenhouse gas reduction."

OBJECTIVE 3. ENSURE JOBS HOUSING BALANCE AND FIT

"Promoting an improved intraregional relationship between jobs and housing, including an improved balance between the number of low-wage jobs and the number of units affordable to low-wage jobs in each jurisdiction."

The MTP/SCS promotes an improved intraregional relationship between total jobs and total housing units as a means to achieving better climate and transportation outcomes. However, the MTP/SCS does not explicitly consider the relationship between low-wage jobs and the number of housing units affordable to low-wage workers in each jurisdiction. As such, the Adopted RHNA Methodology includes a jobs housing fit adjustment factor that seeks to house more low-wage workers near their jobs by encouraging jurisdictions with high ratios of low-wage workers to units affordable to low wage workers to zone for more affordable housing types.

In its review, HCD said that it "commends SACOG for including analysis of low-wage jobs and affordable units in the methodology. The jobs-housing fit adjustment factor directs more lower income RHNA to places with a higher overall number of low-wage jobs, and a higher number of low-wage jobs compared to units affordable to low-wage workers...Seven of the eight jurisdictions with the highest number of low-wage jobs also receive the eight highest shares of lower income RHNA for the region. There is also generally strong alignment between the rank of the jobs-housing ratio for a jurisdiction (more low-wage jobs to less affordable housing) and the share of lower income RHNA that a jurisdiction receives."

OBJECTIVE 4. PROMOTE REGIONAL INCOME PARITY

"Allocating a lower proportion of housing need to an income category when a jurisdiction already has a disproportionately high share of households in that income category, as compared to the countywide distribution of households in that category from the most recent American Community Survey."

The MTP/SCS does not explicitly consider regional income parity. As such, the Adopted RHNA Methodology includes a regional income parity adjustment factor that seeks to move jurisdictions across the region towards a similar proportion of lower-income households over time by encouraging jurisdictions with low proportions of lower-income households to zone for more affordable housing types.

In its review, HCD noted that "This objective is furthered directly by the regional income parity adjustment factor. The SACOG adjustment provides an upward adjustment toward the regional average for jurisdictions that have a lower percentage of households in each income category compared to the region. While the adjustment explicitly responds to objective four, it also assists in the methodology furthering each of the other objectives."

OBJECTIVE 5. AFFIRMATIVELY FURTHER FAIR HOUSING

"Affirmatively furthering fair housing means taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. Specifically, affirmatively furthering fair housing means taking meaningful actions that, taken together, address significant disparities in housing needs and in access to opportunity, replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity, and fostering and maintaining compliance with civil rights and fair housing laws."

The MTP/SCS does not explicitly consider affirmatively furthering fair housing (AFFH). As such, the Adopted RHNA Methodology includes an affirmatively furthering fair housing adjustment factor that seeks to open high opportunity jurisdictions to all economic segments of the community by encouraging jurisdictions with large proportions of existing homes in high opportunity areas to zone for more affordable housing types.

In its review, HCD said that it "applauds the inclusion of the affirmatively furthering fair housing adjustment factor in the methodology. This factor directs more lower income RHNA to areas having more housing units in higher opportunity areas, as defined in the HCD/TCAC Opportunity Maps, which evaluate access to opportunity, racial segregation, and concentrated poverty on 11 dimensions, which are all evidence-based indicators related to long term life outcomes." In the Adopted RHNA Methodology HCD also noted that "the top seven jurisdictions with the most homes in High Opportunity areas receives the top seven largest shares of lower income RHNA thus encouraging more affordable homes in higher resourced areas and increasing housing access to these communities for lower income households." Legislation passed in 2018 requires SACOG to incorporate AFFH principles into the RHNA methodology. As such, the Draft RHNA Methodology Menu includes an AFFH adjustment factor that seeks to open up high opportunity areas, [as defined in the State Housing Opportunity Maps](#), to all economic segments of the community by encouraging jurisdictions with higher than average proportions of homes in high opportunity areas to zone for more affordable housing types.

AFFIRMATIVELY FURTHERING FAIR HOUSING SURVEY

In addition to furthering the above principles in the RHNA methodology, SACOG is required by state law to conduct a survey of fair housing issues, strategies, and actions. The intention is to help identify common barriers for opening up high opportunity areas and effective strategies for avoiding the displacement of lower income households. SACOG conducted this survey in Fall of 2019 and asked the following questions of all member agencies and received responses from 27 of the 28 jurisdictions:

- Does your General Plan have an environmental justice/social equity chapter or integrate environmental justice/social equity, per SB 1000?
- What steps has your jurisdiction undertaken to overcome historical patterns of segregation or remove barriers to equal housing opportunity?
- To what extent could the following factors be barriers to the production of more affordable housing types, including subsidized affordable, missing middle, or multifamily, in high opportunity areas? Options include zoning restrictions (density/intensity/height limits, parking requirements, minimum lot size), community opposition, construction costs, lack of market demand, infrastructure needs, or other.
- What steps has your jurisdiction undertaken to avoid, minimize, or mitigate the displacement of low income households?

The results of the survey are included in Appendix F and summarized below:

- Barriers to production of more affordable housing types in high opportunity areas:
 - 52% of jurisdictions identified zoning restrictions (density/intensity/height limits, parking requirements, minimum lot size) as potential barriers
 - 67% of jurisdictions identified community opposition as a barrier
 - 85% of jurisdictions identified construction costs/lack of funding as a barrier
 - 22% of jurisdictions (largely in rural areas) identified market demand as a barrier
 - 63% of jurisdictions identified infrastructure needs as a barrier
 - Other barriers that were identified by at least one jurisdiction include outside agency fees, a lack of dedicated funding for affordable housing, constrained land, prevailing wage requirements, labor shortages, lack of coordination between departments, and uncertainty associated with discretionary approval/litigation risk
- Only two jurisdictions currently have an environmental justice/social equity chapter in their general plan per SB 1000. Ten jurisdictions are in progress or plan to update in conjunction with their upcoming housing element update or general plan update.
- Jurisdictions across the region have taken a variety of steps to overcome historical patterns of segregation including promoting housing choice through small lot zoning, by right multifamily in high opportunity areas, decreased parking minimums, housing acquisition loans/down payment assistance, policies encouraging ADUs in single family areas, renter helplines, inclusionary zoning requirements, and just-cause eviction protections
- Many jurisdictions committed to including new programs in the 6th Cycle Housing Element Updates aimed at mitigating displacement and removing barriers to equal housing opportunity

RHNA FACTORS (§65584.04.E)

This section describes factors identified in state statute that SACOG must consider, to the extent sufficient data is available, when developing its RHNA methodology. SACOG gathered information relating to the RHNA factors in early 2019. SACOG staff traveled to each county in the region to meet with the planning staffs from each of the 22 cities and six counties in the region to collect data for both the MTP/SCS and the RHNA. SACOG staff also reviewed general plans, specific plans, and other planning documents for each jurisdiction. The following describes the factors and SACOG's approach to addressing them in the RHNA.

1. JOBS AND HOUSING RELATIONSHIP

"Each member jurisdiction's existing and projected jobs and housing relationship. This shall include an estimate based on readily available data on the number of low-wage jobs within the jurisdiction and how many housing units within the jurisdiction are affordable to low-wage workers as well as an estimate based on readily available data, of projected job growth and projected household growth by income level within each member jurisdiction during the planning period." - §65584.04(e)

SACOG reviewed the jobs and housing balance of all jurisdictions. SACOG's MTP/SCS growth forecast, which forms the basis for the total RHNA calculation, considers areas where there are significant imbalances in jobs and housing today and the likelihood of those imbalances improving in the future given the recent market conditions and jurisdictions' local efforts to improve imbalances. Since this factor now includes consideration of existing and projected relationships between low-wage jobs and lower-income housing, the Adopted RHNA Methodology includes a jobs housing fit adjustment factor that seeks to house more low-wage workers near their jobs by encouraging jurisdictions with high ratios of low-wage workers to affordable housing units to zone for more affordable housing types.

2. Opportunities and constraints to development of additional housing (see below)

2a. Capacity for sewer and water service

"Lack of capacity for sewer or water service due to federal or state laws, regulations or regulatory actions, or supply and distribution decisions made by a sewer or water service provider other than the local jurisdiction that preclude the jurisdiction from providing necessary infrastructure for additional development during the planning period." - §65584.04(e)

Some jurisdictions indicated that sewer and/or water capacity could be a constraint during the 2021-2029 RHNA cycle. The jurisdiction-level growth allocation in the MTP/SCS did consider sewer and water capacity constraints; however, the RHNA methodology developed by SACOG staff did not cap a jurisdiction's overall allocation because of diminishing sewer or water capacity (Gov. Code 65584.04(A)(2)). As long as a jurisdiction is able to plan for additional sewer and/or water capacity, no special adjustments were considered in the RHNA methodology. The only case where a jurisdiction is allowed an adjustment is where federal or state regulations prohibit a jurisdiction from providing necessary infrastructure for additional development. This only applies in the Tahoe Basin jurisdictions, which are excluded from this methodology for the reasons described in Section 4.

2b. Availability of land suitable for urban development

"The availability of land suitable for urban development or for conversion to residential use, the availability of underutilized land, and opportunities for infill development and increased residential densities. The council of governments may not limit its consideration of suitable housing sites or land suitable for urban development to existing zoning ordinances and land use restrictions of a locality, but shall consider the potential for increased residential development under alternative zoning ordinances and land use restrictions. The determination of available land suitable for urban development may exclude lands where the Federal Emergency Management Agency (FEMA) or the Department of Water Resources has determined that the flood management infrastructure designed to protect that land is not adequate to avoid the risk of flooding." - §65584.04(e)

The amount of land available for development varies by jurisdiction from relatively large to very limited amounts of vacant land, in addition to infill opportunities from underutilized properties. The MTP/SCS forecasts considered all jurisdictions' land supplies as it must be "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." The MTP/SCS forecast also reflects jurisdiction-specific conditions like a lack of developable lands or redevelopment opportunities due to market forces.

Some jurisdictions noted land set aside for environmental mitigation. These mitigations are reflected in the MTP/SCS allocations in terms of timing of development in specific plan areas. However, jurisdictions that choose to set aside some land from development are not precluded from the planning for potential development in other lands within its boundaries. Jurisdictions are generally not subject to further reductions in their regional housing needs allocations based solely on their lack of developable lands.

2c. Lands preserved or protected from urban development

"Lands preserved or protected from urban development under existing federal or state programs, or both, designed to protect open space, farmland, environmental habitats, and natural resources on a long-term basis, including land zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of that jurisdiction that prohibits or restricts conversion to non-agricultural uses." - §65584.04(e)

The two jurisdictions with land within the Tahoe Basin (Placer and El Dorado counties) are heavily regulated by federal and state laws. The SACOG methodology defers to the agency responsible for growth projections in this area – the Tahoe Regional Planning Agency (TRPA) – for growth allocations for the RHNA.

For the remaining 28 jurisdictions, lands must be officially designated as federal or state conservation lands before any adjustments to the RHNA methodology are considered. Even if federal designations are given, a jurisdiction still has the ability to plan for residential development on other lands within its boundaries. The RHNA will be adjusted only when it is determined no land is available for development within a jurisdiction. Jurisdictions that choose to impose local restrictions on developable lands are not exempt from the RHNA methodology. Jurisdictions with self-imposed restrictions may allow other lands for residential development, and as such, will be given an allocation according to the RHNA methodology.

2d. County policies to preserve prime agricultural land

"County policies to preserve prime agricultural land, as defined pursuant to Section 56064, within an unincorporated and land within an unincorporated area zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of that jurisdiction that prohibits or restricts its conversion to non-agricultural uses." - §65584.04(e)

All six counties have policies that are intended to protect against the development of agricultural lands. The MTP/SCS forecast, which forms the basis of the total RHNA calculation, did not assume development in the areas where these policies are applicable.

3. Opportunities to maximize transit and existing transportation infrastructure

"The distribution of household growth assumed for purposes of a comparable period of regional transportation plans and opportunities to maximize the use of public transportation and existing transportation infrastructure." - §65584.04(e)

As noted, the MTP/SCS land use pattern forms the basis for the total RHNA calculation. This land use pattern is developed in tandem with a series of transportation investments in an effort to ensure past and future transportation investments are maximized. The MTP/SCS calls for "development in communities where services, amenities, and transportation infrastructure already exist" (page 69). Since the MTP/SCS considers this factor no additional adjustment is necessary.

4. Policies directing growth toward incorporated areas

"Agreements between a county and cities in a county to direct growth toward incorporated areas of the county and land within an unincorporated area zoned or designated for agricultural protection or preservation that is subject to a local ballot measure that was approved by the voters of the jurisdiction that prohibits or restricts conversion to non-agricultural uses." - §65584.04(e)

Some cities and their counties have agreements in place to direct growth towards incorporated areas. Where such agreements exist, SACOG directed growth away from unincorporated areas of the county as a part of the MTP/SCS land use forecast. Since the MTP/SCS considers this factor and forms the basis for the total RHNA calculation, no additional adjustment is necessary.

5. Loss of units contained in assisted housing developments

"The loss of units contained in assisted housing developments, as defined in paragraph (9) of subdivision (a) of Section 65583, that changed to non-low-income use through mortgage prepayment, subsidy contract expirations, or termination of use restrictions." - §65584.04(e)

During its meetings with individual jurisdictions, SACOG requested data on the potential loss of assisted units. "Assisted units" are multifamily rental housing units that receive governmental assistance under federal programs. Multiple programs and funding streams make it difficult for jurisdictions and other interest groups to compile accurate lists of the assisted properties in each jurisdiction, especially larger jurisdictions. As such, the conversion of low income units into non-low income units is not explicitly addressed through the distribution of housing need. HCD has made considerable effort to identify the number, location, and risk level of assisted housing units throughout the state. SACOG staff has

determined that at-risk units are best addressed through providing data on these units as part of SACOG’s preapproved data-package and giving local jurisdictions the discretion to address this factor and adequately plan for any at-risk unit loss in preparing their housing elements.

6. High housing cost burdens

"The percentage of existing households at each of the income levels listed in subdivision (e) of Section 65584 that are paying more than 30 percent and more than 50 percent of their income in rent."

SACOG staff worked with HCD as a part of the RHNA determination consultation process to compare the region’s housing cost burdens against comparable regions throughout the nation, including Austin, Denver, Miami, Phoenix, Portland, Salt Lake City, and San Antonio. As a part of this exercise, lower income and higher income cost burdens were separated using 2011-2015 U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) data. The averages of these cost burdens by income group formed the basis for an adjustment as a part of the regional determination. The SACOG region is experiencing higher rates of cost burden in both categories than its peer regions, although not as severe as the Coastal California regions.

Region	Lower Income Cost Burden ³	Higher Income Cost Burden ³
<i>USA Average</i>	<i>60.20%</i>	<i>11.17%</i>

Austin-Round Rock, TX Metro Area*	66.56%	9.67%
Denver-Aurora-Lakewood, CO Metro Area*	63.78%	10.13%
Miami-Fort Lauderdale-West Palm Beach, FL Metro Area	71.13%	18.92%
Phoenix-Mesa-Scottsdale, AZ Metro Area*	63.46%	11.43%
Portland-Vancouver-Hillsboro, OR-WA Metro Area	67.08%	13.20%
Salt Lake City, UT Metro Area*	59.23%	8.79%
San Antonio-New Braunfels, TX Metro Area	58.34%	8.19%
<i>Average of Comparison Regions</i>	<i>64.23%</i>	<i>11.48%</i>

Sacramento--Roseville--Arden-Arcade, CA Metro Area*	68.89%	16.29%
Yuba City, CA Metro Area	66.99%	17.54%
SACOG Region	68.80%	16.40%

As demonstrated in the table above, housing cost burden disproportionately impacts lower income households in comparison to higher income households. This issue is exacerbated in areas where there is not enough affordable housing available, particularly in higher income areas. The Adopted RHNA Methodology incorporates the regional income parity and affirmatively furthering fair housing adjustment factors as a means of planning for more affordable housing types in higher income, higher opportunity areas of the region. Increasing affordable housing supply in these areas can help alleviate cost-burden experienced by local lower-income households because more affordable options will be available. The Adopted RHNA Methodology does not apply a jurisdiction-level adjustment factor for cost burden, but the above adjustment factors are sufficient to address this factor. In addition, SACOG staff has provided jurisdiction-specific rates of cost burden as part of SACOG’s preapproved data-package, which will give local jurisdictions the discretion to further address this factor in their housing elements.

7. Rate of Overcrowding

SACOG staff worked with HCD as a part of the RHNA determination consultation process to compare the region's rates of overcrowding against comparable regions throughout the nation, including Austin, Denver, Miami, Phoenix, Portland, Salt Lake City, and San Antonio. The averages of these overcrowding rates, based on 2013-2017 5-yr Census ACS data, formed the basis for an adjustment as a part of the regional determination. The SACOG region is experiencing higher rates of overcrowding than its peer regions, although not as severe as the Coastal and Southern California regions.

Region	Overcrowding Rate
<i>USA Average</i>	3.34%

Austin-Round Rock, TX Metro Area*	3.95%
Denver-Aurora-Lakewood, CO Metro Area*	2.83%
Miami-Fort Lauderdale-West Palm Beach, FL Metro Area	4.64%
Phoenix-Mesa-Scottsdale, AZ Metro Area*	4.40%
Portland-Vancouver-Hillsboro, OR-WA Metro Area	3.14%
Salt Lake City, UT Metro Area*	3.43%
San Antonio-New Braunfels, TX Metro Area	4.14%
<i>Average of Comparison Regions</i>	3.79%

Sacramento--Roseville--Arden-Arcade, CA Metro Area*	4.21%
Yuba City, CA Metro Area	6.87%
SACOG Region	4.40%

Overcrowding is defined as more than 1.01 persons per room (not bedroom) in a housing unit. Similar to cost-burden, overcrowding is caused by an accumulated housing supply deficit and is considered an indicator of existing housing need. The As such, SACOG staff has determined that jurisdiction-specific rates of overcrowding are best addressed through providing data as part of SACOG's preapproved data-package and giving local jurisdictions the discretion to address this factor in preparing their housing elements.

8. Housing needs of farmworkers

The need for farmworker housing in the SACOG region is a greater issue for farming operations in the valley than in the foothills due to the types of crops and amount of production in these areas. Housing authorities in the region provide some publicly owned and/or dedicated farm laborer housing. Some of these units provide seasonal housing and others permanent housing. Farm labor camps are permitted by use permit in all of the region's counties. In addition, recent state legislation (AB 1763: Farmworker Housing Act) streamlines and provides incentives for the construction of new worker units on surplus farmland, provided they are managed by a non-profit third party. Using this new process, land zoned for agriculture can be developed as farmworker housing so long as it meets standard environmental and safety guidelines and is deed-restricted for lower income agricultural workers for at least 55 years.

Each county has policies encouraging some farm laborer housing on-site (via an accessory unit) and all of the agricultural zoning codes in the region allow for an accessory dwelling unit on-site, either by right or with an additional permit. The number of accessory dwelling units that currently exist in the region and the percentage of these used for farm laborer housing is unknown. Through their housing elements, all of the counties have policies that encourage the use of state and federal housing aid programs to provide farm laborer housing. These policies and practices are reflected in the MTP/SCS.

The Adopted RHNA Methodology does not apply a jurisdiction-level adjustment factor directly related to the housing needs of farmworkers. In many ways, directing growth toward incorporated areas protects the livelihood of farmworkers by preserving prime farmland. Assigning jurisdictions with higher numbers of farmworkers could result in the jurisdiction being forced to rezone agricultural land to housing uses as a means of accommodating its RHNA. This does not serve the interests of farmworkers. As such, SACOG staff has determined that the needs of farmworkers are best addressed through providing data as part of SACOG's preapproved data-package and giving local jurisdictions the discretion to address this factor in preparing their housing elements.

9. Housing needs of UC and Cal State students

"The housing needs generated by the presence of a private university or a campus of the California State University or the University of California within any member jurisdiction." - §65584.04(e)

The plans made by Sacramento State University and University of California Davis campuses are considered as a part of the MTP/SCS land use forecast and are thereby incorporated into the methodology. SACOG staff held a meeting with representatives of UC Davis, City of Davis, Yolo County, and Department of Finance to discuss the housing needs of UC Davis students and how it relates to the MTP/SCS and RHNA methodologies. UC Davis generates a tremendous amount of market demand in the City of Davis, leading to a historically low vacancy rate and an increasing number of student-oriented projects. Market demand is one of the factors that SACOG considers as a part of the MTP/SCS land use forecast. UC Davis is also a growing jobs center, and proximity to jobs as well as jobs/housing balance are also considered in the MTP/SCS. In addition, the MTP/SCS is required to hit a GHG reduction target from the state. One of the key ways the MTP/SCS achieves this target is by continuing to forecast the existing trend of new housing being built close to jobs, which reduces trip distance and facilitates alternative modes of transportation. In this way, the MTP/SCS forecasts more housing near both UC Davis and Sacramento State University.

10. Loss of units during an emergency

"The loss of units during a state of emergency that was declared by the Governor pursuant to the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2), during the planning period immediately preceding the relevant revision pursuant to Section 65588 that have yet to be rebuilt or replaced at the time of the analysis." - §65584.04(e)

There were four states of emergency that were declared by the Governor during the 2013-2021 RHNA period in the SACOG region.

- Governor Newsom declared a State of Emergency in counties across California due to winter storms on 2/21/2019, including El Dorado and Yolo Counties. No homes were destroyed as a part of this emergency in the SACOG region.

- Governor Brown declared a State of Emergency in three counties on 10/9/17, including Yuba County during the Tubbs, Atlas, and Cascade fires. Approximately 142 residential buildings in Yuba County were destroyed as a part of this series of fires.
- Governor Brown declared a state of emergency in multiple counties, including Sutter and Yuba County, on 2/12/17 due to the potential for extreme flooding from the Oroville spillway failure. The flooding did not occur, and no homes were destroyed as a part of this emergency in the SACOG region.
- Governor Brown declared a State of Emergency in El Dorado County on 9/17/14 due to the effects of the King and Boles fires. Approximately 12 residential buildings in El Dorado County were destroyed in the King fire.

As a part of the Regional Determination, HCD applies a minimum replacement unit adjustment of 0.5 percent, which is intended to make up for the typical rate of housing demolitions and/or units lost. SACOG has fortunately experienced a low 0.2 percent demolition rate over the past 10 years, which falls significantly below the minimum replacement rate. HCD applied the 0.5 percent minimum, which resulted in 5,105 additional RHNA units for the region. In this way, the regional determination included significantly more units than those lost, including average demolitions and the approximately 154 units lost due to a state of emergency. As such, an extra mechanism to distribute RHNA based on this factor is not necessary to meet the loss of units.

11. SB 375 Greenhouse Gas Reduction Targets

"The region's greenhouse gas emissions targets provided by the State Air Resources Board pursuant to Section 65080." - §65584.04(e)

Passenger vehicles account for roughly 30 percent of greenhouse gas emissions in California. Under Senate Bill 375 (SB 375), Metropolitan Planning Organizations (MPOs) like SACOG are responsible for conducting land use and transportation planning in a way that reduces greenhouse gases from cars and light duty trucks. Under SB 375, the California Air Resources Board (CARB) is responsible for issuing greenhouse gas targets to MPOs that aim to reduce vehicle emissions, consistent with state climate goals, by 2035 as compared to a 2005 baseline. For the 2020 MTP/SCS, CARB assigned SACOG a target of 19 percent per capita greenhouse gas (GHG) reduction.

The MTP/SCS employs a variety of measures to reach this ambitious target. The primary reductions come from an increase in the share of alternative modes to the single occupancy vehicle (like transit, biking, and walking) and shortened vehicle trips. These two measures, which result from a more compact land use pattern and investments in transit and active transportation, make up over half of the GHG reductions. The remaining reductions come from road facility pricing strategies, local electric vehicle programs, and exogenous factors like an aging population and increased auto costs. The assumptions and indicators described in Appendix E the MTP/SCS offer the best path to achieving the 19 percent per capita (GHG) emissions reduction target, which is subject to review of CARB.

The MTP/SCS land use forecast, which is designed to reach the GHG reduction target, forms the basis for the total RHNA calculation in the Adopted RHNA Methodology. As noted in Section 4, the Regional Determination is multiplied by the proportion of regional growth attributed to a jurisdiction in the growth forecast for the MTP/SCS between 2016-2035, which is the same time horizon as the GHG reduction target. This ensures that the RHNA methodology is both furthering the Infill, Equity, and Environment objective as well as incorporating this RHNA factor that explicitly references the GHG reduction target from CARB.

12. Other factors adopted by Council of Governments

"Any other factors adopted by the council of governments, that further the objectives listed in subdivision (d) of Section 65584, provided that the council of governments specifies which of the objectives each additional factor is necessary to further. The council of governments may include additional factors unrelated to furthering the objectives listed in subdivision (d) of Section 65584 so long as the additional factors do not undermine the objectives listed in subdivision (d) of Section 65584 and are applied equally across all household income levels as described in subdivision (f) of Section 65584 and the council of governments makes a finding that the factor is necessary to address significant health and safety conditions." - §65584.04(e)

No other planning factors were adopted by SACOG to review as a specific local planning factor. Flood protection and management may affect the RHNA methodology and the associated allocations. The Federal Emergency Management Agency (FEMA) is reviewing the flood levees and may re-designate and impose a federal moratorium on residential development in certain areas. If, during the RHNA update process, a jurisdiction receives a FEMA designation that prohibits near-term development, the RHNA methodology may need to be revised.

SECTION 3: REGIONAL RHNA DETERMINATION

The Final SACOG Regional Determination for Cycle 6 of RHNA (2021-2029) is 153,512 units. The Determination began with a consultation between HCD and SACOG staff to discuss HCD's approach, data sources, and timeline. Through this consultation, SACOG staff worked with HCD staff to provide region-specific suggestions for applying state law fairly and appropriately. Based on that consultation, HCD issued a Regional Determination of 153,512 units to SACOG on July 18, 2019, which includes adjustments for vacancy, replacement, overcrowding, and cost burden per state law. As of August 17, 2019, 30 days after receipt by SACOG, the determination became final.

HCD develops the Regional Determination using a two-step process beginning with a regional projection of new households which is then adjusted up or down using a required set of existing needs factors. The regional projection of new households is developed in consultation with the California Department of Finance. It starts with the projected household population for the end of the RHNA period (August 31, 2029 for Cycle 6). The projected population used by HCD as a part of the Cycle 6 Regional Determination is in line with what SACOG is projecting in the MTP/SCS. Based on this household population projection, HCD uses household formation rates by age group to estimate the number of new projected households the region needs to accommodate. The household growth projection for the SACOG region for Cycle 6 is 112,609 and makes up the largest component of the overall determination.

Starting with the projected household growth number above, HCD adjusts the Regional Determination to account for four existing needs factors: (1) vacancy rate, (2) replacement units, (3) overcrowding, and (4) cost burden. The state's purpose for including these factors is to capture existing housing need irrespective of future household growth. HCD is required by state law to factor these needs into the Regional Determination. The Regional Determination calculates the four existing needs adjustments in the following ways:

1. **Vacancy Rate:** HCD compares the SACOG region's existing vacancy rate with a healthy vacancy rate of 5%. The difference is then multiplied with the total projected households to yield the vacancy adjustment. For Cycle 6 of RHNA, the SACOG region's vacancy rate is low (2.77%), which means that SACOG received a 2.23% upward adjustment in the Regional Determination. This resulted in 22,730 additional units.
2. **Replacement Units:** HCD applies a replacement adjustment between 0.5% and 5% based on the current 10-year annual average percent of demolitions. Since the SACOG region has a very low rate of demolitions (0.18%), SACOG received the minimum (0.5%) replacement adjustment. This resulted in 5,105 additional units.
3. **Overcrowding:** The overcrowding adjustment was added in 2018 by state legislation. For the purposes of RHNA, overcrowding is defined as more than one resident per room in each room in a dwelling. This adjustment is based on the difference between the rate of overcrowding in the SACOG region and the rate of overcrowding in comparable regions, which SACOG staff worked with HCD to identify. The difference between the overcrowding rate in the SACOG region (4.39%) and comparable regions (3.79%) is 0.6%. This difference resulted in 6,111 additional units.
4. **Cost Burden:** The cost burden adjustment was added in 2018 by state legislation. For the purposes of RHNA, cost burden is defined as the percentage of households paying more than

30% of their income on housing. Since cost burden is experienced very differently across income groups, the rate of cost burden is separated between households earning below 80% of area median income (lower income) and households earning above 80% area median income (higher income). The adjustment is based on the difference between cost burden by income group for the region and the cost-burden by income group in comparable regions, which SACOG staff worked with HCD to identify. The difference between the cost burden rate for lower income households in the SACOG region (68.76%) and comparable regions (64.23%) is 4.53%. This difference resulted in 2,711 additional lower income units. The difference between the cost burden rate for higher income households in the SACOG region (16.37%) and comparable regions (11.48%) is 4.89%. This difference resulted in 4,246 additional higher income units.

In total, SACOG received a Regional Determination of 153,512 units for Cycle 6 of RHNA, of which 40,903 is due to the existing needs factors described in the bullets above. The determination is approximately 46 percent higher than the Cycle 5 (2013-2021) determination of 104,970. The increase in the regional determination this cycle is not unique to the SACOG region and reflects both the drastically different housing climate in 2019 as well as the addition of two new existing need considerations (overcrowding and cost burden). The different housing climate in 2019 and its impact on the regional determination is most evident in the vacancy rate adjustment. Vacancy rates lower than 5 percent typically indicate that housing supply is not keeping pace with demand. HCD has historically adjusted the determination upward in situations like this. Last cycle, in the depths of the recession, SACOG received a special downward RHNA adjustment to “account for abnormally high vacancies and unique market conditions due to prolonged recessionary conditions, high unemployment, and unprecedented foreclosures.” As such, the Cycle 5 determination was reduced by approximately 12,640 units as HCD assumed some housing demand would be addressed through absorption into vacant housing units. For Cycle 6, SACOG received an upward adjustment of 22,730 units in order to bring the SACOG region’s vacancy rate back to a healthy vacancy rate of 5 percent. This means that changes in vacancy rate alone are resulting in a net increase of over 35,000 units relative to last RHNA cycle.

TAHOE BASIN

The Regional Determination of 153,512 units from HCD includes all 28 jurisdictions within the SACOG Planning Area, as well as the Tahoe Basin portions of unincorporated Placer and El Dorado Counties. Jurisdictions within the Tahoe Basin are subject to the Bi-State Compact (Public Law 96-551) and the [Lake Tahoe Regional Plan](#), which limits growth in the Basin. The Tahoe Regional Planning Agency (TRPA) provided SACOG with a memo on 7/31/19 (Appendix A) that included growth assumptions for the Tahoe Basin portions of unincorporated Placer and El Dorado Counties (included at end of this document). SACOG will not be covering the city of South Lake Tahoe in this RHNA cycle, as determined by HCD.

The Total RHNA calculation shown below accepts the recommendations from TRPA, which removes 794 units (359 from El Dorado County and 435 from Placer County) from the 153,512 Regional Determination that is distributed based on the proportion of 2016-2035 MTP/SCS growth.

HCD Determination	153,512
Unincorporated El Dorado County in Tahoe Basin	359
Unincorporated Placer County in Tahoe Basin	435
SACOG Planning Area RHNA	152,718

SECTION 4: ADOPTED RHNA METHODOLOGY

LOCAL PLANNER AND STAKEHOLDER INPUT

The Adopted RHNA Methodology represents the culmination of input from the public, local housing planners, and housing stakeholders across the region. Over the course of 14 months, SACOG worked with stakeholders a number of ways, including:

- Seven regionwide local government housing planner meetings (July 2018 – August 2019)
- Four Regional Planning Partnership (RPP)¹ meetings (February, April, June, and August - 2019);
- RHNA factors meetings with local planners in each of the six counties, plus special meetings with UC Davis and Tahoe Regional Planning Agency
- Four regional manager/director meetings (November 2018, March, May, and August 2019)
- Ten presentations for local government planning commissions and city council meetings (2019)

These meetings provided an opportunity for SACOG to discuss and solicit feedback on the types of data that could be used to further the RHNA objectives, the assumptions that should be made, as well as information regarding conditions in individual jurisdictions that should be taken into consideration.

METHODOLOGY OVERVIEW

Given the requirement to proactively “further” the five objectives in the methodology, much of the Adopted RHNA Methodology is oriented around the five statutory RHNA objectives. It does this either through the total RHNA calculation or through three adjustment factors. The table below demonstrates how the different aspects of the Adopted RHNA Methodology either further or support the five RHNA objectives. These aspects and how they affect the distribution of RHNA across the region are discussed in more detail below. HCD provided a letter confirming that the Adopted RHNA Methodology indeed furthers the five statutory objectives (see Appendix C).

Objective	Total RHNA Calculation based on MTP/SCS	Methodology Adjustment Factors		
		Regional Income Parity	Affirmatively Furthering Fair Housing	Jobs/Housing Fit
Increase Housing Supply and Mix of Housing Types	Furthers	Supports	Supports	Supports
Promote Infill, Equity, and Environment	Furthers			Supports
Ensure Jobs Housing Balance and Fit	Supports			Furthers
Promote Regional Income Parity		Furthers	Supports	
Affirmatively Further Fair Housing		Supports	Furthers	

¹ A committee with close to 100 representatives from local, regional, state, federal agencies, and tribal governments, as well as representatives of business, environmental, and minority organizations and associations. The Partnership meets monthly and serves as the primary forum for interagency and public consultation.

TOTAL RHNA CALCULATION

The first step in any RHNA methodology is to determine each jurisdiction's total RHNA before it is further split into four income categories. The Adopted RHNA Methodology determines each jurisdiction's total RHNA number by multiplying the Regional Determination by the proportion of regional growth attributed to a jurisdiction in the growth forecast for the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) between 2016 and 2035. For example, if a jurisdiction's MTP/SCS 2016-2035 growth represented 10% of the region and the region's RHNA Determination was 100 units, this jurisdiction would be allocated 10 total units. While the 2020 MTP/SCS plans for growth out to 2040, the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375) links the RHNA to the region's greenhouse gas reduction goals which have a target year of 2035.

The total RHNA calculation is based on the MTP/SCS for two primary reasons.

- 1) State statute requires that housing units allocated through RHNA be "consistent with the development pattern included in the sustainable communities strategy." By using the MTP/SCS growth forecast as the basis for total RHNA calculations, SACOG ensures consistency across these two planning efforts.
- 2) The MTP/SCS land use forecast is an ambitious, but achievable development pattern built from local plans that considers a variety of regulatory, market, and performance factors. The growth forecast in the MTP/SCS has been thoroughly vetted by local planning staff and represents a regional compromise around how the region will grow and meet its climate and quality of life goals.

Total RHNA Calculation			
Jurisdiction	2016-2035 MTP Growth¹	% of Regional Growth²	Total RHNA³
Placerville	374	0.17%	259
El Dorado County Unincorporated Tahoe Basin			359
El Dorado County Unincorporated	7,226	3.27%	4,994
Auburn	449	0.20%	310
Colfax	141	0.06%	97
Lincoln	7,407	3.35%	5,120
Loomis	510	0.23%	352
Rocklin	8,190	3.71%	5,661
Roseville	17,456	7.90%	12,066
Placer County Unincorporated Tahoe Basin			435
Placer County Unincorporated	10,733	4.86%	7,419
Citrus Heights	1,008	0.46%	697
Elk Grove	11,955	5.41%	8,263
Folsom	9,205	4.17%	6,363
Galt	2,786	1.26%	1,926
Isleton	40	0.02%	28
Rancho Cordova	13,118	5.94%	9,067
Sacramento	65,945	29.85%	45,580
Sacramento County Unincorporated	30,776	13.93%	21,272
Live Oak	596	0.27%	412
Yuba City	4,786	2.17%	3,308
Sutter County Unincorporated	1,054	0.48%	729
Davis	3,001	1.36%	2,075
West Sacramento	13,702	6.20%	9,471
Winters	799	0.36%	552
Woodland	4,466	2.02%	3,087
Yolo County Unincorporated	83	0.04%	57
Marysville	242	0.11%	167
Wheatland	722	0.33%	499
Yuba County Unincorporated	4,177	1.89%	2,887
Total	220,950		153,512

1) Taken from the 2016-2035 MTP/SCS Draft preferred Scenario Land Use Assumptions. These assumptions do not reflect any of the group quarters growth on the UC Davis Campus in Unincorporated Yolo County because group quarters are not included in the RHNA process and Yolo County does not have land use authority on UC property.

2) Reflects the percent of the 220,950 MTP/SCS growth each jurisdiction represents.

3) Reflects the percent of regional MTP/SCS growth multiplied by the SACOG Planning Area Determination of 152,718.

As noted in the Total RHNA Calculation table footnotes above, the 2016-2035 MTP/SCS growth proportions, which form the basis for the total RHNA calculation, do not include housing growth on the UC Davis Campus in Unincorporated Yolo County. The RHNA Determination from HCD does not include housing need from student housing, which is considered to be group quarters. Additionally, Yolo County does not have land use authority on UC property and, thus, would have no discretion to make zoning changes associated with housing need on the UC Davis campus. Because UC Davis and other large institutions do not receive a separate RHNA number, RHNA is not an appropriate mechanism to plan for housing on UC Davis property.

Unrelated to the RHNA process, UC Davis completed and adopted in July 2018 a new housing plan as part of the UC Davis 2018 Long Range Development Plan (LRDP). The UC Davis 2018 LRDP is the governing land use and growth plan for the UC Davis campus and includes significant planning capacity for housing growth to exceed the projected enrollment growth. UC Davis has initial housing projects that are currently committed to provide housing for more than 6,100 students by 2025 and a guarantee to build on-campus housing for 100 percent of any new students in both on-campus residence halls and apartment projects.

ADJUSTMENT FACTORS OVERVIEW

The framework for the Adopted RHNA Methodology is oriented around furthering each of the RHNA objectives described in Section 2. As such, each of the objectives is addressed individually. As discussed, the first two objectives are either intrinsically addressed through a methodology that assigns units at different income categories to each jurisdiction across the region or furthered through the total RHNA calculation by relying on the development pattern in the MTP/SCS.

The other three objectives are, at least in part, not inherently furthered by the MTP/SCS. Therefore, the Adopted RHNA Methodology employs three separate adjustment factors that further each of these objectives. Since the total RHNA calculation is determined by the MTP/SCS growth proportion, these adjustment factors instead adjust the number of lower-income units assigned to each jurisdiction. As a result of these adjustments, each jurisdiction will receive a different proportion of lower-income units. The adjustment factors are summarized in the table below and then detailed on the following three pages. Each adjustment factor yields an “unweighted variance,” which is then weighted and capped. A full discussion of the weighting and caps are included at the end of this section.

	Adjustment Factors Summary		
	#1. Regional Income Parity	#2. Affirmatively Furthering Fair Housing	#3. Jobs/Housing Fit
Intent	Move jurisdictions across the region towards a similar proportion of lower-income households over time by encouraging jurisdictions with low proportions of lower-income households to zone for more affordable housing types.	Open up high opportunity jurisdictions to all economic segments of the community by encouraging jurisdictions with large proportions of existing homes in high opportunity areas to zone for more affordable housing types.	House more low-wage workers near their jobs by encouraging jurisdictions with high ratios of low-wage workers to affordable housing units to zone for more affordable housing types.
Adjustment Mechanism	<p>Jurisdictions with a lower than average proportion of lower income households receive an upward adjustment of lower income RHNA units.</p> <p>Jurisdictions with a higher than average proportion of lower income households receive a downward adjustment of lower income RHNA units.</p>	<p>Jurisdictions with a higher than average proportion of existing units in high opportunity areas receive an upward adjustment of lower income RHNA units.</p> <p>Jurisdictions with a lower proportion of existing units in high opportunity areas receive a downward adjustment of lower income RHNA units.</p>	<p>Jurisdictions with a higher than average ratio of low-wage workers to units affordable to low-wage workers receive an upward adjustment of lower income RHNA units.</p> <p>Jurisdictions with a lower than average ratio of low-wage workers to units affordable to low-wage workers receive a downward adjustment of lower income RHNA units.</p>
Underlying Data (relative to regional average)	Based on the existing proportion of lower-income households from the 2015 Comprehensive Housing Affordability Strategy (CHAS) data released by the US Department of Housing and Urban Development (HUD).	Based on the proportion of 2016 housing units that fall within high opportunity areas. High opportunity areas are adapted from Opportunity Area Maps created by TCAC/HCD and vetted by the CA Fair Housing Task Force.	Based on the ratio of low-wage workers (<\$2,300/month) to units affordable to low-wage workers (<\$1,000/month). These figures were adapted from Census Public Use Microdata Sample (PUMS) and American Community Survey (ACS) data.

REGIONAL INCOME PARITY ADJUSTMENT FACTOR

Jurisdiction	A: Existing Lower Income Households	B: Regional Parity Target	C: 2029 Trendline Intersection	D: Unweighted Variance
Placerville	56%	42.5%	48%	-7.5%
El Dorado County Unincorporated	32%	42.5%	38%	6.1%
Auburn	45%	42.5%	44%	-1.5%
Colfax	51%	42.5%	46%	-4.7%
Lincoln	33%	42.5%	38%	5.4%
Loomis	34%	42.5%	39%	4.8%
Rocklin	32%	42.5%	38%	6.1%
Roseville	32%	42.5%	38%	5.9%
Placer County Unincorporated	34%	42.5%	39%	5.0%
Citrus Heights	50%	42.5%	46%	-4.2%
Elk Grove	30%	42.5%	37%	7.3%
Folsom	22%	42.5%	34%	11.8%
Galt	42%	42.5%	42%	0.0%
Isleton	62%	42.5%	51%	-10.9%
Rancho Cordova	48%	42.5%	45%	-3.0%
Sacramento	50%	42.5%	46%	-4.1%
Sacramento County Unincorporated	48%	42.5%	45%	-3.1%
Live Oak	54%	42.5%	48%	-6.8%
Yuba City	41%	42.5%	42%	1.1%
Sutter County Unincorporated	31%	42.5%	38%	6.5%
Davis	46%	42.5%	44%	-1.9%
West Sacramento	50%	42.5%	46%	-4.5%
Winters	43%	42.5%	43%	-0.4%
Woodland	47%	42.5%	45%	-2.8%
Yolo County Unincorporated	49%	42.5%	45%	-4.0%
Marysville	50%	42.5%	46%	-4.5%
Wheatland	32%	42.5%	38%	5.8%
Yuba County Unincorporated	42%	42.5%	42%	0.3%
Total	42.5%			

A: This column reflects each jurisdiction’s existing proportion of lower-income households as estimated in the most recent (2015) Comprehensive Housing Affordability Strategy (CHAS) data set.

B: The regional parity target is the region’s existing proportion of lower-income households as estimated in the most recent (2015) Comprehensive Housing Affordability Strategy (CHAS) data set.

C: Based on a trendline between each jurisdiction’s existing proportion of lower-income households (Column A) and a regional parity target (Column B) in 2035, this column shows the 2029 trendline intersection for each jurisdiction. Using the 2029 trendline intersection, which is the end of the Cycle 6 RHNA period, provides a glide path for jurisdictions to be trending towards regional income parity.

D: Unweighted variance is calculated by taking the difference between the 2029 trendline intersection (Column C) and the jurisdiction’s existing proportion of lower income households (Column A).

AFFIRMATIVELY FURTHERING FAIR HOUSING ADJUSTMENT FACTOR

Jurisdiction	A: High Opportunity Units	B: High Opportunity Average	C: Unweighted Variance
Placerville	0%	37%	-37.0%
El Dorado County Unincorporated	39%	37%	2.4%
Auburn	0%	37%	-37.0%
Colfax	0%	37%	-37.0%
Lincoln	70%	37%	33.1%
Loomis	100%	37%	63.0%
Rocklin	100%	37%	63.0%
Roseville	69%	37%	32.3%
Placer County Unincorporated	34%	37%	-3.5%
Citrus Heights	0%	37%	-37.0%
Elk Grove	72%	37%	34.9%
Folsom	100%	37%	63.0%
Galt	4%	37%	-33.2%
Isleton	0%	37%	-37.0%
Rancho Cordova	9%	37%	-28.2%
Sacramento	31%	37%	-6.3%
Sacramento County Unincorporated	18%	37%	-19.3%
Live Oak	0%	37%	-37.0%
Yuba City	30%	37%	-7.3%
Sutter County Unincorporated	34%	37%	-2.7%
Davis	90%	37%	52.8%
West Sacramento	42%	37%	4.7%
Winters	0%	37%	-37.0%
Woodland	12%	37%	-24.8%
Yolo County Unincorporated	26%	37%	-11.0%
Marysville	60%	37%	22.5%
Wheatland	0%	37%	-37.0%
Yuba County Unincorporated	29%	37%	-7.9%
Total	37%		

A: This column shows the percentage of each jurisdiction’s existing units (as inventoried in the MTP 2016 baseyear) that are located within high opportunity areas. In this option, high opportunity areas are defined as high or highest resource census tracts in the Tax Credit Allocation Committee/Housing and Community Development (TCAC/HCD) Opportunity Area Maps. These are areas that have high index scores for a variety of educational, environmental, and economic indicators. To avoid identifying sparsely populated census tracts that have limited access to services as high opportunity, tracts with a population density threshold of 250 people per square mile or less were excluded. The maps and underlying methodology can be found here: <https://www.treasurer.ca.gov/ctcac/opportunity.asp>

B: The regional average shows the percentage of the region’s existing units (as inventoried in the MTP 2016 baseyear) that are located within high opportunity areas, as defined above in Column A.

C: Unweighted variance is calculated by taking the difference between Column A and the regional average in Column B.

JOBS HOUSING FIT ADJUSTMENT FACTOR

Jurisdiction	A: Jobs less than \$2,300/mo	B: Units less than \$1,000/month	C: Jobs Housing Fit Ratio	D: Unweighted Variance
Placerville	3,468	1,276	2.7	50%
El Dorado County Unincorporated	12,288	4,689	2.6	40%
Auburn	3,358	1,503	2.2	0%
Colfax	304	318	1.0	-120%
Lincoln	2,952	1,060	2.8	60%
Loomis	1,168	263	4.4	220%
Rocklin	8,358	1,896	4.4	220%
Roseville	29,210	5,510	5.3	310%
Placer County Unincorporated	10,731	3,637	3.0	80%
Citrus Heights	7,166	9,004	0.8	-140%
Elk Grove	14,561	3,551	4.1	190%
Folsom	15,702	1,636	9.6	740%
Galt	1,687	1,272	1.3	-90%
Isleton	66	121	0.5	-170%
Rancho Cordova	19,382	7,066	2.7	50%
Sacramento	102,034	53,579	1.9	-30%
Sacramento County Unincorporated	67,480	57,259	1.2	-100%
Live Oak	308	677	0.5	-170%
Yuba City	9,347	7,350	1.3	-90%
Sutter County Unincorporated	2,088	1,665	1.3	-90%
Davis	7,798	3,399	2.3	10%
West Sacramento	10,928	5,063	2.2	0%
Winters	720	316	2.3	10%
Woodland	8,781	5,389	1.6	-60%
Yolo County Unincorporated	7,039	1,655	4.3	210%
Marysville	2,647	2,514	1.1	-110%
Wheatland	264	297	0.9	-130%
Yuba County Unincorporated	3,888	5,262	0.7	-150%
Total				

A: Jobs with wages less than \$2,300/month are calculated using Census Place of Work Public Use Microdata Sample (POW PUMS) data from the 6-county SACOG region to estimate the percentage of generalized Standard Occupational Classifications (SOCs) whose monthly wages are below \$2,300 in 2017 inflation adjusted dollars. These SOCs are converted to SACOG’s SACSIM Employment Categories using Census ACS data for occupation by industry. Finally, the number of low-wage jobs by jurisdiction are calculated by multiplying the percent of low-wage jobs in each category by each jurisdiction’s number of jobs in each employment category from SACOG’s 2016 employment inventory.

B: Units under \$1,000 per month are based on Occupied Contract Rent and Unoccupied Rent Asked totals from the 2017 5-Year Census ACS (Table B25056: Contract Rent and Table B25061: Rent Asked). The \$1,000 per month threshold represents 30% of income for household with 1.5 workers making \$2,300/month.




C: Jobs/Housing Fit Ratio is Column A divided by Column B.

D: Unweighted variance is calculated by taking the difference between Column C and the regional median (2.2).

ADJUSTMENT FACTOR WEIGHTING

The Adopted RHNA Methodology employs weighting and caps to emphasize and deemphasize the resulting impact of unweighted variances described in the adjustment factor tables above. Given the fact that the unweighted variances are widely different measurements, such weighting/capping is necessary to ensure any one adjustment is not dramatically overshadowing the other two.

During the development of the RHNA methodology, SACOG explored using high emphasis or moderate emphasis for each adjustment factor. A high emphasis adjustment factor is weighted and capped such that jurisdictions do not receive more than a 15 percent adjustment. A Moderate emphasis adjustment factor is weighted and capped such that jurisdictions do not receive more than a 10 percent adjustment. While the objectives must be addressed separately, there is a high correlation between Regional Income Parity and Affirmatively Furthering Fair Housing. Recognizing this potential overlap, the Adopted RHNA Methodology reduces the emphasis on Regional Income Parity to moderate, but leaves the other two adjustment factors with high impact.

Adjustment Factors		
Regional Income Parity	Affirmatively Furthering Fair Housing	Jobs/Housing Fit
 Moderate Impact	 High Impact	 High Impact

The table on the following page details the resulting allocations under the Adopted RHNA Methodology. The final table summarizes the four income category breakdown of the Adopted RHNA Methodology.

Adopted RHNA Methodology Lower-Income Calculation

Jurisdiction	Total RHNA ¹	Affordable Base (40.7% of Total RHNA)	Regional Income Parity Adjustment Factor			Affirmatively Furthering Fair Housing (AFFH) Adjustment Factor			Jobs/Housing Fit Adjustment Factor			Adjustment Redistribution ⁴			Summary ⁵	
			Unweighted Variance ²	Weighted Variance (85% of Variance, Cap of 10%)	Adjustment Factor ³	Unweighted Variance ²	Weighted Variance (25% of Variance, Cap of 15%)	Adjustment Factor ³	Unweighted Variance ²	Weighted Variance (7.5% of Variance, Cap of 15%)	Adjustment Factor ³	Total Adjustments	Remainder Distributed Proportionally	Updated Total Adjustments	Lower-Income RHNA	% of Total RHNA
Placerville	259	105	-7.5%	-6.4%	-7	-37.0%	-9.3%	-10	50%	3.8%	4	-13	-2	-15	90	34.7%
El Dorado County Uninc Tahoe Basin	359	146												0	146	40.7%
El Dorado County Unincorporated	4,994	2,033	6.1%	5.2%	105	2.4%	0.6%	12	40%	3.0%	61	178	-48	130	2,163	43.3%
Auburn	310	126	-1.5%	-1.3%	-2	-37.0%	-9.3%	-12	0%	0.0%	0	-14	-3	-17	109	35.2%
Colfax	97	39	-4.7%	-4.0%	-2	-37.0%	-9.3%	-4	-120%	-9.0%	-4	-10	-1	-11	28	28.9%
Lincoln	5,120	2,085	5.4%	4.6%	96	33.1%	8.3%	172	60%	4.5%	94	362	-49	313	2,398	46.8%
Loomis	352	143	4.8%	4.1%	6	63.0%	15.0%	21	220%	15.0%	21	48	-3	45	188	53.4%
Rocklin	5,661	2,305	6.1%	5.2%	120	63.0%	15.0%	346	220%	15.0%	346	812	-55	757	3,062	54.1%
Roseville	12,066	4,913	5.9%	5.1%	248	32.3%	8.1%	397	310%	15.0%	737	1,382	-117	1,265	6,178	51.2%
Placer County Uninc Tahoe Basin	435	177												0	177	40.7%
Placer County Unincorporated	7,419	3,021	5.0%	4.2%	128	-3.5%	-0.9%	-26	80%	6.0%	181	283	-72	211	3,232	43.6%
Citrus Heights	697	284	-4.2%	-3.6%	-10	-37.0%	-9.3%	-26	-140%	-10.5%	-30	-66	-7	-73	211	30.3%
Elk Grove	8,263	3,364	7.3%	6.2%	208	34.9%	8.7%	294	190%	14.3%	479	981	-80	901	4,265	51.6%
Folsom	6,363	2,591	11.8%	10.0%	259	63.0%	15.0%	389	740%	15.0%	389	1,037	-61	976	3,567	56.1%
Galt	1,926	784	0.0%	0.0%	0	-33.2%	-8.3%	-65	-90%	-6.8%	-53	-118	-19	-137	647	33.6%
Isleton	28	11	-10.9%	-9.2%	-1	-37.0%	-9.3%	-1	-170%	-12.8%	-1	-3	0	-3	8	28.6%
Rancho Cordova	9,067	3,692	-3.0%	-2.5%	-93	-28.2%	-7.1%	-260	50%	3.8%	138	-215	-88	-303	3,389	37.4%
Sacramento	45,580	18,558	-4.1%	-3.5%	-641	-6.3%	-1.6%	-290	-30%	-2.3%	-418	-1,349	-440	-1,789	16,769	36.8%
Sacramento County Unincorporated	21,272	8,661	-3.1%	-2.7%	-230	-19.3%	-4.8%	-418	-100%	-7.5%	-650	-1,298	-205	-1,503	7,158	33.6%
Live Oak	412	168	-6.8%	-5.8%	-10	-37.0%	-9.3%	-16	-170%	-12.8%	-21	-47	-4	-51	117	28.4%
Yuba City	3,308	1,347	1.1%	0.9%	12	-7.3%	-1.8%	-25	-90%	-6.8%	-91	-104	-32	-136	1,211	36.6%
Sutter County Unincorporated	729	297	6.5%	5.5%	16	-2.7%	-0.7%	-2	-90%	-6.8%	-20	-6	-7	-13	284	39.0%
Davis	2,075	845	-1.9%	-1.6%	-13	52.8%	13.2%	112	10%	0.7%	6	105	-20	85	930	44.8%
West Sacramento	9,471	3,856	-4.5%	-3.8%	-146	4.7%	1.2%	46	0%	0.0%	0	-100	-91	-191	3,665	38.7%
Winters	552	225	-0.4%	-0.3%	-1	-37.0%	-9.3%	-21	10%	0.7%	2	-20	-5	-25	200	36.2%
Woodland	3,087	1,257	-2.8%	-2.4%	-30	-24.8%	-6.2%	-78	-60%	-4.5%	-57	-165	-30	-195	1,062	34.4%
Yolo County Unincorporated	57	23	-4.0%	-3.4%	-1	-11.0%	-2.7%	-1	210%	15.0%	3	1	-1	0	23	40.4%
Marysville	167	68	-4.5%	-3.8%	-3	22.5%	5.6%	4	-110%	-8.3%	-6	-5	-2	-7	61	36.5%
Wheatland	499	203	5.8%	4.9%	10	-37.0%	-9.3%	-19	-130%	-9.8%	-20	-29	-5	-34	169	33.9%
Yuba County Unincorporated	2,887	1,175	0.3%	0.2%	3	-7.9%	-2.0%	-23	-150%	-11.3%	-132	-152	-28	-180	995	34.5%
Total	153,512	62,502			21			496			958	1,475	-1,475	-	62,502	

1) See the Total RHNA Calculation section above for how each jurisdiction's total RHNA number is derived.

2) See the Adjustment Factors section above for how each jurisdiction's unweighted variances for each adjustment factor are derived.

3) The Adjustment Factor is calculated by multiplying each adjustment factor's weighted variance by the affordable base, which is 40.7% of each jurisdiction's Total RHNA.

4) When the adjustment factors do not sum to 0, the remainder must be redistributed to ensure exactly 62,502 lower-income units are allocated. This redistribution is done proportional to each jurisdiction's Total RHNA.

5) The summary columns show the resulting lower-income units and the proportion of each jurisdiction's Total RHNA the lower-income units represent.

ADOPTED RHNA METHODOLOGY

Jurisdiction	Lower Income Units				Higher Income Units		Total RHNA
	Very Low	Low	Very Low + Low	% of Total RHNA (VL+L)	Moderate	Above Moderate	
Placerville	56	34	90	34.7%	50	119	259
El Dorado County Uninc Tahoe Basin	91	55	146	40.7%	63	150	359
El Dorado County Unincorporated	1,350	813	2,163	43.3%	840	1,991	4,994
Auburn	68	41	109	35.2%	60	141	310
Colfax	17	11	28	28.9%	21	48	97
Lincoln	1,496	902	2,398	46.8%	807	1,915	5,120
Loomis	117	71	188	53.4%	49	115	352
Rocklin	1,911	1,151	3,062	54.1%	771	1,828	5,661
Roseville	3,855	2,323	6,178	51.2%	1,746	4,142	12,066
Placer County Uninc Tahoe Basin	110	67	177	40.7%	77	181	435
Placer County Unincorporated	2,017	1,215	3,232	43.6%	1,242	2,945	7,419
Citrus Heights	132	79	211	30.3%	144	342	697
Elk Grove	2,661	1,604	4,265	51.6%	1,186	2,812	8,263
Folsom	2,226	1,341	3,567	56.1%	829	1,967	6,363
Galt	404	243	647	33.6%	379	900	1,926
Isleton	5	3	8	28.6%	6	14	28
Rancho Cordova	2,115	1,274	3,389	37.4%	1,684	3,994	9,067
Sacramento	10,463	6,306	16,769	36.8%	8,545	20,266	45,580
Sacramento County Unincorporated	4,466	2,692	7,158	33.6%	4,186	9,928	21,272
Live Oak	73	44	117	28.4%	87	208	412
Yuba City	756	455	1,211	36.6%	622	1,475	3,308
Sutter County Unincorporated	177	107	284	39.0%	132	313	729
Davis	580	350	930	44.8%	340	805	2,075
West Sacramento	2,287	1,378	3,665	38.7%	1,722	4,084	9,471
Winters	125	75	200	36.2%	104	248	552
Woodland	663	399	1,062	34.4%	601	1,424	3,087
Yolo County Unincorporated	14	9	23	40.4%	10	24	57
Marysville	38	23	61	36.5%	31	75	167
Wheatland	105	64	169	33.9%	98	232	499
Yuba County Unincorporated	621	374	995	34.5%	561	1,331	2,887
Total	38,999	23,503	62,502	40.7%	26,993	64,017	153,512

Notes: The Adopted RHNA Methodology (see the prior page) determines how many lower income (very low + low income) units are allocated to each jurisdiction. Since the total RHNA is already known (see the total RHNA Calculation section), this means the higher income (moderate + above moderate income) units are also known. The lower income and higher income units are broken down into the four RHNA income categories the same way for each jurisdiction. At the regional level, very low income units represent 62.4% of all lower income units and low income units represent the remaining 37.6% of lower income units. These percentages are multiplied by each jurisdiction's final lower income RHNA to yield the number of very low and low income units. Similarly, moderate income units represent 29.7% of the region's higher income units and above moderate income units represent 70.3% of the region's higher income units. These percentages are multiplied by each jurisdiction's final higher income RHNA to yield the number of moderate and above moderate income units.

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sacog.org

Place

Roseville city, California

Roseville city, California is a city, town, place equivalent, and township located in [California](#).

// [United States](#) / [California](#) / Roseville city, California

[Display Sources](#)

Populations and People

Total Population

147,773

[P1](#) | 2020 Decennial Census

Education

Bachelor's Degree or Higher

44.7%

[S1501](#) | 2021 American Community Survey 1-Year Estimates

Housing

Total Housing Units

57,318

[H1](#) | 2020 Decennial Census

Families and Living Arrangements

Total Households

57,569

[DP02](#) | 2021 American Community Survey 1-Year Estimates

Income and Poverty

Median Household Income

\$107,714

[S1901](#) | 2021 American Community Survey 1-Year Estimates

Employment

Employment Rate

63.4%

[DP03](#) | 2021 American Community Survey 1-Year Estimates

Health

Without Health Care Coverage

1.9%

[S2701](#) | 2021 American Community Survey 1-Year Estimates

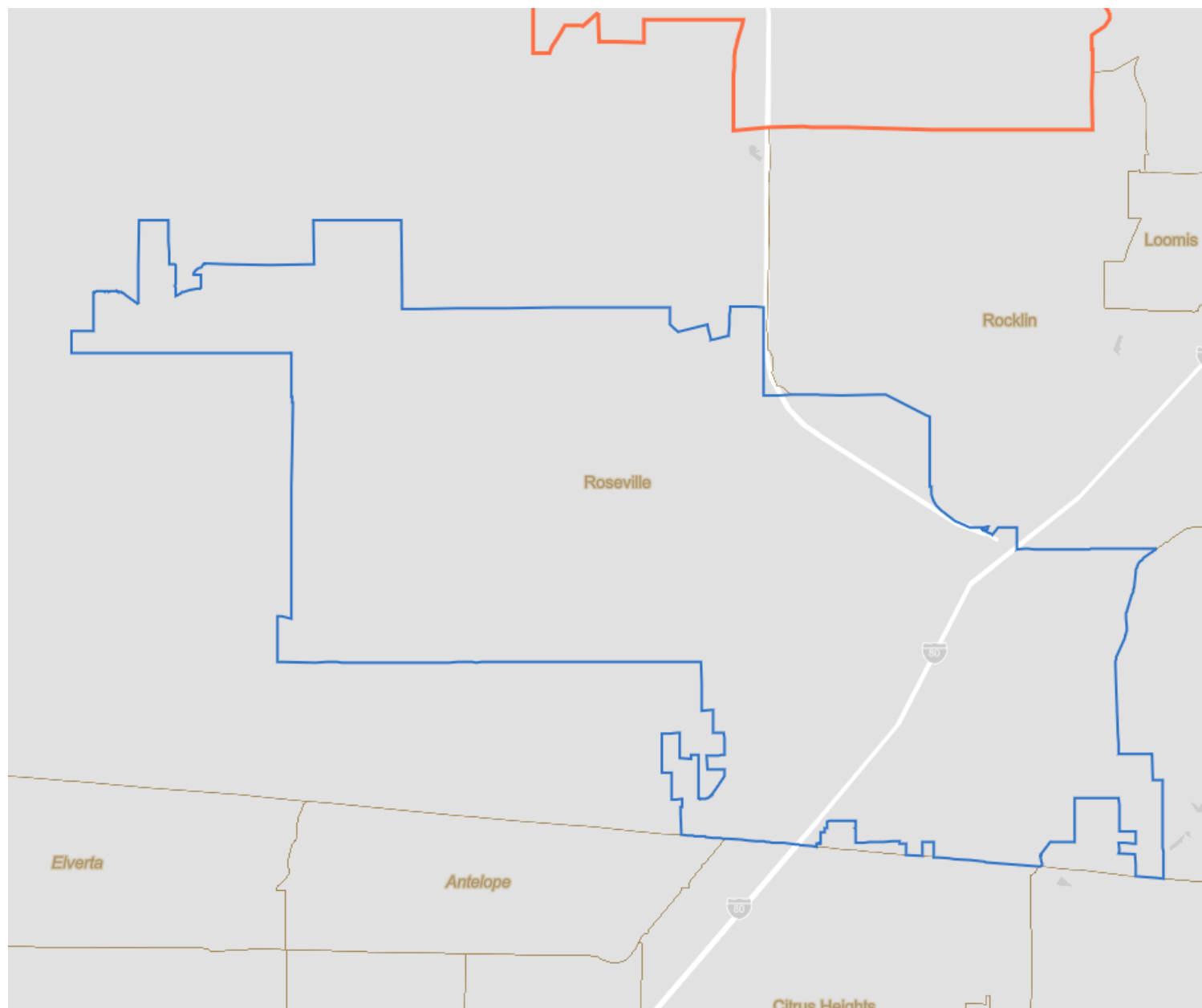
Race and Ethnicity

Hispanic or Latino (of any race)

24,057

[P2](#) | 2020 Decennial Census

Roseville city, California Reference Map



Families and Living Arrangements

Children

23.4% +/- 1.7%

Under 18 years old in Roseville city, California

22.4% +/- 0.1%

Under 18 years old in California

DP05 | 2021 American Community Survey 1-Year Estimates

Children Under 18 by Age Range

in Roseville city, California

Under 5 years - 5.9%



5 to 14 years - 13.1%



15 to 17 years - 4.5%



S0101 | 2020 ACS 5-Year Estimates Subject Tables

Families and Household Characteristics

3.13 +/- 0.12

Average Family Size in Roseville city, California

3.44 +/- 0.01

Average Family Size in California

[S1101](#) | 2021 American Community Survey 1-Year Estimates

Total Households by Type of Households

in Roseville city, California

Married-couple family household - 55.2%



Male householder, no spouse present, family household - 14.3%



Female householder, no spouse present, family household - 24.9%



[DP02](#) | 2020 ACS 5-Year Estimates Data Profiles

Marital Status and Marital History

N +/- N

Never Married in Roseville city, California

38.2% +/- 0.1%

Never Married in California

[S1201](#) | 2021 American Community Survey 1-Year Estimates

Marital Status

in Roseville city, California

Now Married (except separated) - 54.0%



Widowed - 6.0%



Divorced - 11.4%



Separated - 1.4%



Never Married - 27.3%



0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55%

S1201 | 2020 ACS 5-Year Estimates Subject Tables

Measuring America's People, Places and Economy



View Soil Information By Use: All Uses

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Suitabilities and Limitations Ratings

Open All | Close All

Building Site Development

- Corrosion of Concrete
- Corrosion of Steel
- Dwellings With Basements

Dwellings Without Basements

View Description | View Rating

View Options

- Map
- Table
 - Component Breakdown and Rating Reasons
 - Numeric Values
- Description of Rating
- Rating Options
 - Detailed Description

Advanced Options

View Description | View Rating

- Lawns, Landscaping, and Golf Fairways
- Local Roads and Streets
- Shallow Excavations
- Small Commercial Buildings
- Solar Arrays, Ballast Anchor Systems
- Solar Arrays, Soil-based Anchor Systems
- Unpaved Local Roads and Streets
- Construction Materials
- Disaster Recovery Planning
- Land Classifications
- Land Management
- Military Operations
- Recreational Development
- Sanitary Facilities

Map — Dwellings Without Basements

Scale (not to scale)



Soil Health
Vegetative Productivity
Waste Management
Water Management
Wildlife Management



Warning: Soil Ratings Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil survey design of map units and the level of detail shown in the resulting soil map are dependent on that map scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not have been shown at a more detailed scale.

Tables — Dwellings Without Basements — Summary By Map Unit

Summary by Map Unit — Placer County, California, Western Part (CA620)						
Summary by Map Unit — Placer County, California, Western Part (CA620)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
141	Cometa-Fiddymont complex, 1 to 5 percent slopes	Somewhat limited	Cometa (40%)	Shrink-swell (0.12)	9.7	100.0%
			Fiddymont (30%)	Shrink-swell (0.30)		
				Depth to hard bedrock (0.10)		
Totals for Area of Interest					9.7	100.0%

Table — Dwellings Without Basements — Summary by Rating Value

Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	9.7	100.0%
Totals for Area of Interest	9.7	100.0%

Description — Dwellings Without Basements

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options — Dwellings Without Basements

Aggregation Method: Dominant Condition
Component Percent Cutoff: *None Specified*
Tie-break Rule: Higher

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[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > ASD Calculator

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft² - hr - people and 10,000 BTU/ft² - hr - buildings).

Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?

Yes: No:

Is the container under pressure?

Yes: No:

Does the container hold a cryogenic liquified gas?

Yes: No:

Is the container diked?

Yes: No:

What is the volume (gal) of the container?

What is the Diked Area Length (ft)?

What is the Diked Area Width (ft)?

<input type="text"/>	
Calculate Acceptable Separation Distance	
Diked Area (sqft)	<input type="text"/>
ASD for Blast Over Pressure (ASDBOP)	<input type="text"/>
ASD for Thermal Radiation for People (ASDPPU)	<input type="text"/>
ASD for Thermal Radiation for Buildings (ASDBPU)	<input type="text"/>
ASD for Thermal Radiation for People (ASDPNPD)	<input type="text"/>
ASD for Thermal Radiation for Buildings (ASDBNPD)	<input type="text"/>

For mitigation options, please click on the following link: [Mitigation Options \(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/\)](/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us** (<https://www.hudexchange.info/contact-us/>) form.

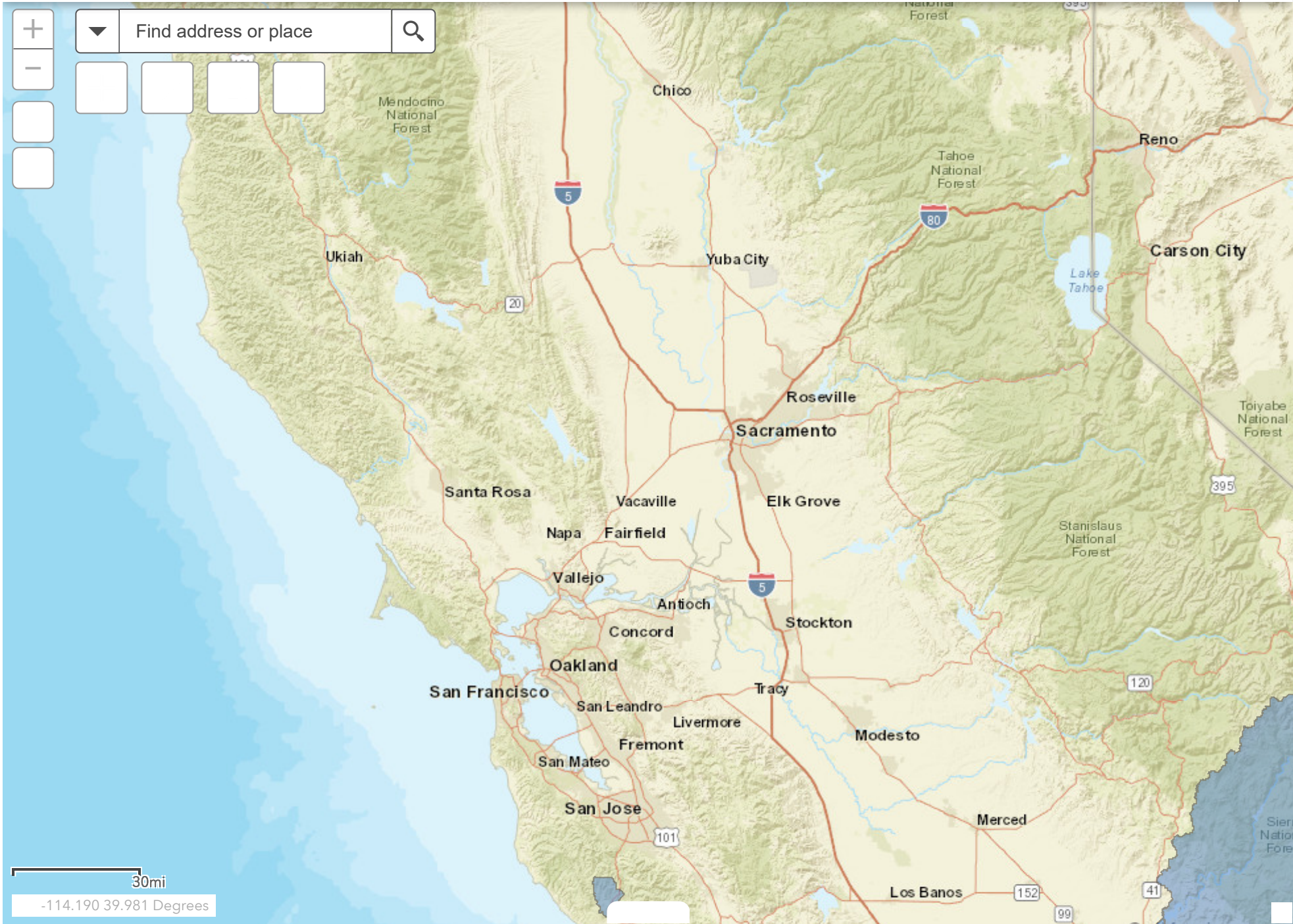
Related Information

- [ASD User Guide \(/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/\)](/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- [ASD Flow Chart \(/resource/3840/acceptable-separation-distance-asd-flowchart/\)](/resource/3840/acceptable-separation-distance-asd-flowchart/)



Sole Source Aquifers

Find address or place





Coastal Barrier Resources Act

Image Details (/media/146029)

We administer the Coastal Barrier Resources Act (CBRA), which encourages the conservation of storm-prone and dynamic coastal barriers by withdrawing the availability of federal funding and financial assistance within a designated set of units known as the Coastal Barrier Resources System (CBRS). The CBRS includes 3.5 million acres along the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts.

What We Do



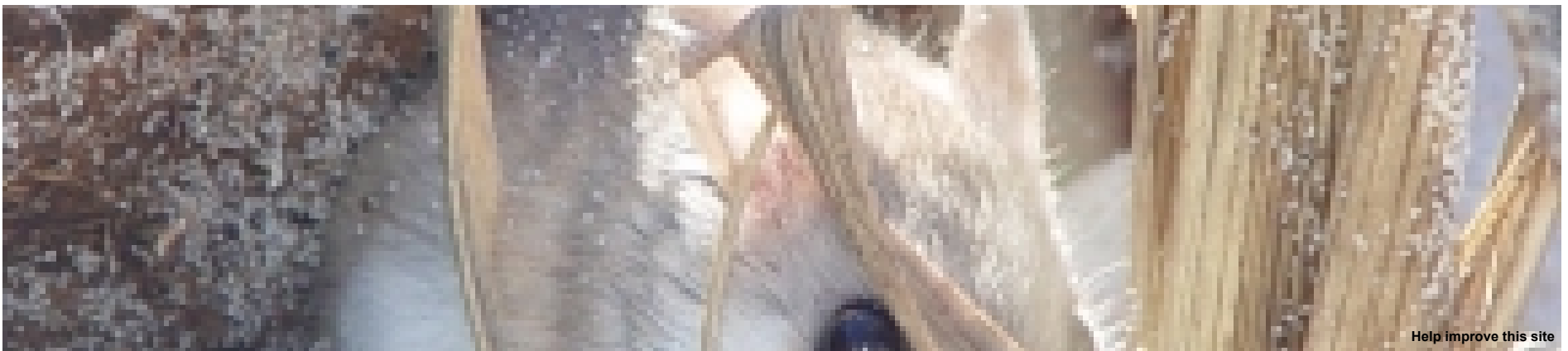
Image Details (/media/effects-storm-surge-chincoteague-national-wildlife-refuge-va)

Our Services

Our responsibilities under CBRA include maintaining the official maps of the CBRS and making recommendations to Congress for appropriate changes to the boundaries; consulting with other federal agencies regarding federally-funded projects proposed within the CBRS; and working with property owners, project proponents, and other stakeholders to determine whether a specific property or project site is located within the CBRS.

Our Projects and Initiatives

The Service is committed to ensuring accurate and user-friendly maps depicting the CBRS. Through a series of [mapping projects](https://www.fws.gov/program/coastal-barrier-resources-act/what-we-do) (<https://www.fws.gov/program/coastal-barrier-resources-act/what-we-do>), we have made progress in modernizing maps for the CBRS using digital technology that has significantly improved public access to information, increased efficiency for infrastructure project planning, and increased accuracy and timeliness in determining whether individual properties are located with the CBRS.



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Image Details (/media/alabama-beach-mouse)

Our Laws and Regulations

With the passage of CBRA in 1982, Congress recognized that certain actions and programs of the Federal Government have historically subsidized and encouraged development on coastal barriers, resulting in the loss of natural resources, threats to human life, health, and property, and the expenditure of millions of tax dollars each year. CBRA seeks to minimize these effects by restricting federal funding and financial assistance affecting the CBRS. The CBRS includes 588 System Units, which comprise nearly 1.4 million acres of land and associated aquatic habitat. There are also 282 “Otherwise Protected Areas,” a category of coastal barriers that are mostly held for conservation and/or recreation purposes that include an additional 2.1 million acres of land and associated aquatic habitat.

A 2019 [study \(https://doi.org/10.2112/JCOASTRES-D-18-00114.1\)](https://doi.org/10.2112/JCOASTRES-D-18-00114.1) published in the *Journal of Coastal Research* analyzed the economic benefits from CBRA and found that CBRA reduced federal coastal disaster expenditures by \$9.5 billion between 1989 and 2013, and forecasts that additional savings will range between \$11 and \$108 billion by 2068.

CBRA does not prohibit the expenditure of private, state, or local funds within the CBRS. Additionally, it does not prevent federal agencies from issuing permits or conducting environmental studies. Areas within the CBRS may be developed, provided that private developers or other non-federal parties bear the full cost and risk.

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5 Coastal Barrier
System Report to
1 Updated Maps
Atlantic Coast
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revised maps for 438
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the nine states most

Studies Examine CBRA's
Effectiveness in Saving Money
and Reducing Development
(/story/studies-examine-cbras-
effectiveness-saving-money-
and-reducing-development)

CBRA provides landscape-level
conservation benefits for fish,
wildlife, and plant resources by
reducing the intensity of
development. A 2007 U.S.
Government Accountability Office
report reviewed the extent to which
development has occurred in CBRS
units and the extent to which federal
agencies...

Dec 16, 2021

Department Reinstates Long-
Standing Interpretation of
CBRA for Shoreline
Stabilization Projects
(/story/2021-07/department-
reinstates-long-standing-
interpretation-cbra-shoreline-
stabilization)

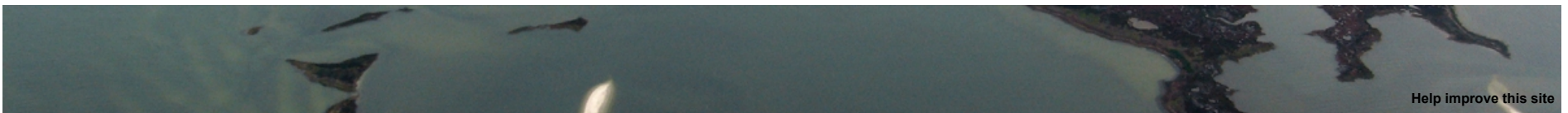
The Department of the Interior has
reinstated its long-standing
interpretation under the Coastal
Barrier Resources Act as it relates to
certain federally-funded shoreline
stabilization projects.

Jul 14, 2021

< 1 2 3 4 5 >

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Our Library



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Image Details (/media/emergent-wetlands)

Whether you are looking for additional information about the Coastal Barrier Resources System, our current mapping projects, or official maps, you can find it here in our library.

[Official Coastal Barrier Resources System Maps \(/library/collections/official-coastal-barrier-resources-system-maps\)](/library/collections/official-coastal-barrier-resources-system-maps)



The Coastal Barrier Resources Act (CBRA) of 1982 and subsequent amendments established the John H. Chafee Coastal Barrier Resources System (CBRS). The CBRS consists of relatively undeveloped coastal barriers and other areas located the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and...

[Library Collection \(/library/collections/official-coastal-barrier-resources-system-maps\)](/library/collections/official-coastal-barrier-resources-system-maps)
25 Items

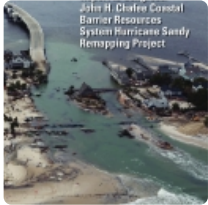
[Service Sends Coastal Barrier Resources System Report to Congress with Updated Maps for the North Atlantic Coast \(/press-release/2022-04/service-sends-coastal-barrier-resources-system-report-congress-updated-maps\)](/press-release/2022-04/service-sends-coastal-barrier-resources-system-report-congress-updated-maps)



The U.S. Fish and Wildlife Service has submitted to Congress its Report to Congress: John H. Chafee Coastal Barrier Resources System Hurricane Sandy Remapping Project. The report includes revised maps for 438 Coastal Barrier Resources System (CBRS) units in the nine states most affected by...

[Press Release \(/press-release/2022-04/service-sends-coastal-barrier-resources-system-report-congress-updated-maps\)](/press-release/2022-04/service-sends-coastal-barrier-resources-system-report-congress-updated-maps)
Apr 6, 2022

resources-system-report-congress-updated-maps)



Report to Congress: John H. Chafee Coastal Barrier Resources System Hurricane Sandy Remapping Project (/media/report-congress-john-h-chafee-coastal-barrier-resources-system-hurricane-sandy-remapping)

In 2014, the U.S. Fish and Wildlife Service (Service) initiated a project to modernize the maps of the Coastal Barrier Resources System (CBRS) units in the nine states along the North Atlantic coast most affected by Hurricane Sandy: Connecticut, Delaware, Maryland, Massachusetts, New Hampshire,...

PDF

Apr 5, 2022



Coastal Barrier Resources Act Project Consultation (/library/collections/coastal-barrier-resources-act-project-consultation)

This library collection includes resources and information related to Coastal Barrier Resources Act project consultations, as well as guidance for shoreline stabilization, disaster assistance, and property buyouts.

Library Collection

(/library/collections/coastal-barrier-resources-act-project-consultation) 7 Items



Updated Maps for Coastal Barrier Resources System Units in North Carolina, South Carolina, and Florida (/story/2021-04/updated-maps-coastal-barrier-resources-system-units-north-carolina-south-carolina-and)

The Service has submitted to Congress seven draft revised maps for John H. Chafee Coastal Barrier Resources System (CBRS) units located in North Carolina, South Carolina, and Florida.

Story

(/story/2021-04/updated-

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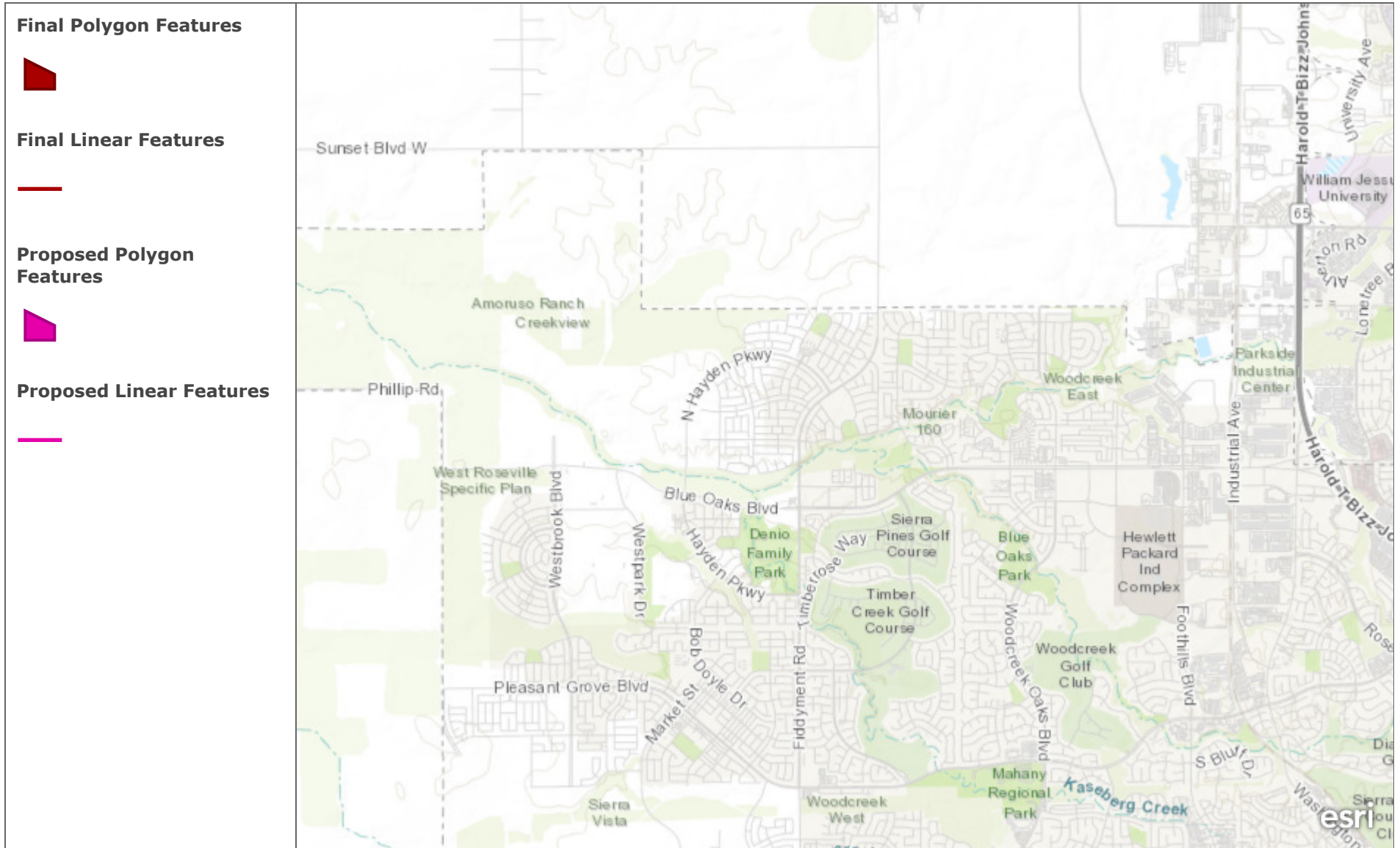
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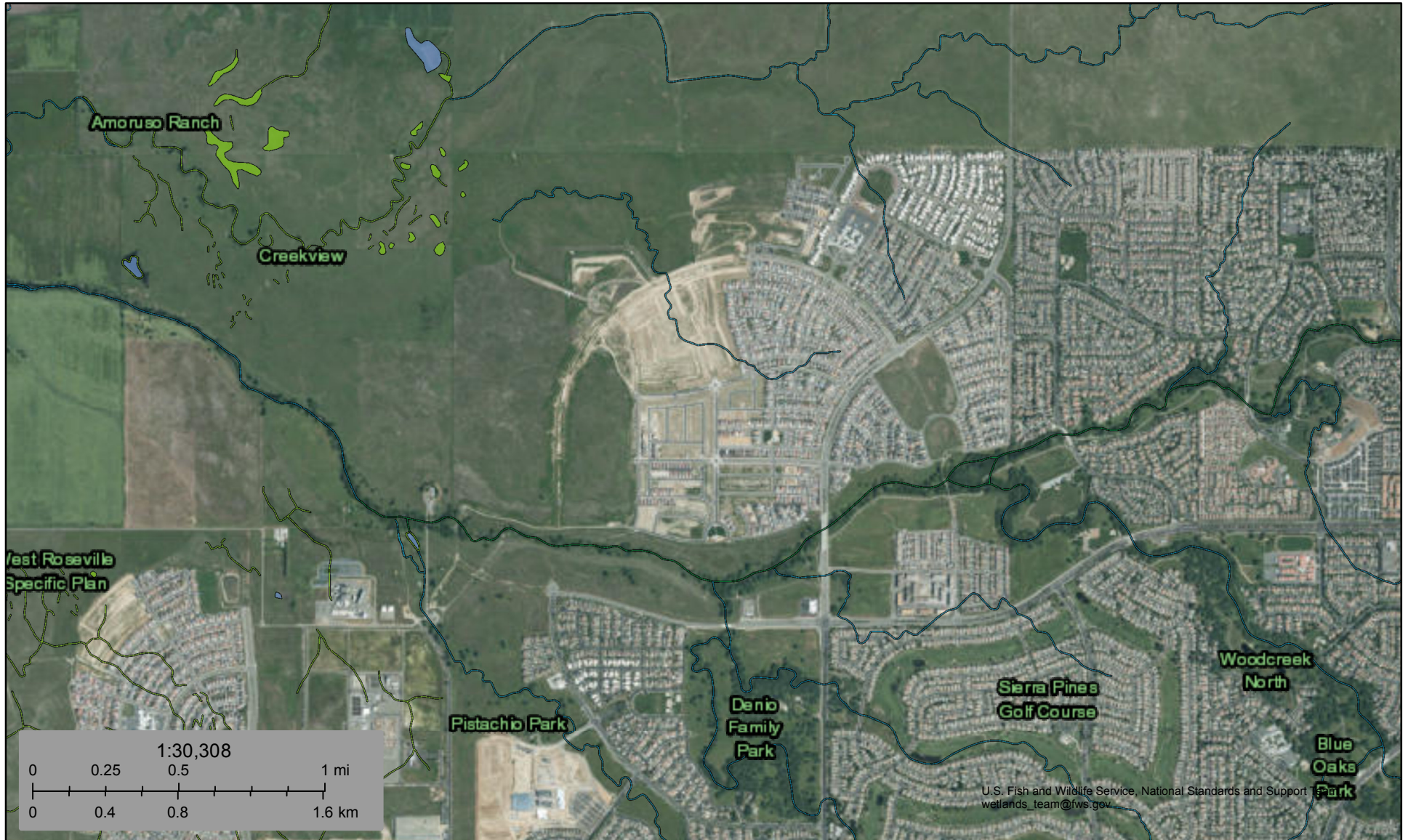
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Critical Habitat for Threatened & Endangered Species [USFWS]






A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

U.S. Fish and Wildlife Service | City of Roseville, Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, NGA, EPA, USDA



October 4, 2022

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



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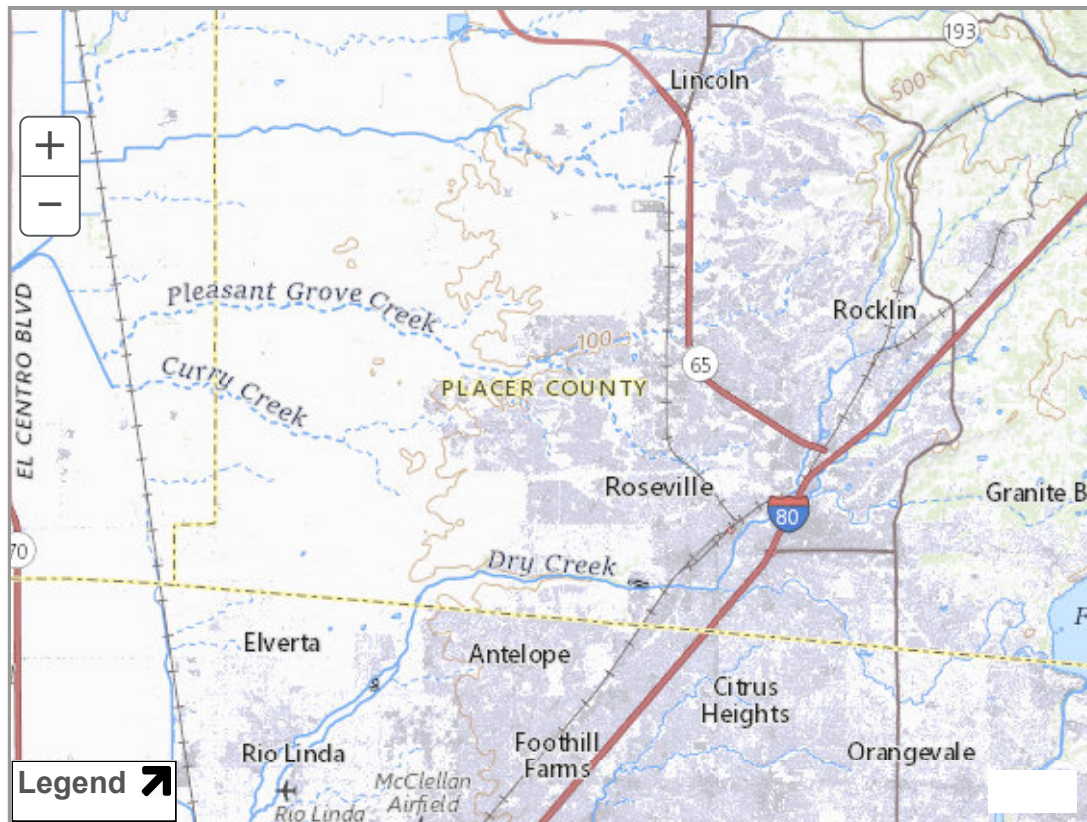
CALIFORNIA

California has approximately 189,454 miles of river, of which 1,999.6 miles are designated as wild & scenic—1% of the state's river miles.

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Seen as barren by the first explorers to today's first-time visitors, the rivers of the high desert simply hide their treasures well.



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- Amargosa River
- American River (Lower)
- American River (North Fork)
- Bautista Creek
- Big Sur River
- Black Butte River
- Cottonwood Creek
- Deep Creek
- Eel River
- Feather River
- Fuller Mill Creek
- Kern River

- Kings River**
- Klamath River**
- Merced River**
- Owens River Headwaters**
- Palm Canyon Creek**
- Piru Creek**
- San Jacinto River (North Fork)**
- Sespe Creek**
- Sisquoc River**
- Surprise Canyon Creek**
- Smith River**
- Trinity River**
- Tuolumne River**
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About WPWMA

The WPWMA is a regional agency established in 1978 through a joint exercise of powers agreement between Placer County and the cities of Lincoln, Rocklin and Roseville to own, operate and maintain a sanitary landfill and all related improvements.

The WPWMA's facilities consist of the Western Regional Sanitary Landfill and a Materials Recovery Facility which includes composting, Household Hazardous Waste, and recycling and buyback facilities.

MRF

The Materials Recovery Facility (MRF) assists Placer County jurisdictions with achieving state mandated waste diversion goals while achieving an economy of scale for material diversion and providing uniformity in waste diversion and recycling programs. The MRF was designed and is operated to: 1) recover recyclable materials from mixed waste; 2) process green and wood wastes for composting or biomass; 3) receive and process source-separated recyclables, and 4) provide for receipt and recycling/disposal of HHW. Materials not recovered via MRF processing are disposed in the Western Regional Sanitary Landfill.

Western Regional Sanitary Landfill

The Western Regional Sanitary Landfill began operations in 1979 at the corner of [Fiddymont Road and Athens Avenue](#), and is the only remaining active landfill in Placer County. The WRSL is currently permitted to receive waste through January 2058. The WRSL's environmental protection

measures include Subtitle D-compliant liners in the active waste disposal modules, leachate and condensate collection and removal systems, a landfill gas collection system and perimeter gas monitoring probes, and a groundwater monitoring network.

Energy 2001

The WPWMA leases approximately 15,000 square feet of land and delivers landfill gas to a private company, [Energy 2001](#), for the purposes of generating electricity. Energy 2001's onsite plant currently consists of six CAT 3516 engines and a small flare. Electricity produced by Energy 2001 is fed into the local power grid and sold to the Marin Energy Authority.

Energy 2001 also owns and operates a 9KW commercial solar array in partnership with Sierra College. Energy produced by the solar array is used to power the WRSL's landfill gas collection equipment.

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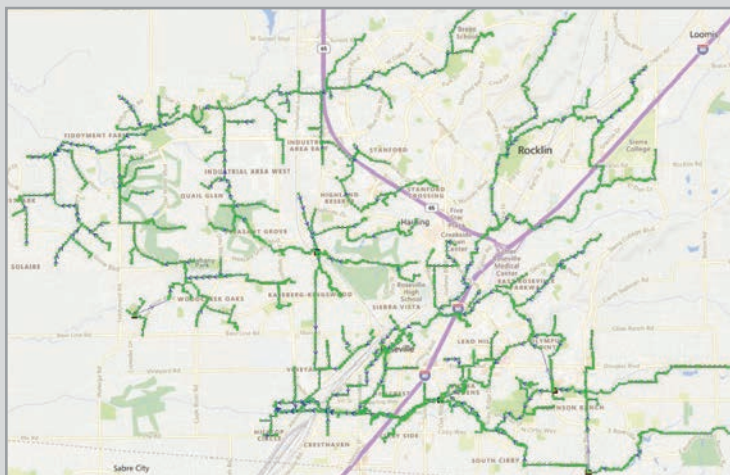
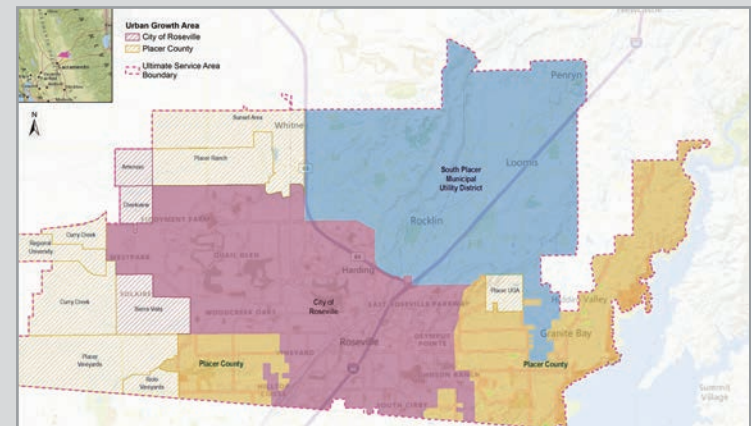
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SOUTH PLACER WASTEWATER AUTHORITY

Partners: City of Roseville, Placer County, South Placer Municipal Utility District

South Placer Regional Wastewater 2020 Systems Evaluation Report



December 2020

Prepared by





SOUTH PLACER REGIONAL WASTEWATER 2020 SYSTEMS EVALUATION REPORT



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COMMITMENT & INTEGRITY DRIVE RESULTS

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South Placer
Wastewater Authority
December 2020

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Appendix F – Proposed Capacity Improvement Project Details

Acknowledgements

This report represents a collaborative effort between Woodard & Curran, V&A Consulting Engineers, the South Placer Wastewater Authority, the City of Roseville, the South Placer Municipal Utility District, and Placer County. We would like to take an opportunity to thank the following key individuals:

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Ian Jaffe	Woodard & Curran
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James Kohne	Woodard & Curran
Kevin Krajewski	V&A Consulting Engineers

List of Abbreviations

AA	average annual
ac	acres
ADWF	average dry weather flow
AFY	acre feet per year
APN	assessor parcel number
BOD	biochemical oxygen demand
BSF	base sanitary flow
CIP	Capital Improvement Program
DC	Dry Creek
DCWWTP	Dry Creek Wastewater Treatment Plant
du, DU	dwelling unit
DWF	dry weather flow
ea	each
EDU	Equivalent Dwelling Unit
ENR-CCI	Engineering News Record Construction Cost Index
ft	feet
FY	fiscal year
GIS	Geographical Information System
gpd	gallons per day
gpm	gallons per minute
GWI	groundwater infiltration
I/I	inflow and infiltration
in	inches
lb/day	pounds per day
MCRT	mean cell residence time
MG	million gallons
mgd	million gallons per day
MM	maximum month
NPDES	National Pollutant Discharge Elimination System
PDWWF	peak day wet weather flow
PG	Pleasant Grove
PGWWTP	Pleasant Grove Wastewater Treatment Plant
PHWWF	peak hour wet weather flow
PMF	peak month flow
PS	pump station
PWWF	peak wet weather flow
RAS	return activated sludge
RDI/I	rainfall dependent infiltration/inflow

RWQCB	Regional Water Quality Control Board
SMD-2	Placer County Sewer Maintenance District 2
SMD-3	Placer County Sewer Maintenance District 3
SPMUD	South Placer Municipal Utility District
SPWA	South Placer Wastewater Authority
SWRCB	State Water Resources Control Board
Systems Evaluation	Regional Wastewater and Recycled Water Systems Evaluation
TM	technical memorandum
TSS	total suspended solids
UGA	Urban Growth Area
UV	ultraviolet
WAS	waste activated sludge
WWF	wet weather flow
WWTP	wastewater treatment plant

EXECUTIVE SUMMARY

This report summarizes the results and recommendations of the Systems Evaluation prepared for the South Placer Wastewater Authority (SPWA), which is a Joint Powers Authority comprised of the City of Roseville (City), South Placer Municipal Utility District (SPMUD), and the County of Placer (Placer County). The Systems Evaluation was prepared by Woodard & Curran in close coordination with City, County and District staff. The Systems Evaluation will be used to guide improvements to the regional wastewater collection system and wastewater treatment plants to accommodate current and future development and ensure that SPWA's customers continue to receive a high level of service.

Background and Purpose of the Systems Evaluation

The South Placer Wastewater Authority (SPWA) was created under a Joint Powers Agreement in October 2000 and comprises the City of Roseville (City), South Placer Municipal Utility District (SPMUD), and the County of Placer (Placer County). Flow from SPMUD and portions of Placer County discharge into the City's sewer collection system. The City of Roseville, on behalf of the regional partners, owns and operates two regional wastewater treatment facilities: the Pleasant Grove Wastewater Treatment Plant (PGWWTP), and the older Dry Creek Wastewater Treatment Plant (DCWWTP). Additionally, the City of Roseville owns and operates the network of gravity sewers, pump stations, and force mains that serve customers within the City's limits, including the joint (regional) facilities that convey flow from the SPWA partners. SPMUD owns and operates gravity sewers, pump stations, and force mains in Rocklin, Loomis, and portions of southern Placer County. Placer County owns and operates gravity sewers, pump stations, and force mains in unincorporated areas of Placer County that are not served by other agencies.

The South Placer Regional Wastewater and Recycled Water Systems Evaluation prepared in 2009 (2009 Systems Evaluation), defined the SPWA service area boundary; evaluated the wastewater collection, wastewater treatment, and recycled water distribution systems; and identified existing and potential future improvement needs. Since that study was completed, the recycled water distribution system has been "removed" from the SPWA system (reallocated as an asset) and is now wholly managed by the City of Roseville. SPWA is now updating the Systems Evaluation to better evaluate future wastewater collection and treatment capacity needs that may have changed since 2009. This report documents the evaluation of the wastewater collection system capacity and the capacity of the wastewater treatment plants versus projected flows and loads.

This South Placer Regional Wastewater Systems Evaluation (Systems Evaluation) has been conducted to accomplish the following:

- Document the existing (2020) capacity and the flows and loadings on regional trunk sewer and wastewater treatment infrastructure and facilities present in 2020;
- Project buildout conditions based upon regional planning documents and planned regional developments in southwestern Placer County; and,
- Present a Regional Systems evaluation, with system deficiencies identified, and capital projects forecasted, which will inform the SPWA partners in identifying their ability to provide service for planned and proposed development both presently and for buildout conditions.

The service area is shown in **Figure 1-1**, and the regional collection system is shown in **Figure ES-2**. Figure 1-1 also indicates the location of the Urban Growth Areas (UGAs) within the service area, which are included in this study. Note that Creekview has been incorporated into the City of Roseville service area as of January 2019, while Amoruso and Sierra Vista are anticipated to be incorporated into the City's service area in early 2021.

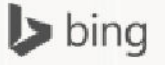
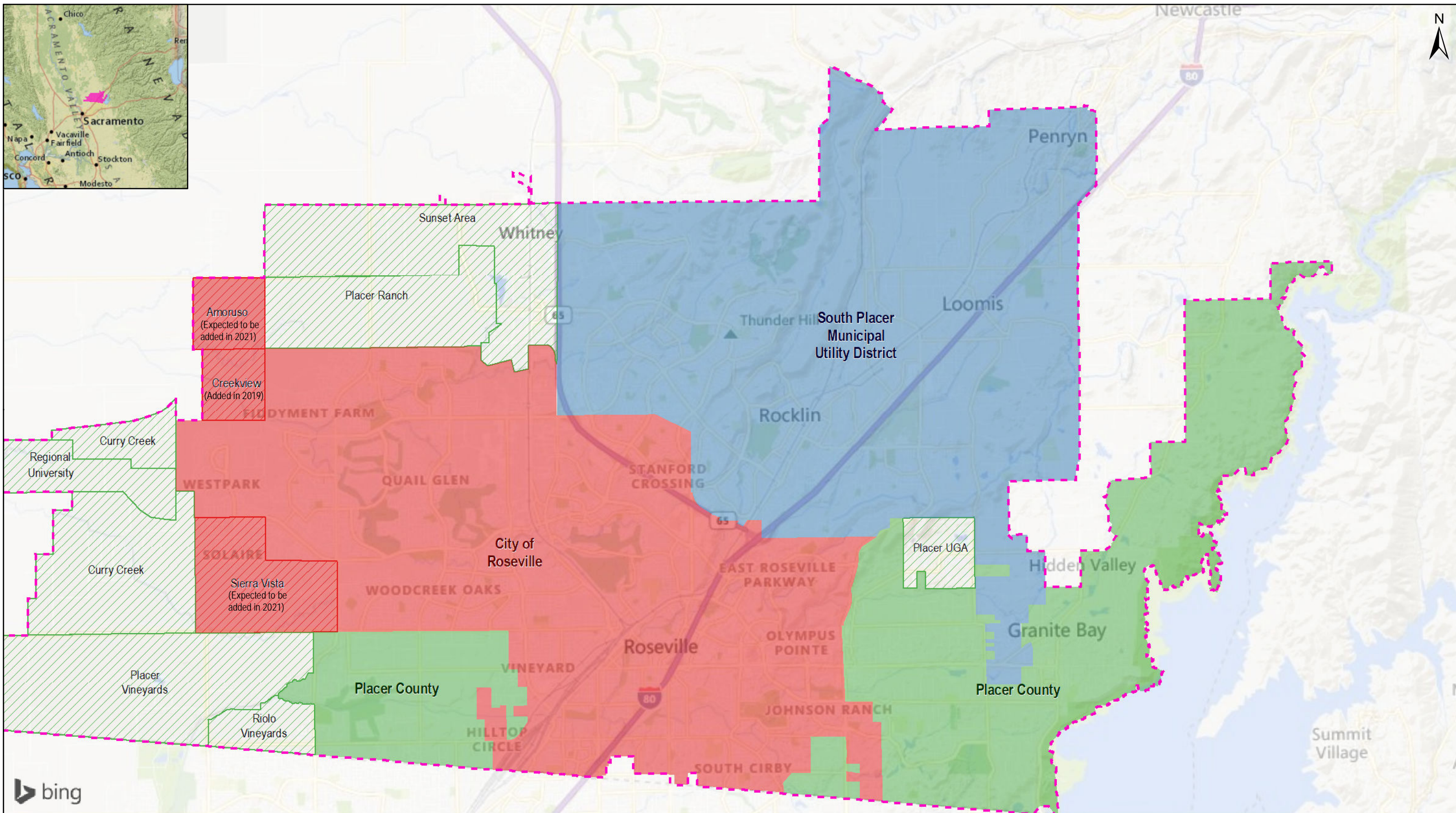


Figure ES-1
2021 Service Area Boundary
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

2021 Partner Agency Service Area

- City of Roseville
- Placer County
- SPMUD

Urban Growth Area

- City of Roseville UGA
- Placer County UGA

Ultimate Service Area Boundary

-

Project #: 0011183.00
 Map Created: December 2020

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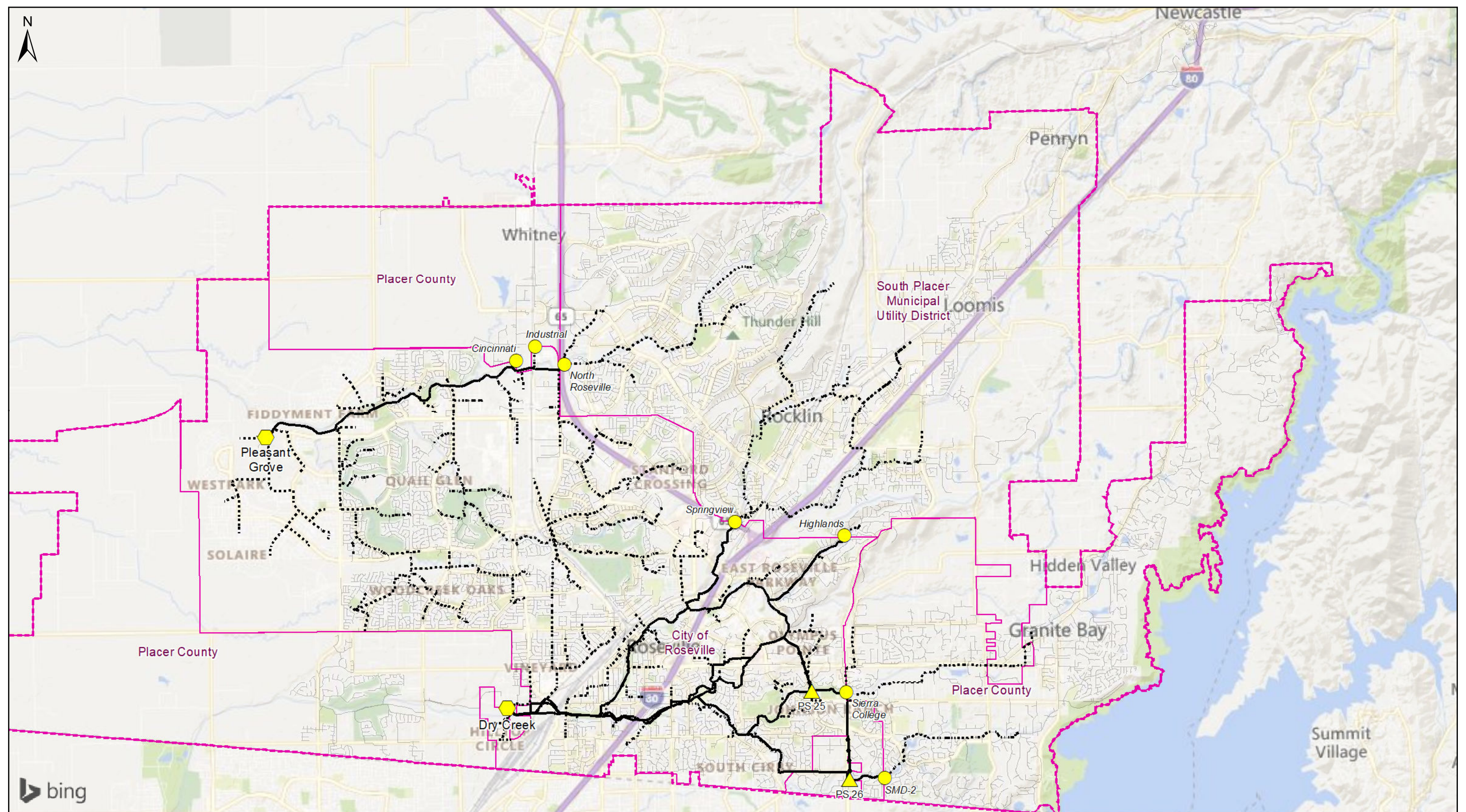


Figure ES-2
Modeled Trunk System
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

- Regional Gravity Sewer
- Regional Force Main
- Non-Regional Modeled Sewer
- Non-Modeled Sewer
- ⬡ Wastewater Treatment Plant
- ▲ Pump Station
- Permanent Flow Meters
- Partner Agency Boundary
- ⬡ Ultimate Service Area Boundary

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Modeled Flow Projections

The flow projections developed for this Systems Evaluation were based on the information collected for the system's hydraulic model updates, including the updates performed for the current study. In 2007, a hydraulic model of the City's sewer collection system was developed using the H2OMap Sewer modeling platform (2007 Model Development Project), in parallel with a trunk sewer model for the combined Roseville, SPMUD, and Placer County systems. The models were later updated as part of the 2009 Systems Evaluation. Subsequently, the City's sewer model was updated in 2017 to reflect existing and future demands within the City, and to upgrade the modeling platform to the fully dynamic InfoWorks ICM software. For the current Systems Evaluation Update, the City's model was updated to reflect existing and future projected flows from Placer County and SPMUD.

Existing base wastewater flows were developed based on the assumptions summarized below; currently connected parcels are indicated in **Figure ES-3**. Note that flow projections (referred herein as loads) are intended to represent the level of development present during the flow monitoring periods used to calibrate the hydraulic model. Buildout loads were based on projected development within the service area. Two buildout scenarios were developed: (1) Buildout scenario representing the currently anticipated development density, and (2) Buildout-Sensitivity scenario, representing higher density development and some potential redevelopment areas.

For the City of Roseville, existing loads were developed based on water consumption data, and calibrated during the 2017 model update. A 15% rebound to reflect drought conditions was assumed for existing sewer loads. A buildout scenario was developed based on infill of currently vacant parcels using land use information from the City's General Plan or provided by the City's planning department, and development of UGAs within the City. The Buildout-Sensitivity scenario considers potential intensification and redevelopment in the downtown Roseville area.

Placer County provided spreadsheets summarizing existing equivalent dwelling units (EDUs) for each APN¹, which formed the basis of the existing model loads. (Note: an EDU is defined as the flow equivalent of one single-family residence.) For the Buildout scenario, flows were based on a spreadsheet provided by Placer County that summarized the anticipated EDUs for all entitled projects in Placer County², development of other currently vacant parcels (based on general plan data²), and development of the Placer County UGAs. For the Buildout scenario, an average development density for vacant parcels was assumed within the General Plan limits. For the Buildout-Sensitivity scenario, the development density was assumed to be at the maximum range allowed by the General Plan. A Base Wastewater Flowrate (BWF) of 180 gpd per EDU was assumed for Placer County and SPMUD.

SPMUD provided a shapefile³ which provided EDUs for the year 2020 (which was identified as "existing" land use by SPMUD staff), and 2060 (which was identified as "Buildout" by SPMUD staff). This shapefile formed the basis of the Existing and Buildout scenarios.

For the UGAs, land use and flow projections were based on the most recent wastewater master plans for each UGA.

The locations of future developments, including urban growth areas, are indicated in **Figure ES-4**.

¹ Spreadsheets included: Existing dry creek EDU-7-24-19.xls, Existing SMD 2- EDU-2018-12-12.xlsx, Existing SMD 3- EDU-2018-12-12.xlsx, Existing Sunset EDU-7-24-19.xls

² 2018-12-18-Entitled-Planned Project.xlsx (provided December, 2018) and GeneralPlans_CommPlans.shp (downloaded from Placer County website, dated October 20, 2019)

³ SPMUD_SewerLoading_AddressPoints, provided August 7, 2019.

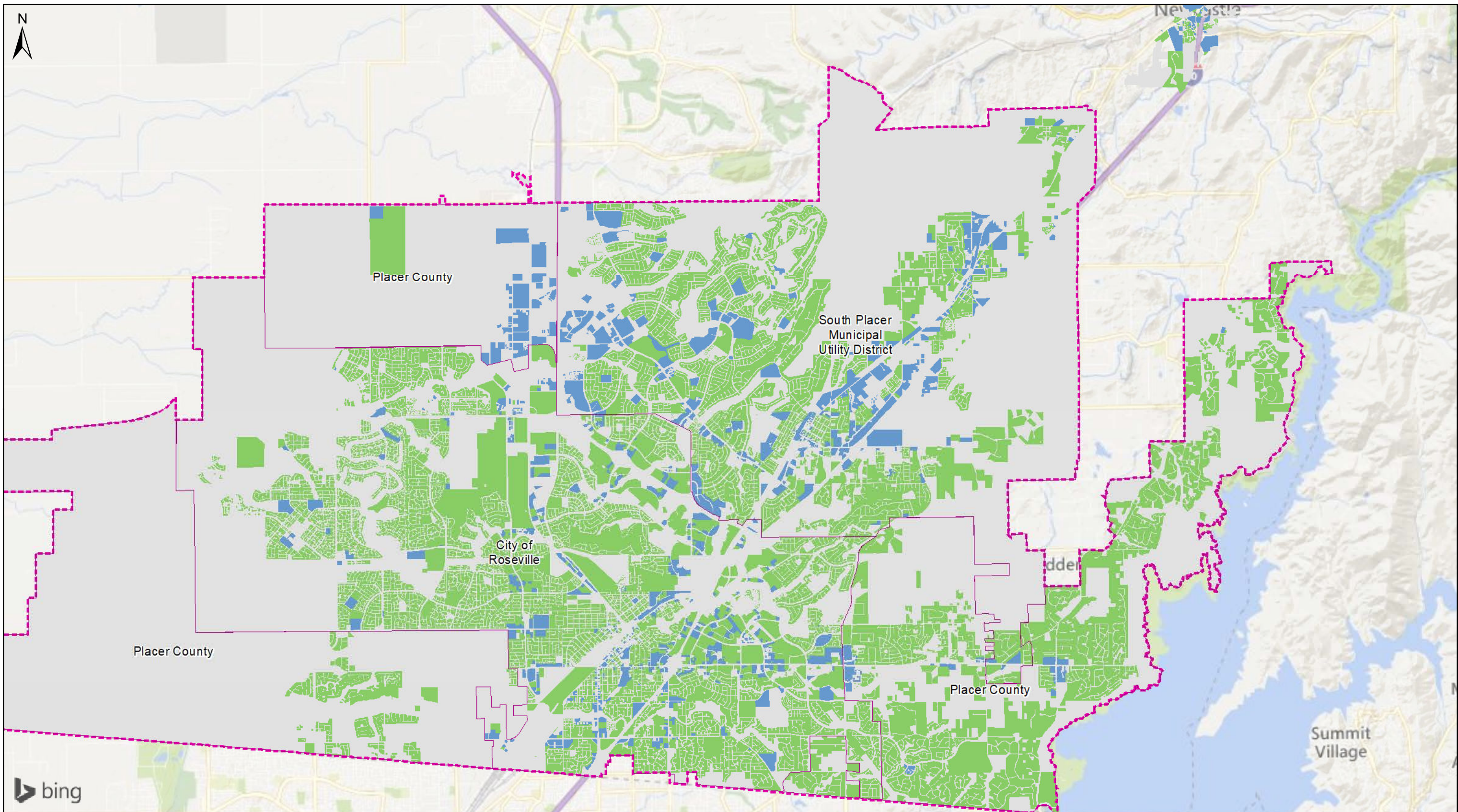


Figure ES-3
Existing Connected Parcels
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

Parcel Land Use

- Commercial/Industrial
- Residential
- Unconnected

Service Area Boundary

Partner Agency Boundary

Project #: 0011183.00
 Map Created: December 2020

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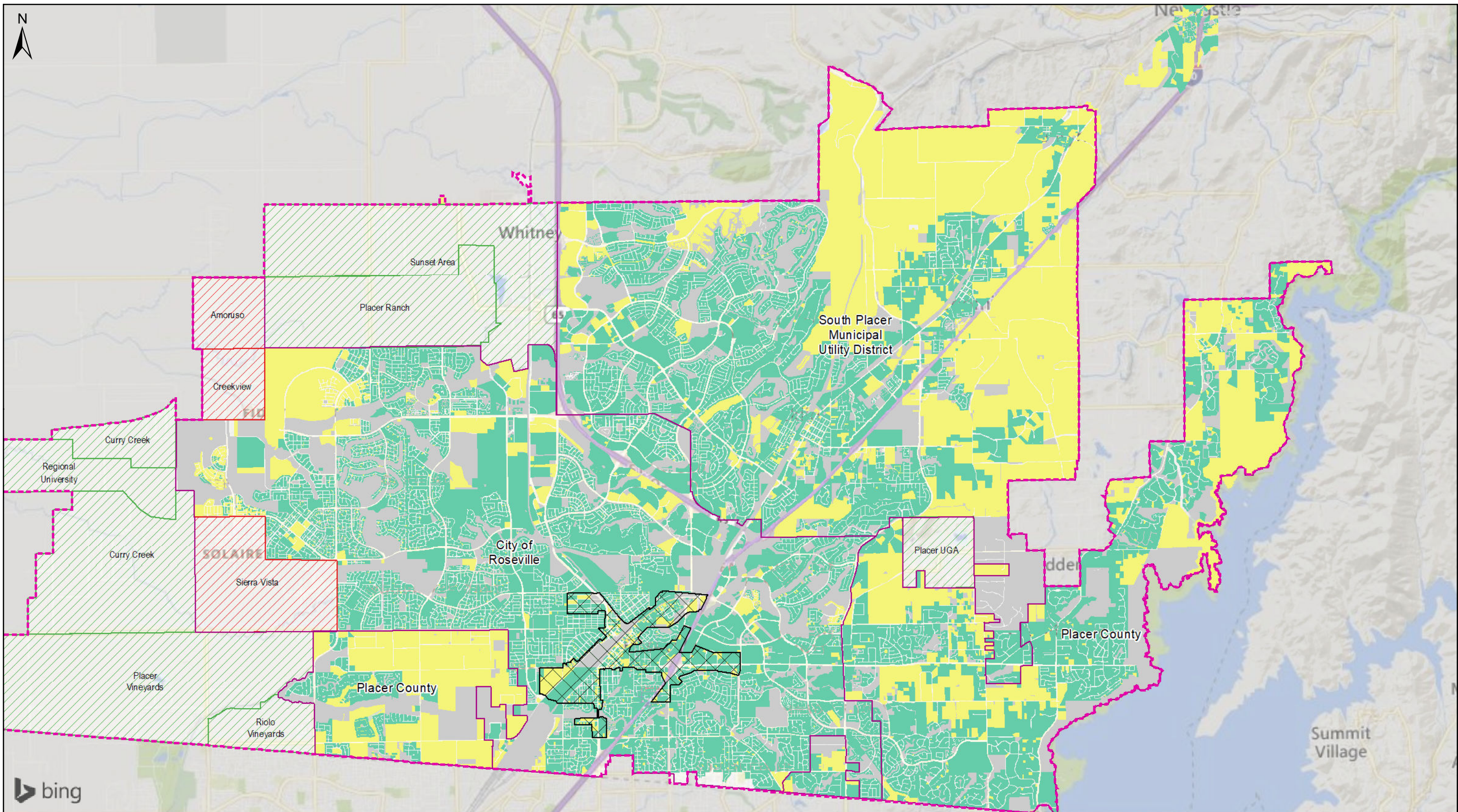


Figure ES-4
Future Development and Urban Growth Areas

South Placer Wastewater Authority
 2020 Systems Evaluation



Buildout Status

- Existing
- Future Connection
- Unconnected
- Redevelopment Area

Urban Growth Area

- City of Roseville UGA
- Placer County UGA
- Partner Agency Boundary

- Service Area Boundary

Project #: 0011183.00
 Map Created: December 2020

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Model loads were calibrated based on temporary monitoring programs for the 2015/2016 wet weather season (30 meters for the City’s 2017 Model Update) and 12 meters during the 2018/2019 wet weather season (for SPMUD and Placer County). V&A Consulting Engineers, under subcontract to Woodard & Curran, conducted the monitoring. As part of the calibration process, rates of wet season groundwater infiltration (GWI, observed as a constant additional flow throughout the monitoring period), and rainfall-dependent inflow and infiltration (RDI/I) were calculated. Existing and projected flows predicted by the model are summarized in Table ES-1 and Table ES-2.

Table ES-1: Estimated Dry Weather Flows^a by Agency

WWTP	Agency	Existing Calibration ADFW (mgd)	Existing ADFW with Drought Rebound	Buildout ADFW (mgd)	Buildout-Sensitivity ^b ADFW (mgd)
Pleasant Grove	Roseville	5.87	6.70	13.01	13.04
	Placer County	0.18	0.20	9.85	9.85
	SPMUD	2.25	2.97	3.63	3.63
	Total	8.30	9.87	26.49	26.52
Dry Creek	Roseville	5.60	6.27	6.89	8.23
	Placer County	2.57	2.81	7.19	7.42
	SPMUD	2.90	3.64	5.16	5.16
	Total	11.06	12.72	19.24	20.81

Notes:

- a. Includes wet season GWI.
- b. For the Buildout-Sensitivity scenario, the development density was assumed to be at the maximum range allowed by the General Plan. A Base Wastewater Flowrate (BWF) of 180 gpd per EDU was assumed for Placer County and SPMUD

Table ES-2: Modeled ADFW And Peak WW Flow Summary

WWTP	Existing (Rebound)			Buildout			Buildout-Sensitivity		
	BWF ^a (mgd)	ADWF (mgd)	PWWF ^b (mgd)	BWF ^a (mgd)	ADWF (mgd)	PWWF ^b (mgd)	BWF ^a	ADWF (mgd)	PWWF ^b (mgd)
Pleasant Grove	9.5	9.9	27.4	26.1	26.5	55.8	26.2	26.5	56.0
Dry Creek	10.1	12.7	41.9	16.7	19.2	59.2	18.2	20.8	60.6

Notes:

- a. Does not include wet season groundwater infiltration (GWI).
- b. Modeled PWWF assumes improvements have been implemented to eliminate overflows and significant surcharging.

Trunk Sewer Evaluation

The calibrated model was run for Existing, Buildout, and Buildout-Sensitive land use scenarios under the design event described above. Several deficiencies were identified in non-regional facilities which resulted in model-predicted overflows for one or more of the scenarios; to ensure flows were conveyed to regional sewers, pipes were upsized in this analysis to eliminate any overflows. As the current model is a calibrated fully-dynamic model, the design condition represents a relatively infrequent storm event, and many of SPWA’s sewers are relatively deep, surcharging up to within 5 feet of the manhole rims (ground surface) was considered acceptable under 10-year design storm PWWF, as long as the surcharge (flow height in the manhole) does not exceed 4 feet from the top of pipe up the manhole.

Model results under Existing and Buildout conditions are summarized in Table ES-3 and results for the Buildout scenario are shown in Figure ES-5. Within the regional system, seven deficiency areas have been identified as indicated in Figure ES-5. There was no significant difference in modeled surcharge between the Buildout and Buildout-Sensitivity scenarios.

Table ES-3: Sewer Capacity Results under Existing and Buildout Land Use Scenarios^a

Area	Existing (with Rebound)			Buildout and Buildout-Sensitivity		
	Length of Throttle Surcharge (ft)	Maximum Surcharge Depth (ft)	Minimum Freeboard (ft)	Length of Throttle Surcharge (ft)	Maximum Surcharge Depth (ft)	Minimum Freeboard (ft)
A	5,530	7.3	0.0	5,530	7.8	0.0
B	3,369	1.9	2.0	3,948	7.7	0.0
C	522	1.0	7.4	6,009	6.4	2.8
D	700	1.1	8.6	4,220	3.3	6.4
E	--	--	--	2,223	3.1	5.6
F	--	0.9	12.2	1,716	7.3	2.2
G	--	--	--	0	2.3	6.3

Notes:

- a. Areas that exceed the hydraulic capacity criteria but do not have modeled overflows are highlighted yellow, while areas with modeled overflows are highlighted orange.

Based on these model results, improvement projects have been identified to relieve the capacity deficiencies. Improvement Project 1 would relieve existing deficiencies, while Improvement Project 2 and 3 would relieve deficiencies identified in the Buildout system. Improvement Project 2 and 3 would largely be triggered by additional growth in Placer County's SMD2 and SMD3 service areas. Subsequent model runs were performed to estimate the number of EDUs that would trigger the need for these additional projects; based on this analysis, the projects would be needed after approximately 1,800 additional EDUs (compared to 2018 development). Based on the EDU projections provided by Placer County, this additional growth is not anticipated until after Fiscal Year (FY) 2059/2060. Note that this estimate is based on dry weather flows and rainfall response estimated as part of the model update; changes in these projected flows may occur (in the future with additional flow monitoring and model updates) which would trigger the need for the projects earlier, or delay or eliminate the need for the projects.

The proposed capacity improvement projects are summarized in **Table ES-4** and the locations are shown in **Figure ES-6**.

Table ES-4: Proposed Capacity Improvement Projects

Project	Description	Estimated Capital Improvement Cost	Approximate Additional EDUs in SMD2/SMD3 to Trigger Project ^a
1	Increased Capacity of PS 26 and sewers on Sierra College Blvd directly downstream of PS 26 to relieve Old Auburn Trunk sewer (Area A)	\$1,606,000	Existing
2	Redirect flows from PS 26 and Sierra College Blvd down Eureka Road to relieve Area E.	\$1,831,000	~1,800 ^b
3	Increased Firm capacity of PS 25 to meet Buildout PWWF. New weir structure or adjustments to existing structure at PS 25 to convey the maximum potential flow through PS 25 without any dry weather flows.	\$758,000	~1,800 ^c

Notes:

- a. Based on a percentage of buildout factor applied to future model loads. Represents approximately 60% of buildout.
- b. There are approximately 8,400 Existing EDUs upstream of the deficiency triggering Improvement Project 2, and approximately 10,200 EDUs would trigger the need for improvement. Represents approximately 60% of buildout.
- c. There are approximately 11,900 Existing EDUs upstream of the deficiency triggering Improvement Project 3, including 7,600 in Placer County, 4,200 in Roseville, and less than 100 in SPMUD. Approximately 13,700 EDUs would trigger the need for the improvement.

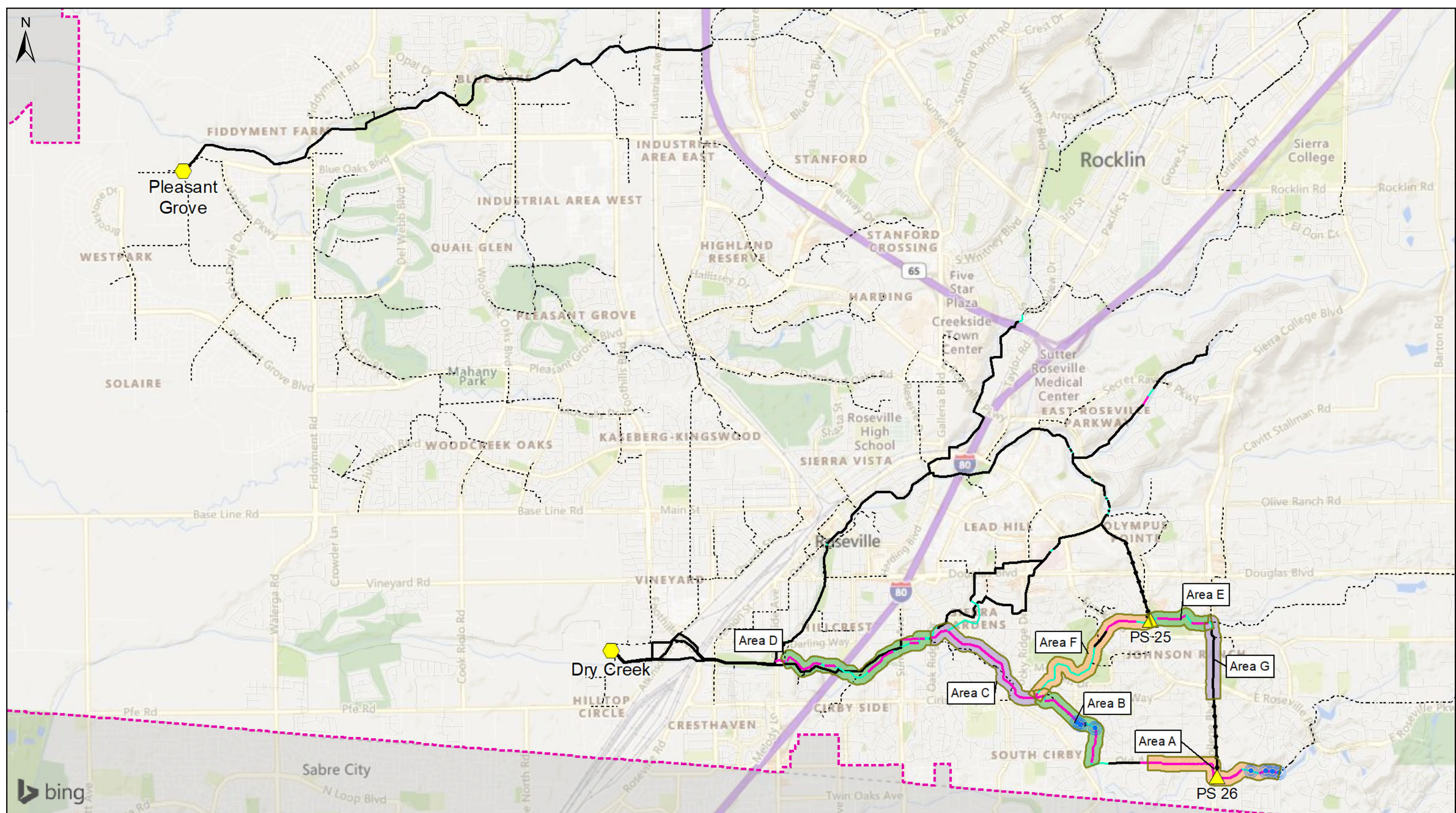
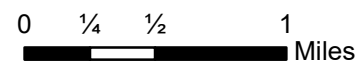


Figure ES-5

Model Results (Buildout and Buildout Sensitivity PWWF)

South Placer Wastewater Authority
2020 Systems Evaluation



- Regional Gravity Sewer
- Force Main
- Non-Regional Modeled Sewer

- Backwater Surcharge
- Throttle Surcharge
- Modeled Sewer Overflow

- Deficiency Area
- Ultimate Service Area Boundary

Project #: 0011183.00
Map Created: December 2020

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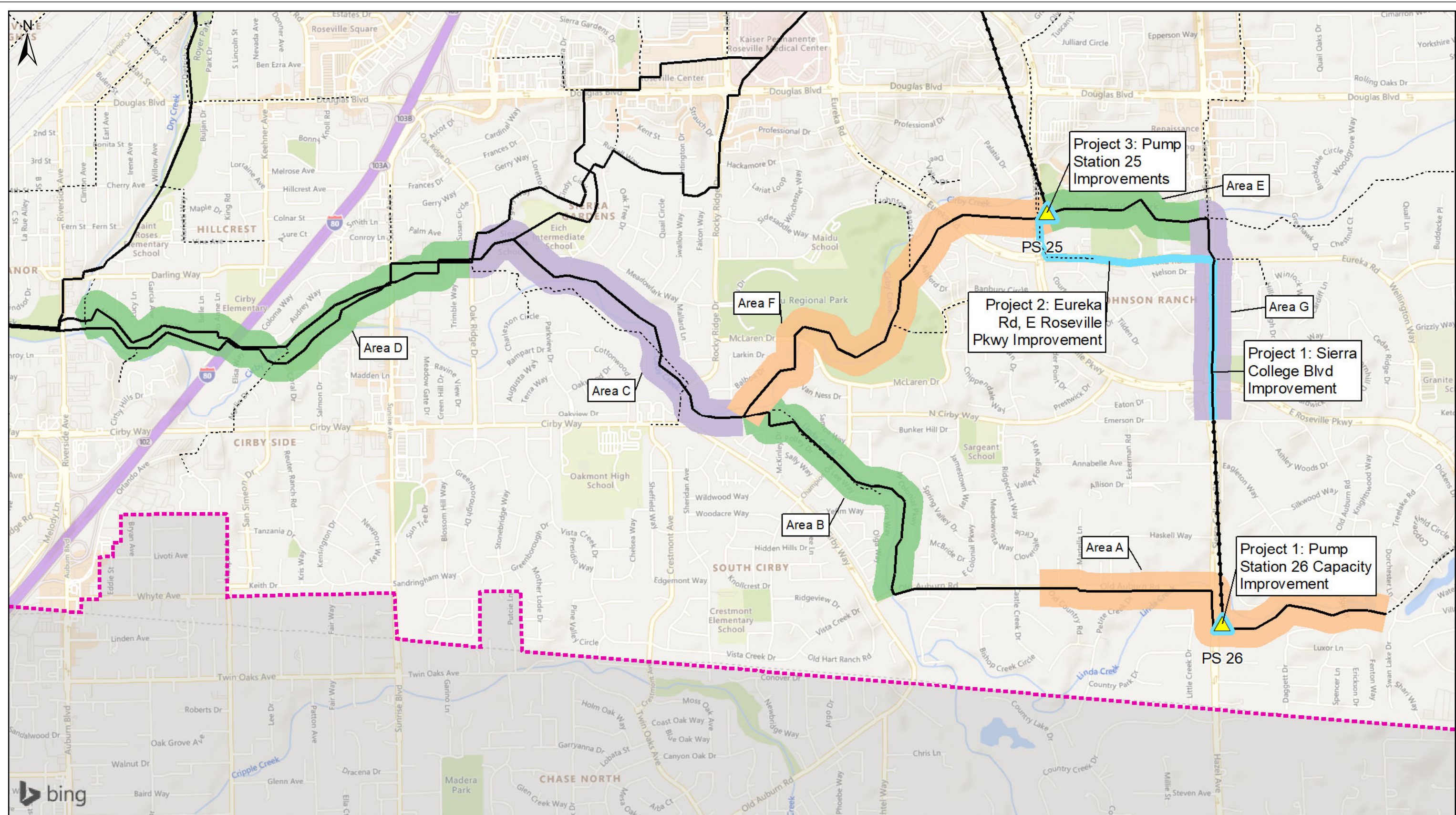
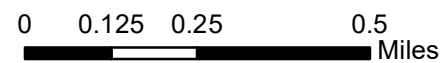


Figure ES-6
Proposed Improvement Locations

South Placer Wastewater Authority
2020 Systems Evaluation



- Regional Gravity Sewer
- Force Main
- Non-Regional Modeled Sewer
- Pump Station
- Preliminary Capacity Improvement Area
- Deficiency Area
- Service Area Boundary

Project #: 001183.00

Map Created: December 2020

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Wastewater Treatment Plant Expansion Evaluation

Based on the updated growth projections provided by the SPWA partners, wastewater flow and loading (organic loading as measured by Biochemical Oxygen Demand, or BOD, and solids loading as measured by Total Suspended Solids, or TSS) projections were developed for the Dry Creek Wastewater Treatment Plant (DCWWTP) and Pleasant Grove Wastewater Treatment Plant (PGWWTP). The flow and loading projections were compared to the most recent evaluations of treatment plant capacity from 2009 for DCWWTP and from 2016 for PGWWTP. Projected shortfalls in hydraulic capacity or biological treatment capacity were identified and preliminary recommendations for expansion and upgrade projects were proposed. The recommendations address phasing, timing, and preliminary conceptual costs of the expansions required through buildout to address both flows and loads, as well as identifying next steps for confirming current plant capacity and refining expansion and upgrade projects.

Wastewater Flow and Loading Evaluation

Current influent flows and loadings for both plants were established by analyzing daily plant influent data provided by the City of Roseville for the period from January 1, 2016 through September 19, 2019 for influent flow and from January 1, 2013 through September 19, 2019 for wastewater loadings. Notably, the waste loadings for biochemical oxygen demand (BOD) over the past 6 years have been significantly higher than documented for prior studies and design projects. In previous studies, average BOD concentrations of 248 mg/L at DCWWTP and 285 mg/L at PGWWTP were documented. The 2013-2019 data set shows an average influent BOD concentration of 425 mg/L at DCWWTP and 358 mg/L at PGWWTP. These higher concentrations may be a result of water conservation efforts over the past decade combined with the drought conditions that were experienced throughout California from 2011-2016, but should be confirmed through additional testing. While TSS and nutrient loadings were also calculated, now that the Roseville WWTPs are addressing nutrient removal in their water quality strategies, the focus herein is on organic loading, as measured by BOD, because that is where the capacity constraints present themselves.

Projected flows were calculated based on population and non-residential growth, normalized to account for diversity in land uses by establishing equivalent dwelling units (EDUs). EDU projection data were provided by each of the SPWA partners. Flow projections were developed by multiplying the projected EDUs by an ADWF contribution of 190 gallons per day (gpd) per EDU, in accordance with the estimate developed in the 2009 Systems Evaluation (a conservative value used for regional treatment capacity planning).

The plant data show that current BOD loadings are higher than the BOD treatment capacities estimated in the prior reference documents for both plants. However, according to City staff, the plants have consistently been in compliance with their NPDES discharge permits. This suggests that the **actual** plant capacities are beyond their **nominal** design capacity with respect to BOD. Additionally, it is unclear to what extent interim improvements such as the Nitrate Reduction Improvements project at DCWWTP have affected the plant capacity. For the purposes of this Systems Evaluation, it is assumed that the annual average BOD removal capacity at each plant is, at minimum, the same as the current BOD loadings. It is recommended that process-specific sampling, process modeling, and, if needed, stress testing be performed to determine the actual plant capacity, the limiting processes, and corresponding process improvements needed at each plant. While this evaluation will be immediately helpful at Pleasant Grove, it is immediately essential at Dry Creek because of the large discrepancy between current loading and nominal capacity.

The current and projected flows and loadings to the treatment plants are summarized in **Table ES-5** along with the treatment capacities based on current operating conditions. This comparison of current plant capacity and projected future flows and loads accounts for only hydraulic and carbonaceous BOD treatment capacity because these parameters have driven capacity expansion timing in the past (vs. TSS and nutrient treatment capacity). Potential nutrient removal requirements have not been considered in expansion timing and phasing. Evaluation of plant capacity with respect to TSS and nutrient removal should be incorporated into the subsequent analysis of plant capacity.

Table ES-5: Current and Projected Flows and Organic (BOD) Loadings

Parameter	Condition	Unit	Capacity			
				Current	FY59/60	Buildout
Dry Creek Wastewater Treatment Plant						
EDU		#		57,747	87,772	96,000
Flow	Average Dry Weather Flow	mgd	18	8.6	16.7	18.2
BOD	Annual Average Loading	lbs/day	33,900 ¹	33,900	52,000	56,000
Pleasant Grove Wastewater Treatment Plant						
EDU		#		54,907	92,864	145,000
Flow	Average Dry Weather Flow	mgd	12 ²	7.6	17.6	27.6
BOD	Annual Average Loading	lbs/day	22,400 ¹	22,400	38,000	60,000

Notes:

1. Current BOD loadings based on plant data from January 2013 through September 2019.
2. Plant improvements that expand treatment capacity at PGWWTP are currently under construction and are expected to be in service by FY 22-23.

Recommended Expansion Phasing

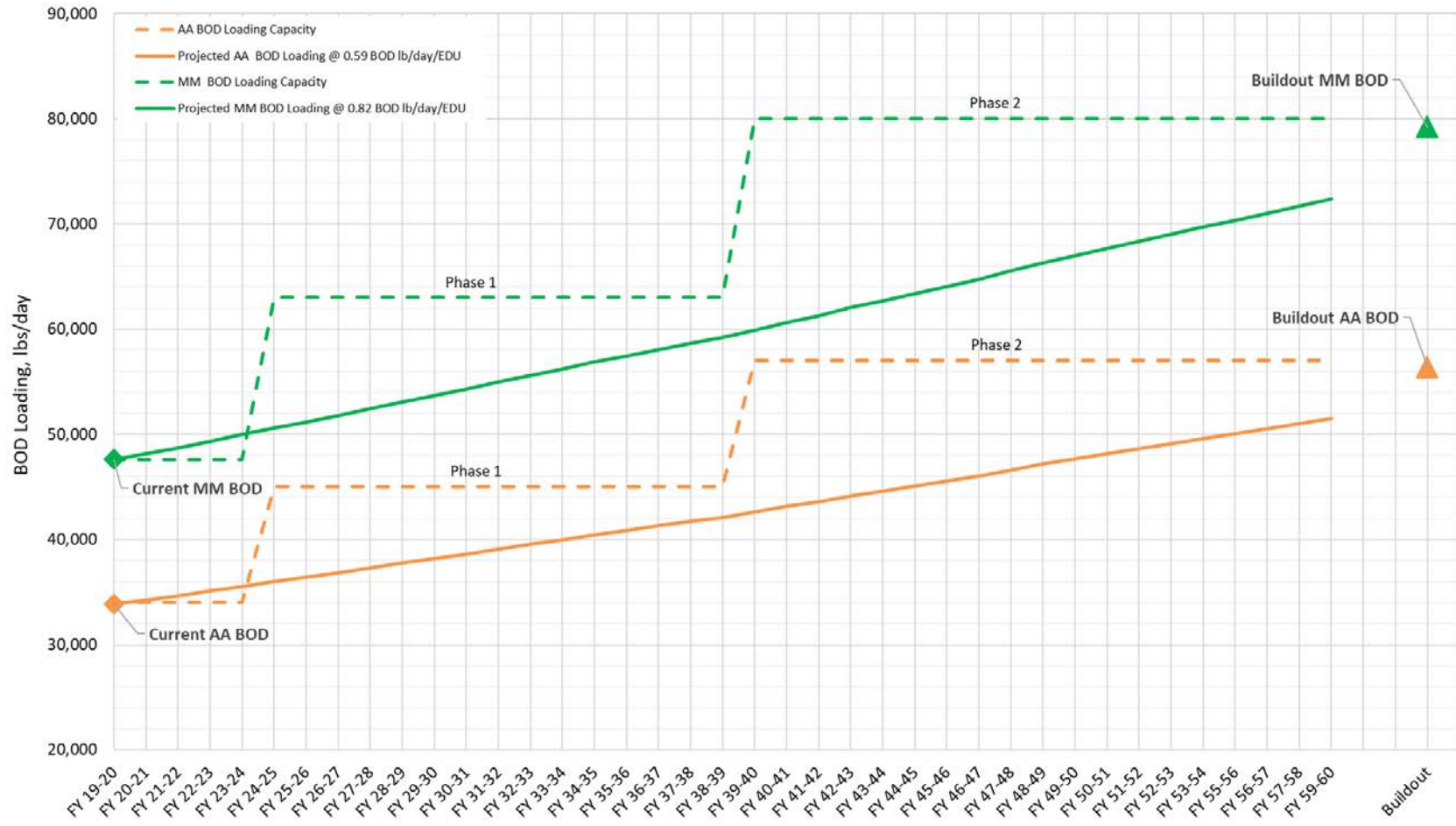
Prior to implementing any further improvements, it is recommended that process-specific sampling, process modeling, and if needed, stress testing be performed to determine the actual plant capacity, the limiting process, and corresponding process improvements needed at each plant.

Dry Creek Wastewater Treatment Plant. Based on the projected ADWF of 16.7 for FY 59/60 and 18.2 mgd for buildout, the current ADWF hydraulic capacity of 18 mgd is effectively sufficient through buildout. As shown in **Table ES-5**, DCWWTP appears to be currently running at or beyond its nominal design capacity with respect to BOD loading. **Figure ES-7** shows annual average (AA) and maximum monthly (MM) biological treatment capacities plotted against the loadings projected over the planning period and the anticipated expansion phasing. Depending on the results of the capacity testing, a Phase 1 expansion project may be necessary in approximately FY 24/25, which is the earliest practical time frame considering planning, design, and construction duration. The plant will reach 94% of the expanded Phase 1 AA and MM BOD loading capacity in FY 39/40. Therefore, it is recommended to implement Phase 2 biological improvements at this time. Phase 2 improvements in FY 39/40 are recommended to bring the plant BOD loading capacity to its buildout AA and MM projections of 56,000 and 79,000 lbs/day, respectively. The timing and magnitude of the recommended projects should be refined after additional capacity analysis and facility planning is completed, as described in the 3rd paragraph in the Wastewater Flow and Loading Evaluation section above.

Pleasant Grove Wastewater Treatment Plant. The improvements currently under construction will expand PGWWTP's treatment capacity to 12 mgd by FY 22-23. Based on the ADWF projections, this capacity expansion should be sufficient to handle flows through FY 28-29, though timing would depend on whether any rebound in sewer flows occurs. Based on current estimates of capacity, Phase 1 hydraulic expansion at PGWWTP may be needed by approximately FY 28-29 to expand the plant ADWF to 15 mgd. Phase 1 expansion would carry the PGWWTP through FY 40-41. At that point, Phase 2 improvements may be needed to increase the plant ADWF capacity to the FY 59/60 flow projections of 17.6 mgd. **Figure ES-8** shows ADWF plotted against the flow projected over the planning period and the anticipated phasing for improvements.

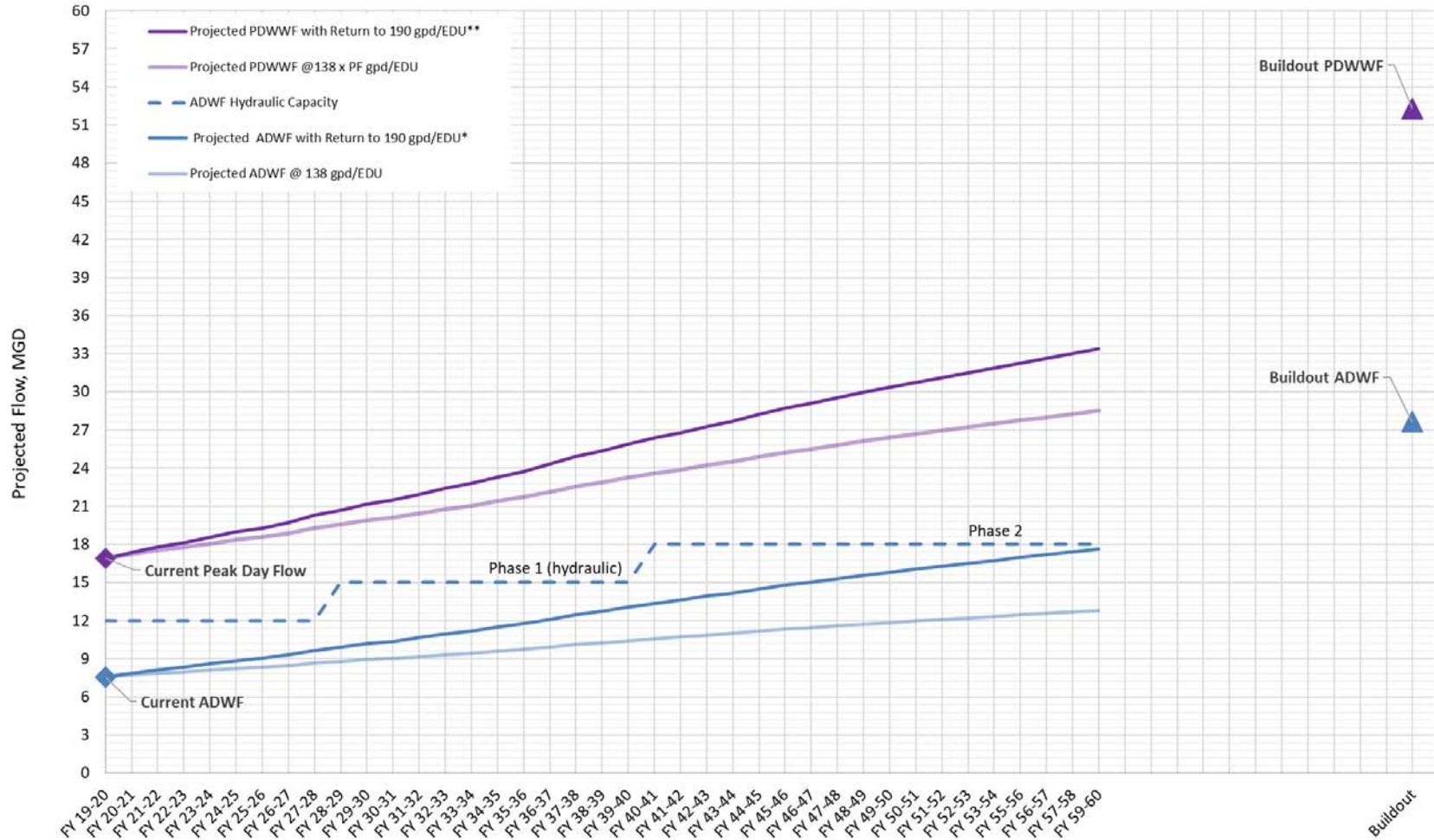
As shown in **Table ES-5**, PGWWTP is currently running at or beyond its nominal design capacity with respect to BOD loading. **Figure ES-9** shows AA and MM biological treatment capacities plotted against the loadings projected over the planning period and the anticipated expansion phasing. The improvements currently under construction will expand the plant's AA and MM BOD loading capacities to 34,500 lbs/day and 40,100 lbs/day, respectively. These improvements should be sufficient to meet projected BOD loadings through FY 40/41 when Phase 2 hydraulic capacity improvements are recommended at PGWWTP. During Phase 2 expansion, it is recommended that plant capacity be increased to accommodate projected FY59/60 AA and MM BOD loadings of 38,000 lbs/day and 48,000 lbs/day, respectively. The timing and magnitude of the recommended projects should be refined after additional capacity analysis and facility planning is completed, as described in the Wastewater Flow and Loading Evaluation section above.

Figure ES-7: DCWWTP Biological Capacity Comparison



* Buildout date is currently unknown and is shown for graphical purposes only.

Figure ES-8: PGWWTP Hydraulic Capacity Comparison

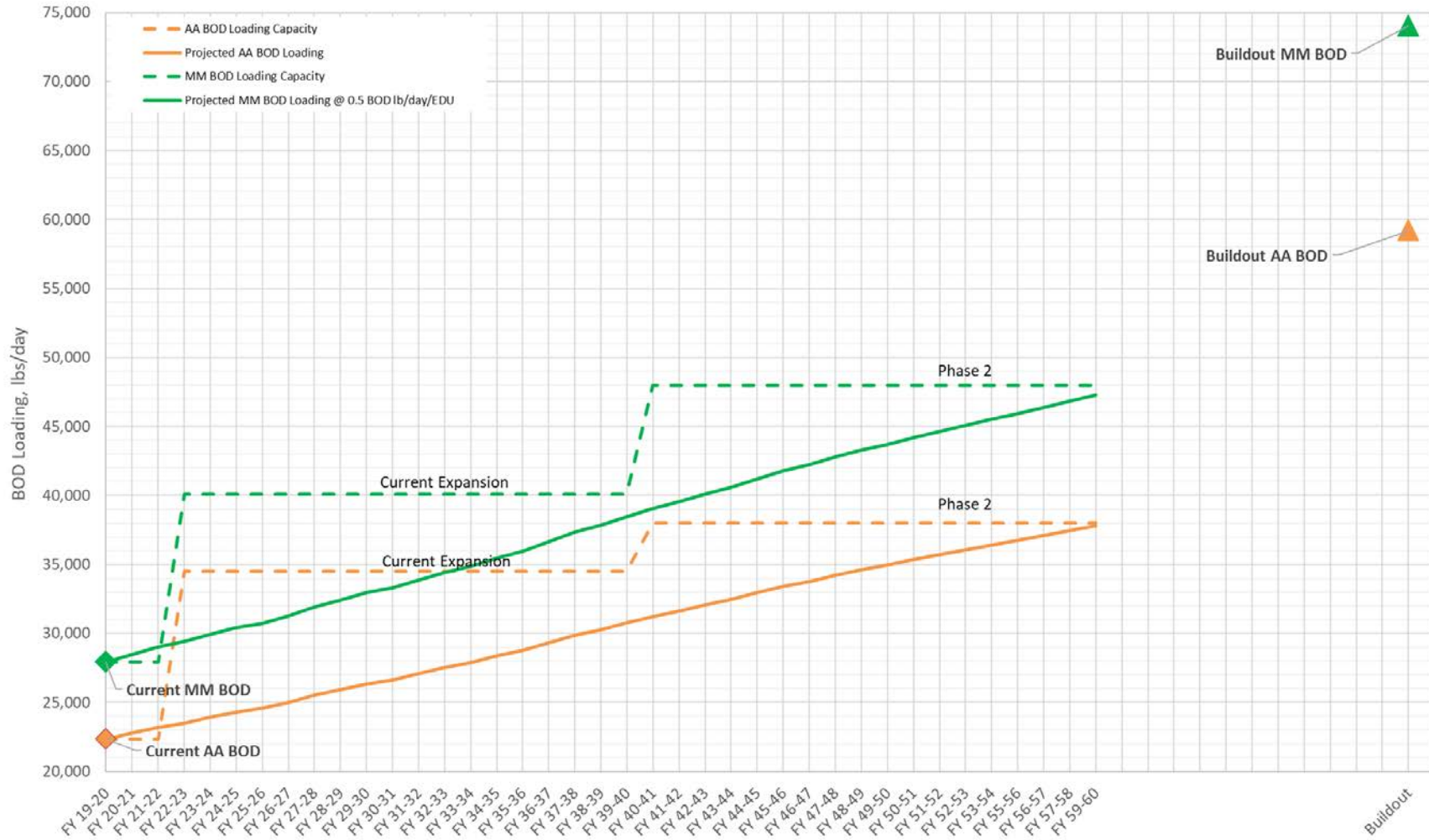


* ADWF GPD/EDU factor is assumed to reach 190 gpd/EDU by FY 59/60, with a linear increase from 138 gpd/EDU at FY 19/20

**PDWWF is assumed to be ADWF flow plus 170 gpd/EDU of wet weather flow, based on current wet weather flowrates

*** Buildout date is currently unknown and is shown for graphical purposes only.

Figure ES-9: PGWWTP Biological Capacity Comparison



* Buildout date is currently unknown and is shown for graphical purposes only.

Conceptual Level Capital Cost Estimates

Preliminary opinions of probable cost at the conceptual level were developed for the recommended expansion phases. Estimates were developed by extrapolating from process unit cost estimates found in prior plant studies and applying appropriate escalation factors, allowances, and contingencies. Improvements that may be required after the FY 59/60 planning horizon have not been estimated.

Dry Creek Wastewater Treatment Plant. The preliminary phased improvements on a process basis are provided in **Table ES-6**. The listed improvements in Phase 1 (FY 24/25) will increase the AA BOD treatment capacity from 34,000 to 45,000 lbs/day (an equivalent increase in plant ADWF capacity from 11.5 mgd to 14.5 mgd). In Phase 2 (FY 39/40), the improvements will increase the AA BOD treatment capacity from 45,000 to 57,000 lbs/day (an equivalent increase in plant ADWF capacity from 14.5 mgd to 18 mgd). It should be emphasized that the cost estimates provided below are conceptual level costs for capacity expansion projects and do not include rehabilitation and replacement projects or discretionary projects. More detailed cost estimating should be developed when the plant capacity is determined and phased improvement projects are updated accordingly.

Pleasant Grove Wastewater Treatment Plant. The preliminary phased improvements on a process basis are provided in **Table ES-7**. The recommended phased improvements in Phase 1 (FY 28-29) increase the plant ADWF capacity from 12 mgd to 15 mgd. Phase 2 improvements will increase the ADWF capacity from 15 mgd to 18 mgd and the AA BOD treatment capacity from 35,000 to 38,000 lbs per day. It should be emphasized that the cost estimates provided below are conceptual level costs for capacity expansion projects and do not include rehabilitation and replacement projects or discretionary projects. More detailed cost estimating should be developed when the plant capacity is determined, and phased improvement projects are updated accordingly.

Table ES-6: DCWWTP Phase 1 and Phase 2 Capital Cost Estimates (ENR CCI: 12115)^a

Process	Process Unit Cost	Phase 1	Phase 2
		FY 24/25	FY 39/40
		# of units	# of units
Coarse Screens	\$280,000	-	1
Influent Pump Station	\$2,000,000	-	1
Fine Screens	\$170,000	2	1
Odor Control	\$210,000	1	1
Grit Basins	\$290,000	-	1
Primary Sedimentation	\$3,400,000	-	2
Aeration Basins	\$2,600,000	4	6
Blowers	\$290,000	1	-
Mixed Liquor Return Pumps	\$150,000	4	6
Rehab Existing Anoxic Zones	\$290,000	1	
Secondary Clarifiers	\$4,100,000	4	2
RAS/WAS Pump Station	\$860,000	1	1
Tertiary Filtration	\$730,000		2
Waste Backwash Pumps	\$100,000		1
UV Disinfection	\$2,100,000		1
Anaerobic Digesters	\$3,300,000	1	1
Centrifuges	\$650,000	2	
Cooling Units	\$290,000		2
Total Unit Process Costs		\$34,000,000	\$43,000,000
Site Yard Piping & Mechanical (5%)		\$1,700,000	\$2,200,000
Site Electrical / I&C/SCADA (15%)		\$5,100,000	\$6,500,000
Site Civil (5%)		\$1,700,000	\$2,200,000
Subtotal of Direct Construction Costs		\$43,000,000	\$54,000,000
Mobilization/Demobilization (5%)		\$2,200,000	\$2,700,000
Contractor Overhead & Profit (20%)		\$8,600,000	\$10,800,000
Subtotal of Direct and Indirect Costs		\$54,000,000	\$68,000,000
Contingency (30%)		\$16,000,000	\$20,000,000
Total Estimated Construction Cost		\$70,000,000	\$88,000,000
Engineering, Permitting, CM, ESDC (25%)		\$18,000,000	\$22,000,000
Total Estimated Capital Cost		\$88,000,000	\$110,000,000

Notes:

- a. Costs based on Average of SF and "20 Cities" ENR for April 2020: 12115

Table ES-7: PGWWTP Phase 1 and Phase 2 Capital Cost Estimates (ENR CCI: 12115)^a

Process	Process Unit Cost	Phase 1	Phase 2
		FY 24/25	FY 39/40
		# of units	# of units
Influent Pumps	\$120,000	1	-
Grit Basins	\$290,000	1	-
Fine Screens	\$170,000	2	-
Primary Sedimentation	\$3,400,000	-	1
Oxidation Ditches	\$7,100,000	-	1
Secondary Clarifiers	\$4,100,000	1	1
RAS/WAS Pump Station	\$860,000	1	-
Tertiary Filtration	\$730,000	2	1
UV Disinfection	\$2,100,000	3	-
Thickeners Building Modification	\$490,000	-	1
Digesters Building Modification	\$490,000	-	1
Total		\$13,000,000	\$16,000,000
Site Yard Piping & Mechanical (5%)		\$650,000	\$800,000
Site Electrical / I&C/SCADA (15%)		\$2,000,000	\$2,400,000
Site Civil (5%)		\$650,000	\$800,000
Subtotal of Direct Costs		\$16,000,000	\$20,000,000
Mobilization/Demobilization (5%)		\$800,000	\$1,000,000
Contractor Overhead & Profit (20%)		\$3,200,000	\$4,000,000
Subtotal of Direct and Indirect Costs		\$20,000,000	\$25,000,000
Contingency (30%)		\$6,000,000	\$7,500,000
Total Estimated Construction Cost		\$26,000,000	\$33,000,000
Engineering, Permitting, CM, ESDC (25%)		\$6,500,000	\$8,300,000
Total Estimated Capital Cost		\$33,000,000	\$41,000,000

Notes:

- a. Costs based on Average of SF and "20 Cities" ENR for April 2020: 12115

Capacity Improvement Project Summary

Table ES-8 summarizes the capacity improvements identified in this systems evaluation. Note that the improvement needs projected for Dry Creek and Pleasant Grove WWTPs are significantly larger and more expensive than the improvement projects projected for the collection system, but are based on limited available data. The estimated costs for Dry Creek WWTP are especially high because of the size and age of that plant; when it was designed, the organic loading in Roseville was far lower than when Pleasant Grove was designed; since the mid 2000's organic loading to both plants has continued to increase. Further studies, as described in the Wastewater Flow and Loadings Section should be undertaken for both treatment plants, and the capacity improvement projects should be refined based on those findings.

Table ES-8: Proposed Capacity Improvement Projects

		Existing	FY 24/25 or FY 28/29	FY 39/40	After FY 59/60
Collection System	Description	Improvement Project 1 (Increased Capacity of PS 26 and sewers on Sierra College Blvd)	None	None	Improvement Project 2 (Redirect flows from PS 26 and Sierra College Blvd down Eureka Road) Improvement Project 3 (Increased Firm capacity of PS 25 with diversion structure improvements)
	Estimated Capital Cost	\$1,610,000	-	-	\$2,590,000
Dry Creek WWTP	Description	Plant Capacity, Condition Assessment, and Facilities Plan	Phase 1 (Increase AA BOD Capacity to ~45,000 lbs/day)	Phase 2 (Increase AA BOD Capacity to ~57,000 lbs/day)	Phase 3: Increase BOD Capacity and Hydraulic Capacity (not estimated)
	Estimated Capital Cost	\$550,000	\$88,000,000	\$110,000,000	Not Estimated
Pleasant Grove WWTP	Description	Plant Capacity, Condition Assessment, and Facilities Plan	Increase ADWF hydraulic capacity to 15 mgd	Increase ADWF hydraulic capacity to 18 mgd. Increase AA BOD Loading Capacity to 38,000 lbs/day	Phase 3: Increase BOD Capacity and Hydraulic Capacity (not estimated)
	Estimated Capital Cost	\$450,000	\$33,000,000	\$41,000,000	Not Estimated

Next Steps

Based on the findings of this preliminary evaluation, and discussions with the project team the following next steps are recommended for consideration by SPWA:

- Conduct an analysis of process performance and current biological treatment and hydraulic capacity at both DCWWTP and PGWWTP. This will likely require process-specific sampling and development of calibrated process models. Biological treatment capacity should consider both BOD and nitrate plus nitrite permit limitations set forth within each plant's respective NPDES permit. Results of this study should determine a capacity rating for each unit process at the plant and the limiting processes. This analysis will provide a sound basis for the planning of new facilities and is integral to determining required future capital improvement projects during phased expansions. It is recommended that DCWWTP capacity analysis take precedence over PGWWTP considering DCWWTP appears to be currently operating beyond its nominal BOD removal capacity.
- Review previous condition assessment work conducted on the plant assets and perform additional assessment needed to identify and prioritize repair and replacement (R&R) projects. This effort would include a risk assessment to identify likelihood of failure and criticality of each asset. Results of this study would identify R&R projects which may need to be implemented prior to or concurrent with phased expansions.
- Based on the capacity analysis and R&R project planning, develop Facilities Plans for DCWWTP and PGWWTP. Considering both plants could be running at or above their nominal design capacities, it is recommended that facilities planning begin immediately after the capacity analysis. This effort would evaluate various process optimization steps and upgrade alternatives and provide recommended improvements for phased expansions. The Facilities Plans would include review of the 190 gpd/EDU flow factor that is critical to the timing and magnitude of any hydraulic capacity improvements.
- Develop Class 4 cost estimates for recommended improvements at the WWTPs under each expansion phase and for R&R projects to assist SPWA partners in assessing capital needs in the future.
- For the collection system, periodically update the model network based on any configuration changes, perform re-calibration to confirm the actual and anticipated flows, and to update future loads into the model network. An update frequency of every 5-10 years is recommended, depending on changes in development planning and/or system configuration.

We also recommend that SPWA evaluate funding and financing options to support implementation of the recommended capital improvements, especially Phase 1 at Dry Creek given its size and relative immediacy. With the implementation of the steps above, and the ongoing high level performance of the SPWA Regional System, SPWA will be able to continue its excellent level of service to the Regional Partners.

1. INTRODUCTION

The South Placer Wastewater Authority (SPWA) was created under a Joint Powers Agreement in October 2000 and comprises the City of Roseville (City), South Placer Municipal Utility District (SPMUD), and the County of Placer (Placer County). Flow from SPMUD and portions of Placer County discharge into the City's sewer collection system. The City of Roseville, on behalf of the regional partners, owns and operates two regional wastewater treatment facilities: the Pleasant Grove Wastewater Treatment Plant (PGWWTP), and the older Dry Creek Wastewater Treatment Plant (DCWWTP). Additionally, the City of Roseville owns and operates the network of gravity sewers, pump stations, and force mains that serve customers within the City's limits, including the joint (regional) facilities that convey flow from the SPWA partners. SPMUD owns and operates gravity sewers, pump stations, and force mains in Rocklin, Loomis, and portions of southern Placer County. Placer County owns and operates gravity sewers, pump stations, and force mains in unincorporated areas of Placer County that are not served by other agencies.

Figure 1-1 shows the service area boundaries of the SPWA partner agencies and the overall SPWA service area. Figure 1-1 also indicates the location of several Urban Growth Areas (UGAs), both inside and outside the City, which have significant development plans under varying stages of progress.

The South Placer Regional Wastewater and Recycled Water Systems Evaluation prepared in 2009 (2009 Systems Evaluation), defined the SPWA service area boundary; evaluated the wastewater collection, wastewater treatment, and recycled water distribution systems; and identified existing and potential future improvement needs. Since that study was completed, the recycled water distribution system has been removed from the SPWA system (reallocated as an asset) and is now wholly managed by the City of Roseville. SPWA is now updating the Systems Evaluation to better evaluate future wastewater collection and treatment capacity needs that may have changed since 2009. This report documents the evaluation of the regional wastewater collection system capacity and the capacity of the wastewater treatment plants versus projected flows and loads.

1.1 Objectives of the Systems Evaluation

The specific need for this Systems Evaluation was precipitated by several factors, including:

- Recent annexations of land by SPWA partner agencies;
- Changes in water consumption rates and associated dry weather flow rates;
- Planned development and redevelopment within the 2005 SPWA service area;
- Revisions in the planning for proposed Urban Growth Areas (UGAs) in the vicinity of the 2005 SPWA service area;
- Wastewater characteristics (i.e., flow and strength) that have changed since the 2009 Systems Evaluation.

This South Placer Regional Wastewater Systems Evaluation (Systems Evaluation) has been conducted to accomplish the following:

- Document the existing (2020) capacity and the flows and loadings on regional trunk sewer and wastewater treatment infrastructure and facilities present in 2020;
- Project buildout conditions based upon regional planning documents and planned regional developments in southwestern Placer County; and,
- Present a Regional Systems evaluation, with system deficiencies identified, and capital projects forecasted, which will inform the SPWA partners in identifying their ability to provide service for planned and proposed development, both presently and for buildout conditions.

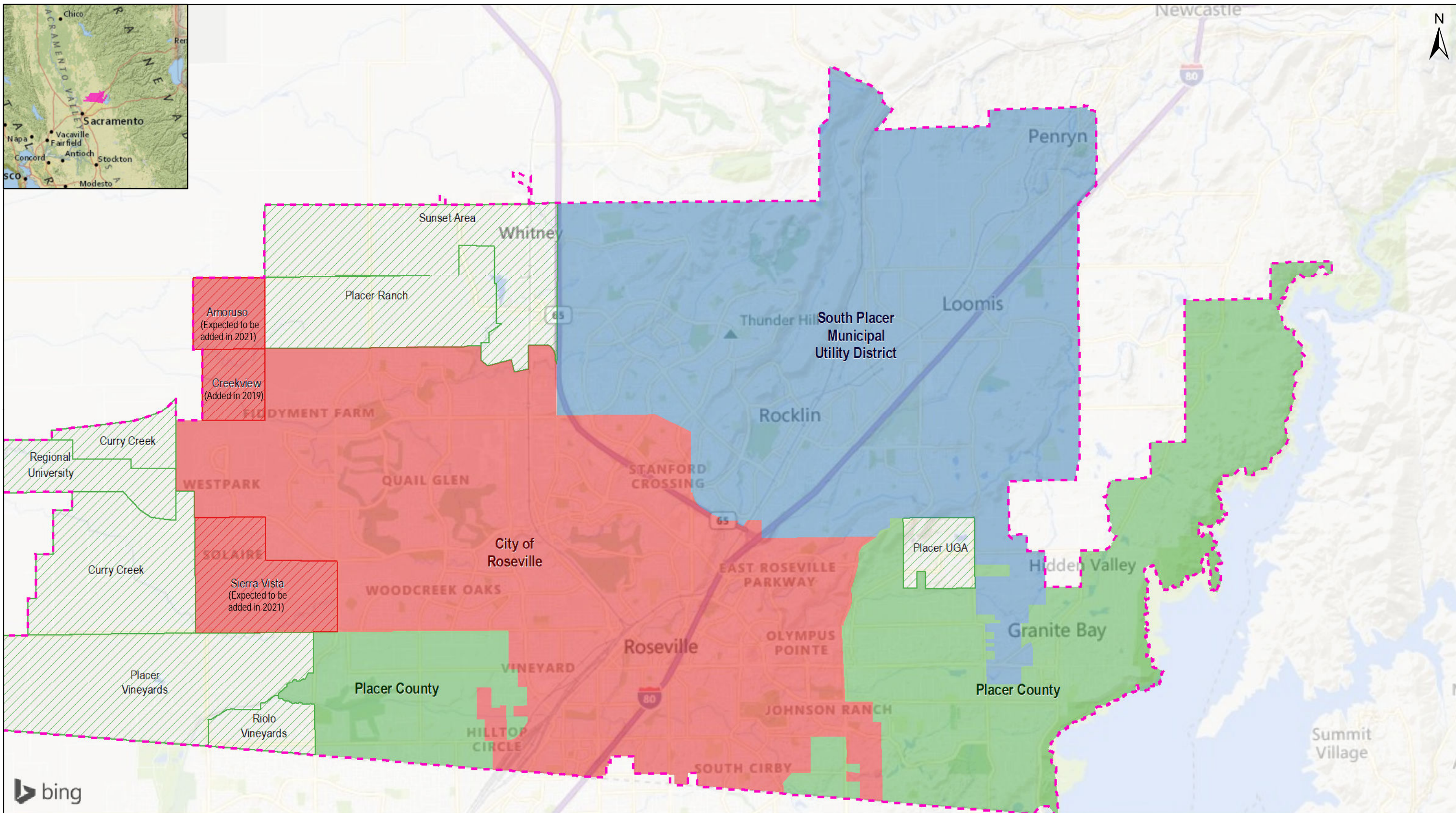


Figure 1-1
2021 Service Area Boundary

South Placer Wastewater Authority
2020 Systems Evaluation

0 1/2 1 2 Miles

2021 Partner Agency Service Area

- City of Roseville
- Placer County
- SPMUD

Urban Growth Area

- City of Roseville UGA
- Placer County UGA

Ultimate Service Area Boundary

-

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Figure Exported: 12/21/2020 By: cvanlinden Using: \\woodardcurran.net\shared\Projects\RM\WCR\0091 Roseville_City_of\0011183.00 SPWA Systems Evaluation\G_GIS\3 MXDs\Report Figures\1-1 SPWA Service Area.mxd

1.2 Project Scope

The scope of the Systems Evaluation, as well as a brief discussion of work conducted under each task, is described below.

- **Task 1 – Project Management.**

Periodic progress meetings were held with City staff to review project status and discuss project issues, and monthly status reports were prepared to document the work completed.

- **Task 2 – Data Collection and Review.**

This task involved assembling, organizing, and reviewing information and data related to the sewer system, including previous reports; maps and drawings of sewer system facilities and recent sewer improvement projects; water use and customer account data; the City's General Plan and other relevant planning information; and sewer design standards and specifications. This task also included meetings with City Planning staff, Placer County and SPMUD to confirm growth and future land use assumptions within the City of Roseville as well as from the SPWA partners outside the City.

- **Task 3 – Flow Monitoring.**

A plan for flow and rainfall monitoring in the collection system during the 2015/16 wet weather season was developed. The program included 30 temporary flow meters (including 5 meters authorized by Task 5) and two rain gauges installed for a period of approximately two months (mid-January through mid-March). Gauge adjusted radar rainfall (GARR) data was also obtained for the rainfall periods. The monitoring was conducted by Woodard & Curran's subconsultant, V&A Consulting Engineers, and the GARR data was provided by OneRain, Inc.

- **Task 4 – Model Update and Calibration.**

A hydraulic model of the City's trunk sewer system was developed using InfoWorks™ ICM software. The model network was developed using as-builts, the City's GIS data, and information from the 2005 Model Development Project. Flow loads to the model were compiled using water use and land use data and flow factors representing unit base wastewater flow (BWF) rates, diurnal BWF patterns, and infiltration/inflow (I/I). The model was calibrated for dry and wet weather conditions using the flow monitoring data collected under Task 2.

- **Task 5 – Update Flow Projections.**

Based on data collected under Task 2 and discussions with SPWA and partner agencies' staff, existing and projected flows were developed. As part of this task, the best available planning information was collected and documented, including plans for Urban Growth Areas and parcel based data within the agencies' current service areas. A database of parcel-based projections within the SPMUD and Placer County Service areas was also prepared in this task. This information was used to estimate future flows and potential capacity needs.

- **Task 6 – Trunk Sewer Evaluation**

In this task, the existing trunk sewers were evaluated against hydraulic performance criteria under the design storm conditions identified for the 2009 System Evaluation. Using the calibrated model and the selected design storm, existing and future model runs were performed to identify capacity deficiencies in the trunk sewer system. For those deficiencies, capacity improvement projects were developed.

- **Task 7 – Wastewater Treatment Plant Expansion Evaluations**

Based on the flow projections developed in Task 5 and buildout timeline information provided by City of Roseville, Placer County, and SPMUD, design flows and biological loading for both the Dry Creek and Pleasant Grove Wastewater Treatment Plants were developed. Based on these design flows and work completed by the City of Roseville, phased WWTP capacity expansions were identified considering current and future changes in regulatory requirements, and preliminary cost estimates were developed.

- **Task 8 – Prepare Systems Evaluation**

This report was prepared to summarize and present the results and recommendations of the study.

1.3 Report Organization

This report includes five chapters, which are described below

- **Chapter 1, Introduction**, presents the background, objectives, and scope of the System Evaluation.
- **Chapter 2, Modeled Flow Projections**, discusses the service area land use projections, the basis for developing estimates for each component of wastewater flows, and the base wastewater flow projections for the service area.
- **Chapter 3, Trunk Sewer Evaluation**, describes the modeled trunk sewer system, development of the model network and model loads, flow monitoring program, and model calibration. This chapter also identifies the results of the capacity analysis, including preliminary solutions for the identified capacity deficiencies.
- **Chapter 4, Wastewater Treatment System Evaluation**, summarizes the wastewater treatment upgrade and expansion analyses performed for the Systems Evaluation, including the development of flow and loading peaking factors, facility expansion recommendations to handle projected flows and loadings at buildout, and a timeline for phasing the construction of the improvements.
- **Chapter 5, Capacity Improvement Summary**, summarizes the recommended capacity improvements, including project costs, phasing, and implementation recommendations.

2. BASIS OF FLOW PROJECTIONS

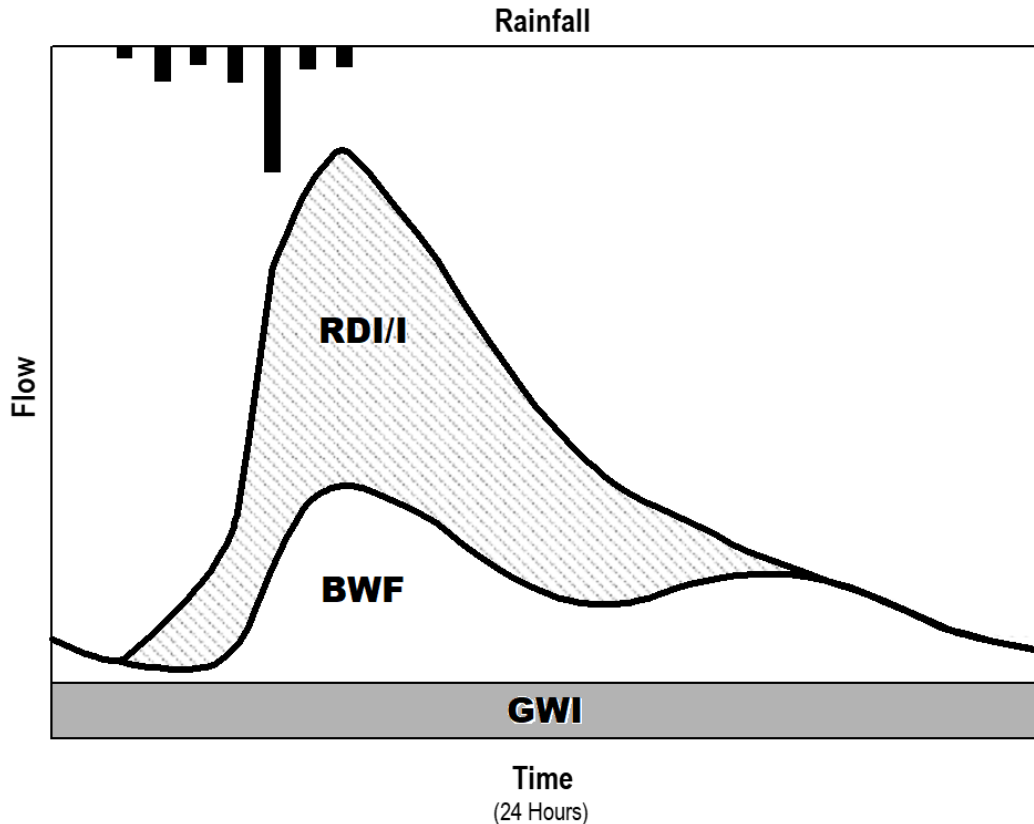
2.1 Introduction

The flow projections developed for this Systems Evaluation were based on the information collected for the system's hydraulic model updates, including the updates performed for the current study. In 2007, a hydraulic model of the City's sewer collection system was developed using the H2OMap Sewer modeling platform (2007 Model Development Project), in parallel with a trunk sewer model for the combined Roseville, SPMUD, and Placer County systems. The models were later updated as part of the 2009 Systems Evaluation. Subsequently, the City's sewer model was updated in 2017 to reflect existing and future demands within the City, and to upgrade the modeling platform to the fully dynamic InfoWorks ICM software. For the current Systems Evaluation Update, the City's model was updated to reflect existing and future projected flows from Placer County and SPMUD.

This section describes the flow components used in the hydraulic model and the existing and projected future land uses for the service area, which form the basis for generating base wastewater flows, in the current hydraulic model. Note that flow projections (referred herein as loads) are intended to represent the level of development present during the flow monitoring periods used to calibrate the hydraulic model. Design flow estimates were developed based on criteria developed for each component of wastewater flows: base wastewater flow (BWF), groundwater infiltration (GWI), and rainfall-dependent infiltration and inflow (RDI/I), and confirmed through model calibration, as described in Chapter 3. Average dry weather flow (ADWF) projections for each treatment plant area discussed in the Wastewater Treatment Plant Expansion Evaluations TM.

The three components of wastewater flows are illustrated conceptually in **Figure 2-1**. BWF represents the sanitary and process flow contributions from residential, commercial, institutional, and industrial users of the system. GWI is groundwater that infiltrates into defects in sewer pipes and manholes, particularly in winter and springtime in low-lying areas. GWI is typically seasonal in nature and remains relatively constant during specific periods of the year. ADWF represents the average flows at each WWTP from July to September. The source of these flows is a combination of BWF and GWI. RDI/I is storm water inflow and infiltration that enter the system in direct response to rainfall events, through direct connections such as holes in manhole covers or illegally connected roof leaders or area drains, or, more commonly, through defects in sewer pipes, manholes, and service laterals. RDI/I typically results in short term peak flows that recede quickly after the rainfall ends.

Figure 2-1: Wastewater Flow Components
(Not to scale)



2.2 Average Dry Weather Flow

ADWF has been estimated for four development scenarios: (1) Existing loads for model calibration; (2) Existing loads for capacity analysis; (3) Buildout; and (4) Buildout Sensitivity, which includes some additional densification and redevelopment assumptions based on feedback from the SPWA partners. As part of this Systems Evaluation, a database of existing and future loads for each parcel in Placer County and SPMUD service areas has been developed and provided to the City. As noted above, ADWF includes two components: GWI and BWF.

In 2007, a hydraulic model of the City's sewer collection system was developed using the H2OMap Sewer modeling platform (2007 Model Development Project), in parallel with a trunk sewer model for the combined Roseville, SPMUD, and Placer County systems. The models were later updated as part of the 2009 Systems Evaluation. Subsequently, the City's sewer model was updated in 2017 to reflect existing and future demands within the City, and to upgrade the modeling platform to the fully dynamic InfoWorks ICM software. For the current Systems Evaluation Update, the City's model was updated to reflect existing and future projected flows from Placer County and SPMUD.

This section describes the flow projections and model development process used to evaluate the SPWA collection system (sewers conveying flows from more than one partner agency), as well as findings from that effort.

2.2.1 Diurnal Base Wastewater Flow Curves

BWF varies throughout the day in a typical way, generally peaking early in the morning in upstream sewers and later and less sharply in larger downstream sewers. Typical hourly peak flows from small residential areas tend to be about twice the average flow (or even higher for very small areas), whereas peak flows further downstream may be less than 1.5 times average flows due to flow attenuation in the collection system. Higher peaks can occur on atypical days of the year (e.g., on major holidays such as Thanksgiving or at halftime on Super Bowl Sunday).

For the current Systems Evaluation Update, typical diurnal profiles were developed for residential and commercial/industrial (non-residential) wastewater flow, for both weekend and weekday conditions. These hydraulic profiles are shown in **Figure 2-2** and **Figure 2-3**. The residential profiles were developed based on monitored flows for smaller, primarily residential meter areas and refined during calibration. Two non-residential profiles were developed to represent flow patterns from two different types of uses: commercial/retail pattern, and an industrial/professional pattern. For parcels inside the City, each non-residential parcel was assigned a non-residential diurnal profile according to the land use code in the parcel database; a summary of the diurnal profile assigned to each land use code is provided in Appendix A. For non-residential parcels in Placer County and SPMUD, the commercial/retail pattern was used.

For UGAs, the residential profile was used for all residential uses, and the retail/commercial diurnal profile was used for all non-residential and mixed use land uses.

Figure 2-2: Residential Diurnal Curves

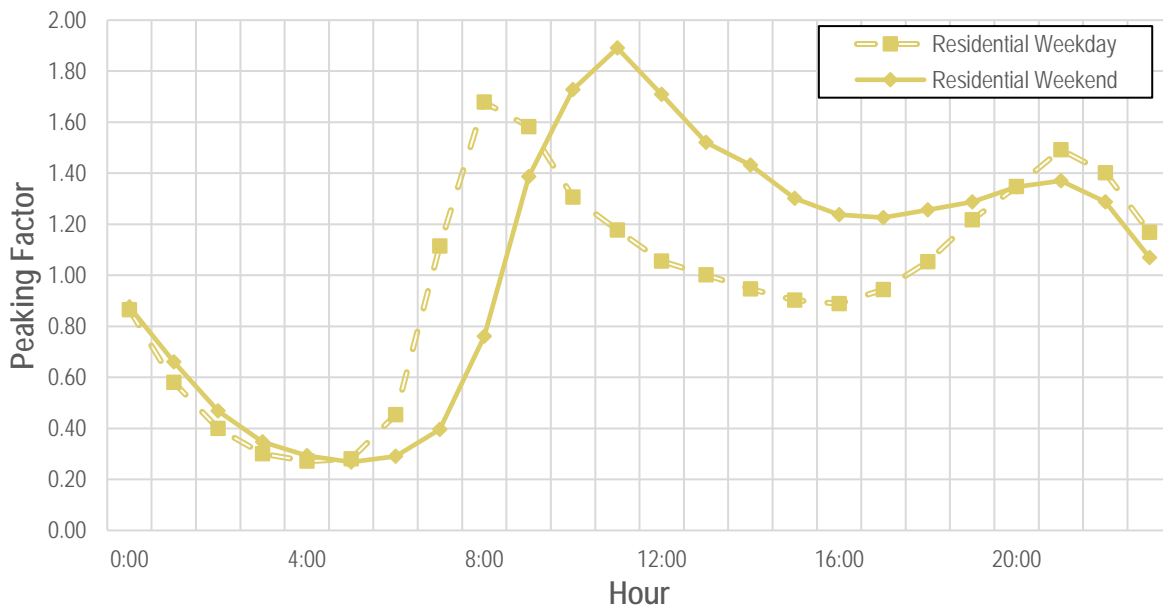
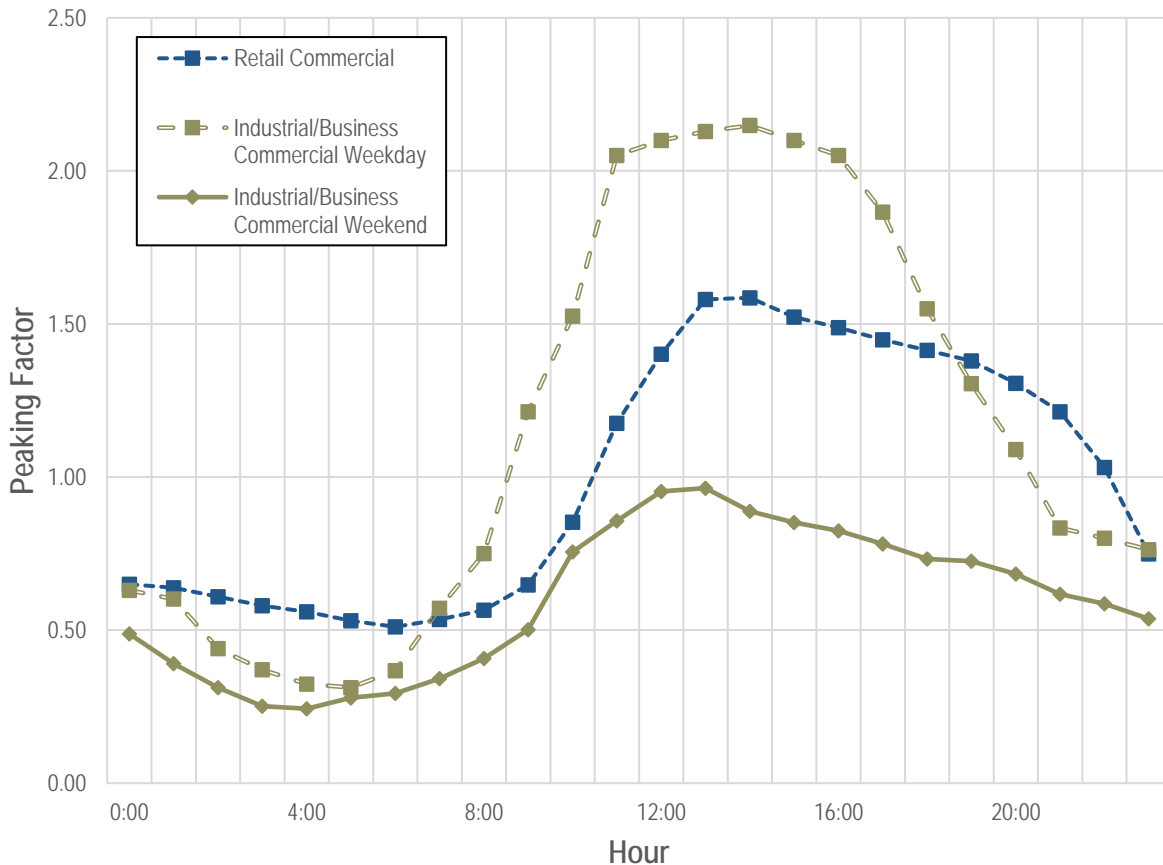


Figure 2-3: Non-Residential Diurnal Curves



2.2.2 Groundwater Infiltration

Groundwater infiltration is generally quantified based on actual flow monitoring data, since it is difficult to predict GWI rates based on physical system data alone. In the context of design flow criteria, GWI represents the incremental groundwater infiltration that occurs during the wet weather season above the “baseline” infiltration level during the driest months of the year.

GWI can be estimated based on minimum flows during non-rainfall periods within a wet weather flow monitoring period. Minimum flows typical occur during the nighttime or early morning hours when base wastewater flows are at a low. Alternatively, GWI can be estimated as the difference between average metered flow during non-rainfall periods and computed average BWF. In either case, the resulting GWI, is expressed on a unit basis (gpd/acre or gpad) by dividing by the sewered acreage of the monitored area. Typical GWI rates may range from 100 to over 1,000 gpad.

GWI flows for existing connected parcels were estimated through the model calibration process (see Chapter 3) by comparing model-simulated BWF to actual flow measurements from the temporary flow monitoring program. Cases where model-predicted BWF was noticeably lower than monitored flow indicated the possible occurrence of GWI.

2.2.3 Existing Base Wastewater Flows

Existing base wastewater flows were developed based on the assumptions summarized below; currently connected parcels are indicated in **Figure 2-4**. Note that loads are intended to represent the level of development present during the flow monitoring periods used to calibrate the hydraulic model.

2.2.3.1 City of Roseville

As noted previously, flows within City limits were estimated as part of the 2017 Sewer Model Update. As part of that study, existing residential and non-residential BWF within the City was determined based on water billing data provided by the City. The City has relatively complete water use records for all parcels within the City; billing data from December 2013 through April 2016 was provided for use in developing BWF estimates for the model. Metered water use during the winter months is assumed to most closely approximate wastewater generation, since outdoor water use is at a minimum. As data for the City of Roseville came from work done in 2016, existing BWF estimates for the City of Roseville represents 2016 land use.

December 2015 through March 2016 data was selected to represent winter water use, as it was generally wetter than prior years and therefore less irrigation was employed. This data also coincides with the flow monitoring period for the 2017 Sewer Model Update and should therefore correlate better with the recorded data during model calibration. It was assumed that all water use during these months was returned to the sewer; this assumption was validated during calibration. Note that the 2015/2016 wet season occurred after several years of drought. Therefore, water use levels may be lower than non-drought years due to conservation.

Where water use data was not available (limited portions of the City), sewer generation rates were estimated based on existing dwelling units indicated in the parcel database. For purposes of calibration, a single family rate of 160 gpd per DU and a multi-family rate of 120 gpd per DU were assumed, based on average rates from the December 2015 through March 2016 billing data. Using GIS processes, BWF loads from each parcel were then allocated to the nearest City sewer.

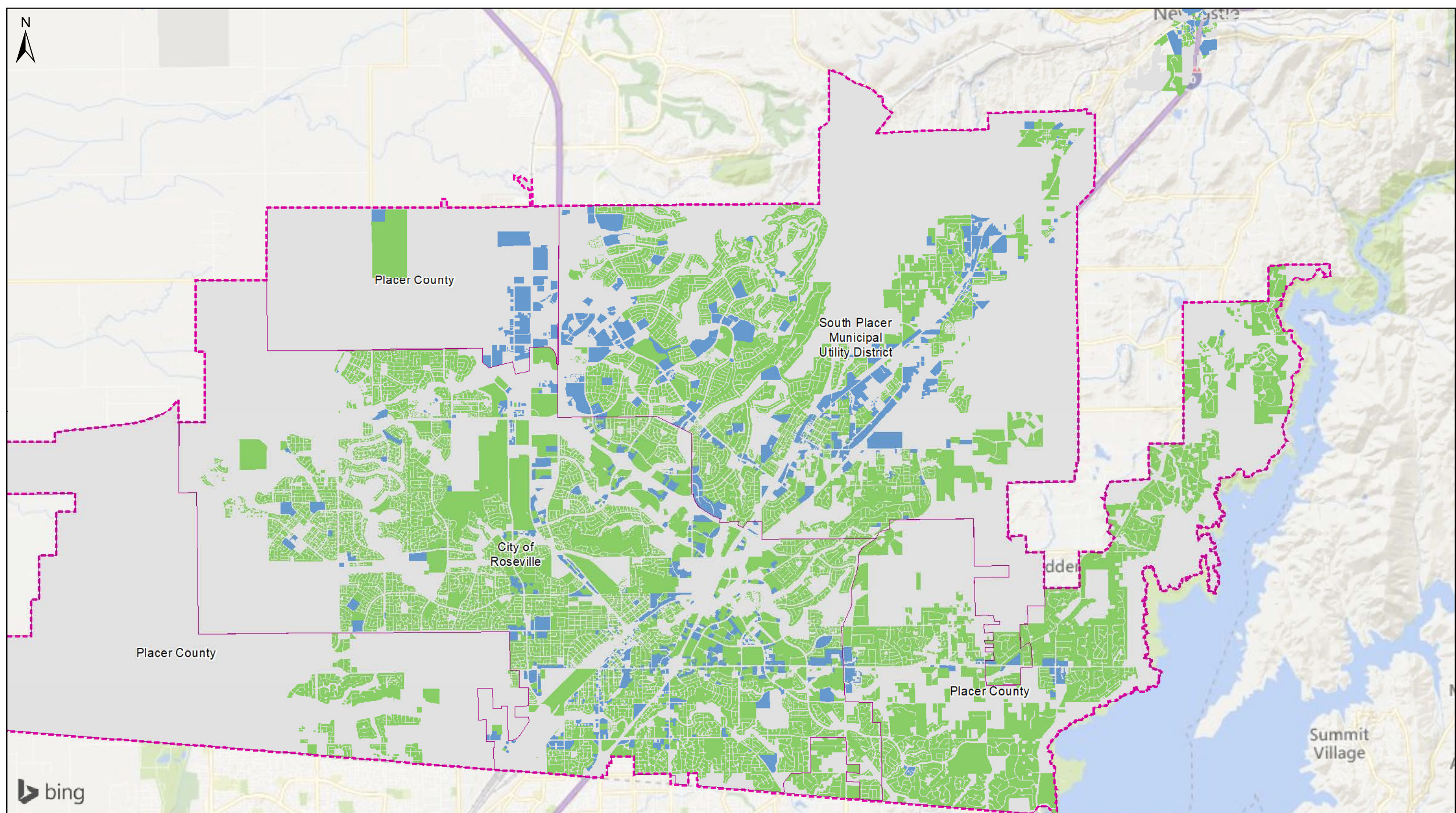


Figure 2-4
Existing¹ Connected Parcels
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

- Parcel Land Use**
- Commercial/Industrial
 - Residential
 - Unconnected
- Service Area Boundary**
- Service Area Boundary
 - Partner Agency Boundary

1. "Existing" represents 2015/2016 connections within the City of Roseville and 2019 connections for Placer County and SPMUD.

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2.2.3.2 Placer County and SPMUD

Placer County provided spreadsheets summarizing equivalent dwelling units (EDUs) for each APN¹. (Note: an EDU is defined as the flow equivalent of one single-family residence.) This dataset was then joined to a parcel dataset downloaded from the County website (downloaded March 20th, 2019), and then allocated to the nearest Placer County sewer. Since not all Placer County sewers are included in the model, GIS processes were used to identify the modeled manhole downstream of the parcel. All of the EDUs included in the spreadsheets were assigned to parcels and allocated to modeled manholes in this way. Each parcel was assigned either a residential or commercial loading pattern based on its general plan category as summarized in Appendix A.

SPMUD provided a shapefile² which provided EDUs for the year 2020 (which was identified as “existing” land use by SPMUD staff), an associated SPMUD manhole, and a type of use (residential or commercial) for each parcel. As for Placer County, GIS processes were used to identify the modeled manhole downstream of the parcel.

During calibration, a base wastewater flowrate of 160 gpd per EDU was typically applied, but this factor was adjusted down in some cases by 15 or 20 percent based on data from wastewater flow meters in the collection system.

2.2.3.3 Drought Rebound

The calibration period occurred during the third year of an ongoing drought. Billing data and flow records indicate a general decline in water use, likely due to the drought-induced conservation primarily limiting irrigation water use but also reducing indoor water use. Analysis of billing data indicates that on a per dwelling unit basis, water use was reduced by approximately 15 percent between 2014 and 2016. Therefore, for capacity analysis purposes of the existing system and for all future scenarios, it has been assumed that base wastewater flows within the City would increase by 15 percent.

For Placer County and SPMUD, BWF was increased to 180 gpd per EDU, which is consistent with the BWF assumptions used in the 2009 Systems Evaluation and is approximately a 15 percent increase compared to calibrated flow factors overall, though specific flow meter basins assume a higher rebound percentage (wherever the flowrate per EDU was decreased during calibration).

2.2.4 Future Average Dry Weather Flow

Future BWF from the City, SPMUD, and Placer County have been estimated for a Buildout scenario (representing likely future land use based on current data) as well as a Buildout-Sensitivity scenario (representing higher potential growth) using the factors summarized in **Table 2-1**. For consistency with WWTP flow projections, ADWF flow factors are used, which includes some dry season GWI.

The locations of future developments, including urban growth areas, are indicated in **Figure 2-5**, and discussed further in the next sections.

¹ Spreadsheets included: Existing dry creek EDU-7-24-19.xls, Existing SMD 2- EDU-2018-12-12.xlsx, Existing SMD 3- EDU-2018-12-12.xlsx, Existing Sunset EDU-7-24-19.xls

² SPMUD_SewerLoading_AddressPoints, provided August 7, 2019.

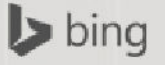
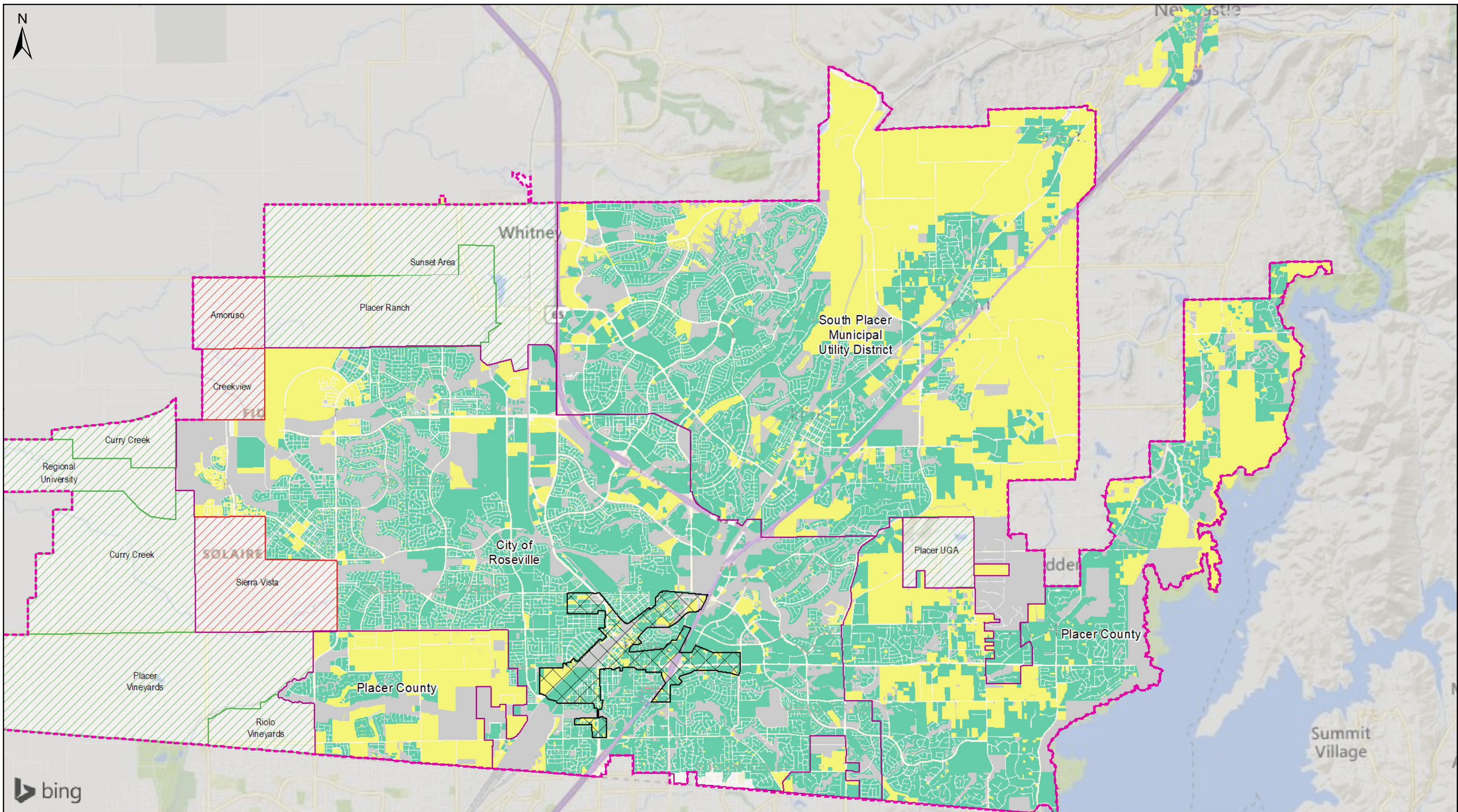


Figure 2-5
Future Development and Urban Growth Areas
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

Buildout Status		Urban Growth Area		Service Area Boundary
	Existing		City of Roseville UGA	
	Future Connection		Placer County UGA	
	Unconnected		Partner Agency Boundary	
	Redevelopment Area			

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Table 2-1: Average Dry Weather Flow Factors

Land Use Designation	Units	Unit Flow Factors ^a
Commercial	gpd per acre	850
Heavy Industrial	gpd per acre	850
Light Industrial	gpd per acre	850
Mixed Use	gpd per acre	2,300
Public/Quasi-Public	gpd per acre	660
Schools	gpd per acre	170
Residential Single DU (or EDU)	gpd per du	190
Residential Mult. DU ^b	gpd per acre	2,040
Parks > 10 Acres	gpd per acre	10
Vacant/Open Space	gpd per acre	0

Notes:

a. Includes allowance for GWI.

b. The Residential Multiple DU unit flow factor can also be represented as 130 gpd per du

2.2.4.1 City of Roseville

For the City of Roseville, the Buildout scenario is based on infill of currently vacant parcels, using land use information from the City's General Plan or provided by the City's planning department, and development of the Sierra Vista, Creekview, and Amoruso UGAs. Sources of data included the following:

- Parcel data downloaded from the City's website (download dated 8/25/2016). The parcel data has the following fields that were used for to estimate future demands:
 - PotUnits: The total number of units allocated to the parcel, prior to any development. Once development begins, potential units is reduced to zero.
 - Undevunits: Once development commences, undeveloped units are the number of vacant lots in the subdivision that do not have a single family unit
 - PotArea: the total developable square footage of the parcel upon its creation. Once development begins, the area is reduced to zero.
 - UndevArea: Once development commences, if the parcel is not fully developed, the number refers to the remaining available square footage of land available to be developed
- The West Roseville Specific Plan (*West Roseville Specific Plan*, EIP Associates, dated February 4, 2004) was used to confirm future units within the West Roseville Specific Plan area.
- Land use data for several specific developments was provided by City Planning, where that data was likely to be more current and more detailed than available in the current GIS.

Infill locations are indicated in **Figure 2-5**.

2.2.4.1.1 Redevelopment (Buildout-Sensitivity Scenario)

The Buildout-Sensitivity scenario includes redevelopment of a portion of the City, as indicated in **Figure 2-5**. Redevelopment occurs where existing land uses are removed and replaced with new, typically more intensive land

uses (and associated sewer flows). Redevelopment land uses are based on parcel-based classifications developed for the 2009 Systems Evaluation. It was assumed that existing land uses for the parcels in the redevelopment area would be replaced by the land uses in the redevelopment plan. Overall, redevelopment results in an increase in ADWF of about 1.5 mgd from the Buildout Scenario. More detailed information on the redevelopment land uses inside the City is included in TM 9C of the 2009 Systems Evaluation.

2.2.4.2 Placer County and SPMUD

Placer County provided a spreadsheet that summarized the anticipated EDUs for all entitled projects in Placer County¹. EDUs for other currently vacant parcels were estimated using general plan data¹. Specifically, the general plan shapefile indicated a minimum and maximum density for each category; the categories used for this study, and the associated density and diurnal curve used are summarized in Appendix A. For the Buildout-Sensitivity scenario, Placer County staff suggested an assumption that 60 percent of parcels zoned for residential development would densify to 30 percent higher than the maximum density allowed in the general plan. GIS processes were used to allocate each parcel to the nearest Placer County sewer, and then associated with the modeled manhole downstream of the parcel.

The shapefile provided by SPMUD specified the EDUs in 2060 for each parcel, as well as an associated SPMUD manhole. As for assignment of existing loads, GIS processes were used to identify the modeled manhole downstream of the parcel.

Locations of future development in Placer County and SPMUD are indicated on **Figure 2-5**.

2.2.4.3 Urban Growth Areas

Several UGAs were identified in the 2009 Systems Evaluation and have been included in this evaluation. Locations of the UGAs are shown in **Figure 2-5**. Placer County UGAs include Placer Ranch, Sunset Area, Placer Vineyards, Regional University, Riolo Vineyards, and Curry Creek; the SMD-3 UGA has been incorporated into the current Service Area Boundary. UGAs within the City identified for included Sierra Vista, Creekview, and Amoruso; these UGAs either have already been added to the current Service Area Boundary or are expected to be added in early 2021 (as shown in Figure 1-1) but are included here for consistency with the City's 2017 Model Update. Land use and flow projections were based on the most recent wastewater master plans for each UGA, as indicated below. Flows associated with each UGA are summarized in **Table 2-2**. A more detailed summary of land uses for each UGA broken out by sewershed is included in Appendix B.

- Sierra Vista (*Sierra Vista Specific Plan Sanitary Sewer Master Plan*, Mackay & Soms Civil Engineers, July 2009)
- Creekview (*Creekview Specific Plan Sanitary Sewer Master Plan*, Mackay & Soms Civil Engineers, November 2010)
- Amoruso (*Amoruso Ranch Specific Plan Area Wastewater Master Plan*, Kimley Horn, September 2015)
- Placer Ranch (*Placer Ranch Sewer Master Plan*, Mackay & Soms, July 2017)

¹ 2018-12-18-Entitled-Planned Project.xlsx (provided December, 2018) and GeneralPlans_CommPlans.shp (downloaded from Placer County website, dated October 20, 2019)

- Sunset Area (*Sunset Area Water, Wastewater, and Recycled Water Technical Report*, Psomas, October 2017)
- Placer Vineyards (*Placer Vineyards Specific Plan; Sanitary Sewer Master Plan Addendum 1*, Mackay & Soms, May 2019)
- Regional University (*Regional University Specific Plan, Sanitary Sewer Demand*, Mackay & Soms, September 1, 2017)
- Riolo Vineyards (*Riolo Vineyards Sanitary Sewer Master Plan Update*, Unico Engineering, April 2016)
- Curry Creek (*2009 SPWA Systems Evaluation*, RMC Water & Environment, 2009). No current planning information is available for Curry Creek. Preliminary land use estimates were developed for the 2009 Systems Evaluation and used again for this evaluation.
- Placer UGA (*Hawk Homestead Sewer Analysis – Supplementary Information Requested by Placer County Environmental Engineering*, Derrick Whitehead, Municipal Consulting Group, January 29, 2016)

Table 2-2: ADFW from UGAs

UGA	Agency	WWTP	Total Area (ac)	Buildout ADFW (mgd)
Sierra Vista	Roseville	Pleasant Grove	2,064	1.83
Creekview	Roseville	Pleasant Grove	501	0.43
Amoruso ^a	Roseville	Pleasant Grove	694	0.61
Placer Ranch	Placer County	Pleasant Grove	2,213	2.15
Sunset Area ^b	Placer County	Pleasant Grove	2,888	3.80
Placer Vineyards	Placer County	Dry Creek	5,230	2.89
Regional University	Placer County	Pleasant Grove	1,159	1.17
Riolo Vineyards	Placer County	Pleasant Grove	879	0.23
Curry Creek	Placer County	Pleasant Grove	3,212	2.74
Placer UGA	Placer County	Pleasant Grove	617	0.04

Notes:

- Includes 274 units north of Amoruso that would contribute flow through sewers in Amoruso (Toad Hill)
- Does not include the Placer Ranch subset of the Sunset Area Plan

2.2.5 Dry Weather Flow Summary

Existing and Projected Future Dry Weather Flows are summarized in **Table 2-3**. Note that these estimates include wet season GWI, which may be higher than dry season GWI.

Table 2-3: Estimated Dry Weather Flows^a by Agency

WWTP	Agency	Existing Calibration ADWF (mgd)	Existing ADWF with Drought Rebound	Buildout ADWF (mgd)	Buildout-Sensitivity ^b ADWF (mgd)
Pleasant Grove	Roseville	5.87	6.70	13.01	13.04
	Placer County	0.18	0.20	9.85	9.85
	SPMUD	2.25	2.97	3.63	3.63
	Total	8.30	9.87	26.49	26.52
Dry Creek	Roseville	5.60	6.27	6.89	8.23
	Placer County	2.57	2.81	7.19	7.42
	SPMUD	2.90	3.64	5.16	5.16
	Total	11.06	12.72	19.24	20.81

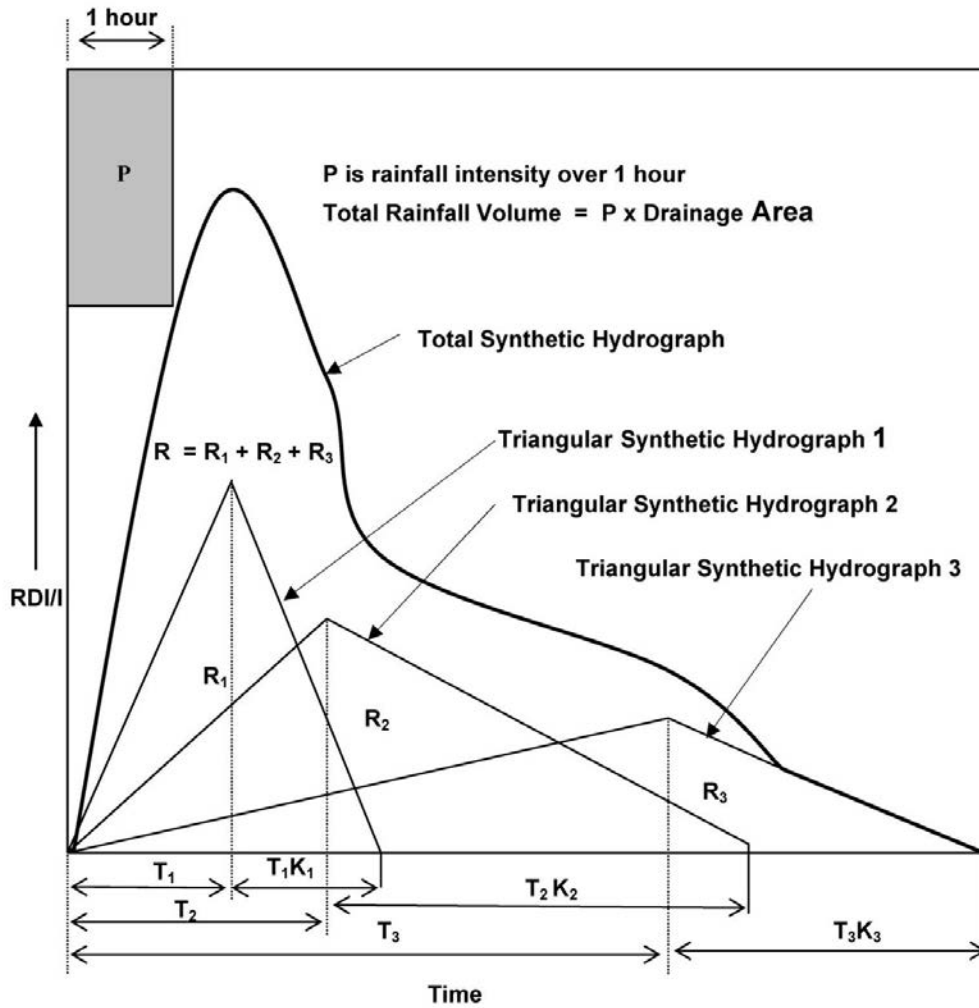
Notes:

- a. Includes wet season GWI.
- b. For the Buildout-Sensitivity scenario, the development density was assumed to be at the maximum range allowed by the General Plan. A Base Wastewater Flowrate (BWF) of 180 gpd per EDU was assumed for Placer County and SPMUD.

2.3 Rainfall-Dependent Infiltration and Inflow

RDI/I flows result from rainfall events that produce infiltration and inflow of storm water runoff into the sewer system. RDI/I flows are defined by the magnitude, shape, and timing of the RDI/I response. RDI/I varies depending on many factors, including the magnitude and intensity of the storm event, area topography, type of soil, and the condition of the sewers, manholes, and sewer service laterals. In a dynamic model, RDI/I is typically computed as a percentage of the rainfall (sometimes referred to as the “R value”) falling on the contributing area of a subcatchment for each of three or more hydrograph components, representing different response times to rainfall, e.g., fast, medium, and slow, as illustrated in Figure 2-6. The contributing area is assumed to be the sum of the area of all developed parcels, except for large open areas such as parks and parking lots. Summing all of the component hydrographs for the entire duration of the rainfall event results in the total RDI/I hydrograph for the event for that subcatchment. Note that although the “slow” RDI/I component can contribute significantly to the total RDI/I volume, the “fast” component has the biggest impact on the magnitude of the peak wet weather flow.

Figure 2-6: RDI/I Hydrograph Components



3. TRUNK SEWER EVALUATION

3.1 Introduction

This section describes the hydraulic analysis and design criteria used to evaluate system performance and size capacity relief projects in the trunk sewer system and identifies the capacity deficiencies based on the results of model runs.

3.2 Model Network Development

This section describes the development of the hydraulic model used for the capacity assessment of the SPWA trunk sewers. The modeling software used for this study was InfoWorks ICM by Innowyze, a fully dynamic hydraulic modeling program that has been used for many other collection systems in California, including Sacramento Area Sewer District, Regional San, and the City of Folsom. This section provides an overview of the model development process, including description of the modeled sewer network, the flow monitoring program, and the calibration of the model.

3.2.1 Modeling Terminology

Key modeling terms are defined below.

- **Network** refers to the representation of the physical facilities being modeled. Modeled network components include pipes, manholes, and pump stations.
- **Nodes** are primarily manholes, but also include pump station wet wells and outfalls (discharge points from the modeled system). Key data associated with nodes include manhole ground elevations and pump station wet well elevations and cross-sectional areas.
- **Pipes or conduits** are connections (links) between nodes, and include both gravity sewers, force mains and conduits. Key data associated with pipes are upstream and downstream node IDs, pipe length, diameter, roughness factor, and upstream and downstream invert elevations.
- **Pumps, gates, and overflow weirs** are represented in the model as links between nodes. Data associated with these facilities depend on the structure type. For example, data for weirs include width, elevation, and weir discharge coefficient.
- **Subcatchments** are areas that contribute flow to the modeled sewer network. They may represent parcels, or an area comprised of multiple parcels that are collected by unmodeled sewers in the collection system (sewershed). Data associated with subcatchments include BWF (computed based on population, water use, or other available data), type of diurnal BWF profile (which is a function of land use), I/I parameters, and the node at which the flow from the subcatchment enters the modeled system.
- **Model loads** are the flows entering the modeled sewer system from each subcatchment. Model loads include residential and commercial sanitary or BWF, GWI, and RDI/I. As a sum, they represent the total wastewater flow applied to the model.
- **Models** are the combination of a modeled network, its associated subcatchments and loads, and other data (e.g., rainfall, diurnal profiles, inflows from other areas, etc.) that comprise a specific model scenario.

3.2.2 Modeled System

The model network for this Systems Evaluation included trunk sewers from the City's model, as well as selected pipe reaches in SPMUD and Placer County. The extent of the modeled sewers in SPMUD and Placer County is consistent with the extent used in the 2009 Systems Evaluation, and generally includes 15-inch and larger trunk sewers. The existing modeled network is shown in **Figure 3-1**. **Figure 3-1** also highlights the trunk sewers within Roseville that convey flow from multiple SPWA partners and are the focus of the capacity analysis.

As noted previously, the model network was based on the model developed for the City's 2017 Sewer Model Update. For the trunk sewers in that model update, the City's GIS data was updated with rim and invert elevation data extracted from record drawings or, in some cases, ground elevation data from other datasets. In a few cases (e.g. at all flow splits) additional data was collected through survey or field inspection by City staff.

For the current Systems Evaluation Update, that model was extended into Placer County and SPMUD service areas to provide a more complete analysis of the regional trunk sewer system. GIS data provided by Placer County and SPMUD was used as the basis for extending the network into their respective systems. The model extent was limited to the extent used for the 2009 Systems Evaluation, but generally includes most 15-inch and larger sewers, as well as selected smaller diameter sewers. A model validation process was undertaken, similar to the process used in the City's 2017 Sewer Model Update.

Model validation generally includes the following:

- **Connectivity checks.** The modeled networks were checked for connectivity, which includes verifying that correct upstream/downstream manholes were identified for each pipe, with no missing links or nodes in the network. A connected network means that all pipes and manholes will be selected when the network is traced upstream from the model outfalls.
- **Missing data checks.** Key data required for modeling were reviewed to identify missing values. Missing data were inferred where reasonable (e.g., where one or two invert elevations were missing between populated values, the data could be interpolated), or populated based on data from the 2009 Systems Evaluation.
- **Profile review.** Profiles were plotted for each series of pipe segments in the modeled network to visually check for suspect data. Examples of suspect data include negative pipe slopes, abrupt steps up or down in pipe inverts, and pipe diameters that conflict with surrounding pipes. Where appropriate, corrections to suspect data were inferred. Otherwise, verification in the form of as-built drawings or field investigations were requested.
- **Special structures.** Flow splits (manholes with more than one outlet pipe) were identified for further verification of outlet pipe elevations and/or the existence of weir overflows or other control structures. Field verification and/or as-built drawings were requested as needed.

In all, the model includes approximately 83 miles of gravity trunk sewers, of which about 32 miles are considered SPWA facilities. All gravity pipelines are modeled assuming a Manning's n of 0.013.

The modeled system includes two pump stations that can convey regional flows as summarized in **Table 3-1**. PS 25 and PS 26 were designed to operate during high wet weather conditions by transferring flow between trunk sewers, thereby alleviating downstream capacity issues. Flow enters the pump station wet well when surcharge conditions in the adjacent gravity sewer overtops an associated weir. PS 25 is designed to limit surcharging in the trunk sewer on Old Auburn Road and conveys flows (mostly originating in Placer County) north towards the 21-inch trunk sewer downstream of Placer County's Sierra College Meter. PS 26 is designed to limit surcharging in that 21-inch easement sewer by conveying flows further north on East Roseville Parkway. City operations staff note that PS 26 is used regularly during wet weather conditions, but PS 25 has not been used in a number of years.

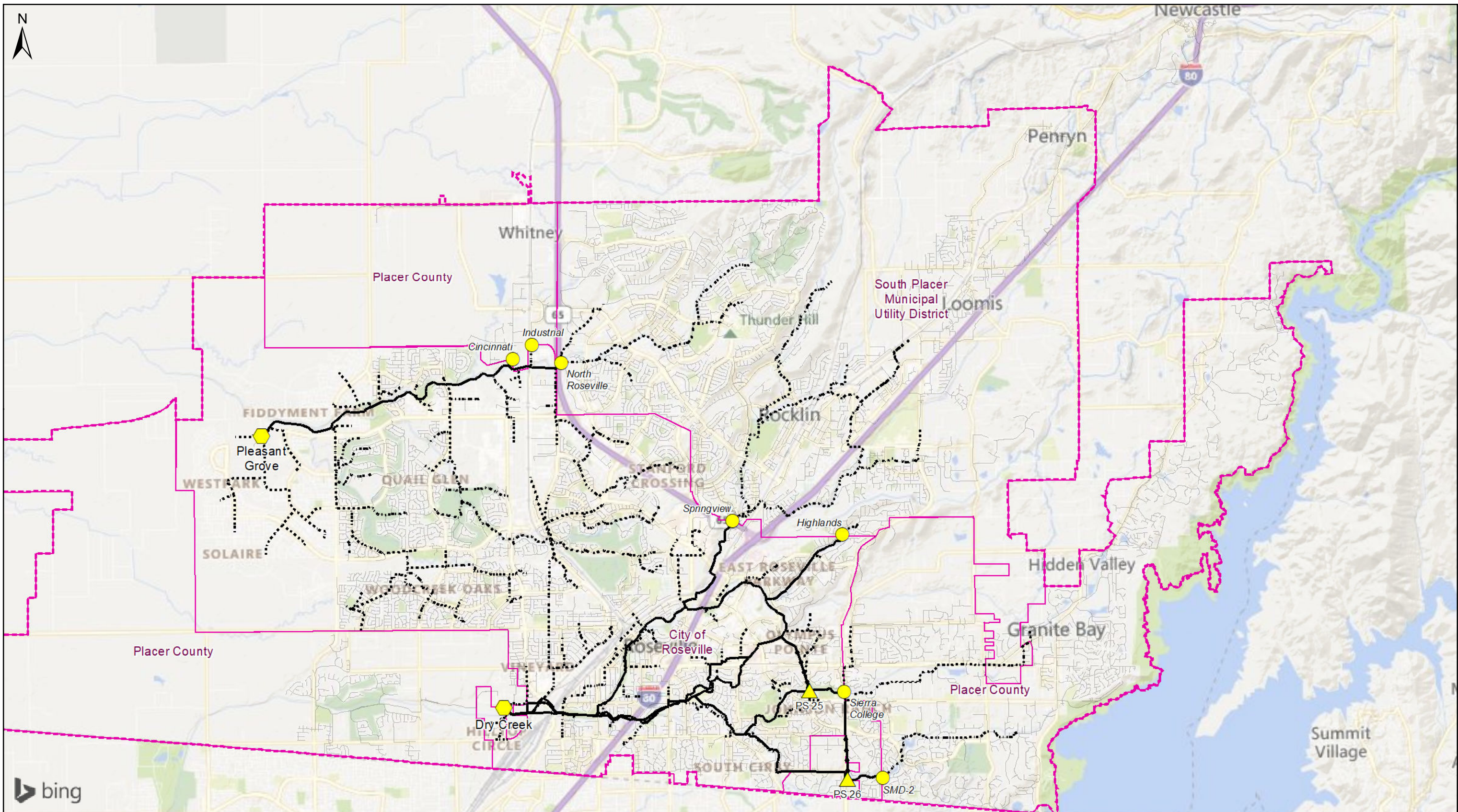


Figure 3-1
Modeled Trunk System
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

- Regional Gravity Sewer
- Regional Force Main
- Non-Regional Modeled Sewer
- Non-Modeled Sewer
- ⬡ Wastewater Treatment Plant
- ▲ Pump Station
- Permanent Flow Meters
- Partner Agency Boundary
- ⬡ Ultimate Service Area Boundary

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Placer **CITY OF ROSEVILLE** **WOODWARD CURRAN**

Figure Exported: 12/21/2020 By: cvanlinden Using: \\woodardcurran.net\shared\Projects\RM\WCR\0091 Roseville_City of 0011183.00 SPWA Systems Evaluation\G. GIS\MXDs\Report Figures\3-1 Modeled Trunk System.mxd

Table 3-1: Regional Pump Station Facilities

Pump Station	No. of Pumps	Firm Capacity ^a (mgd)	Total Capacity (mgd)	Force Main Dia. (in.)
PS 25 ^b (Johnson Ranch)	2	2.02	3.20	12
PS 26 (Old Auburn)	2	0.43	0.68	8

Notes:

- a. Capacity with one pump out of service.
- b. Capacity of PS 25 is based on information collected as part of the 2009 Systems Evaluation. Capacity has not been evaluated for this study. Based on reports from City operations, PS 26 has not been used in several years.

3.2.3 Flow Monitoring Program

To support the development of the hydraulic model and flow projections for the Systems Evaluation Update, a temporary flow monitoring program was conducted as part of this study, including 30 meters during the 2015/2016 wet weather season (for the City's 2017 Model Update) and 12 meters during the 2018/2019 wet weather season (for SPMUD and Placer County). V&A Consulting Engineers, under subcontract to Woodard & Curran, conducted the monitoring. The meters and rain gauges were installed for a 2-month period from early January through early March for each wet weather season to capture the flow from the tributary areas. In addition, two recording rain gauges were also installed during both seasons and used for calibration of gauge-adjusted radar rainfall data. The locations of the flow monitoring sites are shown in **Figure 3-2**. The figure also shows the associated tributary area (basin) for each flow meter.

The locations of the flow meters relative to each other and to flow splits within the collection system are shown schematically in **Figure 3-3**. Note that many of the meters were located downstream of other meters; therefore, the tributary areas shown for each of these meters in **Figure 3-2** are the “incremental” areas between the flow meter and tributary basins of the upstream flow meters. Flow meter locations, pipe diameters, and upstream meters are listed in **Table 3-2** and **Table 3-3** for the permanent meters and temporary meters, respectively. Data for all meters during both flow monitoring periods are included in Appendix C.

The purpose of the flow monitoring program was to quantify the flows in the system to provide data with which to calibrate the hydraulic model (discussed later in this section), and to quantify the I/I response to storm events in various areas of the system.

Table 3-2: Permanent Flow Meters

Flow Meter ID (FM ID)	Agency	Downstream Meters	Upstream Meters
Cincinnati	Placer County	22	
Industrial	Placer County	22	
SMD-2	Placer County	11	161
Sierra College	Placer County	18	159, 160
Highlands	SPMUD	19	
North Roseville	SPMUD	22	151, 152, 153, 154, 155
Springview	SPMUD	14	156, 157, 158

Table 3-3: Temporary Flow Meter Locations

Flow Meter ID (FM ID)	Manhole ID	Diameter (in) ^a	Downstream Meters	Upstream Meters
1	E04-042	18	25	
2	E01-180	15	23	
3	D02-280	15	21	
4	B06-195	15	16, 17	
5	B04-003	12	15	
5A	B04-225	21	15	
6	C06-161	18	14	
7	D02-354	23.5	21	7A
7A	D03-115	12	7	
8	D04-201	24	24	
9	D02-068	18	21	
10	B06-341	18	16	
11 ^b	A08-034	14.5	PS 26, 16, 17	SMD-2
12	B03-029	21	DC WWTP	
13 ^c	B03-042	42	DC WWTP	16
14	B03-024	66	DC WWTP	6, 19, Springview
15	B03-053	36	DC WWTP	5, 5A, 15A, 17
15A	B04-082	12	15	
16	B04-151	30	13	4, 10, 11, 16A, 18
16A	B06-161	15	16, 17	
17	B05-258	21	15	4, 1 6A, 11
18	B07-242	22.5	16	11, Sierra College
19	C06-024	35.5	14	20, Highlands
20	C07-003	24	19	
21	E01-149	33	23	3, 7, 9
22	F01-136	72	PG WWTP	24, 25, Cincinnati, Industrial, North Roseville
23	F01-147	36	PG WWTP	2, 21
24	F02-074	41.5	22	8
25	G04-041	21	22	1
26	F99-035	42	PG WWTP	
151	L02-001	24	North Roseville	
152	K02-005	18	North Roseville	
153	L03-014	18	North Roseville	
154	M06-004	18	North Roseville	
155	M06-003	21	North Roseville	
156	J07-058	15	Springview	
157	J07-060	18	Springview	
158	I10-037	18	Springview	
159	C9-02	17.4	Sierra College	161
160	C9-04	14.4	Sierra College	
161	B12-03	14.4	SMD-2	
162	D14-03	14.4	159	

Notes:

- a. Actual measured diameter used for meter flow calculations (may be slightly different than pipe nominal diameter).
- b. Meter located directly downstream of SMD-2 meter to confirm SMD-2 flows and for consistency with 2005 Flow Monitoring Program. Meter confirmed accuracy of flows at SMD-2 meter.
- c. Meter placed for consistency with 2005 Flow Monitoring Program and to confirm measured flows to DC WWTP.

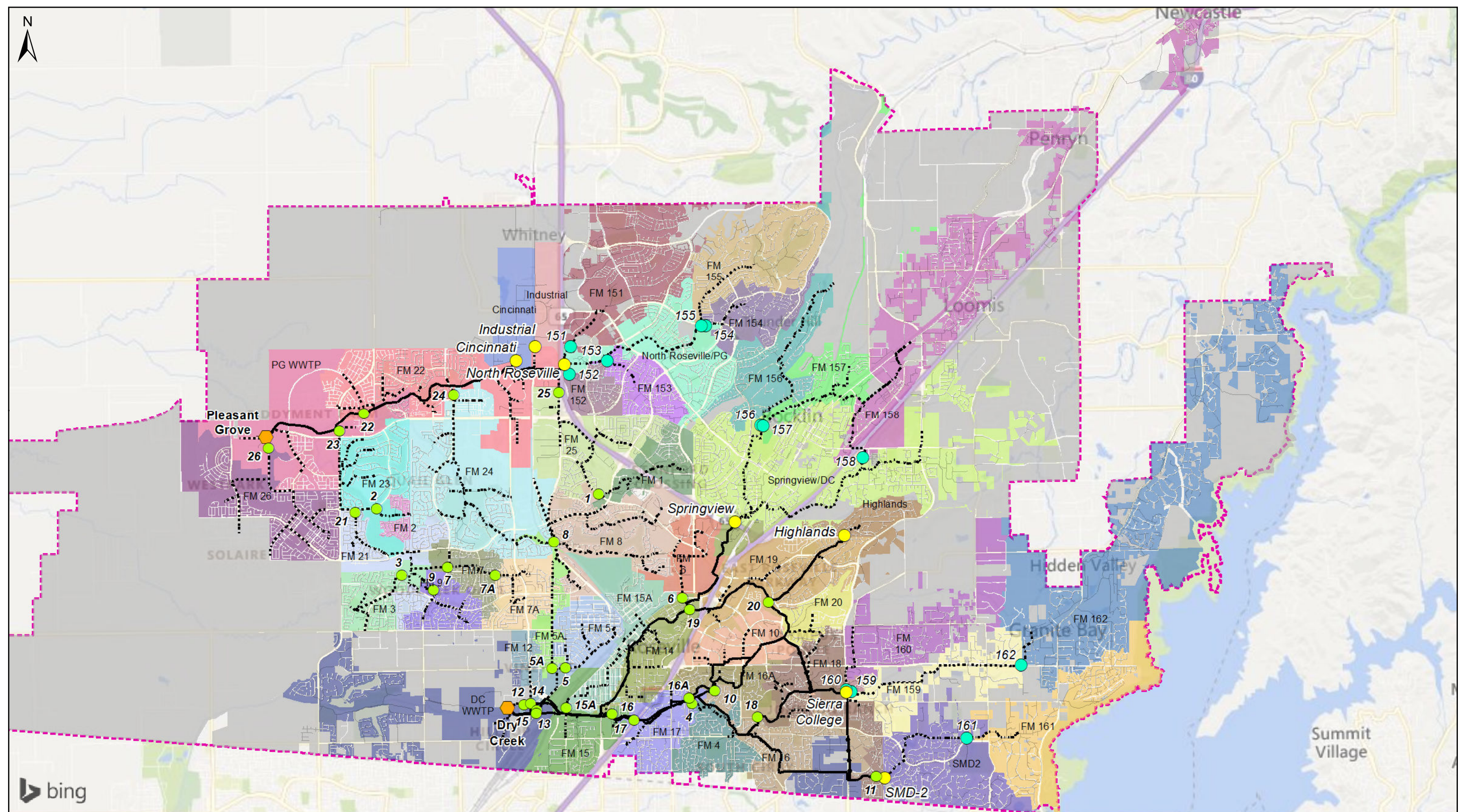


Figure 3-2
Flow Monitoring Locations

South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

- Regional Gravity Sewer
- Regional Force Main
- ⋯ Non-Regional Modeled Sewer
- Non-Modeled Sewer
- Permanent Flow Meters
- 2018/2019 Temporary Flow Meter
- 2015/2016 Temporary Flow Meter
- Wastewater Treatment Plant
- Flow Meter Basin
- ⋯ Ultimate Service Area Boundary

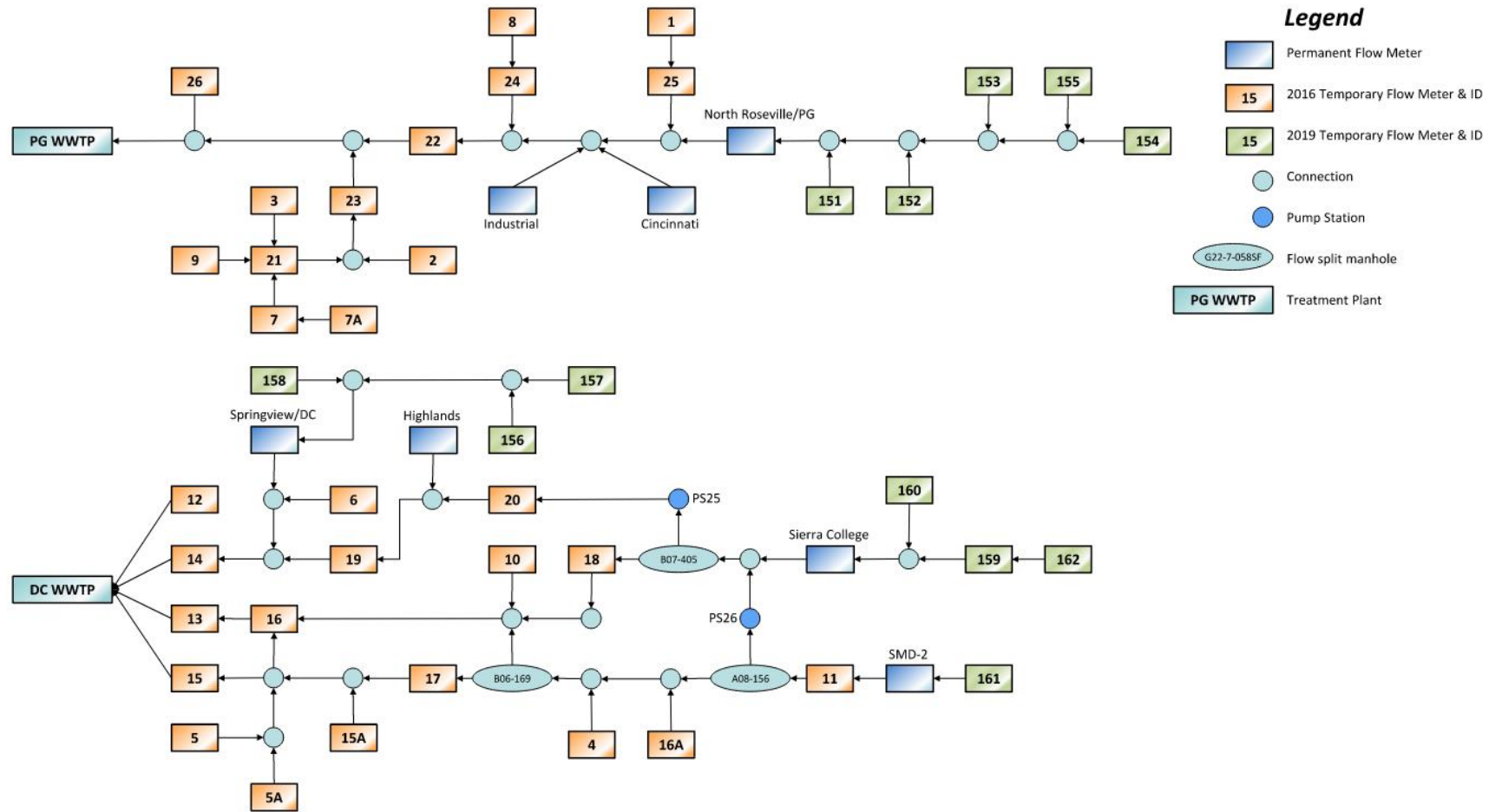
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Figure 3-3: Flow Meter Schematic



3.2.3.1 Radar Rainfall Data

To obtain the most accurate spatial rainfall data for use in model calibration, gauge-adjusted radar rainfall (GARR) data was obtained for the rainfall events that occurred during both monitoring periods. GARR data combines the use of spatial rainfall estimates from radar data with point rainfall measurements from rain gauges located on the ground. The radar measures the reflected signals from falling raindrops in the atmosphere, which can then be translated into estimates of rainfall rates using mathematical and empirical relationships. However, the conversion of the reflected signals to rainfall rates is not sufficiently accurate to consistently estimate actual rainfall amounts at a given location, but does provide good information about the relative rainfall amounts at different locations (i.e., the spatial variation of rainfall). Therefore, the radar rainfall estimates are calibrated to (i.e., adjusted to match) more accurate rainfall measurements from rain gauges located on the ground in the area of study.

The process of converting radar images to GARR estimates is complex and must be conducted by trained and experienced radar rainfall specialists. There are several providers of GARR data throughout U.S. Each uses its own data processing techniques and proprietary algorithms to generate the gauge-adjusted radar rainfall estimates. For this study, Woodard & Curran contracted with OneRain, Inc. to provide the GARR data. The rainfall collected by the two V&A temporary rain gauges was provided to OneRain for use in their GARR calibration to supplement data available from permanent rain gauges owned by the City for its Flood Alert System.

OneRain developed the GARR data for the flow monitoring period in 5-minute time increments for 1 kilometer by 1 kilometer pixels (each approximately 250 acres in size) covering the entire SPWA service area (including SPMUD and Placer County). Approximately 200 pixels cover the sewered portions of the service area. The data was aggregated to 15-minute intervals for use in the model. The pixel containing the centroid of each model subcatchment defines the rainfall for that subcatchment for each rainfall event.

3.2.4 Model Loading

Section 4.4 described how BWF model loads were developed from water use and land use and growth projections. GWI and RDI/I flows were also loaded to the model by parcel by associating each parcel with a flow meter area. For each parcel, a sewershed (“contributing”) area (i.e., area that potentially contributes I/I) was determined based on land use. Contributing areas for non-open space land uses, including residential, commercial, industrial, and institutional uses, were based on the full parcel area. Contributing areas for parks and other land uses that may contribute sewer flows but are likely to have significant open space were limited to 1 acre. Parcels comprised of open space, drainage channels, and large roadways such as freeways not likely to contribute sewer flows were assigned zero contributing area. I/I flows for each parcel were computed in the model by applying the appropriate meter area GWI and RDI/I parameters (determined during the model calibration process described below) to the contributing area of the parcel.

Parcels loading to the same modeled manhole are grouped into subcatchments. All BWF loads associated with each parcel in the subcatchment are then summed to calculate the overall BWF loading from the subcatchment. The contributing areas are also summed, and the appropriate meter area GWI and RDI/I parameters are assigned to calculate I/I flows for each subcatchment.

3.2.5 Model Calibration

Model calibration is the process of comparing model-computed flows to observed (monitored) flows to verify that the model is accurately simulating flows in the sewer system. The model is calibrated for both dry and wet weather conditions.

As described above, temporary flow monitoring programs were conducted during the late January through mid-March 2016 and 2018 wet weather periods. The data collected during these flow monitoring programs, as well as data from the permanent meters, were used for model calibration.

3.2.6 Dry Weather Calibration

The dry period in early to mid-February 2016 (for flow meters in the City) and late January 2019 (for flow meters in SPMUD and Placer County) were used as the dry weather calibration periods for the model. The dry weather calibration process was used to verify BWF loads and diurnal curves, and to quantify GWI (as indicated by monitored flows that were higher than estimated BWF). The dry period immediately prior to the wet weather calibration period in early March was also used to confirm the calibration.

Figure 3-4 shows an example plot of model vs. metered flow for one meter location (Site 155). In this graph, the green line represents the monitored (observed) flow, and the red line is the model-simulated flow. Calibration graphs for all meters throughout the monitoring program are included in Appendix D. Note that the Sierra College permanent meter was not operational during much of the 2019 season; however, nearly all tributary flows to this meter were measured as part of the temporary metering program. While most meters calibrated well for both 2016 and 2019 data, there were a few meters with discrepancies. The discrepancies are mostly due to differences in GWI observed in the temporary meters upstream of the Springview and Sierra College meters during the 2019 flow monitoring program versus the 2016 program. As 2016 had significantly less rainfall preceding the flow monitoring program, this GWI was likely not present during the 2016 flow monitoring program.

Table 3-4 summarizes the dry weather loading parameters determined for each flowmeter area during calibration. Calibrated unit flow factors are indicated on **Figure 3-5**, while estimated GWI rates for each flowmeter area are indicated on **Figure 3-6**.

The model calibration resulted in a reasonably good match of modeled to metered flow at most locations, but some differences at others. These differences may be due to inaccuracies in the meter data, inaccuracies in the water consumption data, or in the configuration of the system (e.g., upstream flow splits). The calibration process also resulted in further investigation and adjustments at the major flow split locations in the model (manholes SMH B06-169, SMH A08-156, SMH B07-405 and SMH D04-442). To ensure accuracy during calibration, sewers in the City's trunk model were updated based on survey, field investigation and City drawings to capture the physical structures of the flow splits and then adjusted as needed to better calibrate to the flow meter data.

For a few of the meters (FM 6, 10, and 16A), the water consumption data was not sufficient to account for all of the apparent flow observed by the flowmeter. This could be due to water use not in the water consumption database (e.g. water from another source, or error in the water consumption database), or an error in the flow meter data. To be conservative, some residential flow (less than 0.1 mgd) was distributed in each of the meter areas across all parcels to improve calibration.

Table 3-4: Dry Weather Flow Loading Parameters

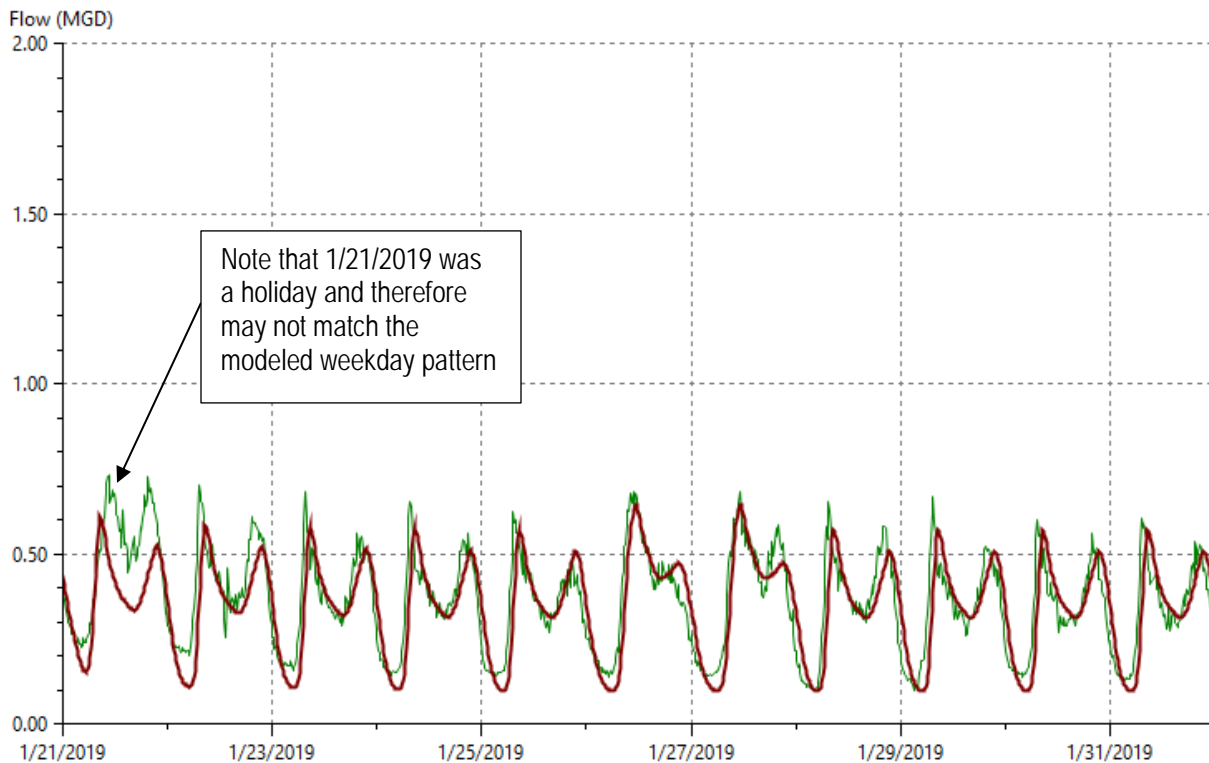
Flow Meter ID (FM ID)	Contributing Area ^a (acres)	Incremental Calibrated ABWF ^a (mgd)	Calibration ABWF Reduction Factor ^b	GWI (gpd/ac.)	GWI ^a (mgd)	Incremental Calibrated ADWF ^a (mgd)
1	297	0.28	0%	--	--	0.28
2	174	0.14	0%	--	--	0.14
3	270	0.29	0%	--	--	0.29
4	397	0.30	0%	--	--	0.30
5	241	0.30	0%	373	0.09	0.39
5A	181	0.14	0%	441	0.08	0.22
6	209	0.23	0%	192	0.04	0.27
7	181	0.19	0%	--	--	0.19
7A	349	0.42	0%	--	--	0.42
8	588	0.51	0%	425	0.25	0.76
9	209	0.22	0%	--	--	0.22
10	363	0.32	0%	--	--	0.32
11	0 ^b	0.00	0%	--	--	0.00
12	157	0.15	0%	--	--	0.15
13	0 ^c	0.00	0%	--	--	0.00
14	428	0.43	0%	--	--	0.43
15	328	0.31	0%	--	--	0.31
15A	326	0.30	0%	--	--	0.30
16	470	0.41	0%	1064	0.50	0.91
16A	219	0.27	0%	593	0.13	0.40
17	352	0.31	0%	--	--	0.31
18	364	0.34	0%	302	0.11	0.45
19	374	0.51	0%	561	0.21	0.72
20	172	0.18	0%	--	--	0.18
21	327	0.26	0%	--	--	0.26
22	857	0.58	0%	--	--	0.58
23	283	0.20	0%	--	--	0.20
24	932	1.38	0%	--	--	1.38
25	589	0.53	0%	170	0.10	0.53
26	423	0.34	0%	--	--	0.34
151	757	0.64	15%	--	--	0.64
152	218	0.25	0%	--	--	0.25
153	280	0.23	20%	--	--	0.23
154	384	0.23	20%	--	--	0.23
155	521	0.35	15%	--	--	0.35
156	562	0.21	15%	302	0.17	0.38
157	314	0.16	0%	96	0.03	0.19
158	1766	0.74	15%	130	0.23	0.97
159	497	0.11	0%	80	0.04	0.15
160	570	0.17	20%	175	0.1	0.27
161	818	0.21	0%	342	0.28	0.49
162	2124	0.44	0%	311	0.66	1.10
Cincinnati ^d	204	0.09	0%	--	--	0.09
Industrial ^d	121	0.06	0%	--	--	0.06
SMD-2	783	0.28	0%	--	--	0.28
Sierra College	14	0.01	0%	--	--	0.01
Highlands	344	0.11	0%	--	--	0.11

Flow Meter ID (FM ID)	Contributing Area ^a (acres)	Incremental Calibrated ABWF ^a (mgd)	Calibration ABWF Reduction Factor ^b	GWI (gpd/ac.)	GWI ^a (mgd)	Incremental Calibrated ADWF ^a (mgd)
North Roseville (Pleasant Grove)	1997	1.25	15%	--	--	1.25
Springview (Dry Creek)	605	0.55	15%	--	--	0.55

Notes:

- a. For meters with upstream basins, represents the incremental meter basin area or flow, as shown on Figure 3-2.
- b. Meter located directly downstream of SMD-2 meter to confirm SMD-2 flows and for consistency with 2005 Flow Monitoring Program
- c. Meter placed for consistency with 2005 Flow Monitoring Program and to confirm measured flows to DC WWTP.
- d. Due to highly variable and relatively small industrial flows, calibration of Cincinnati and Industrial meters was limited.

Figure 3-4: Example DWF Model Calibration Graph (Site 155)



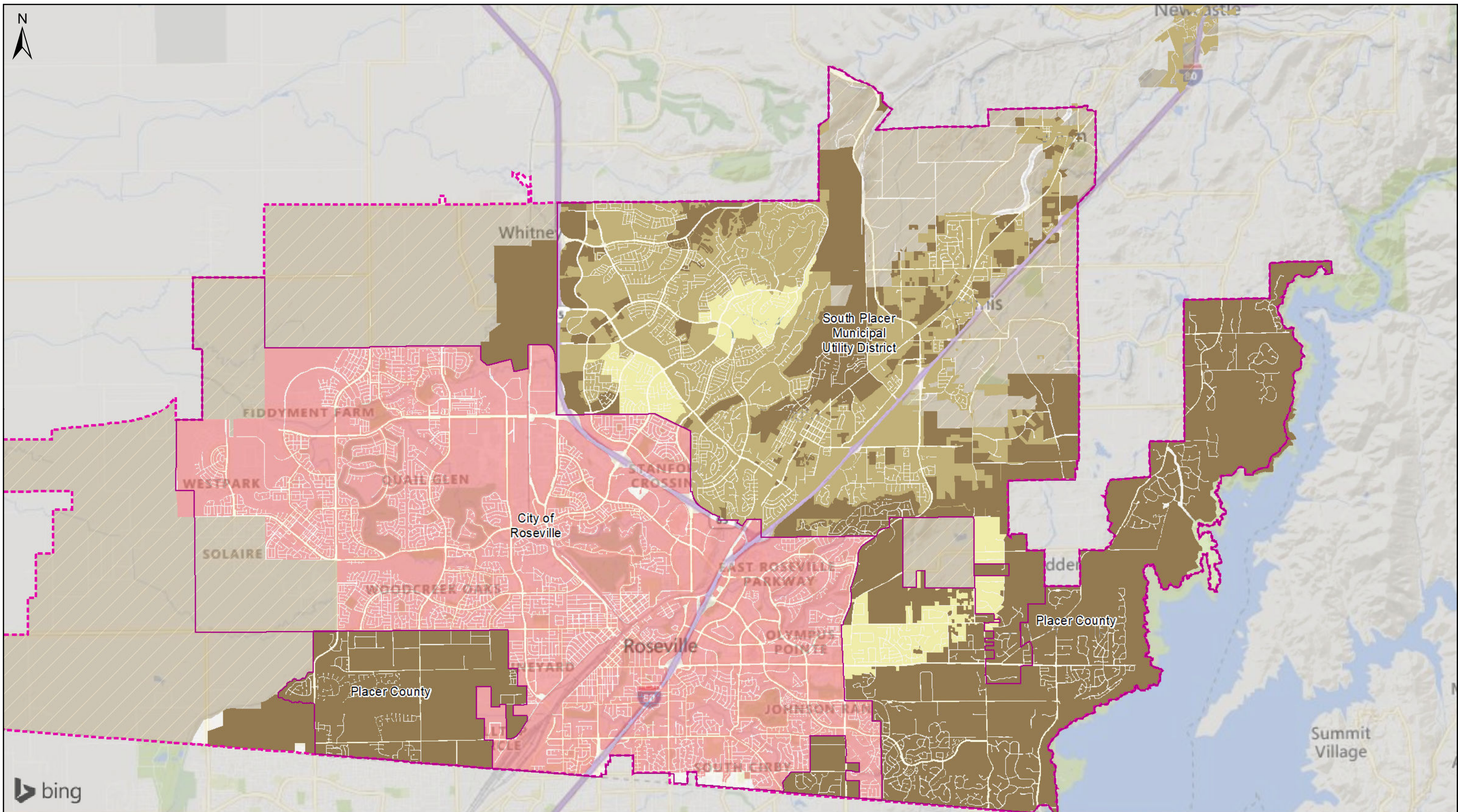
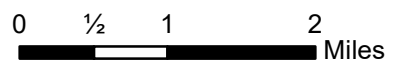


Figure 3-5
Calibrated Unit Flow Factors
 South Placer Wastewater Authority
 2020 Systems Evaluation



- | | | |
|------------------------------|--|-------------------------|
| Flow Factor (gpd/EDU) | City of Roseville (Water Billing Data) | Partner Agency Boundary |
| 128 | Future Connection | |
| 136 | Ultimate Service Area Boundary | |
| 160 | | |

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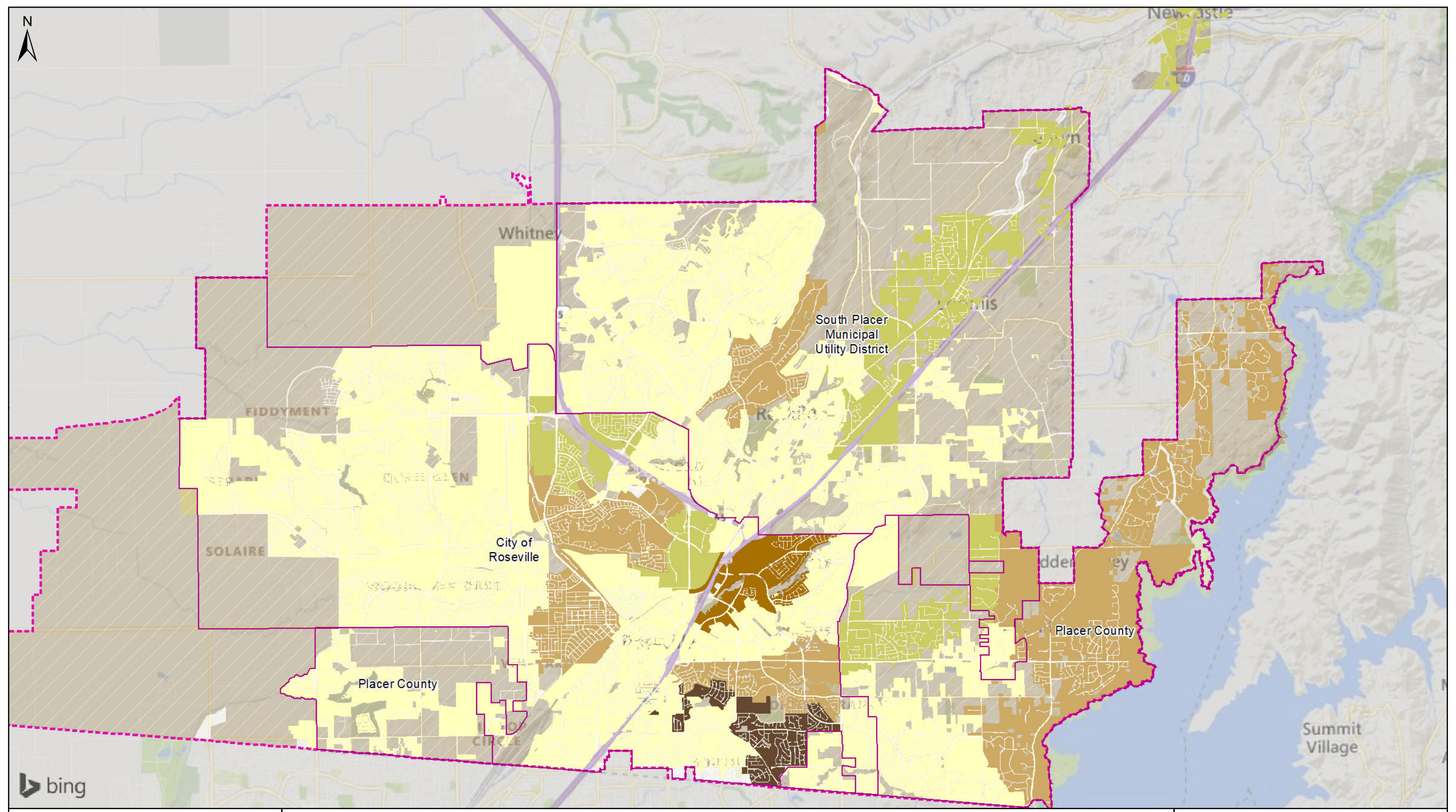


Figure 3-6
Calibrated GWI Rates
 South Placer Wastewater Authority
 2020 Systems Evaluation

0 1/2 1 2 Miles

Partner Agency Boundary Ultimate Service Area Boundary	GWI (gpd/acre) < 100 100 - 200 200 - 500 500 - 1,000	Unconnected > 1,000
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3.3 Wet Weather Flow Projections

3.3.1 Wet Weather Calibration

During wet weather calibration, parameters are adjusted to simulate the volume and timing of RDI/I for monitored storm events. Rainfall was assigned to each parcel or subcatchment using data from the GARR pixel at the centroid of the parcel or subcatchment. Through the wet weather calibration process, RDI/I hydrograph parameters were developed for each metered area. For calibration of the City’s meters, the rainfall period from March 4th through March 15th, 2016 was used to determine RDI/I parameters. This period had two storms: the first storm occurring around March 5th-6th generally had the highest rainfall totals; the second storm on March 12th-13th generally had the highest peak flows. The soils for the second storm were more saturated, and generated a larger response. For a conservative calibration, RDI/I parameters were selected to best match the response to the March 12th-13th storm. These conservative calibration conditions should be considered when using this model to evaluate capacity.

For meters in Placer County and SPMUD, two storms were used for wet weather calibration: one event occurring January 15th through January 17th, and another event February 25th through 27th, 2019. The January event was generally higher peak intensity but lower total volume, while the February event was less intense but had more total rain. Both events had similar (generally wet) antecedent conditions. Some meters had higher peak flows during the January event, while others had higher peak flows during the February event; in general, an attempt was made to calibrate for both events. Storm information for the calibration events are summarized in Table 3-5.

Table 3-5: Calibration Rainfall Events

Start Date/Time	Storm Duration (hours)	Total Storm Rainfall (in.)			Peak Hour (in.)		
		DC WWTP	Rocklin (Site 157)	Granite Bay (Site 162)	DC WWTP	Rocklin (Site 157)	Granite Bay (Site 162)
2016 Calibration Events							
3/5/2016 13:00	69	2.68	3.16	2.84	0.15	0.21	0.22
3/12/2016 14:00	86	2.29	2.52	2.70	0.21	0.22	0.25
2019 Calibration Events							
1/16/2019 12:00	12	1.55	1.71	1.83	0.36	0.34	0.44
2/24/2019 17:00	44	3.59	3.78	3.49	0.23	0.19	0.19

Table 3-6 summarizes the results of the wet weather calibration in terms of the R values assigned to each flow meter basin. An example wet weather calibration graph is presented in Figure 3-7. Calibration graphs for all meters are included in Appendix D.

Overall, most meters had relatively low R values, indicative of a tight system with newer pipes (see Figure 3-8). The FM 5 and FM 7 areas exhibited more significant peak flow response. Further investigations, such as smoke tests or CCTV, may be appropriate in these area or others with higher R factors to identify potential sources of I/I (such as unauthorized stormwater discharge or leaking pipes or manholes) and any capacity concerns.

A few areas did not exhibit enough response to rainfall to develop calibration parameters; a minimum R volume response of 0.6 percent was assumed, distributed evenly between the fast, medium, and slow response R factors. For future growth areas, a minimum R volume response of 0.6 percent was also assumed, which results in a peak RDI/I under the design storm of approximately 700 gallons per acre per day (consistent with criteria for new development documented in TM 3A of the 2009 Systems Evaluation).

Table 3-6: Wet Weather Calibration Parameters

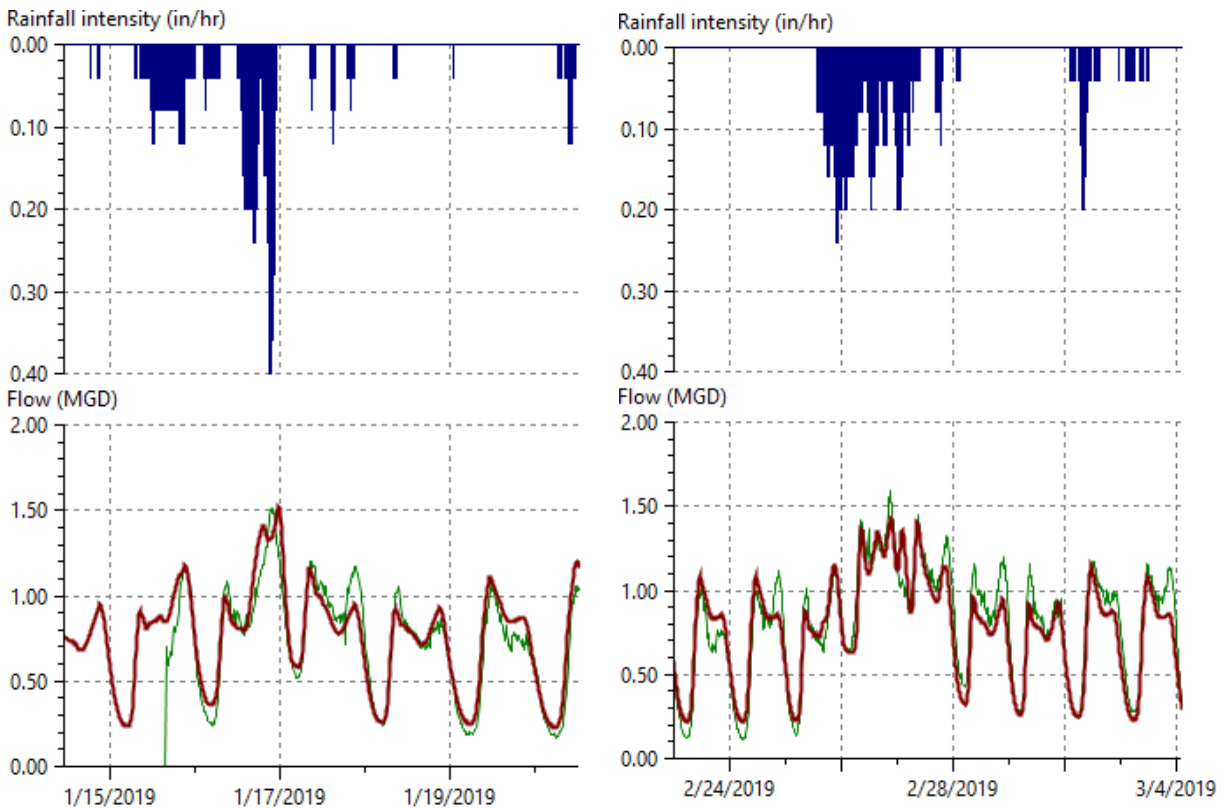
Flow Meter ID (FM ID)	R1 RDI/I Vol (%)	R2 RDI/I Vol (%)	R3 RDI/I Vol (%)	Rtot RDI/I Vol (%)
1	0.2	0.4	4.0	4.6
2	1.2	1.0	3.0	5.2
3	0.2	0.2	2.0	2.4
4	0.8	0.5	2.0	3.3
5	3.0	6.0	8.0	17.0
5A	0.2	2.0	3.5	5.7
6	0.5	1.5	1.0	3.0
7	2.5	2.0	12.0	16.5
7A	1.0	0.7	3.0	4.7
8	0.2	2.0	6.0	8.2
9	0.5	3.0	5.0	8.5
10	0.2	0.4	0.5	1.1
11	0.8	2.0	2.2	5.0
12	0.2	0.2	4.0	4.4
13	0.5	1.0	3.0	4.5
14	0.3	1.3	3.8	5.4
15	3.0	2.5	0.3	5.8
15A	0.8	0.3	0.3	1.4
16	0.5	1.0	3.0	4.5
16A	1.5	1.0	6.0	8.5
17 ^a	0.2	0.2	0.2	0.8
18	0.3	2.0	5.0	7.3
19	0.3	1.3	3.8	5.4
20	0.2	0.6	3.0	3.8
21	0.2	2.0	2.0	4.2
22	0.2	0.4	4.0	4.6
23 ^a	0.2	0.2	0.2	0.6
24	0.2	1.0	0.5	1.7
25	0.2	1.5	6.0	7.7
26 ^a	0.2	0.2	0.2	0.6
151	0.6	0.7	0.2	1.5
152	0.7	0.3	0.1	1.1
153	1.0	0.5	0.2	1.7
154	0.4	0.5	0.1	1.0
155	1.3	1.0	1.0	3.3
156	1.0	1.3	2.0	4.3
157	0.7	0.4	0.4	1.5

Flow Meter ID (FM ID)	R1 RDI/ Vol (%)	R2 RDI/ Vol (%)	R3 RDI/ Vol (%)	Rtot RDI/ Vol (%)
158	0.3	1.1	3.0	4.4
159	0.2	0.5	1.3	2.0
160	0.9	1.3	2.5	4.7
161	0.6	1.0	2.0	3.6
162	0.2	0.5	1.3	2.0
Cincinnati ^b	0.1	0.1	1.3	1.5
Industrial ^b	0.1	0.1	0.3	0.5
SMD-2	0.6	1.0	2.0	3.6
Sierra College	0.5	0.9	1.9	3.3
Highlands	0.7	1.0	0.4	2.1
North Roseville (Pleasant Grove)	1.3	1.3	0.3	2.9
Springview (Dry Creek)	0.7	2.0	10.0	12.7

Notes:

- Where flowmeters did not indicate a significant response to rainfall, a minimum response of 0.6% was assumed, distributed evenly between R1, R2, and R3. A minimum response of 0.6% was also assumed for areas of future growth.
- Due to highly variable and relatively low industrial flows, calibration of Cincinnati and Industrial meters was limited.

Figure 3-7: Example WWF Model Calibration Graph (Site 155)



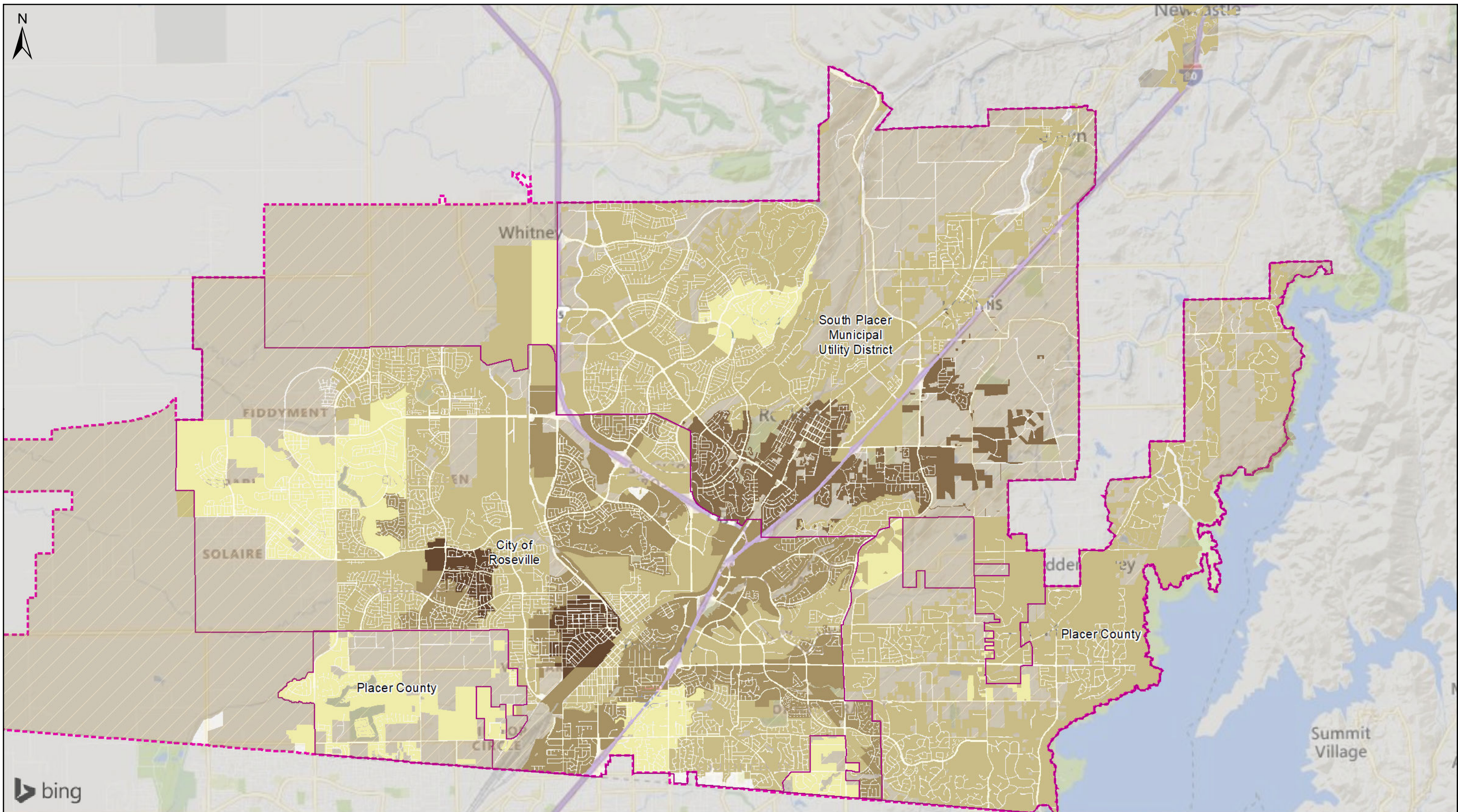
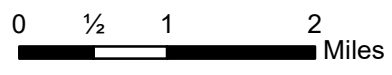


Figure 3-8

Calibrated R Values

South Placer Wastewater Authority
2020 Systems Evaluation



Unconnected	Total R	> 15%
Partner Agency Boundary	0.3% - 1%	1% - 5%
Ultimate Service Area Boundary	5% - 10%	11% - 15%

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3.4 Capacity Analysis

This section describes the hydraulic analysis and capacity criteria used to evaluate system performance and size capacity relief projects in the trunk sewer system, and identifies the capacity deficiencies based on the results of model runs.

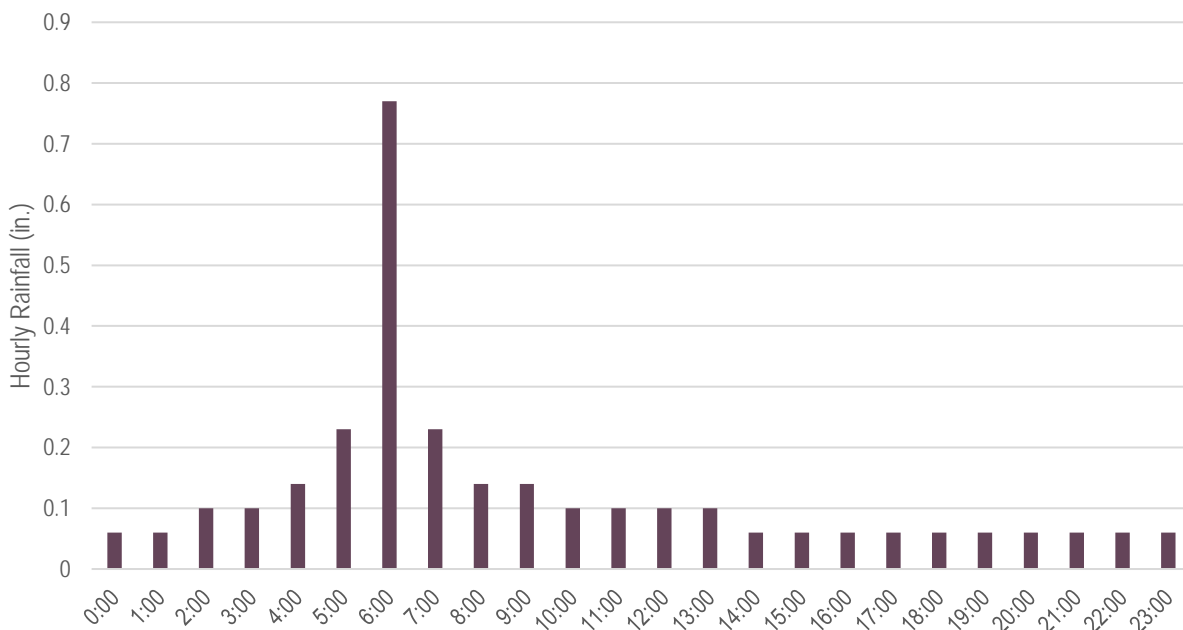
3.4.1 Design Flow Criteria

Design flows for sewer systems consist of BWF, GWI, and RDI/I. Criteria for computing existing BWF, GWI, and RDI/I (developed as part of model calibration), and flow assumptions for future development were discussed in the previous chapters. Note that for capacity analysis purposes, base wastewater flows assume rebound of approximately 15 percent from current flows.

For this Systems Evaluation Update, design RDI/I is based on a 10-year 24-hour synthetic rainfall pattern that occurs uniformly across the entire service area. The event used is the same event as used for the previous 2009 Systems Evaluation. The design storm hyetograph was developed utilizing Table 5-A-1 (elevation (h) = 150 feet) from the 1990 Placer County Flood Control and Water Conservation District Stormwater Management Manual (1990 Placer County Stormwater Management Manual). This event has a 1 hour peak intensity of 0.77 inches and a 24-hour rainfall depth of 2.97 inches. The peak rainfall hour was set at 6 a.m. so that the peak RDI/I response (which would normally occur about 1-2 hours after the rainfall for a typical basin) roughly coincides with the peak hour of the dry weather profiles to give a conservative flow response in the collection system. The intensity and timing of the design storm is presented in Figure 3-9.

It should be noted that current NOAA statistics (NOAA Atlas 14, updated in 2014) have a somewhat lower peak hour rainfall intensity, though slightly higher 24-hour rainfall depth (1 hour peak intensity of 0.65 and 24-hour depth of 3.35 inches). As the design event developed from the 1990 Placer County Stormwater Management Manual was likely to result in higher peak flows, and therefore more conservative estimate of system capacity, that design event was selected for this evaluation. NOAA Atlas 14 data confirms that design rainfall intensity does not vary significantly across the SPWA service area.

Figure 3-9: SPWA 10-year Design Storm Event



3.4.1.1 Summary of Flows Under Design Storm

A summary of modeled flows based on the design flow criteria is included in Table 3-7.

Table 3-7: Modeled ADFW and Peak Wet Weather Flow Summary

WWTP	Existing (Rebound)			Buildout			Buildout-Sensitivity		
	BWF ^a (mgd)	ADWF (mgd)	PWWF ^b (mgd)	BWF ^a (mgd)	ADWF (mgd)	PWWF ^b (mgd)	BWF ^a	ADWF (mgd)	PWWF ^b (mgd)
Pleasant Grove	9.5	9.9	27.4	26.1	26.5	55.8	26.2	26.5	56.0
Dry Creek	10.1	12.7	41.9	16.7	19.2	59.2	18.2	20.8	60.6

Notes:

- Does not include wet season groundwater infiltration (GWI).
- Modeled PWWF assumes improvements have been implemented to eliminate overflows and significant surcharging.

3.4.2 Hydraulic Capacity Criteria

Capacity deficiency or performance criteria are used to determine when the capacity of a sewer pipeline is exceeded to the extent that a capacity improvement project (e.g., a relief sewer or larger replacement sewer) is required. Capacity deficiency criteria are sometimes called “trigger” criteria in that they trigger the need for a capacity improvement project. These criteria may differ from “design criteria” that are applied to determine the size of a new facility, which may be more conservative than the performance criteria. The 2009 Systems Evaluation identified several hydraulic capacity criteria:

- No surcharging in SPWA sewers, though exceptions were made where limited surcharging may occur in relatively deep pipes. Note that surcharging due to downstream conditions (i.e. backwater conditions) may not be considered a deficiency.
- Pump stations are considered capacity deficient if the design storm PWWF exceeds the pump station capacity with the largest pumping unit out of service (i.e. firm capacity).
- Force mains with velocities exceeding 7 feet per second under PWWF may require further investigation, though would not trigger a project unless the pump station required additional capacity.

As the current model is a calibrated fully-dynamic model, the design condition represents a relatively infrequent storm event, and many of SPWA’s sewers are relatively deep, a less conservative surcharge criteria was applied, with surcharging up to within 5 feet of the manhole rims (ground surface) considered acceptable under 10-year design storm PWWF, as long as the surcharge (flow height in the manhole) does not exceed 4 feet from the top of pipe up the manhole. The pump station and force main criteria from the 2009 Systems Evaluation were unchanged.

3.4.3 Capacity Analysis Results

The calibrated model was run for Existing, Buildout, and Buildout-Sensitive land use scenarios under the design event described above. Several deficiencies were identified in non-regional facilities which resulted in model-predicted overflows for one or more of the scenarios; to ensure flows were conveyed to regional sewers, pipes were upsized in this analysis to eliminate any overflows.

Within the regional system, seven areas have been identified that either have deficiencies or could be impacted when upstream deficiencies are relieved. Note that not all areas have been identified as having capacity deficiencies.

- **Area A** includes the sewers on Old Auburn Road immediately downstream and upstream of PS 26. This area is designed to divert flows above the springline of the sewer into PS 26. However, since PS 26 has insufficient firm capacity during peak wet weather flows, the sewers back up into the upstream sewers and results in a modeled overflow. This is an area of known capacity concerns. If flows through PS 26 were increased, the capacity issues in this area would be relieved.
- **Area B** includes the trunk sewer downstream of Area A from Old Auburn Road to SMH A06-257, which is where flow from PS 26 rejoins this trunk sewer. Note that there are two shallow manholes in this area that have less than 5 feet of cover (SMH A07-234 and SMH A07-091). Sewer depths should be investigated, and, if depths are confirmed, bolting manhole covers should be considered.
- **Area C** includes the trunk sewer downstream of Area B (from SMH A06-257) to the junction structure at Oak Ridge Drive. The junction structure at Oak Ridge Drive connects a 15-inch trunk (modeled, but not part of the regional system) to the main 33-inch trunk, but allows high flows to overtop a weir into a parallel 15-inch trunk sewer.
- **Area D** includes the 30-inch and 33-inch trunk sewer downstream of the Area C (from Oak Ridge Drive), to the 42-inch sewer near Riverside Age.
- **Area E** includes the 15 and 21-inch sewers from the Sierra College permanent meter to the weir structure adjacent to PS 25.
- **Area F** includes the area downstream of Area E, extending from PS 25 to the upstream manhole of Area C (SMH A06-257).
- **Area G** includes the gravity sewer downstream of PS 26, extending to the intersection with Area E.

Model results under Existing and Buildout conditions are summarized in **Table 3-8** and shown in **Figure 3-10** and **Figure 3-11**, respectively. The figures indicate existing trunk sewers that were predicted by the model to be surcharged (water levels in manholes above the crowns of the pipes) due to “throttle” conditions (peak flow exceeding full pipe capacity) or due to backwater from a downstream throttle condition, and locations of model-predicted overflows. Note that **Figure 3-11** shows the results for both the Buildout and Buildout-Sensitivity scenarios (i.e. there is no difference in surcharge locations between the scenarios). In **Table 3-8**, areas that exceed the hydraulic capacity criteria but do not have modeled overflows are highlighted yellow, while areas with modeled overflows are highlighted orange. Hydraulic profiles for each area under existing and Buildout land use conditions are included in Appendix E.

Table 3-8: Capacity Results under Existing and Buildout Land Use Scenarios^a

Area	Existing (with Rebound)			Buildout and Buildout-Sensitivity		
	Length of Throttle Surcharge (ft)	Maximum Surcharge Depth (ft)	Minimum Freeboard (ft)	Length of Throttle Surcharge (ft)	Maximum Surcharge Depth (ft)	Minimum Freeboard (ft)
A	5,530	7.3	0.0	5,530	7.8	0.0
B	3,369	1.9	2.0	3,948	7.7	0.0
C	522	1.0	7.4	6,009	6.4	2.8
D	700	1.1	8.6	4,220	3.3	6.4
E	--	--	--	2,223	3.1	5.6
F	--	0.9	12.2	1,716	7.3	2.2
G	--	--	--	0	2.3	3.3

a. Areas that exceed the hydraulic capacity criteria but do not have modeled overflows are highlighted yellow, while areas with modeled overflows are highlighted orange.

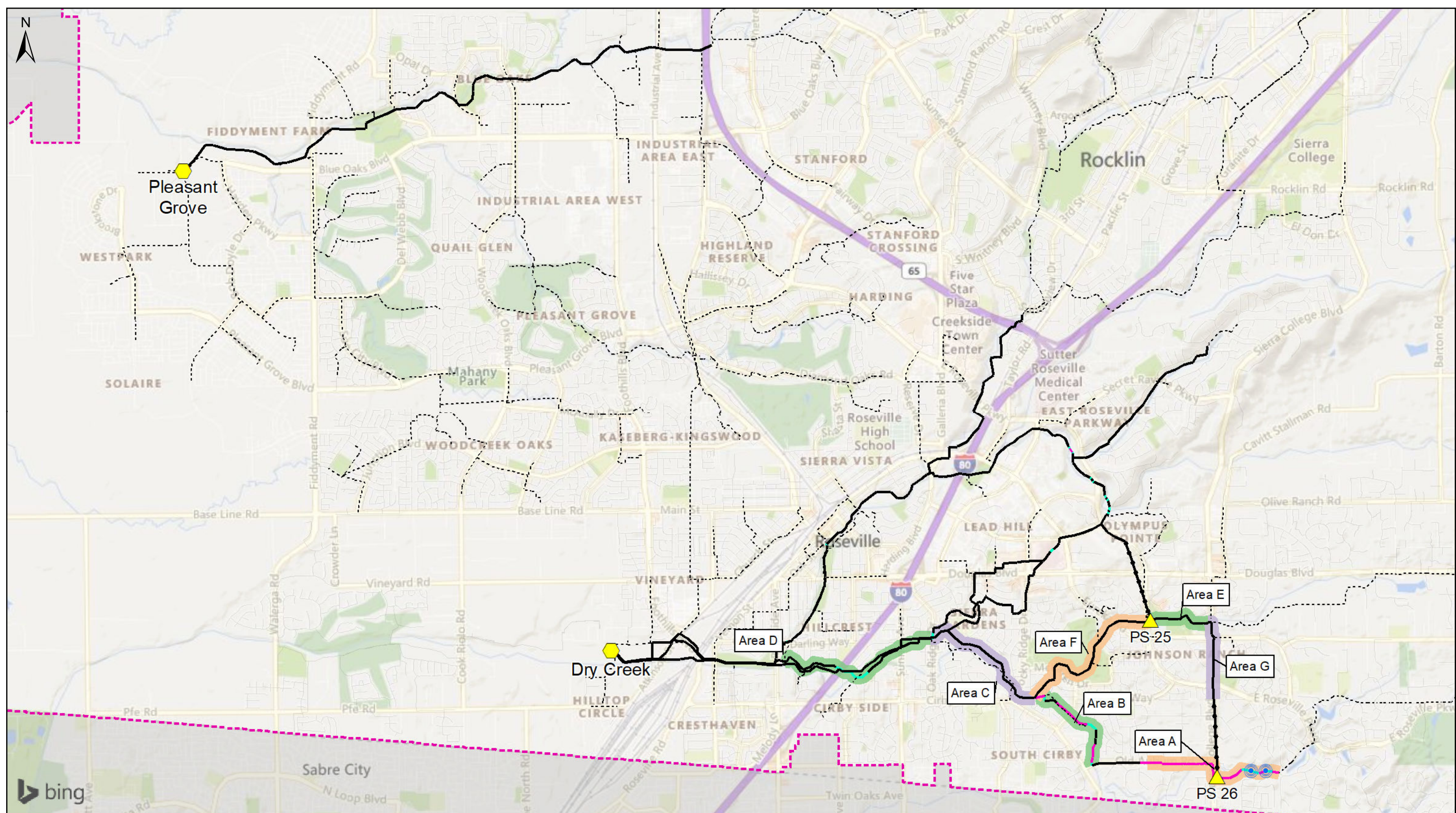
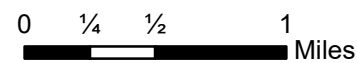


Figure 3-10
Model Results (Existing PWWF)

South Placer Wastewater Authority
 2020 Systems Evaluation



- Regional Gravity Sewer
- Non-Regional Modeled Sewer
- Force Main
- Backwater Surcharge
- Throttle Surcharge
- Deficiency Area
- Ultimate Service Area Boundary
- Modeled Sewer Overflow

Project #: 0011183.00

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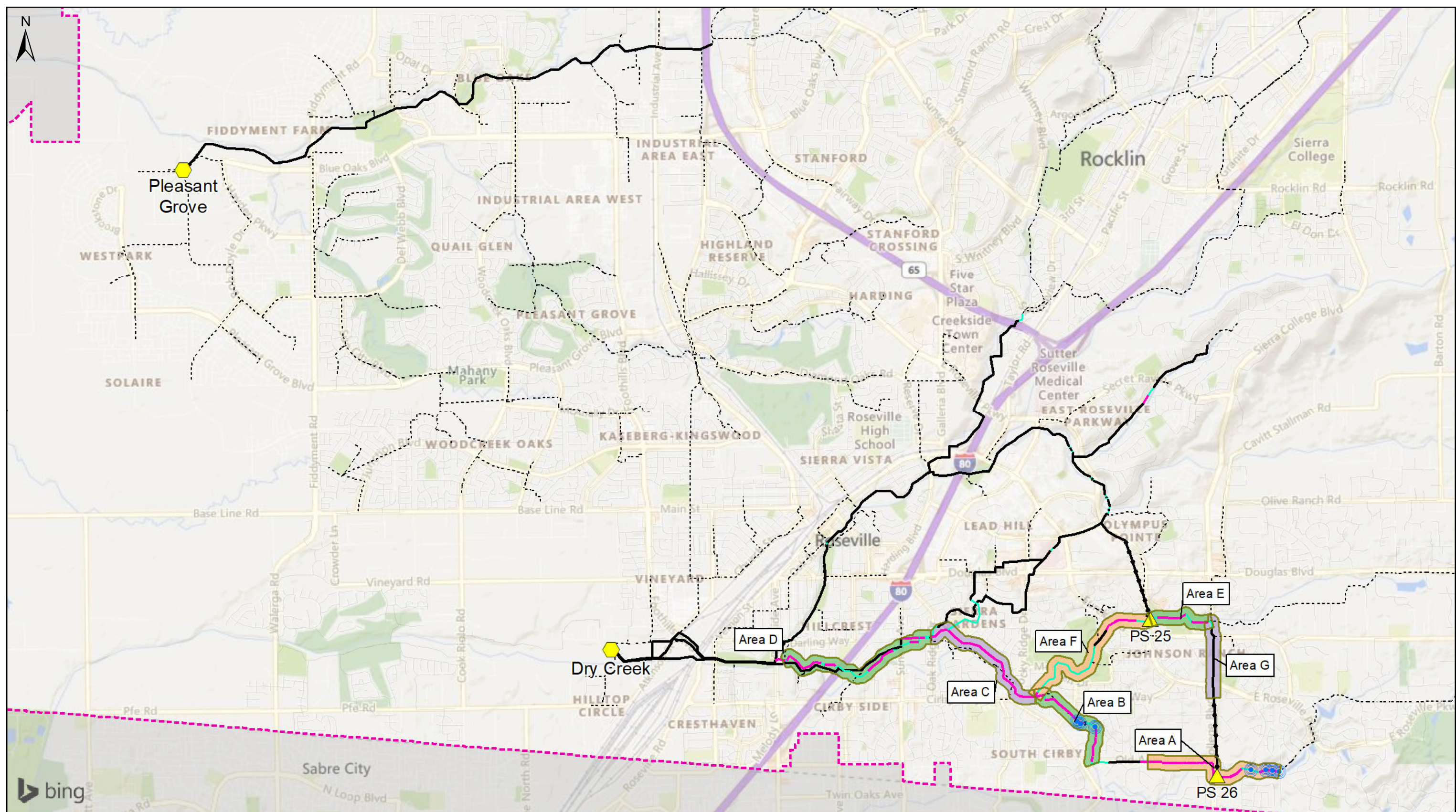
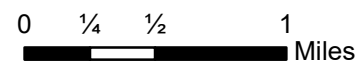


Figure 3-11

Model Results (Buildout and Buildout Sensitivity PWWF)

South Placer Wastewater Authority
2020 Systems Evaluation



- Regional Gravity Sewer
- Force Main
- Non-Regional Modeled Sewer

- Backwater Surcharge
- Throttle Surcharge
- Modeled Sewer Overflow

- Deficiency Area
- Ultimate Service Area Boundary

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3.5 Proposed Improvements

Proposed improvement projects have been developed, and verified using the hydraulic model, to alleviate surcharge in the areas described in the previous section. Each proposed project was reviewed on aerial mapping to identify potential design and constructability issues. Preliminary estimates of probable construction costs were prepared.

This section discusses these proposed improvements as well as the criteria used to develop them and estimate costs. The projects are considered planning level, and further pre-design of each project is recommended prior to implementation.

3.5.1 Design Criteria for New Sewer Facilities

Section 9 of the City of Roseville Design Standards (January 2019) details criteria for Sanitary Sewer Design. These criteria are used during the development of new standards and applied to any new infrastructure.

3.5.1.1 Gravity Sewers

Below is a list of select City design standards for gravity sewers. See Section 9 of the Design Standards for a full listing of criteria.

- Minimum slopes and flow capacities summarized below

Pipe Diameter (in)	Slope (ft/ft)	Capacity (at 0.7 Depth)	Capacity Flowing Full
6	0.0050	0.22 MGD	
8	0.0035	0.38 MGD	
10	0.0025	0.58 MGD	
12	0.0020	0.85 MGD	1.00 MGD
15	0.0015	1.32 MGD	1.60 MGD
18	0.0012	1.95 MGD	2.35 MGD

- Maximum allowable depth-to-diameter ratio (d/D) of 0.7 at design flow for laterals 10 inches or less. Pipes 12" or greater may be designed to flow full unless connections are planned, in which case the 0.7 depth-to-diameter ratio governs.
- Flow velocities must be between 2 feet per second and 10 feet per second.
- Maximum bury depth of main with lateral connection shall be 15 feet. Minimum slope of lateral connection shall be ¼ inch per foot with a minimum bury depth of 12 inches at any buildable location within the properties to be served.
- Maximum spacing of manholes shall be 500 feet for all straight lines of 10 inches in diameter or less. Manhole spacing for mains 12 inches and larger shall be considered on a case by case basis.
- The invert elevation for pipe of the same diameter entering a manhole shall have a 0.10-foot drop between the entering and exiting pipe and invert elevations for pipe of different diameters shall match crown of exiting pipe. The crown of the entering pipe shall be at the same elevation or higher than the exit pipe.
- Drop connections shall be permitted under special conditions and with the approval of the Environmental Utilities Director

3.5.1.2 Pump Stations and Force Mains

Below is a list of select City design standards for pump stations and force mains. See Section 9 of the Design Standards for a full listing of criteria.

- A sufficient number of centrifugal pumping units shall be installed such that station capacity can be maintained with any one unit out of service.
- Provisions for 4 hour storage capacity shall be provided.
- Planning level criteria as follows:

Pump Stations	
Capacity	PWWF (hydraulic modeling required for pipes 18 inches and larger)
Storage	4 hours
Operation	Lead/lag for duty pump(s), plus 1 standby pump
Maximum Pump Cycles	6 cycles/hour (3 cycles per pump)
Force Mains	
Headloss	Hazen-Williams roughness coefficient (C-factor) of 120
Maximum Velocity	7-10 feet per second
Minimum Velocity	3.0 feet per second

3.5.2 Cost Criteria

Opinions of probable costs for proposed capacity improvement projects were developed based on Woodard & Curran's experience with similar projects and discussions with product vendors. The estimated construction costs are based on a Class 4 estimate as defined by the Association for the Advancement of Cost Engineering (AACE) International cost estimate classification system. **Table 3-9** provides a summary of the estimate classes and expected accuracy range. For Class 4 estimates, the expected accuracy range is -15% to -30% on the low end and +20% to +50% on the high end.

Table 3-9: Cost Estimate Classification Matrix (AACE International)

Estimate Class	Level of Project Definition	Purpose of Estimate	Methodology	Expected Accuracy Range
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgement, or analogy	Low: -20% to -50% High: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	Low: -15% to -30% High: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	Low: -10% to -20% High: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	Low: -5% to -15% High: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-cost	Low: -3% to -10% High: +3% to +15%

Source: AACE International Recommended Practice No. 18R-97

These estimates are suitable for use for budget forecasting, CIP development, and project evaluations, with the understanding that refinements to the project details and costs would be necessary as projects proceed into the design and construction phases. All costs have been adjusted to an Engineering News Record Construction Cost Index (ENR CCI) of approximately 12,115, which represents the average of the April 2020 ENR CCI for “20 Cities Average” and “San Francisco” indices.

Cost criteria include baseline unit construction costs for gravity sewers using open-cut methods. Pipe bursting is sometimes a more cost-effective option for projects that involve upsizing existing sewers to 15-inch diameter or smaller; this construction method could be considered during design. Costs for gravity trunk sewers vary with pipe diameter and depth (in the case of open-cut construction). Allowances added to the baseline construction cost include mobilization/demobilization and project-specific for remove and replace construction and traffic control for work in roadways. A 30 percent allowance for contingencies for unknown conditions was also included for all projects, as well as an allowance of 25 percent of construction cost for engineering, administration, and legal costs. For pump stations, costs include site work, mechanical and electrical equipment specific to each station.

3.5.3 Proposed Capacity Improvement Project Descriptions

Improvement projects were developed as a series of improvements that sequentially decrease surcharging in downstream sewers. These improvement projects, including estimated capital improvement costs, are discussed below and summarized in **Table 3-10** and shown in **Figure 3-12**. Individual improvement project cost estimate details as well as detailed project figures are provided in Appendix F.

3.5.3.1 Improvement Project 1

Improvement Project 1 would increase the capacity of PS 26 (Sierra College Boulevard PS) as needed to limit surcharging in the Old Auburn Trunk sewer (Area A and Area B). The weir leading to PS 26 would be unchanged and would divert flows when depth in the sewer exceeds half the sewer diameter. Because this project would substantially increase flows through the sewer on Sierra College Boulevard (Area G), this project also includes upsizing those pipelines to 10, 12, and 15-inch sewers to eliminate surcharging in that line.

PS 26 will need to be modified to meet the increased firm capacity, from 0.43 mgd to 1.6mgd. If the existing wet well is large enough, it could be retrofitted with new, higher flow pumps. The existing wet well at PS 26 is 8 feet in internal diameter. Updated design criteria were provided to a Flygt pump representative and, based on the minimum wet well sizing for their recommended pump selection, the existing wet well is sufficiently large to be reused with a larger pump.

The pump selection provided should be considered preliminary. Given the high total pump station head and large motor of the resulting pump selection, an evaluation of alternatives to reduce the pump size, via upsizing the discharge force main for example, should be considered during pre-design. A life cycle cost analysis may be appropriate to compare the difference between the additional headloss and resulting pumping costs versus the cost to upsize the force main.

3.5.3.2 Improvement Project 2

Improvement Project 2 would re-route the sewer on Sierra College Boulevard east on Eureka and reconnect to the regional trunk at East Roseville Parkway (Area F). This would relieve surcharge in Area E. Excess flows resulting in surcharge in Area F would be diverted through PS 25 to the northern sewershed, which does not have capacity concerns. The preliminary project would upsize existing 8 and 10-inch sewer on Eureka Road and E Roseville Parkway. Since the connection is about 100 feet downstream of the PS 25 diversion structure, this improvement project may increase flows (and associated surcharge) in Area F (unless adjustments are made to the PS 25 diversion structure, as discussed in Improvement Project 3).

3.5.3.3 Improvement Project 3

Improvement Project 3 would alter the piping and diversion structure in the vicinity of PS 25 (Rollingwood PS) to convey additional flow away from Area C, Area D, and Area F, and increase the capacity of PS 25 as needed to accommodate the additional flow. For this improvement project, the diversion structure would be converted to divert any flows exceeding peak dry weather flow (up to approximately 2.6 mgd with buildout land uses under peak wet weather conditions). It should be noted that the 2009 Systems Evaluation assumed diversion of 3.2 mgd through PS 25 with buildout land uses under peak wet weather conditions.

A new junction structure would need to be installed at E Roseville Parkway (or the existing junction structure would need to be relocated) in order to capture the additional flows.

PS 25 would need to be modified to meet the increased firm capacity. If the existing wet well is large enough, it could be retrofitted with new, higher flow pumps. The existing wet well at PS 25 is 10 feet in internal diameter. Updated design criteria were provided to a Flygt pump representative and, based on the minimum wet well sizing for their recommended pump selection, the existing wet well could be reused.

Table 3-10: Proposed Capacity Improvement Projects

Project	Location	Existing Sizes	Improved Sizes ^a	Description	Estimated Capital Improvement Cost
1	PS 26	0.43 mgd firm capacity	1.6 mgd PWWF at Buildout	Increased Capacity of PS 26 and sewers on Sierra College Blvd directly downstream of PS 26 to relieve Old Auburn Trunk sewer (Area A)	\$1,606,000
	Sierra College Blvd (Area G)	500 ft of 8-inch 1,900 ft of 10-inch	500 ft of 10-inch (upsized from 8-inch) 900 ft of 12-inch (upsized from 10-inch) 1,000 ft of 15-inch (upsized from 10-inch)		
2	Eureka Road and E. Roseville Parkway	800 ft of 8-inch 1,400 ft of 10-inch	2,200 of 15-inch (upsized from 8 or 10-inch) 1,200 ft of new 15-inch.	Redirect flows from PS 26 and Sierra College Blvd down Eureka Road to relieve Area E.	\$1,831,000
3	PS 25 (pumps)	2.02 mgd firm capacity	2.6 mgd PWWF at Buildout	Increased Firm capacity of PS 25 to meet Buildout PWWF (depends on alternative).	\$758,000
	PS 25 diversion structure	N/A	New diversion structure and related piping	New weir structure or adjustments to existing structure at PS 25 to convey the maximum potential flow through PS 25 without any dry weather flows.	

Notes:

- a. Note that pipeline capacity increases could be accomplished through parallel pipes, rather than upsizes.

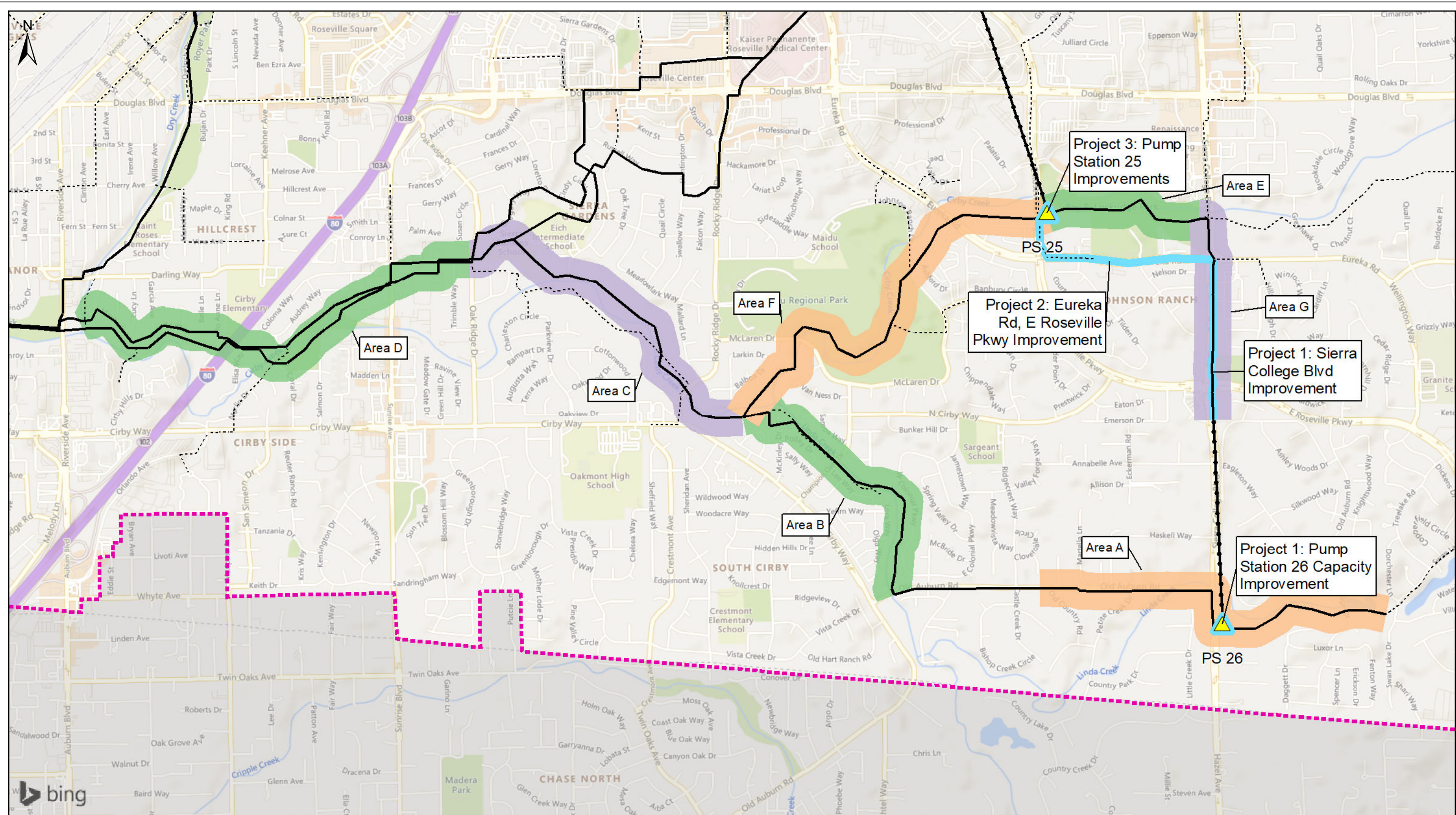
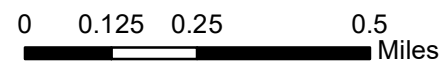


Figure 3-12
Proposed Improvement Locations

South Placer Wastewater Authority
2020 Systems Evaluation



- Regional Gravity Sewer
- Force Main
- Non-Regional Modeled Sewer
- Pump Station
- Preliminary Capacity Improvement Area
- Deficiency Area
- Service Area Boundary

Project #: 001183.00

Map Created: December 2020

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** SPWA Agencies, ESRI, W&C



3.5.4 Timing of Proposed Improvement Projects

While Project 1 is needed for current demands, Project 2 and Project 3 are expected to be triggered by future development. For the purpose of this Systems Evaluation, an approximate number of equivalent dwelling units upstream of the capacity deficiency that would trigger the need for a project has been estimated by applying a reduction factor to future flows to represent percentage of buildout. Nearly all of the future growth that would trigger the projects would occur in SMD-2 and SMD-3 (with less than 100 EDUs of future growth anticipated for SPMUD and Roseville). Based on the SMD2 and SMD3 growth projections provided by Placer County, this would occur beyond the 2060 planning horizon provided.

The timing estimated here is subject to change, and could be impacted by the following assumptions:

- Inflow and Infiltration rates for existing sewers are assumed to remain approximately the same. These rates could change based on pipe condition and maintenance activities (such as rehabilitation and repair) in the collection system.
- Inflow and Infiltration rates for new sewers are assumed based on typical values. Actual I/I rates could be higher or lower than assumed.
- The estimates are based on an assumed rebound of dry weather flows to 190 gpd per EDU. If dry weather flows do not rebound, the timing for Project 2 and Project 3 could be somewhat delayed.

Future studies should monitor the I/I rates and update these estimates as needed. The number of EDUs in SMD2/SMD3 that would trigger the proposed project are summarized in Table 3-11.

Table 3-11: Timing of Proposed Capacity Improvement Projects

Project	Description	Estimated Capital Improvement Cost	Approximate Additional EDUs in SMD2/SMD3 to Trigger Project ^a
1	Increased Capacity of PS 26 and sewers on Sierra College Blvd directly downstream of PS 26 to relieve Old Auburn Trunk sewer (Area A)	\$1,606,000	Existing
2	Redirect flows from PS 26 and Sierra College Blvd down Eureka Road to relieve Area E.	\$1,831,000	~1,800 ^b
3	Increased Firm capacity of PS 25 to meet Buildout PWWF (depends on alternative). New weir structure or adjustments to existing structure at PS 25 to convey the maximum potential flow through PS 25 without any dry weather flows.	\$758,000	~1,800 ^c

Notes:

- Based on a percentage of buildout factor applied to future model loads.
- Represents approximately 60% of buildout. There are approximately 8,400 Existing EDUs upstream of the deficiency triggering Improvement Project 2, and approximately 10,200 EDUs would trigger the need for improvement.
- Represents approximately 60% of buildout. There are approximately 11,900 Existing EDUs upstream of the deficiency triggering Improvement Project 3, including 7,600 in Placer County, 4,200 in Roseville, and less than 100 in SPMUD. Approximately 13,700 EDUs would trigger the need for the improvement.

4. WASTEWATER TREATMENT PLANT EXPANSION EVALUATION

4.1 Introduction

Based on the updated growth projections provided by the SPWA partners through fiscal year 2059-2060 and at buildout, this section provides facility expansion recommendations for Dry Creek Wastewater Treatment Plant (DCWWTP) and Pleasant Grove Wastewater Treatment Plant (PGWWTP), which treat the entirety of flows from the SPWA service area. The recommendations address timing, phasing, and preliminary conceptual costs of the expansions required through buildout to address both flows and loads, as well as identifying next steps for confirming current plant capacity to accurately reflect recent and ongoing capital improvements.

The analysis provides updates to the following flow and loading parameters for DCWWTP and PGWWTP:

- Flows: existing and projected influent flow through buildout:
 - Average Dry Weather Flow (ADWF)
 - Average Annual flow (AA)
 - Peak Month Flow (PMF)
 - Peak Day Wet Weather Flow (PDWWF)
 - Peak Hour Wet Weather Flow (PHWWF)
- Loads: existing and projected influent loads through buildout:
 - Biochemical Oxygen Demand (BOD), Annual Average (AA) and Maximum Month (MM)
 - Total Suspended Solids (TSS), AA and MM
 - Ammonia (NH₃), AA and MM

4.1.1 Dry Creek Wastewater Treatment Plant

Much of the DCWWTP was constructed in 1974 and was expanded in 1991 to treat an ADWF of 18 mgd. In June of 2004, a portion of the influent flow was diverted to the newly constructed PGWWTP, freeing up some treatment capacity at the time. Recently, nutrient removal upgrades were completed at DCWWTP to ensure reliable compliance with the NPDES permit limits (including the 10 mg/L average monthly limit for nitrate plus nitrite).¹ Currently, the flow meter on the discharge of the Influent Pump Station is being modified to increase the PHWWF hydraulic capacity to 36 mgd.

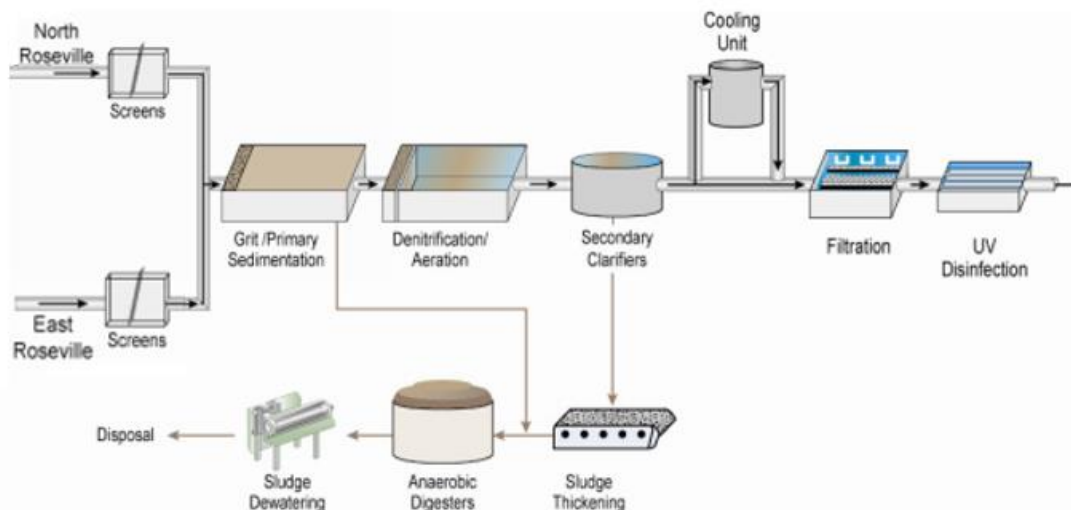
Population in the SPWA service area has continued to grow steadily, with loadings increasing substantially while ADWF decreased. The ADWF at DCWWTP has decreased from 10.5 mgd in 2009 to approximately 8.6 mgd as of 2019.

Equally as important as the hydraulic capacity of a plant is its biological treatment capacity. Design of the 1991 expansion of the plant was based on an influent BOD concentration of 160 mg/L, and the corresponding AA and MM loadings of 24,000 lbs/day and 36,000 lbs/day. Since 1991, the influent BOD concentration has increased to 425 mg/L, resulting in much higher BOD loadings than in previous projections. The impact of higher influent BOD concentration and loadings is discussed in Section 4.3.1.

A schematic of the DCWWTP liquid and solids treatment train is shown in **Figure 4-1**.

¹ Source: City of Roseville, DCWWTP Nitrate Reduction Improvements Project, Basis of Design Report (May 2017).

Figure 4-1: DCWWTP Treatment Schematic



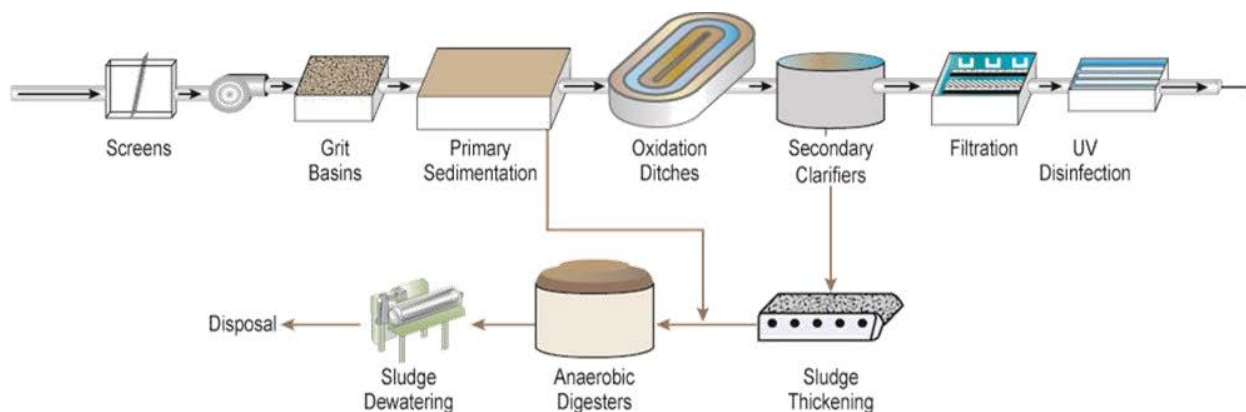
4.1.2 Pleasant Grove Wastewater Treatment Plant

Construction of the PGWWTP was completed in 2004. It was designed for an ADWF of 12 mgd, assuming historical domestic strength wastewater, similar to the Dry Creek Plant. Subsequent study of the plant's treatment processes and influent loading resulted in PGWWTP's capacity being lowered to an equivalent flow of 9.5 mgd. Like the DCWWTP, this was partially a result of influent BOD concentrations trending much higher over time than anticipated in the initial design. Current ADWF is approximately 7.6 mgd with an average influent BOD concentration of 358 mg/L.

To ensure the plant can reliably treat 12 mgd ADWF at the current higher loadings, an expansion project is currently underway, with anticipated completion/commissioning by fiscal year (FY) 22/23.¹ The expansion will add a primary sedimentation process to the liquid treatment train, which currently includes influent screening and grit removal, secondary treatment/denitrification in oxidation ditches, secondary clarification, filtration, and disinfection. The solids treatment process is being upgraded with sludge thickening using rotary drum thickeners and anaerobic digestion of the combined thickened secondary sludge and primary sludge, upstream of the existing dewatering centrifuges (which currently dewater only the secondary sludge). These upgrades will provide additional solids treatment capacity as well as biological treatment capacity. **Figure 4-2** shows a schematic of the PGWWTP treatment train reflecting the upgrades currently under construction.

¹ Source: City of Roseville, PGWWTP Expansion Basis of Design Report (March 2016).

Figure 4-2: PGWWTP Treatment Schematic



4.2 Flows and Loadings

Influent flows and loading (organic loading as measured by BOD and solids loading as measured by TSS) for both the DCWWTP and PGWWTP were established by analyzing daily plant influent data provided by the City of Roseville for the period from January 1, 2016 through September 19, 2019 for influent flow and from January 1, 2013 through September 19, 2019 for loadings. In addition, hourly flow data from December 1, 2016 to September 17, 2019 (which incorporated high winter flow periods) was used to establish peak hour flows.

Projected flows for both the DCWWTP and PGWWTP were calculated based on population and non-residential growth, normalized to account for diversity in land uses by establishing equivalent dwelling units (EDUs). EDU projection data were provided by each of the SPWA JPA Partners (City of Roseville, Placer County, and South Placer Municipal Utility District)¹. Flow projections were developed by multiplying the projected EDUs by an ADWF contribution of 190 gallons per day (gpd) per EDU, in accordance with the estimate developed in the 2009 Systems Evaluation.

4.2.1 Current Flows and Peaking Factors

Current ADWF was established by averaging flows observed at each plant for the period of July through September. While the ADWF is usually thought of as the rated capacity of a treatment plant, the design of treatment systems must also accommodate significant seasonal and diurnal variations in influent flow. A treatment plant must be designed to prevent hydraulic overloads and wash out of solids during peak day and peak hour events. Generally, preliminary and primary treatment systems are sized for peak day or peak hour flow, while secondary treatment systems must meet maximum month organic loading peaks. Sizing treatment processes appropriately aids treatment plants in meeting discharge limits during the higher flows and loading periods that can otherwise stress or overwhelm the plant processes.

Current flow conditions and the associated peaking factors for both plants are summarized in **Table 4-1**.

¹ Data provided on July 2019 for Placer County, August 2019 for SPMUD, and November 2016 for the City of Roseville

Table 4-1: Current Flows and Peaking Factors

Flow Condition	DCWWTP		PGWWTP	
	Current Flow, mgd	Peaking Factor	Current Flow, mgd	Peaking Factor
ADWF	8.6	1.0	7.6	1.0
AA	10.8	1.2	8.1	1.07
PMF	18.4	2.12	10.3	1.36
PDWWF	27.9	3.22	16.9	2.23
PHWWF	36.0	4.19	20.4	2.69

It should be noted that the current plant data reflect a significantly lower flow contribution per EDU than the previously established unit flow factor of 190 gpd/EDU. Approximately 57,747 EDUs are tributary to DCWWTP for FY 19/20. Based on the current ADWF, the equivalent unit flow contribution is approximately 150 gpd/EDU. At PGWWTP, there are approximately 54,907 EDU tributary to the plant for FY19/20, which reflects a flow contribution of 138 gpd/EDU. This is likely the result of several factors, including water conservation efforts over the past decade, drought conditions that were experienced throughout California from 2011-2016, and lower levels of development than previously anticipated prior to the impacts of the recession in 2008-2009.

These flow contributions per EDU may rebound back to historical levels and, to provide a safety factor, the 190 gpd/EDU will continue to be used for this analysis. This unit flow factor should be tracked closely and, if warranted, the per EDU value adjusted accordingly over time.

4.2.2 Projected Plant Influent Flows

Future plant flows were projected over the planning horizon to fiscal year 2059-2060 (FY 59/60)¹ and to ultimate buildout conditions, based on the information provided in Chapter 2. ADWF projections at FY 59/60 and buildout are calculated by multiplying the EDU projection by the flow contribution per EDU. Peaking factors from **Table 4-1** were then applied to established ADWF per EDU based on current flows (138 gpd/EDU at PGWWTP and 150 gpd/EDU at DCWWTP) and added to ADWFs difference calculated from 190 gpd/EDU and current ADWF/EDU to project the additional flow conditions. This approach avoids using peaking factors on projected ADWF calculated from 190 gpd/EDU for a more realistic flow estimate. These flows are summarized in **Table 4-2** and **Table 4-3**.

Table 4-2: Projected FY 59/60 and Buildout EDUs and Flows at DCWWTP

Condition	DCWWTP			
	FY 59/60 EDU	FY 59/60 Flow, mgd	Buildout EDU	Buildout Flow, mgd
ADWF	87,772	16.7	96,000	18.2
AA	---	19.9	---	21.8
PMF	---	31.5	---	34.4
PDWWF	---	45.9	---	50.2
PHWWF	---	58.6	---	64.1

¹SPWA's fiscal year runs from July 1 to June 30.

Table 4-3: Projected FY 59/60 and Buildout EDUs and Flows at PGWWTP

Condition	PGWWTP			
	FY 59/60 EDU	FY 59/60 Flow, mgd	Buildout EDU	Buildout Flow, mgd
ADWF	92,864	17.6	145,000	27.6
AA	---	18.6	---	29.0
PMF	---	22.2	---	34.8
PDWWF	---	33.4	---	52.3
PHWWF	---	39.3	---	61.5

4.2.3 Current BOD Loadings

In previous studies, design parameters were established based on much lower influent BOD concentrations, ranging from 248 mg/L at DCWWTP to 285 mg/L at PGWWTP. The plant data set provided for this TM (which is an extended data set from 2013-2019) indicates an average influent BOD concentration of 425 mg/L at DCWWTP, and 358 mg/L at PGWWTP. The range in influent BOD concentrations at both plants are shown in Figure 4-3 and Figure 4-4.

Figure 4-3: Influent BOD Concentrations at DCWWTP

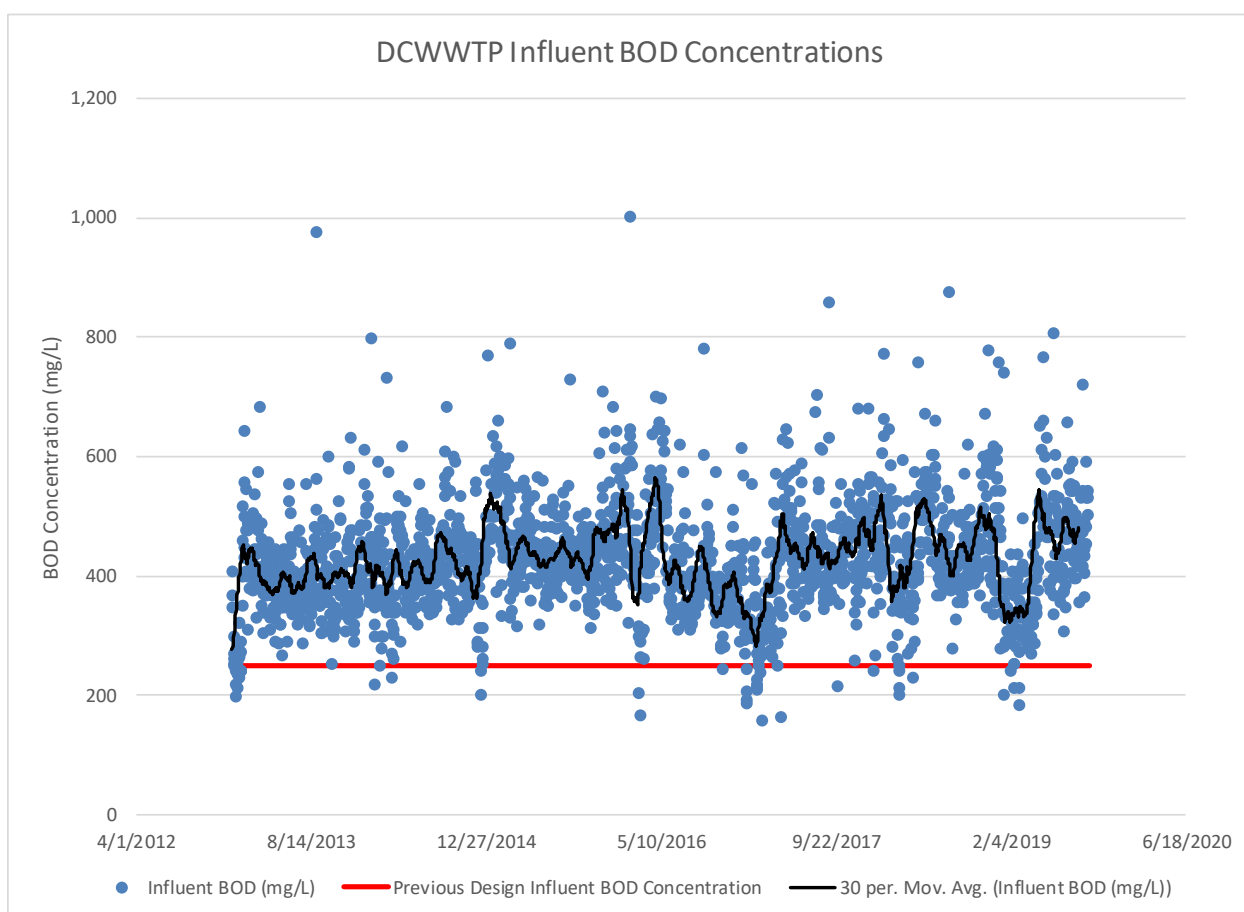
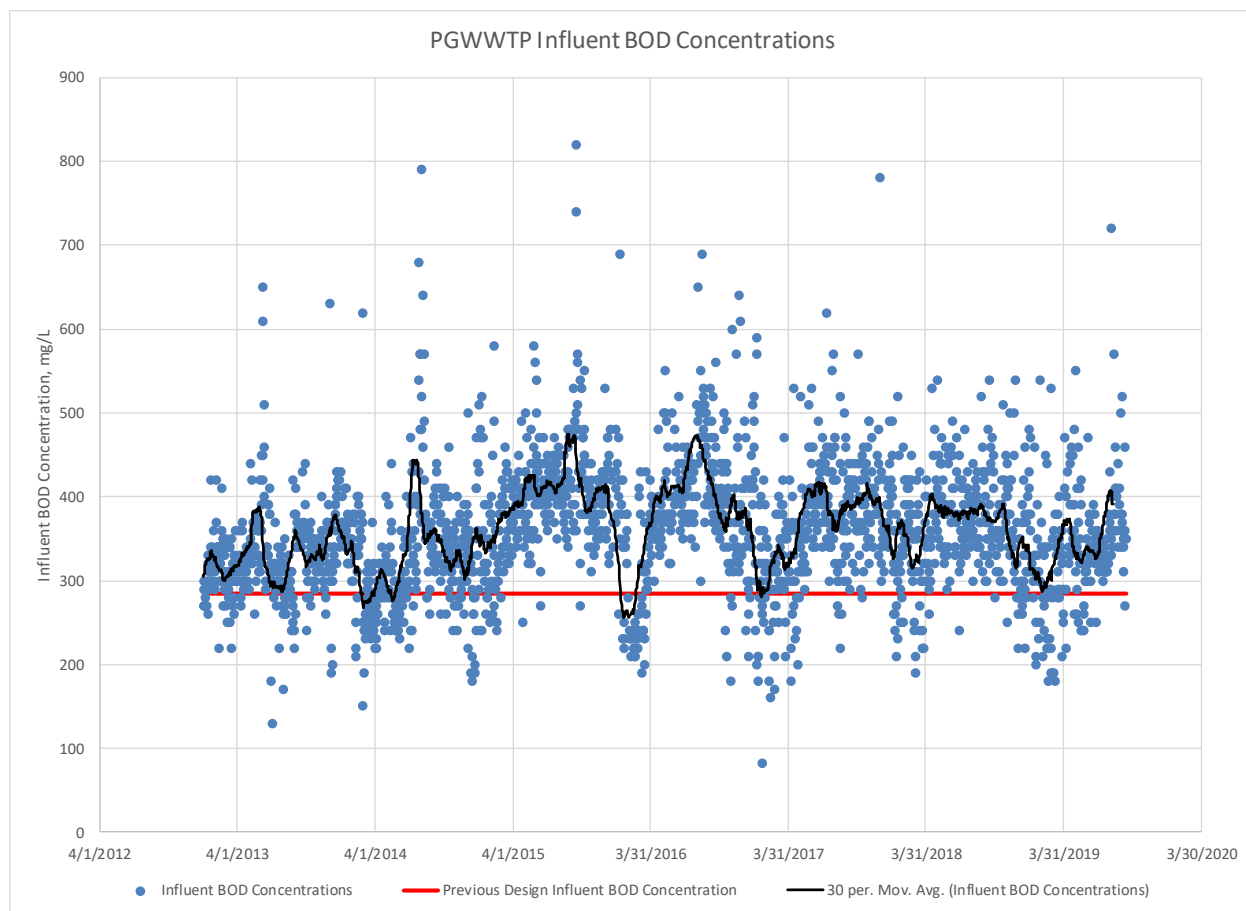


Figure 4-4: Influent BOD Concentrations at PGWWTP



These higher concentrations are likely a result of water conservation efforts over the past decade, combined with the drought conditions that were experienced throughout California from 2011-2016, though the relatively high concentrations at DCWWTP should be confirmed. The effect of conservation is on top of the demographic changes in the SPWA service area since the treatment plants were designed that brought much more commercial flows and loadings along with changing development patterns, such that the strength of the wastewater at both plants evolved from low strength domestic wastewater to moderate strength commercial wastewater, influenced by more food service, restaurant, brewery and other contributions.

A 30-day moving average of influent BOD concentrations is also shown on these figures. This moving average shows that current influent concentrations are now holding relatively constant, though they are higher than previous designs accounted for. This is an indication that influent BOD concentrations have now leveled off, however we recommend the SPWA monitor this parameter in the long term. When the State experiences another drought or there are changes to land use within the service area such as densification, influent loading concentrations may increase further.

4.2.4 Current and Projected Plant Influent Loadings

The January 1, 2013 through September 19, 2019 data set also included daily influent plant loadings for BOD, TSS, and NH₃. These data were analyzed to establish current annual average (AA) and maximum month (MM) pollutant loadings. Current MM loadings were established by taking the maximum value of a 30-day running average of the daily influent data provided. The peaking factors for each parameter were established by dividing the MM loading by the AA loading.

Projected loads, shown in **Table 4-4** and **Table 4-5**, were calculated by using the average loadings from the data set provided and establishing AA loading per EDU. Peaking factors were then applied to establish the FY 59/60 and buildout MM loads.

Table 4-4: Current and Projected Influent Loading at DCWWTP

Parameter	Condition	Unit	DCWWTP			
			Current	FY59/60	Buildout	Peaking Factor
BOD	Average Concentration	mg/L	425	---	---	---
	AA Loading	lbs/day	33,900	52,000	56,000	---
	MM Loading	lbs/day	47,600	73,000	79,000	1.41
TSS	Average Concentration	mg/L	540	---	---	---
	AA Loading	lbs/day	42,800	65,000	71,000	---
	MM Loading	lbs/day	60,800	92,000	101,000	1.42
NH ₃	Average Concentration	mg/L	23	---	---	---
	AA Loading	lbs/day	1,800	2,800	3,100	---
	MM Loading	lbs/day	2,500	4,000	4,200	1.35

Table 4-5: Current and Projected Influent Loading at PGWWTP

Parameter	Condition	Unit	PGWWTP			
			Current	FY59/60	Buildout	Peaking Factor
BOD	Average Concentration	mg/L	358	---	---	---
	AA Loading	lbs/day	22,400	38,000	60,000	---
	MM Loading	lbs/day	28,000	48,000	75,000	1.25
TSS	Average Concentration	mg/L	291	---	---	---
	AA Loading	lbs/day	18,100	31,000	48,000	---
	MM Loading	lbs/day	26,400	45,000	70,000	1.46
NH ₃	Average Concentration	mg/L	40	---	---	---
	AA Loading	lbs/day	2,400	4,100	6,400	---
	MM Loading	lbs/day	2,700	4,600	7,100	1.11

4.3 Plant Capacity Comparison and Expansion Phasing

This comparison of current plant capacity and projected future flows and loads accounts for only hydraulic and carbonaceous BOD treatment capacity because these parameters have driven capacity expansion timing in the past. Potential nutrient removal requirements have not been considered in expansion timing and phasing. Evaluation of plant capacity with respect to TSS and ammonia removal should be incorporated into a subsequent analysis of plant capacity. Existing plant capacity was provided in the following documents:

- South Placer Regional Wastewater and Recycled Water Systems Evaluation, RMC Water and Environment, December, 2009
- Technical Memorandum 4b: Wastewater Treatment Plants Expansion Requirements (TM 4b), RMC Water and Environment, March 28, 2006
- DCWWTP Initial Assessment Final Report, CH2M Hill, Inc, August 2008
- Final Pleasant Grove Wastewater Treatment Expansion Basis of Design Report, Kennedy/Jenks Consultants, March 2016
 - Executive Summary
 - Technical Memorandum No. 1: Influent Flow and Load Characteristics and Projections, Pleasant Grove Wastewater Treatment Plant

- City of Roseville, Dry Creek Wastewater Treatment Plant, Influent Pump Station Hydraulic Analysis, Waterworks Engineers, March 2018.

Current loading capacities at each plant based on these documents are summarized in Table 4-6.

Table 4-6: Current Hydraulic and Organic (BOD) Capacities at DCWWTP and PGWWTP

Plant	DCWWTP	PGWWTP	
	Existing	Existing	FY 22-23 ^a
ADWF Hydraulic Treatment Capacity, mgd	18 ^b	12 ^b	12 ^{a,c}
Biological Treatment Capacity, AA BOD Loading, lbs/day	26,200 ^d	22,000 ^b	34,500 ^c
Biological Treatment Capacity, MM BOD loading, lbs/day	32,500 ^d	N/A	40,100 ^c

Notes:

- Plant improvements that expand treatment capacity at PGWWTP are currently under construction and are expected to be in service by FY 22-23. Capacity comparisons in this TM take this into consideration.
- Permitted plant capacity and capacity documented in the South Placer Regional Wastewater and Recycled Water Systems Evaluation, RMC Water and Environment, December 2009.
- Source: Table 1.1, Technical Memorandum No. 1: Influent Flow and Load Characteristics and Projections. Final Pleasant Grove Wastewater Treatment Expansion Basis of Design Report, Kennedy/Jenks Consultants, March 2016
- Source: Table 5-1, DCWWTP Initial Assessment Final Report, CH2M Hill, Inc, August 2008

The plant data show that current BOD loadings are higher than the BOD treatment capacities estimated in the reference documents at both plants (marginally higher at Pleasant Grove). However, according to City staff, the plants have consistently been in compliance with their NPDES discharge permits. This suggests that the **actual** plant capacities are beyond their nominal design capacity with respect to BOD. Additionally, it is unclear to what extent interim improvements such as the Nitrate Reduction Improvements project at DCWWTP have affected the plant capacity. For the purposes of this TM, it is assumed that the AA and MM BOD removal capacity at each plant are, at minimum, the same as their current BOD loadings. **Table 4-7** shows the revised treatment capacities based on current AA and MM BOD loadings. It is recommended that process-specific sampling, process modeling, and, if needed, stress testing be performed to determine the actual plant capacity, the limiting processes, and corresponding process improvements needed at each plant. While this evaluation will be immediately helpful at Pleasant Grove, it is essential at Dry Creek because of the large discrepancy between current loading and nominal capacity.

Table 4-7: Revised Current Hydraulic and Organic (BOD) Capacities at DCWWTP and PGWWTP

Plant	DCWWTP	PGWWTP	
		Existing	FY 22-23 ^a
ADWF Hydraulic Treatment Capacity, mgd	18 ^b	12 ^b	12 ^{a,c}
Biological Treatment Capacity AA BOD Loading, lbs/day	33,900 ^d	22,400 ^d	34,500 ^c
Biological Treatment Capacity, MM BOD Loading, lbs/day	48,000 ^d	28,000 ^d	40,100 ^c

Notes:

- Plant improvements that expand treatment capacity at PGWWTP are currently under construction and are expected to be in service by FY 22-23. Capacity comparisons in this TM take this into consideration.
- Permitted plant capacity and capacity documented in the South Placer Regional Wastewater and Recycled Water Systems Evaluation, RMC Water and Environment, December, 2009.
- Source: Table 1.1, Technical Memorandum No. 1: Influent Flow and Load Characteristics and Projections. Final Pleasant Grove Wastewater Treatment Expansion Basis of Design Report, Kennedy/Jenks Consultants, March 2016
- Current BOD loadings based on plant data from January 2013 through September 2019.

4.3.1 Dry Creek Wastewater Treatment Plant

This section discusses the hydraulic and biological capacity of the DCWWTP and preliminary phasing of future improvements. Based on the estimated plant capacity and projected flow and loading requirements, two phases of improvements are recommended.

4.3.1.1 Hydraulic Capacity and Phasing

Based on the projected ADFW of 16.7 for FY 59/60 and 18.2 mgd for buildout, the current DCWWTP ADFW hydraulic capacity of 18 mgd is effectively sufficient through buildout. **Figure 4-5** shows ADFW capacity plotted against the flow projected over the planning period. **Figure 4-5** also presents graphs for ADFW and PDWWF rebound based on a linear interpolation from 150 gpd/EDU calculated based on current flows in FY 19/20 to a potential flow factor of 190 gpd/EDU in FY 59/60. This is not to say that all unit processes are sufficient to handle future peak flows associated with wet weather; assuming peaking factors hold steady over time, or increase, unit processes based upon flow criteria (as opposed to loading) will need to be expanded as presented below.

4.3.1.2 Biological Capacity and Phasing

Preliminary biological capacity improvements for DCWWTP have been identified, which should be confirmed and refined when additional capacity testing has been completed. Based on **Table 4-7**, DCWWTP is currently running at or beyond its nominal design capacity with respect to BOD loading. It is recommended that SPWA implement Phase 1 expansion in approximately FY 24/25 which is the earliest practical time frame it could be implemented considering planning, design, and construction duration. The plant will reach 94% of the expanded Phase 1 AA and MM BOD loading capacity in FY 39/40. Therefore, it is recommended to implement Phase 2 biological improvements at this time concurrent with necessary wet weather hydraulic improvements. Phase 2 improvements in FY 39/40 are recommended to bring the plant BOD loading capacity to its buildout AA and MM projections of 56,000 and 79,000 lbs/day, respectively. **Figure 4-6** shows AA and MM biological treatment capacities plotted against the loadings projected over the planning period and the anticipated phasing. As discussed in Chapter 5, the timing and size of the recommended projects should be reviewed after additional capacity analysis and facility planning is completed.

4.3.2 Pleasant Grove Wastewater Treatment Plant

This section discusses the hydraulic and biological capacity of the PGWWTP and the recommended phasing of future improvements. This phasing includes improvements that are currently under design and are expected to be in service by FY 22-23. Based on the estimated plant capacity and projected flow and loading requirements, two phases of improvements beyond the FY 22-23 project are recommended.

4.3.2.1 Hydraulic Capacity and Phasing

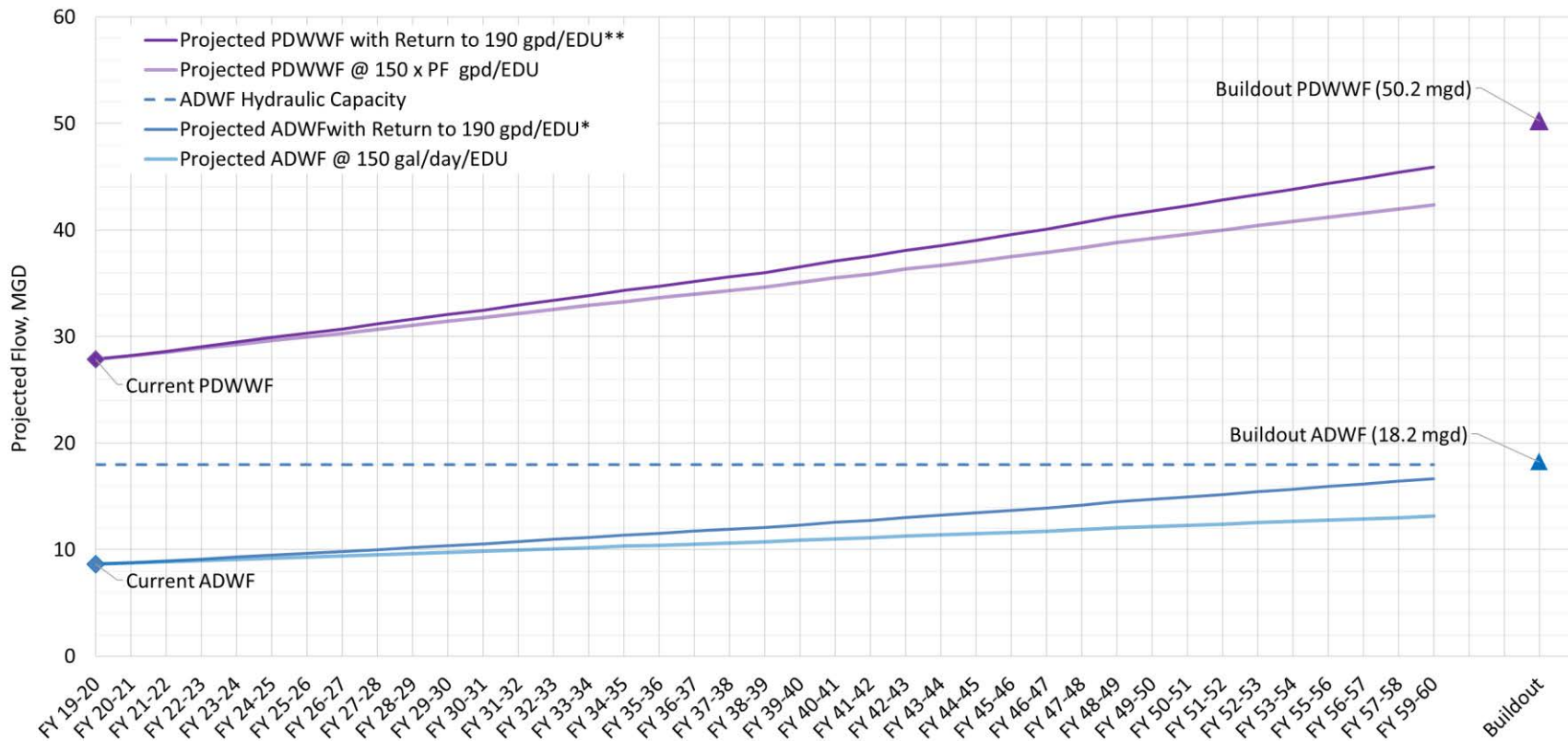
Although the PGWWTP hydraulic capacity is 12 mgd, based on the references above, the current ADFW treatment capacity at the PGWWTP is rated at 9.5 mgd. The improvements currently under construction will expand PGWWTP's treatment capacity to its hydraulic capacity rating of 12 mgd. Based on the ADFW projections calculated from a linear interpolation between current flow of 138 gpd/EDU and historic 190 gpd/EDU flow contribution, this capacity expansion should be sufficient to handle flows through approximately FY 28-29, though timing would depend on the rate of any rebound in sewer flows. It is currently recommended that Phase 1 hydraulic expansion be implemented in FY 28-29 to expand the plant ADFW to 15 mgd. Phase 1 expansion would carry the PGWWTP through FY 40-41. At that point, Phase 2 improvements may be needed to increase the plant ADFW capacity to FY 59/60 flow projections of 18 mgd. **Figure 4-7** shows ADFW plotted against the flow projected over the planning period and the anticipated phasing for improvements. **Figure 4-7** presents graphs for ADFW and PDWWF rebound based on linear interpolation from 138 gpd/EDU calculated based on current flows in FY 19/20 to a potential flow factor of 190 gpd/EDU in FY 59/60. As discussed in Chapter 5, the timing and size of the recommended projects should be reviewed after additional facility planning is completed and the gpd/EDU assumption is confirmed.

4.3.2.2 Biological Capacity and Phasing

Based on Table 4-7, PGWWTP is currently running at or beyond its nominal design capacity with respect to BOD loading. The improvements currently under design will expand the plant's AA and MM BOD loading capacities to 34,500 lbs/day and 40,100 lbs/day. These improvements should be sufficient to meet projected BOD loadings through FY 40/41 when Phase 2 hydraulic capacity improvements are recommended. During Phase 2 expansion, it is recommended that plant capacity be increased to accommodate projected FY59/60 AA and MM BOD loadings of 38,000 lbs/day and 48,000 lbs/day, respectively. The timing and magnitude of additional expansion to accommodate buildout will be determined in subsequent planning documents.

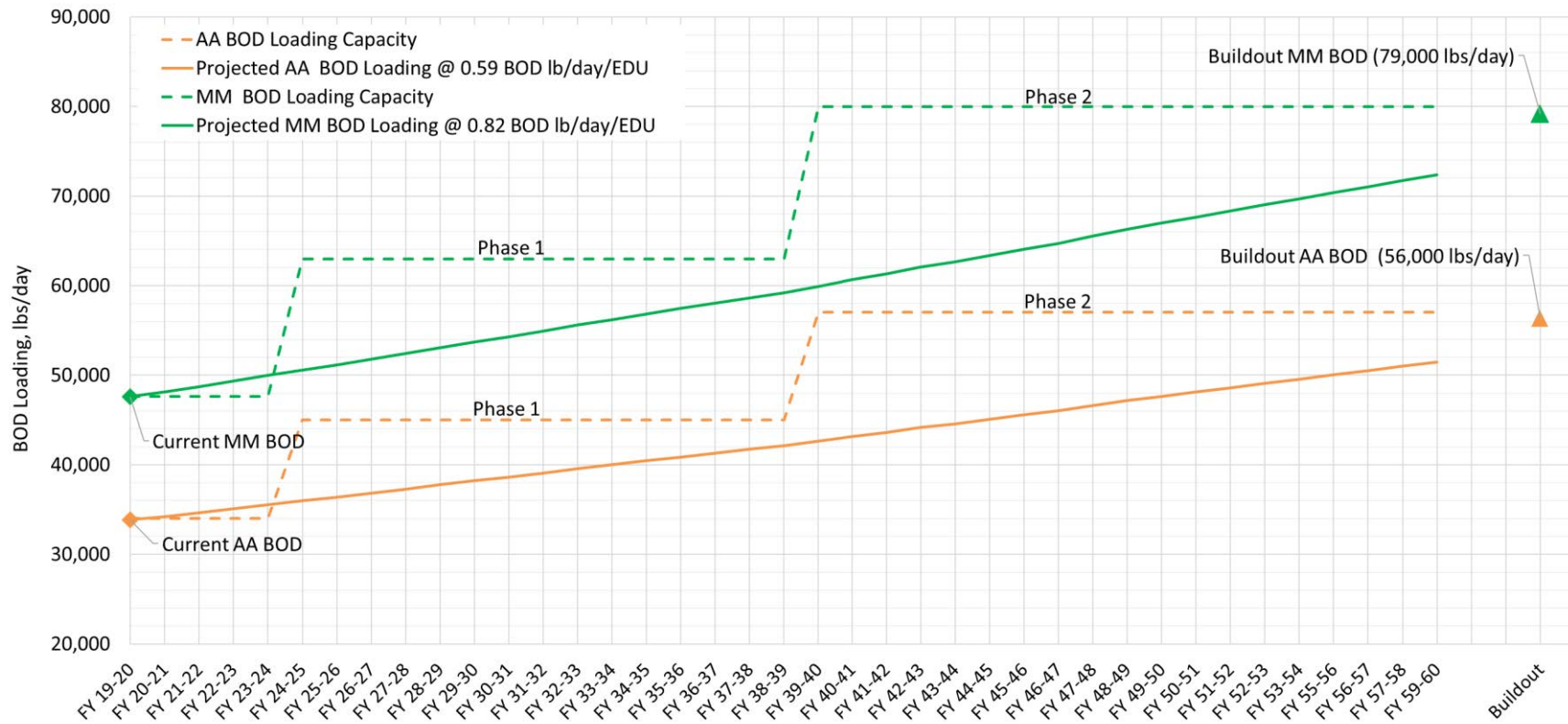
Figure 4-8 shows AA and MM biological treatment capacities plotted against the loadings projected over the planning period and the anticipated phasing.

Figure 4-5: DCWWTP Hydraulic Capacity Comparison



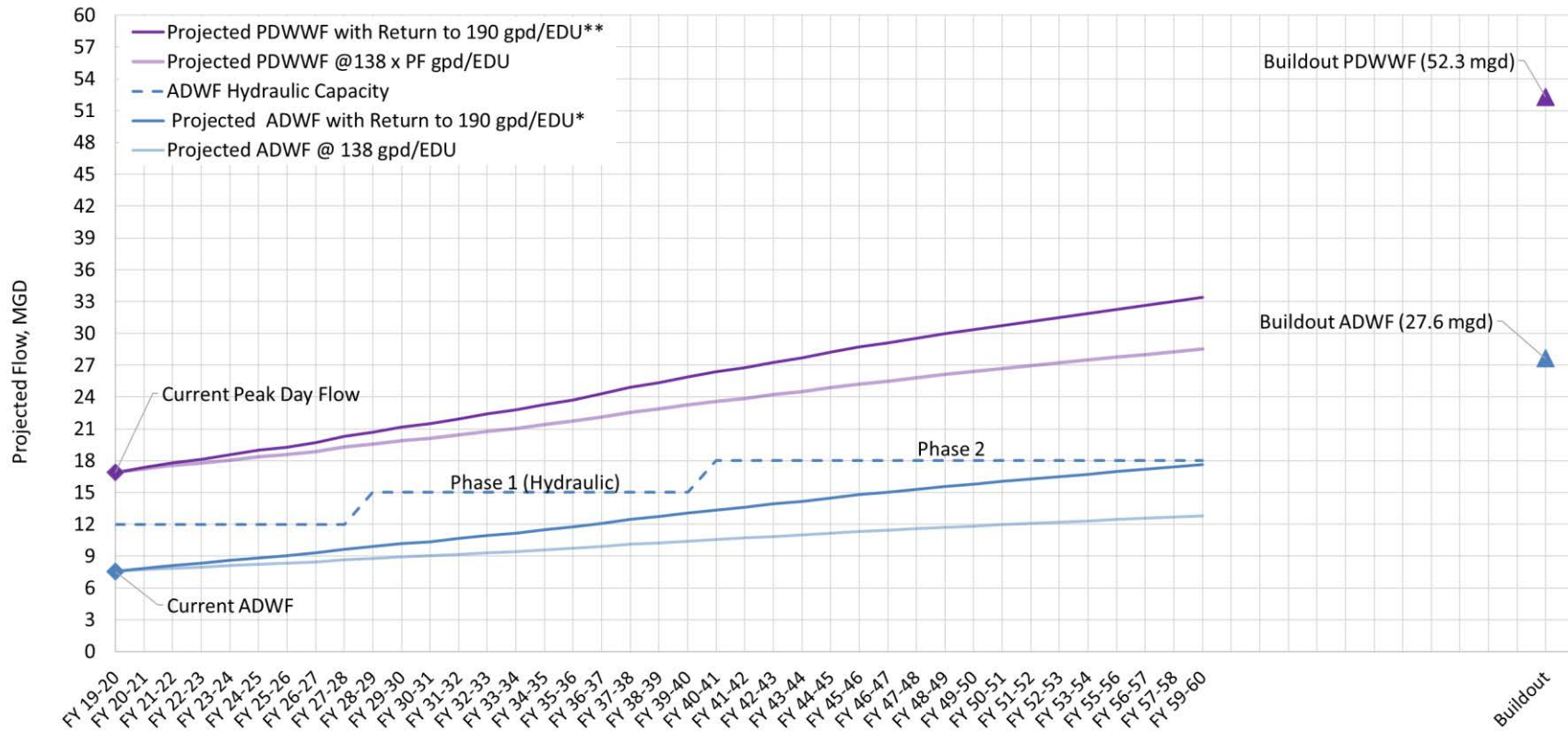
* ADWF gpd/EDU flow factor is assumed to reach 190 gpd/EDU by FY 59/60, with a linear increase from 150 gpd/EDU at FY 19/20
 **PDWWF is assumed to be ADWF flow plus 330 gpd/EDU of wet weather flow, based on current wet weather flowrates
 *** Buildout date is currently unknown and is shown for graphical purposes only.

Figure 4-6: DCWWTP Biological Capacity Comparison



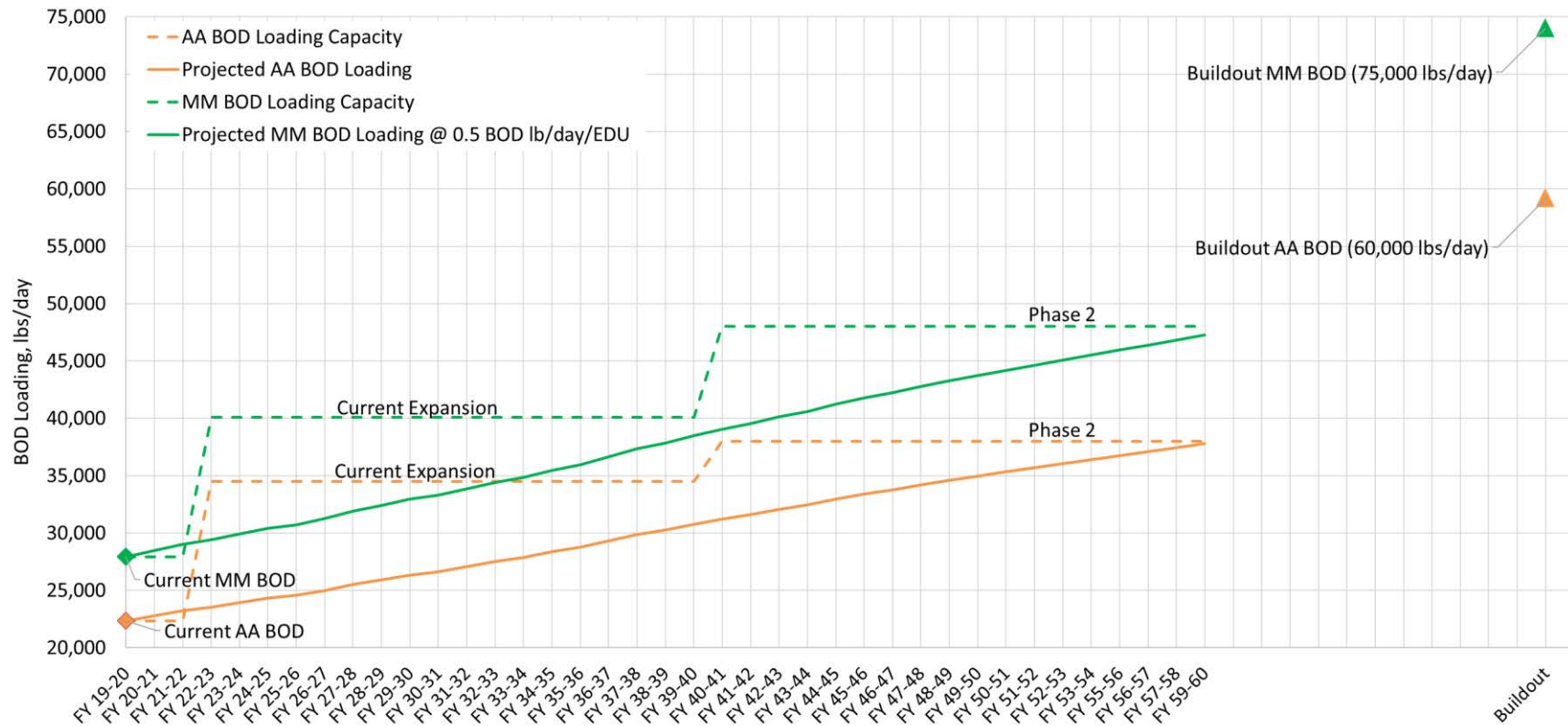
* Buildout date is currently unknown and is shown for graphical purposes only.

Figure 4-7: PGWWTP Hydraulic Capacity Comparison



* ADFW GPD/EDU factor is assumed to reach 190 gpd/EDU by FY 59/60, with a linear increase from 138 gpd/EDU at FY 19/20
 **PDWWF is assumed to be ADFW flow plus 170 gpd/EDU of wet weather flow, based on current wet weather flowrates
 *** Buildout date is currently unknown and is shown for graphical purposes only.

Figure 4-8: PGWWTP Biological Capacity Comparison



* Buildout date is currently unknown and is shown for graphical purposes only.

4.4 Conceptual Capital Cost Estimates

Opinions of probable cost were developed for the recommendations of this TM and are presented in this section. This section also provides the procedures and methodology used for developing planning-level capital cost estimates for PGWWTP and DCWWTP phased improvement projects. Note that improvements that would be required after the FY 59/60 planning horizon have not been estimated.

4.4.1 Cost Estimation Approach

This section describes the assumptions and procedures used to develop cost estimates for phased improvements at PGWWTP and DCWWTP. The cost estimates provided in this TM include improvements that would increase the plant capacity to treat the projected flows and loadings but does not include repair and replacement (R&R) projects or discretionary projects such as resource recovery improvements.

The estimated construction costs are based on a Class 5 estimate as defined by the Association for the Advancement of Cost Engineering (AACE) International cost estimate classification system. **Table 4-8** provides a summary of the estimate classes and expected accuracy range. For Class 5 estimates, the expected accuracy range is -20% to -50% on the low end and +30% to +100% on the high end.

Table 4-8: Cost Estimate Classification Matrix (AACE International)

Estimate Class	Level of Project Definition	Purpose of Estimate	Methodology	Expected Accuracy Range
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgement, or analogy	Low: -20% to -50% High: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	Low: -15% to -30% High: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	Low: -10% to -20% High: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	Low: -5% to -15% High: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-cost	Low: -3% to -10% High: +3% to +15%

Source: AACE International Recommended Practice No. 18R-97

Construction costs were developed based on the improvements and unit costs provided in the prior planning documents listed below:

- Technical Memorandum 4b: Wastewater Treatment Plants Expansion Requirements, RMC Water and Environment, March 28, 2006 (TM 4b).
- DCWWTP Initial Assessment Final Report, CH2M Hill, Inc, August 2008 (CH2M Hill, 2008)
- Final Pleasant Grove Wastewater Treatment Expansion Basis of Design Report, Kennedy/Jenks Consultants, March 2016

Raw construction costs are estimated for each component based on estimated unit costs multiplied by quantity.

Construction cost factors were used to develop and escalate unit costs to reflect the current bid environment, industry trends, and project location as well as plant capacity increase. These factors are incorporated into the unit costs and are represented in two categories:

- **Engineering News Record’s (ENR) Construction Cost Index (CCI)** – All project construction cost estimates are indexed to an ENR CCI of 12115 which represents the average of the April 2020 indices for San Francisco (SF) ENR and the “20-Cities” ENR, to account for the greater Sacramento area construction market.
- **Capacity Adjustment Factor** – The number of units listed in TM 4b were associated with different capacity increases than required in proposed improvement phasing in this Systems Evaluation. Proportional adjustment factors were used to account for these capacity increase differences. Further discussion is provided below.

Based on the level of detail available for Class 5 estimates, allowances are used for some of the direct construction elements including the site electrical, and instrumentation and control (I&C), site yard piping and mechanical, and site civil work estimates (i.e. direct construction costs). Allowance estimates are made using the percentages listed in **Table 4-9**.

Table 4-9: Direct Construction Cost Allowances

Construction Cost Allowance Types	Percent
Site Yard Piping & Mechanical	5%
Site Electrical / I&C/SCADA	15%
Site Civil	5%

From the direct construction cost subtotal, indirect construction cost factors are applied to develop an estimated total construction cost. These construction cost markups include the following:

- **Overhead and Profit** – Contractor overhead and profit (O&P) represents the general contractor’s operating costs and estimated profit levels. The O&P factor typically varies between 10% and 25% of the direct construction cost subtotal, depending on the size of the project and market conditions, with larger projects typically having lower O&P factors. For this Systems Evaluation, an O&P factor of 20% was used.
- **Estimating Contingency** – The estimating contingency is defined as unknown costs due to lack of detailed engineering during the planning phase that are estimated as a percentage of defined project costs (i.e. direct and indirect construction cost subtotal). For this Systems Evaluation, a contingency factor of 30% was used since the projects are at conceptual planning level.

The estimated total construction cost is then multiplied by an allowance of 25% for Engineering, Permitting, Construction Management, and Engineering Services during Construction.

4.4.2 Dry Creek WWTP Cost Estimates

The proposed Phase 1 and 2 improvements and process unit cost estimates in TM 4b were used as the basis of the cost estimate. Several revisions and updates were made to the TM 4b improvements to develop the new phased improvements list and cost estimates in this Systems Evaluation, including the following:

- **Influent Pump Station** – Several improvements have been completed at East Roseville influent pump station including installation of new pumps and emergency generator, demolition of the old East Roseville Pump Station and Pump Station Annex, and replacement of PLCs. Therefore, TM 4b Phase 1 improvements were updated to remove the influent pump installation.
- **Influent Coarse Screen** – The existing two coarse screens have a PHWWF capacity of 30 mgd each. The existing screens provide sufficient capacity through buildout with project PHWWF of 54.7 mgd with two screens in service and using the existing bypass channel in the event that one of the screens is out of service. Therefore, it is recommended that a third screen be installed in Phase 2.
- **Aeration Tanks** – TM 4b proposed installation of ten new aeration tanks including replacement of four of the exiting smaller size aeration tanks constructed in 1974 with larger tanks (same size as tanks constructed in 1991) in Phase 1. The CH2M Hill, 2008 report evaluation indicated existing aeration basin volumes were sufficient for Phase 1 improvements which assumed a projected AA BOD loading capacity about the same as the current plant loading and recommended providing additional aeration and mixed liquor recycle (MLR) pumping capacity. New MLR pumps were installed at the plant per the Nitrate Removal Project Basis of Design Report (B&C, 2017). A rough evaluation of the aeration tank sizes indicated that replacement of two aeration tanks and construction of two new ones (total of four) in Phase 1 and replacement of the remaining 2 aeration tanks and construction of 4 new ones in Phase 2 (total of six) would provide sufficient capacity at each of the 2 phases.
- **Capacity Increase Adjustment Factor** – Biological treatment capacity increases for AA BOD loading were used to calculate the DCWWTP adjustment factor. The Adjustment Factor was obtained from the ratio between incremental capacity increases proposed in TM 4b and in this TM.

BOD loading increase in Phase 1 based on TM 4b was 10,500 lb/day and the required capacity increase per this TM is 11,100. An adjustment factor of 1.06 was calculated and applied to the number of units.

BOD loading increase in Phase 2 based on TM 4b was 13,700 lb/day and the required capacity increase per this TM is 12,000 lb/day. An adjustment factor of 0.88 was calculated and applied to the number of units.

The preliminary phased improvements are provided in **Table 4-10**. The listed improvements increase the plant ADWF capacity based on AA BOD loading from 11.5 mgd to 14.5 mgd in Phase 1 and to 18 mgd in Phase 2. It should be emphasized that the cost estimates provided below are conceptual level costs for capacity expansion projects and do not include rehabilitation and replacement projects or discretionary projects. More detailed cost estimating should be developed when the plant capacity is determined, and phased improvement projects are updated accordingly.

Table 4-10: DCWWTP Phase 1 and Phase 2 Capital Cost Estimates (ENR CCI: 12115)^a

Process	Process Unit Cost	Phase 1	Phase 2
		FY 24/25	FY 39/40
		# of units	# of units
Coarse Screens	\$280,000	-	1
Influent Pump Station	\$2,000,000	-	1
Fine Screens	\$170,000	2	1
Odor Control	\$210,000	1	1
Grit Basins	\$290,000	-	1
Primary Sedimentation	\$3,400,000	-	2
Aeration Basins	\$2,600,000	4	6
Blower	\$290,000	1	-
Mixed Liquor Return Pumps	\$150,000	4	6
Rehab Existing Anoxic Zones	\$290,000	1	
Secondary Clarifiers	\$4,100,000	4	2
RAS/WAS Pump Station	\$860,000	1	1
Tertiary Filtration	\$730,000		2
Waste Backwash Pumps	\$100,000		1
UV Disinfection	\$2,100,000		1
Anaerobic Digesters	\$3,300,000	1	1
Centrifuges	\$650,000	2	
Cooling Units	\$290,000		2
Total Unit Process Costs		\$34,000,000	\$43,000,000
Site Yard Piping & Mechanical (5%)		\$1,700,000	\$2,200,000
Site Electrical / I&C/SCADA (15%)		\$5,100,000	\$6,500,000
Site Civil (5%)		\$1,700,000	\$2,200,000
Subtotal of Direct Construction Costs		\$43,000,000	\$54,000,000
Mobilization/Demobilization (5%)		\$2,200,000	\$2,700,000
Contractor Overhead & Profit (20%)		\$8,600,000	\$10,800,000
Subtotal of Direct and Indirect Costs		\$54,000,000	\$68,000,000
Contingency (30%)		\$16,000,000	\$20,000,000
Total Estimated Construction Cost		\$70,000,000	\$88,000,000
Engineering, Permitting, CM, ESDC (25%)		\$18,000,000	\$22,000,000
Total Estimated Capital Cost		\$88,000,000	\$110,000,000

Notes:

- a. Costs based on Average of SF and "20 Cities" ENR for April 2020: 12115

4.4.3 PGWWTP Cost Estimates

The proposed Phase 1 and 2 improvements and cost estimates in TM 4b were used as the basis of the cost estimate. Several revisions and updates were implemented on these proposed improvements for Phase 1 and Phase 2 to develop the new phased improvements cost estimates, including the following:

- **Current Expansion** – As described in 1.2, several improvements are currently being constructed at PGWWTP per the Pleasant Grove Wastewater Treatment Plant Expansion BODR (Kennedy/Jenks, 2016). Therefore, TM 4b Phase 1 improvements were updated by removing the current expansion projects from Phase 1 scope, including the following:
 - Installation of four new primary sedimentation basins
 - Installation of 1 odor control system
 - Installation of 2 new solid thickening systems and building
 - Installation of 2 new digesters and building
 - Installation of 1 new co-generation system
- **Hydraulic Capacity Increase** – Proposed Phase 1 improvements in this TM are to increase PGWWTP peak day hydraulic capacity. Therefore, proposed projects in Phase 1 improvements in TM 4b were revised to include only improvements to unit process that increase the plant hydraulic capacity and the remaining projects associated with BOD removal capacity including installation of one digester and one oxidation ditch, and construction of associated buildings were moved to Phase 2 improvements .
- **Capacity Increase Adjustment Factor** – For Phase 1, since only hydraulic capacity increase is required, an Adjustment Factor was obtained from the ratio between the hydraulic capacity increase in TM 4b and in this TM. Both TMs propose 3 mgd hydraulic capacity increases in Phase 1, therefore the adjustment factor of 1 was multiplied by the number of units proposed in TM 4b.

For Phase 2, biological treatment capacity increases for AA BOD loading were used. The Phase 2 BOD loading capacity increase in TM 4b was 21,000 lb/day and the proposed capacity increase in this TM is 3,500 lb/day. An adjustment Factor of 0.17 was calculated from TM 4b and proposed capacity increase ratio and was multiplied by the number of units proposed in TM 4b.

An adjustment factor was not applied to building modifications.

The updated opinion of probable cost for the phased improvements is provided in **Table 4-11**. The recommended phased improvements increase the plant ADWF capacity from 12 mgd to 15 mgd in Phase 1 and from 15 mgd to 18 mgd in Phase 2. It should be emphasized that the cost estimates provided below are conceptual level costs for capacity expansion projects and do not include rehabilitation and replacement projects or discretionary projects. More detailed cost estimating should be developed when the plant capacity is determined, and phased improvement projects are updated accordingly.

Table 4-11: PGWWTP Phase 1 and Phase 2 Capital Cost Estimates (ENR CCI: 12115)^a

Process	Process Unit Cost	Phase 1	Phase 2
		FY 28/29	FY 39/40
		# of units	# of units
Influent Pumps	\$120,000	1	-
Grit Basins	\$290,000	1	-
Fine Screens	\$170,000	2	-
Primary Sedimentation	\$3,400,000	-	1
Oxidation Ditches	\$7,100,000	-	1
Secondary Clarifiers	\$4,100,000	1	1
RAS/WAS Pump Station	\$860,000	1	-
Tertiary Filtration	\$730,000	2	1
UV Disinfection	\$2,100,000	3	-
Thickeners Building Modification	\$490,000	-	1
Digesters Building Modification	\$490,000	-	1
Total		\$13,000,000	\$16,000,000
Site Yard Piping & Mechanical (5%)		\$650,000	\$800,000
Site Electrical / I&C/SCADA (15%)		\$2,000,000	\$2,400,000
Site Civil (5%)		\$650,000	\$800,000
Subtotal of Direct Costs		\$16,000,000	\$20,000,000
Mobilization/Demobilization (5%)		\$800,000	\$1,000,000
Contractor Overhead & Profit (20%)		\$3,200,000	\$4,000,000
Subtotal of Direct and Indirect Costs		\$20,000,000	\$25,000,000
Contingency (30%)		\$6,000,000	\$7,500,000
Total Estimated Construction Cost		\$26,000,000	\$33,000,000
Engineering, Permitting, CM, ESDC (25%)		\$6,500,000	\$8,300,000
Total Estimated Capital Cost		\$33,000,000	\$41,000,000

Notes:

- a. Costs based on Average of SF and "20 Cities" ENR for April 2020: 12115

5. CAPACITY IMPROVEMENT PROJECT SUMMARY & NEXT STEPS

Table 5-1 summarizes the capacity improvements identified in this systems evaluation. Note that the improvement needs projected for Dry Creek and Pleasant Grove WWTPs are significantly larger and more expensive than the improvement projects projected for the collection system, but are based on limited available data. The estimated costs for Dry Creek WWTP are especially high because of the size and age of that plant; when it was designed, the organic loading in Roseville was far lower than when Pleasant Grove was designed; since the mid 2000's organic loading to both plants has continued to increase. Further studies, as described in Chapter 4, should be undertaken for both treatment plants, and the capacity improvement projects should be refined based on those findings.

Note that only capacity improvement projects have been identified; condition and reliability related improvement needs have not been evaluated in this study.

Table 5-1: Proposed Capacity Improvement Projects

		Existing	FY 24/25	FY 39/40	After FY 59/60
Collection System	Description	Improvement Project 1 (Increased Capacity of PS 26 and sewers on Sierra College Blvd)	None	None	Improvement Project 2 (Redirect flows from PS 26 and Sierra College Blvd down Eureka Road) Improvement Project 3 (Increased Firm capacity of PS 25 with diversion structure improvements)
	Estimated Capital Cost	\$1,610,000	-	-	\$2,590,000
Dry Creek WWTP	Description	Plant Capacity Analysis, Condition Assessment, and Facilities Plan	Phase 1 (Increase AA BOD Capacity to ~45,000 lbs/day)	Phase 2 (Increase AA BOD Capacity to ~57,000 lbs/day)	Phase 3: Increase BOD Capacity and Hydraulic Capacity (not estimated)
	Estimated Capital Cost	\$550,000	\$88,000,000	\$110,000,000	Not Estimated
Pleasant Grove WWTP	Description	Plant Capacity Analysis, Condition Assessment, and Facilities Plan	Increase ADWF hydraulic capacity to 15 mgd	Increase ADWF hydraulic capacity to 18 mgd. Increase AA BOD Loading Capacity to 38,000 lbs/day	Phase 3: Increase BOD Capacity and Hydraulic Capacity (not estimated)
	Estimated Capital Cost	\$450,000	\$33,000,000	\$41,000,000	Not Estimated

5.1 Next Steps

Based on the findings of this preliminary evaluation, and discussions with the project team, the following next steps are recommended for consideration by SPWA:

- Conduct an analysis of process performance and current biological treatment and hydraulic capacity at both DCWWTP and PGWWTP. This will likely require process-specific sampling and development of calibrated process models. Biological treatment capacity should consider both BOD and nitrate plus nitrite permit limitations set forth within each plant's respective NPDES permit. Results of this study should determine a capacity rating for each unit process at the plant and the limiting processes. This analysis will provide a sound basis for the planning of new facilities and is integral to determining required future capital improvement projects during phased expansions. It is recommended that DCWWTP capacity analysis take precedence over PGWWTP considering DCWWTP is currently operating well beyond its nominal BOD removal capacity.
- Review previous condition assessment work conducted on the plant assets and perform additional assessment needed to identify and prioritize repair and replacement (R&R) projects. This effort would include a risk assessment to identify likelihood of failure and criticality of each asset. Results of this study would identify R&R projects which may need to be implemented prior to or concurrent with phased expansions.
- Based on the capacity analysis and R&R project planning, develop Facilities Plans for DCWWTP and PGWWTP. Considering both plants are running at or above their nominal design capacities, it is recommended that facilities planning begin immediately after the capacity analysis. This effort would evaluate various process optimization steps and upgrade alternatives and provide recommended improvements for phased expansions. The Facilities Plans would include review of the 190 gpd/EDU flow factor that is critical to the timing and magnitude of any hydraulic capacity improvements.
- Develop Class 4 cost estimates for recommended improvements at the WWTPs under each expansion phase and for R&R projects to assist SPWA partners in assessing capital needs in the future.
- For the collection system, periodically update the model network based on any configuration changes, perform re-calibration to confirm the actual and anticipated flows, and to update future loads into the model network. An update frequency of every 5-10 years is recommended, depending on changes in development planning and/or system configuration.

We also recommend that SPWA evaluate funding and financing options to support implementation of the recommended capital improvements, especially Phase 1 at Dry Creek, given its size and relative immediacy. With the implementation of the steps above, and the ongoing high level performance of the SPWA Regional System, SPWA will be able to continue its excellent level of service to the Regional Partners.

APPENDIX A – PLACER COUNTY GENERAL PLAN DENSITIES

General Plan Designation	Maximum Density (EDU/Acre)	Diurnal Profile
Commercial	21	Commercial
Greenbelt & Open Space	0	Residential
High Density Residential 4 - 10 DU/Ac.	10	Residential
Industrial	4.356	Commercial
Low Density Residential 0.4 - 0.9 Ac. M	2.5	Residential
Low Density Residential 1 - 2 DU./Ac.	2	Residential
Low Density Residential Density Transf	2.5	Residential
Low Density Residential Development	2	Residential
Medium Density Residential 2 - 4 DU/A	4	Residential
Open Space	0	Residential
Professional Office	4.356	Commercial
Public Facility	0	Commercial
Rural Estate 4.6 - 20 Ac. Min.	0.21739	Residential
Rural Low Density Residential 0.9 - 2.3	1.11	Residential
Rural Low Density Residential 0.9 - 2.3	1.11	Residential
Rural Low Density Residential 0.9 - 2.3	1.11	Residential
Rural Low Density Residential 0.9 - 2.3	1.39	Residential
Rural Low Density Residential 1 - 2.3 Ac	1	Residential
Rural Residential 2.3 - 4.6 Ac. Min.	0.43478	Residential
Public Facility/Agricultural 80 Ac. Min.	0	Residential
Low Density Residential 0.4 - 2.3 Ac. M	1.11	Residential
Riparian Drainage	0	Residential
Agriculture/Timberland - 20 Ac. Min.	0	Residential
Rural Residential 1 - 10 Ac. Min.	1	Residential

APPENDIX B – URBAN GROWTH AREA LAND USE SUMMARIES

PLACER COUNTY URBAN GROWTH AREAS

Placer Ranch UGA^a

Land Use	Flow Factor	Land Use Quantities		
		Western Shed	Central Shed	Eastern Shed
Single Family Residential (Units)	190 gpd/DU	2,244	1,254	320
Multi Family Residential (Units)	130 gpd/DU	397	782	831
Mixed Use (acres)	2,300 gpd/ac	-	33.8	15.1
Commercial (acres)	850 gpd/ac	73.2	309.9	38.0
Parks > 10 acres (acres)	10 gpd/ac	37.8	17.1	-
Public/Quasi-Public (acres)	660 gpd/ac	0.8	0.8	3.9
Schools (acres)	170 gpd/ac	32.0	-	-
Total ADWF (mgd)		0.55	1.95	0.24

Footnotes:

- See Exhibit D of the Placer Ranch Sewer Master Plan (Mackay & Soms, 2017). Approximately 1,300 acres in the Sunset Industrial Area outside of Placer Ranch are anticipated to drain through Placer Ranch sewers, when fully developed.

Sunset Industrial Area^a

Land Use	Flow Factor	Land Use Quantities			
		PR-POC 1	PR-POC 2	Existing POC 1	Existing POC 2
Single Family Residential (Units)	190 gpd/DU	2,361	297	0	0
Multi Family Residential (Units)	130 gpd/DU	0	0	0	0
Mixed Use (acres)	2,300 gpd/ac	257	161	0	0
Commercial/Industrial (acres)	850 gpd/ac	1,287	85	531	277
Parks > 10 acres (acres)	10 gpd/ac	0	0	0	0
Public/Quasi-Public (acres)	660 gpd/ac	0	0	0	0
Schools (acres)	170 gpd/ac	0	0	0	0
Point Sources ^d	gpd	480,000	0	0	0
Total ADWF (mgd)		2.61	0.50	0.45	0.24

Footnotes:

- Sunset Area Water, Wastewater, and Recycled Water Technical Report (Psomas, October 2017)
- Includes low density residential and medium density residential units.
- Approximately 1,300 acres in the Sunset Industrial Area outside of Placer Ranch are anticipated to drain through Placer Ranch sewers, when fully developed.
- Includes Thunder Valley Casino and Area L270 (County area east of the Sunset Area proposed to drain through the Sunset Area)

Placer Vineyards^a

Land Use	Flow Factor	Land Use Quantities		
		Shed A1	Shed A2	Shed B
Single Family Residential (Units)	190 gpd/DU	1,723	7,051	1,951
Multi Family Residential (Units)	130 gpd/DU	0	2,822	270
Mixed Use (acres)	2,300 gpd/ac	0	50.5	0
Commercial/ Industrial (acres)	850 gpd/ac	0	234.2	25.0
Parks > 10 acres (acres)	10 gpd/ac	0	30	12.0
Public/Quasi-Public (acres)	660 gpd/ac	0	113	27.2
Schools (acres)	170 gpd/ac	12	155	0
Total ADWF (mgd)		0.33	2.12	0.45

Footnotes:

- a. Placer Vineyards Specific Plan; Sanitary Sewer Master Plan Addendum 1 (Mackay & Somps, May 20, 2019)

Table 0-1: Regional University^a

Land Use	Flow Factor	Land Use Quantities
Single Family Residential (Units)	190 gpd/DU	1,845
Multi Family Residential (Units)	130 gpd/DU	349
Mixed Use (acres)	2,300 gpd/ac	10.98
Commercial/ Industrial (acres)	850 gpd/ac	25
Parks > 10 acres (acres)	10 gpd/ac	27.3
Public/Quasi-Public (acres)	660 gpd/ac	5.0
Schools (acres)	170 gpd/ac	32.6
University	mgd	0.725
Total ADWF (mgd)		1.18

Footnotes:

- a. Regional University Specific Plan, Sanitary Sewer Demand (Mackay & Somps, September 1, 2017)

Riolo Vineyards^a

Land Use	Flow Factor	Land Use Quantities		
		Lift Station Shed	Gravity Shed 1	Gravity Shed 2
Single Family Residential (Units)	190 gpd/DU	673 ^b	172	153
Multi Family Residential (Units)	130 gpd/DU	0	0	0
Mixed Use (acres)	2,300 gpd/ac	0	0	0
Commercial/Industrial (acres)	850 gpd/ac	26.5 ^b	0	10
Parks > 10 acres (acres)	10 gpd/ac	0	0	0
Public/Quasi-Public (acres)	660 gpd/ac	0	0	11
Schools (acres)	170 gpd/ac	0	16	0
Total ADWF (mgd)		0.15	0.035	0.045

Footnotes:

- Riolo Vineyards Sanitary Sewer Master Plan Update (Unico Engineering, April 2016)
- Includes flows from offsite draining through these sheds

Placer UGA^a

Land Use	Flow Factor	Land Use Quantities	
		North Shed	South Shed
Single Family Residential (Units)	190 gpd/DU	147	41.7
Multi Family Residential (Units)	130 gpd/DU	0	0
Mixed Use (acres)	2,300 gpd/ac	0	0
Commercial/Industrial (acres)	850 gpd/ac	0	0
Parks > 10 acres (acres)	10 gpd/ac	0	0
Public/Quasi-Public (acres)	660 gpd/ac	0	0
Schools (acres)	170 gpd/ac	0	0
Total ADWF (mgd)		0.028	0.008

Footnotes:

- Hawk Homestead Sewer Analysis – Supplementary Information Requested by Placer County Environmental Engineering, Derrick Whitehead, Municipal Consulting Group, January 29, 2016*

CITY OF ROSEVILLE URBAN GROWTH AREAS

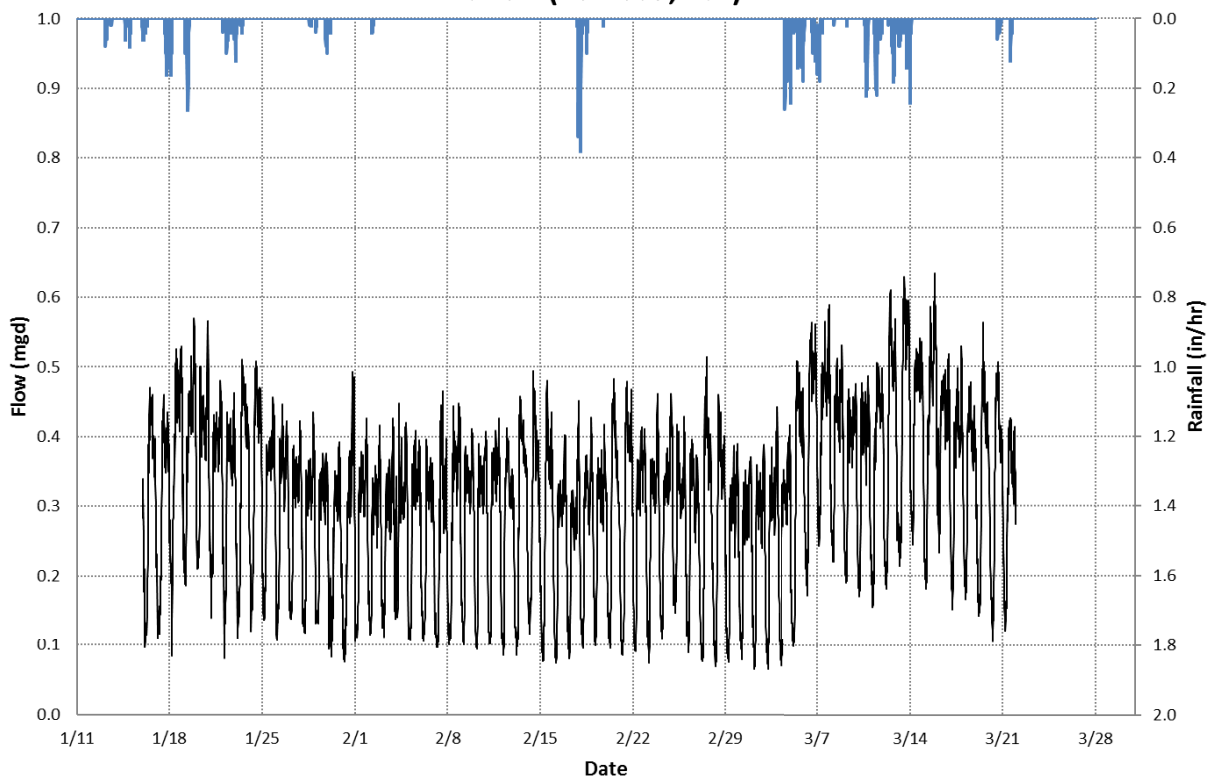
Land Use	Flow Factor	Creekview ^a	Amoruso ^b	Sierra Vista ^c	
				North Shed ^d	South Shed
Single Family Residential (Units)	190 gpd/DU	2,019	4,239 ^e	1,658	2,118
Multi Family Residential (Units)	130 gpd/DU	758	873	1,058	1,478
Mixed Use (acres)	2,300 gpd/ac	0.0	27.3	13.3	34.9
Commercial (acres)	850 gpd/ac	15.5	23.9	37.7	181.0
Parks > 10 acres (acres)	10 gpd/ac	0.0	0.0	10.0	39.9
Public/Quasi-Public (acres)	660 gpd/ac	2.6	7.6	10.1	6.6
Schools (acres)	170 gpd/ac	7.0	9.6	10.0	45.6
Total ADWF (mgd)		0.43	0.61	0.59	1.24

Footnotes:

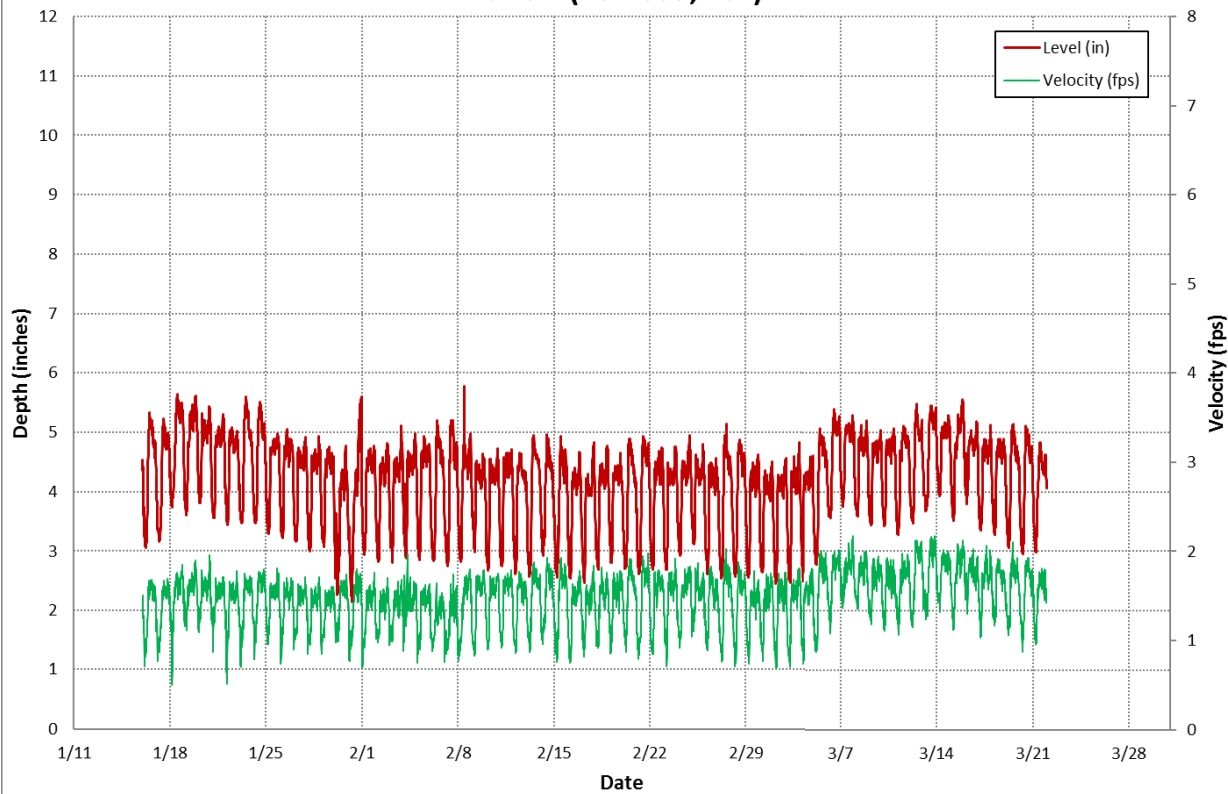
- a. *Creekview Specific Plan Sanitary Sewer Master Plan*, Mackay & Soms Civil Engineers, November 2010
- b. *Amoruso Ranch Specific Plan Area Wastewater Master Plan*, Kimley Horn, September 2015
- c. *Sierra Vista Specific Plan Sanitary Sewer Master Plan*, Mackay & Soms Civil Engineers, July 2009
- d. Includes the Westbrook portion of Sierra Vista
- e. Includes 274 units north of Amoruso that would contribute flow through sewers in Amoruso (Toad Hill)

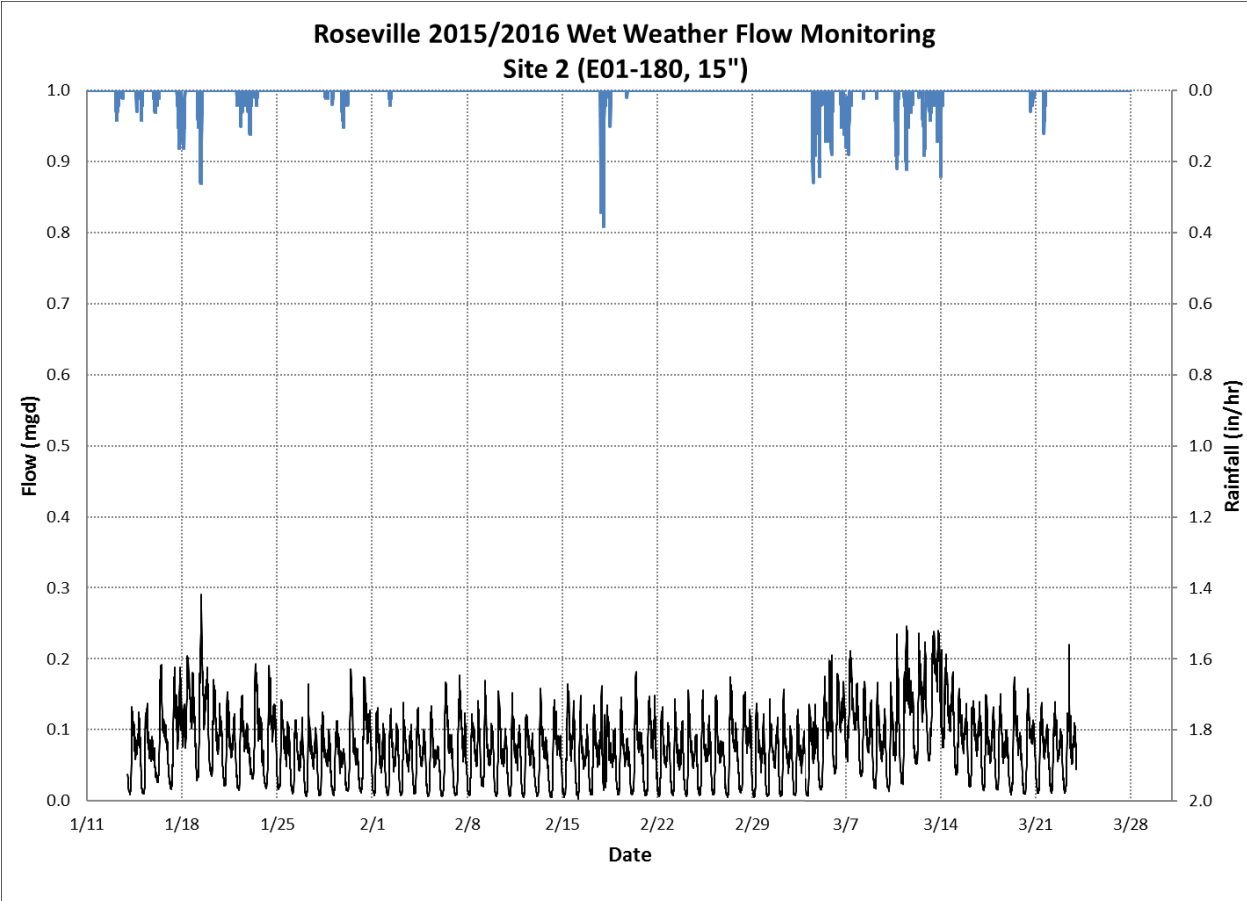
APPENDIX C – FLOW MONITORING DATA

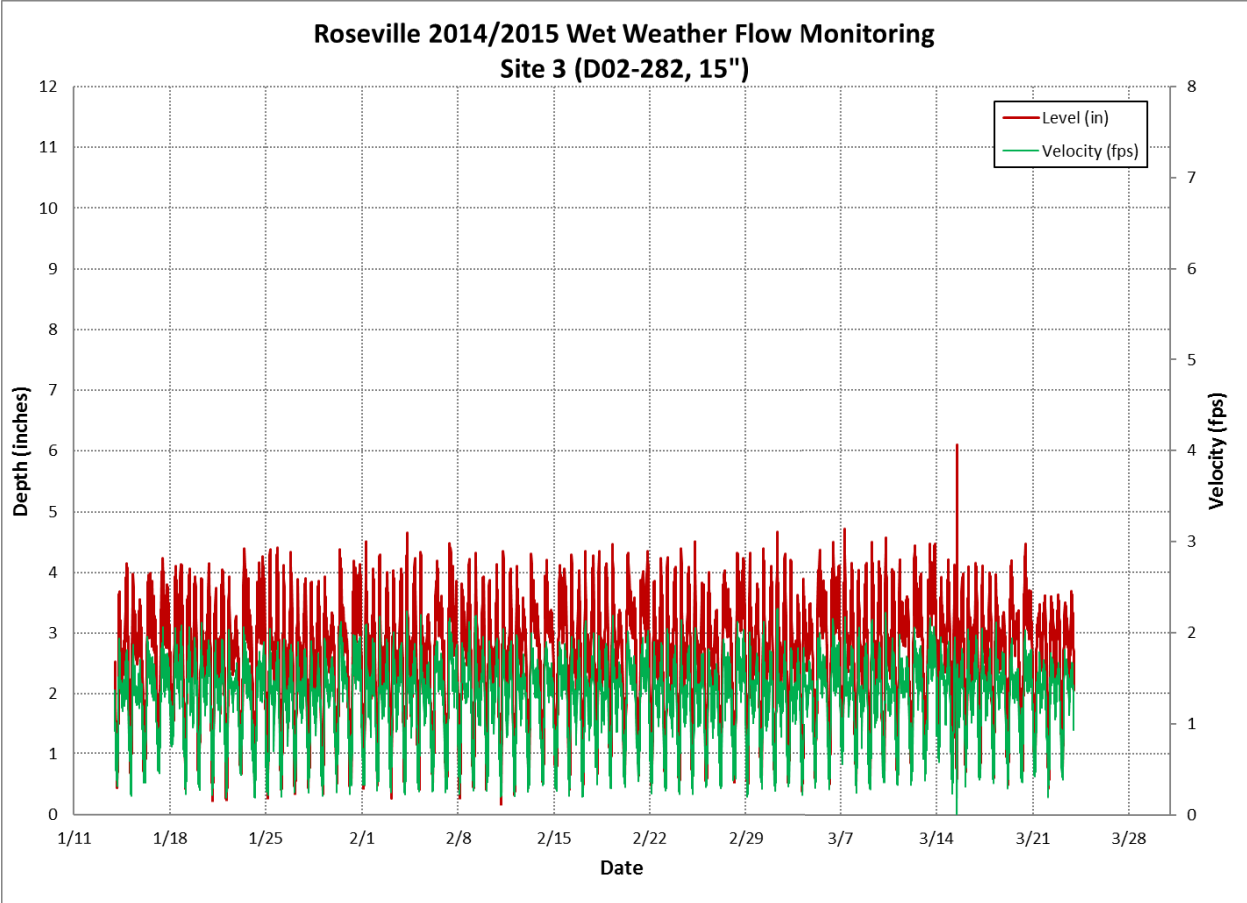
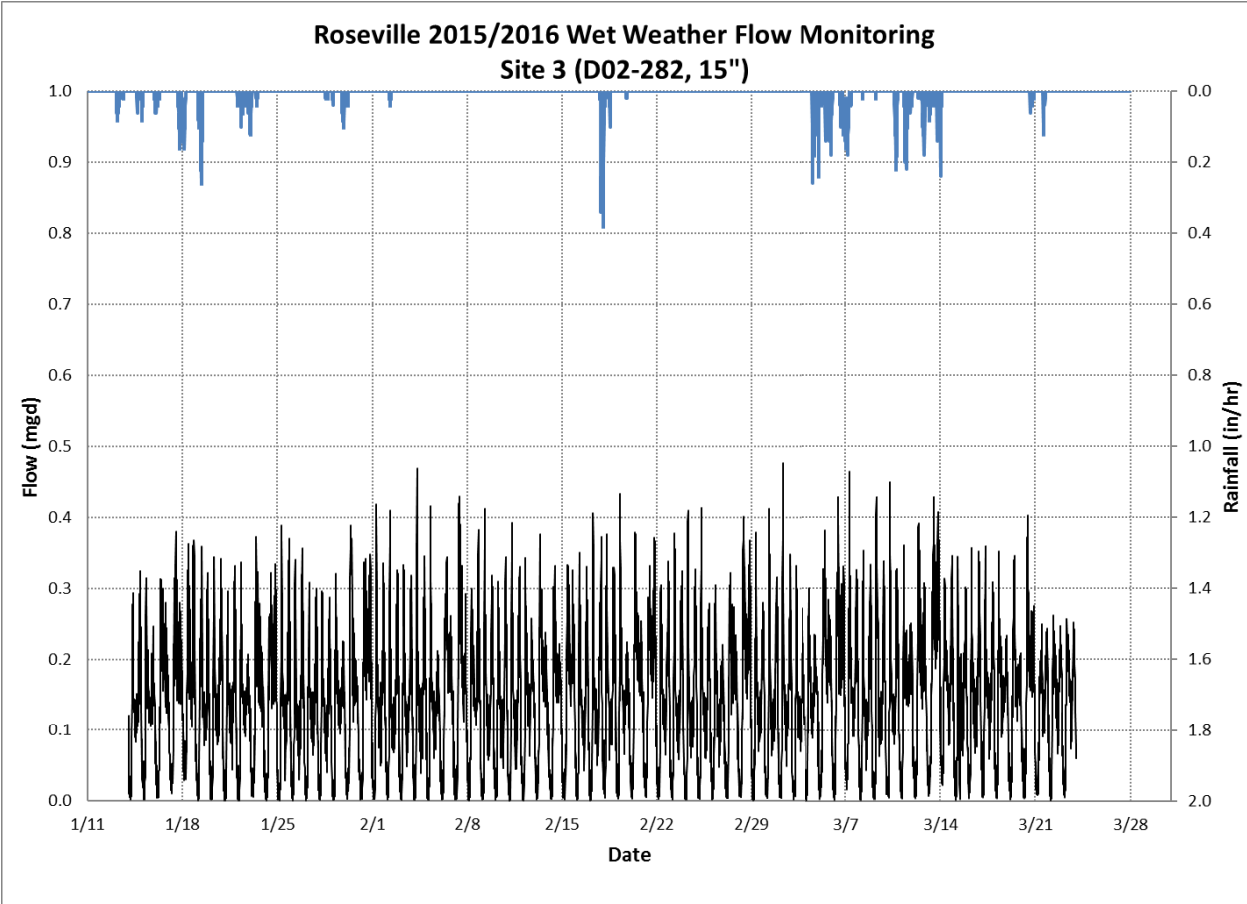
Roseville 2015/2016 Wet Weather Flow Monitoring Site 1 (E04-039, 18")

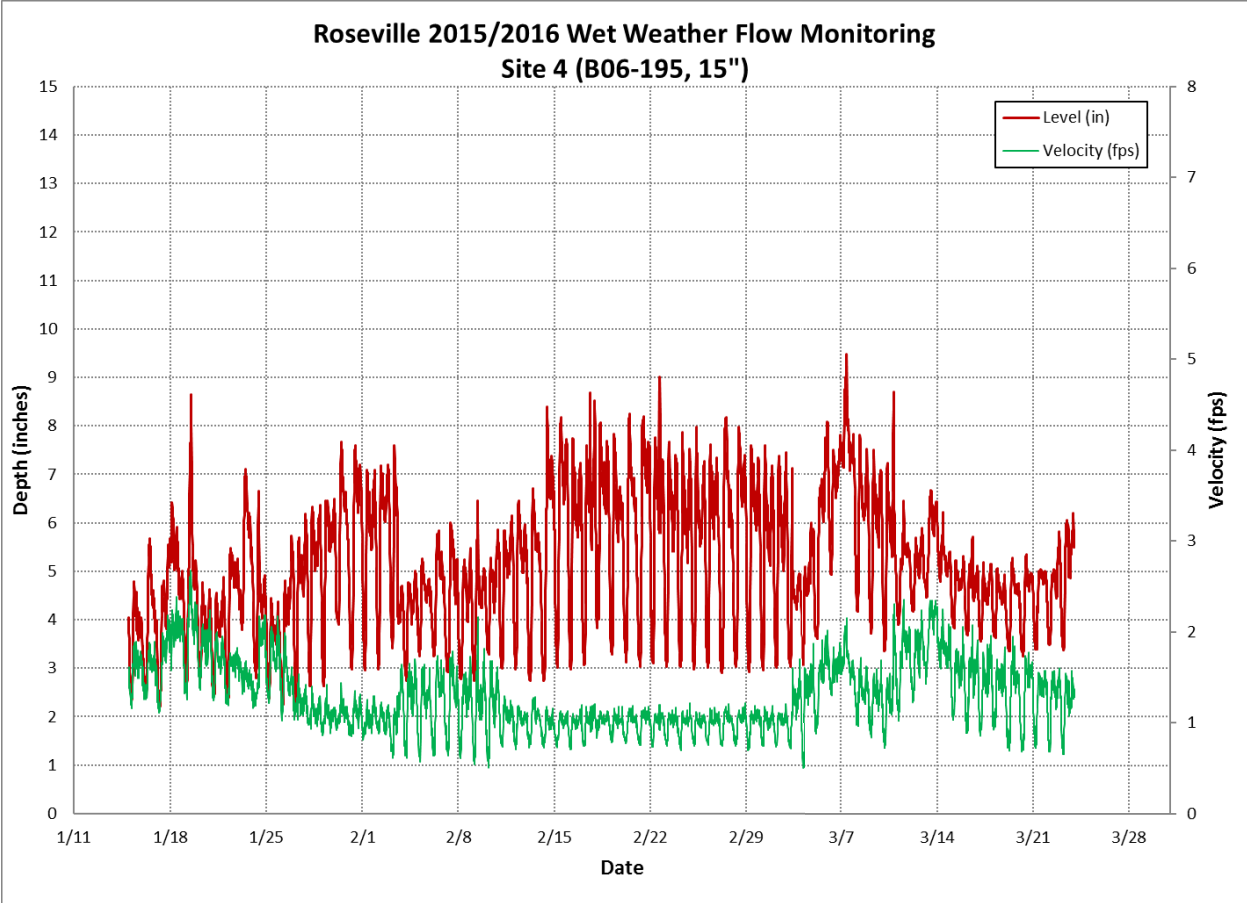
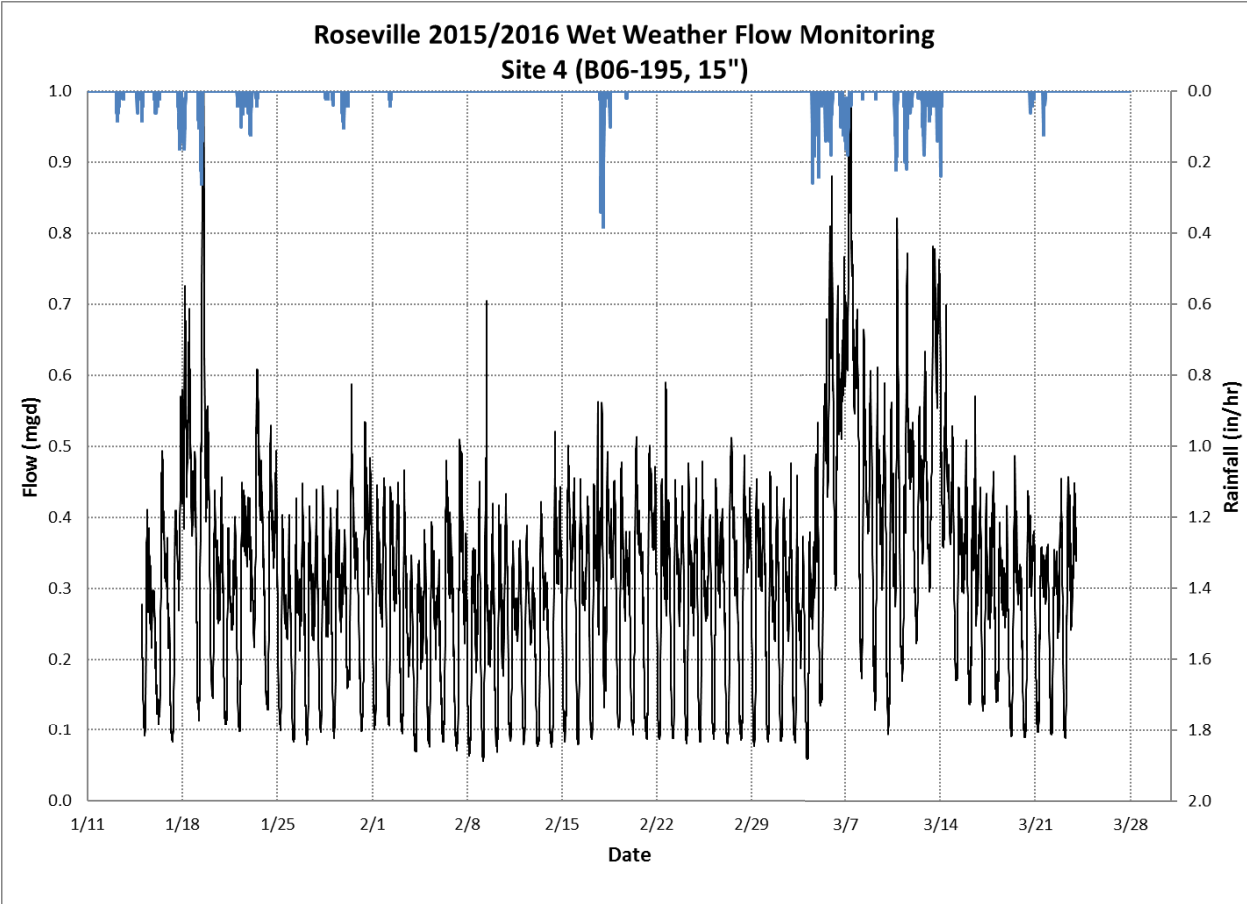


Roseville 2015/2016 Wet Weather Flow Monitoring Site 1 (E04-039, 18")

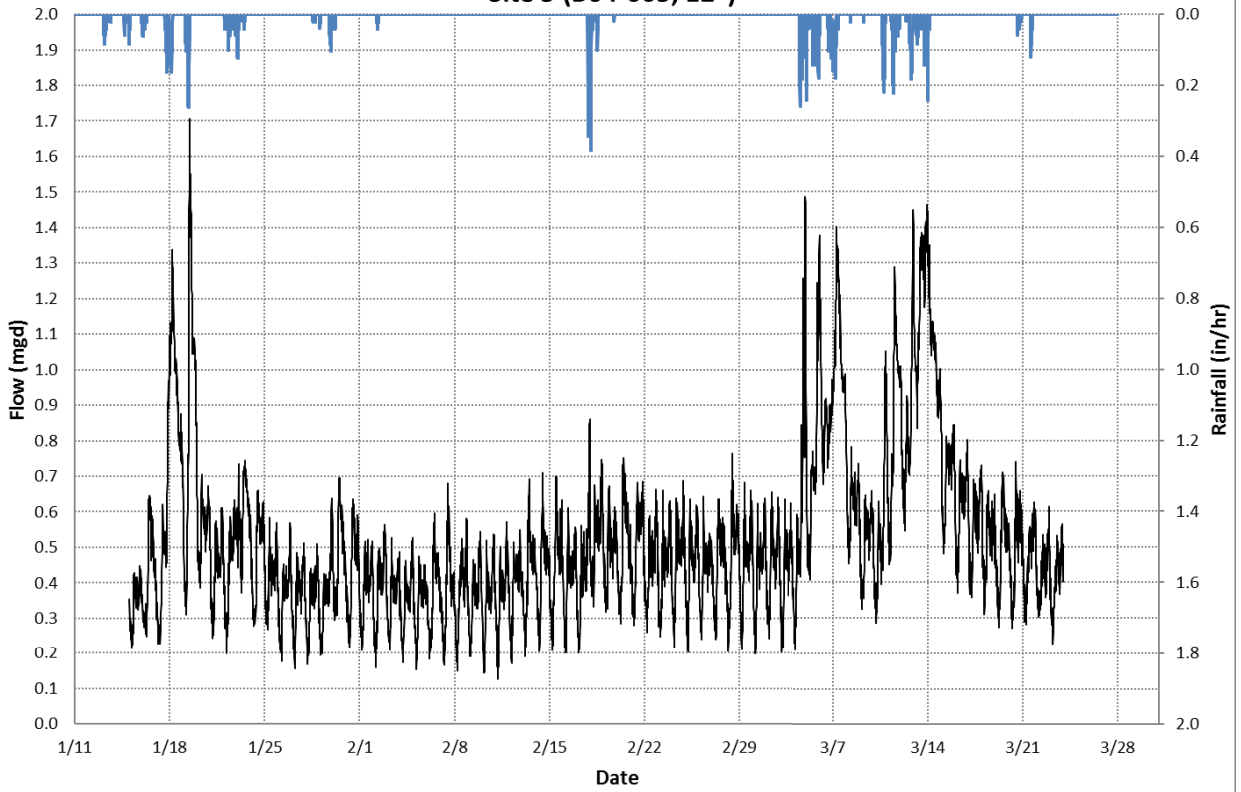




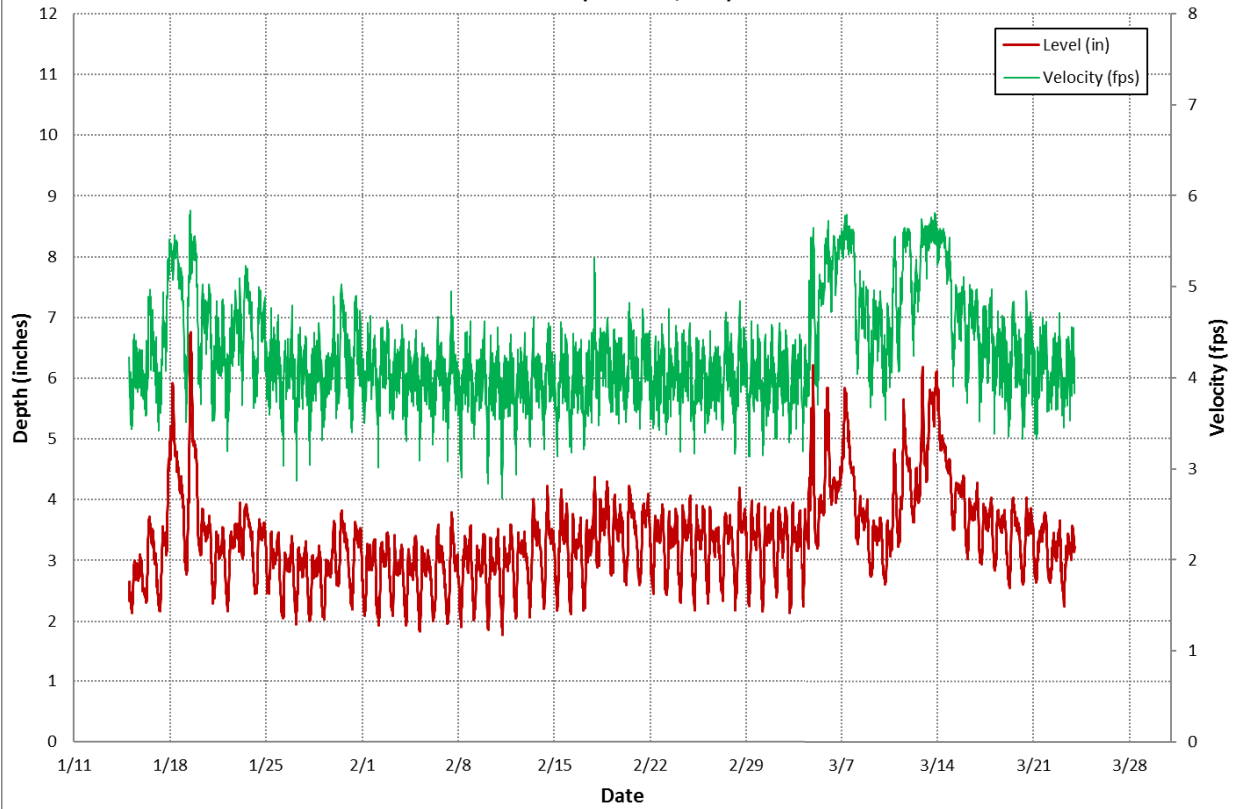




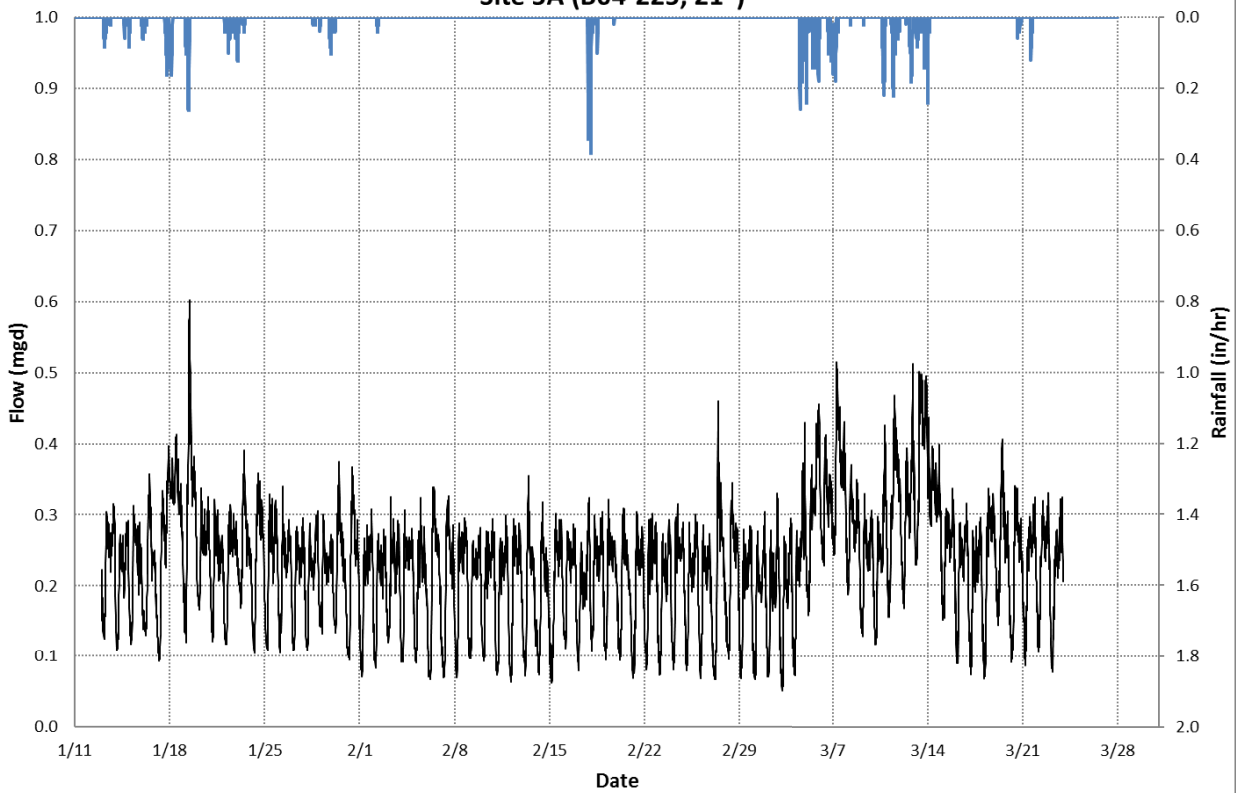
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 5 (B04-005, 12")



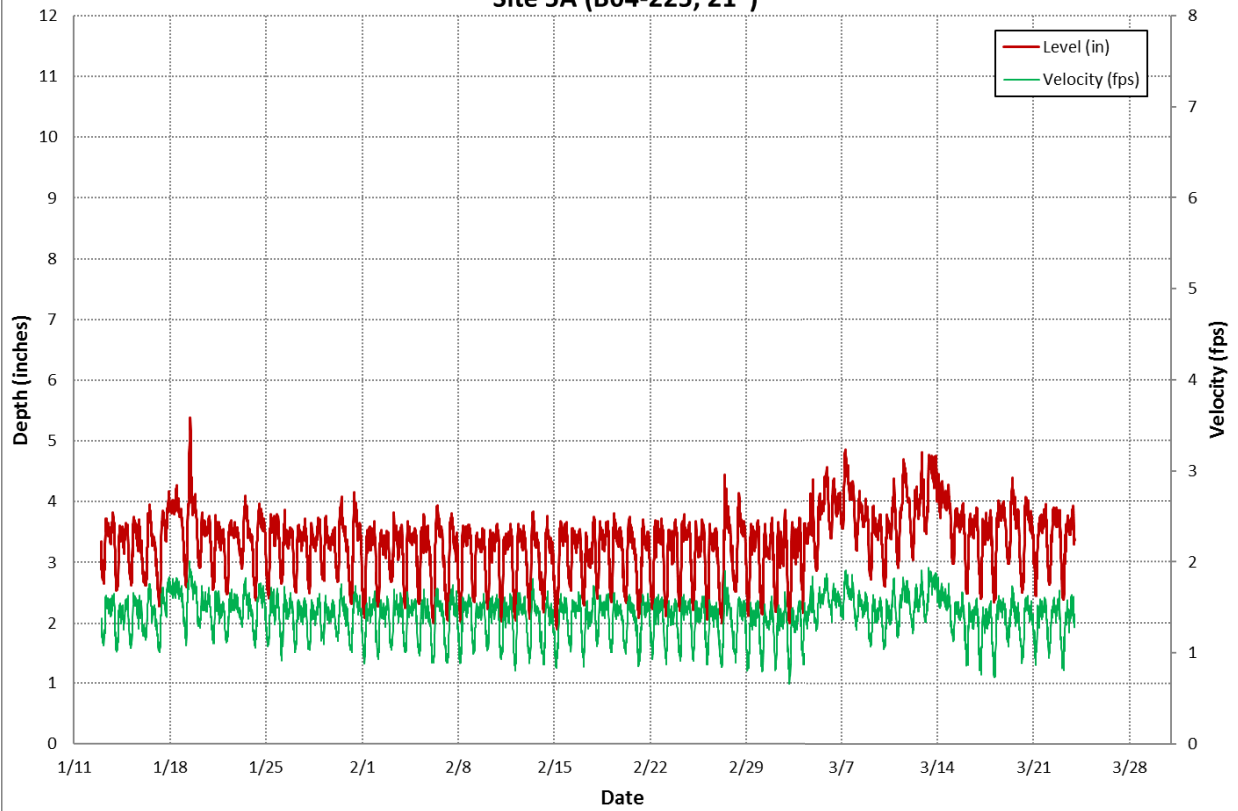
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 5 (B04-005, 12")



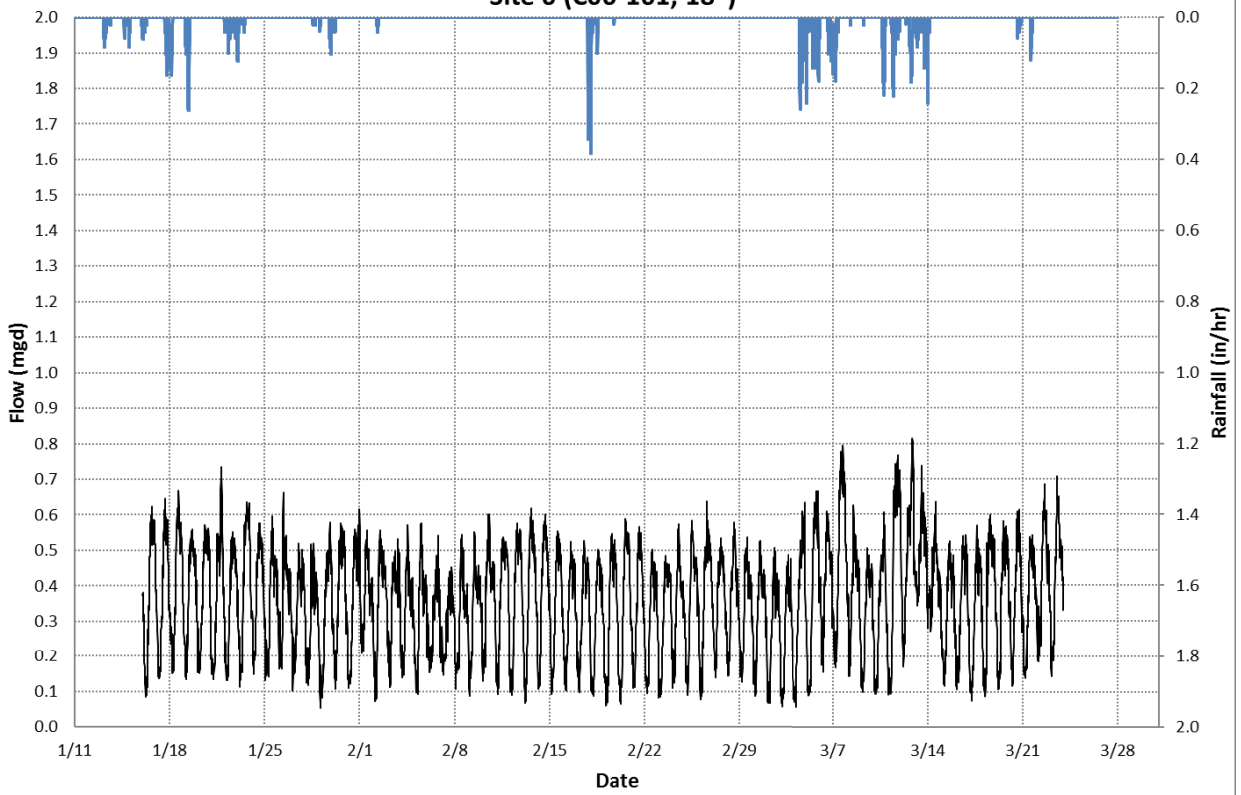
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 5A (B04-225, 21")



Roseville 2015/2016 Wet Weather Flow Monitoring
Site 5A (B04-225, 21")



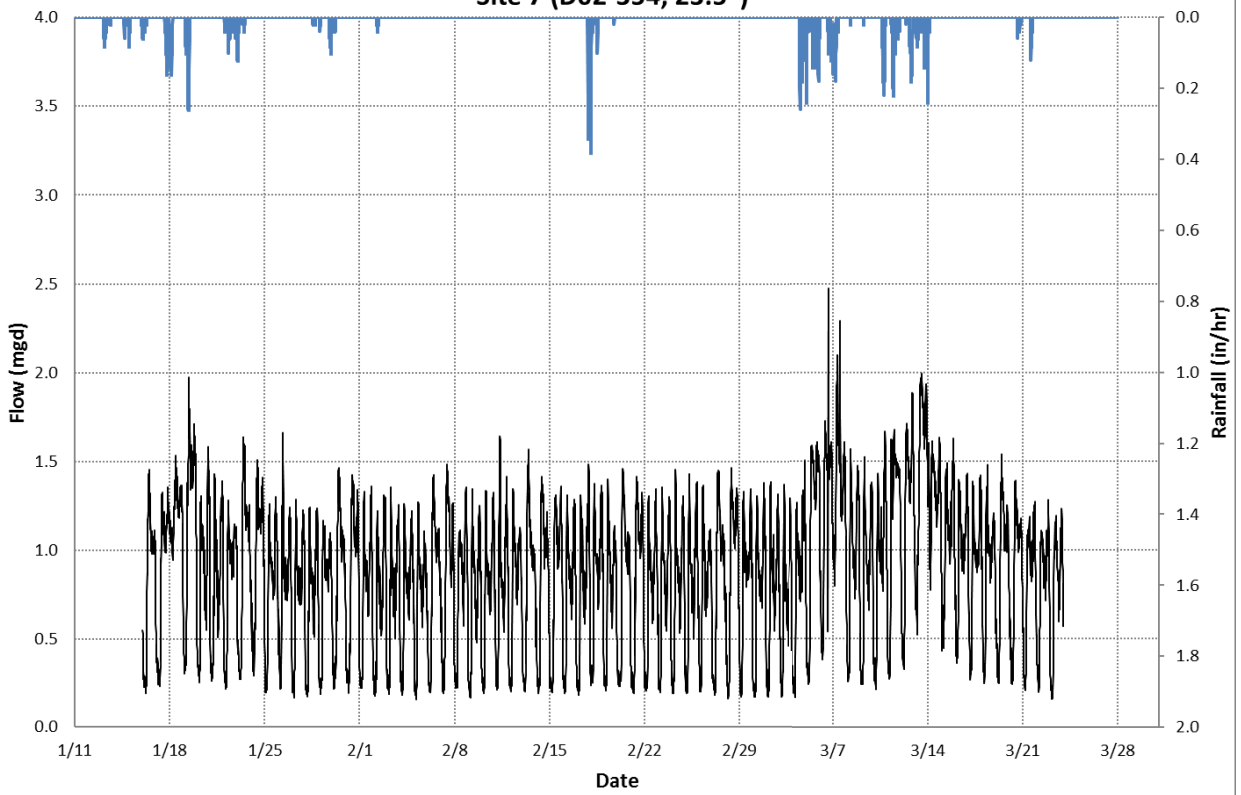
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 6 (C06-161, 18")



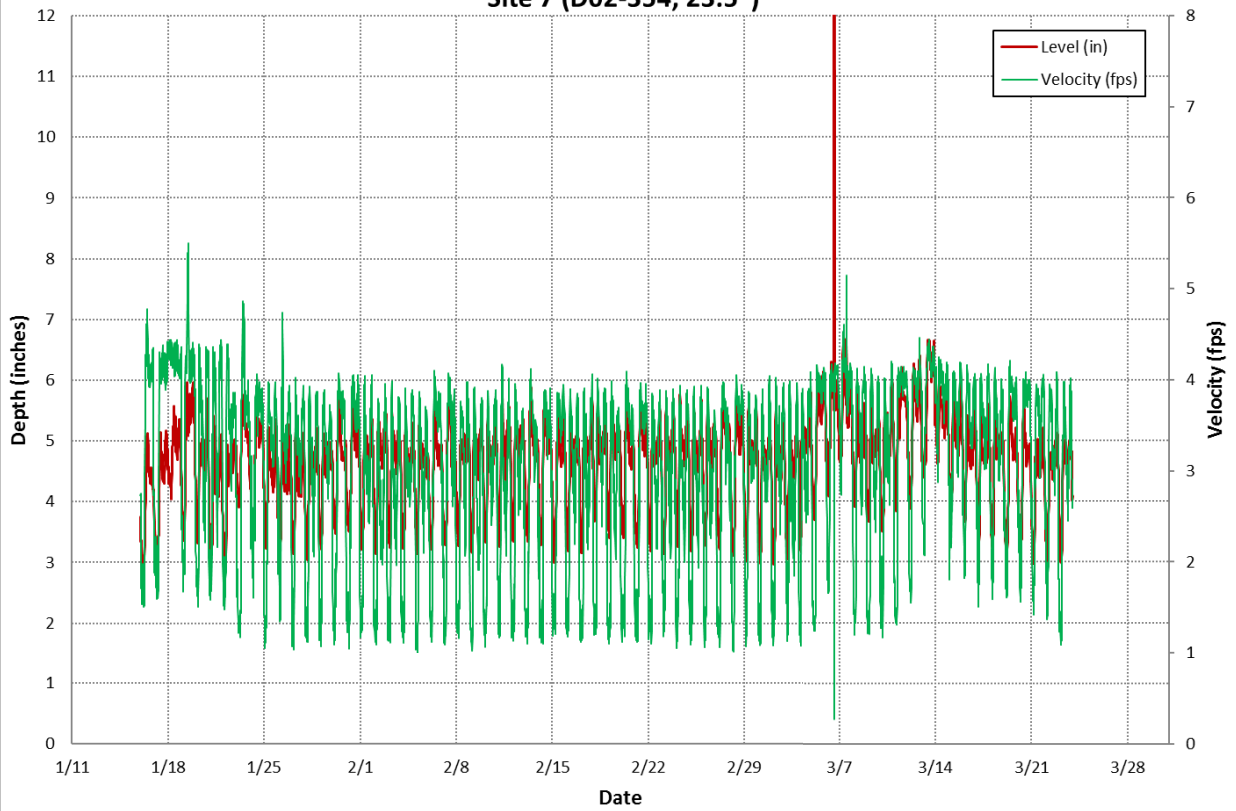
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 6 (C06-161, 18")



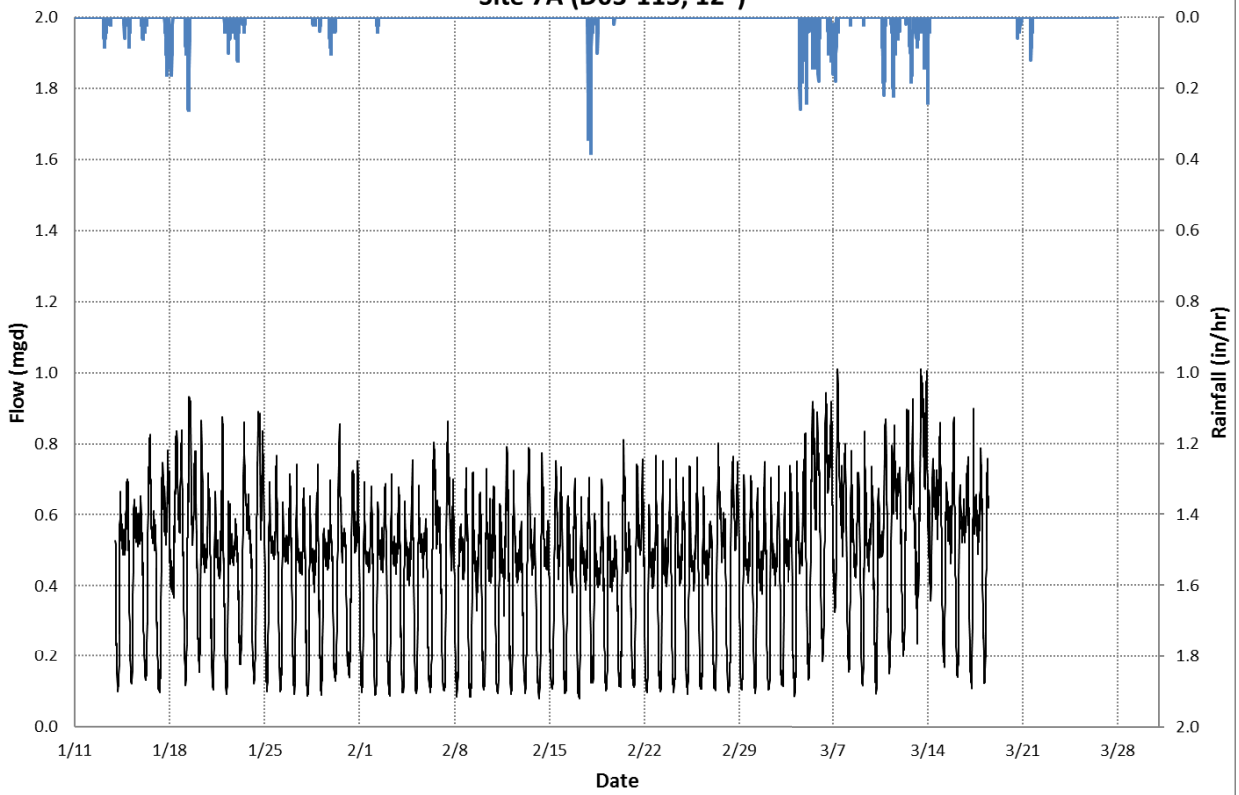
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 7 (D02-354, 23.5")



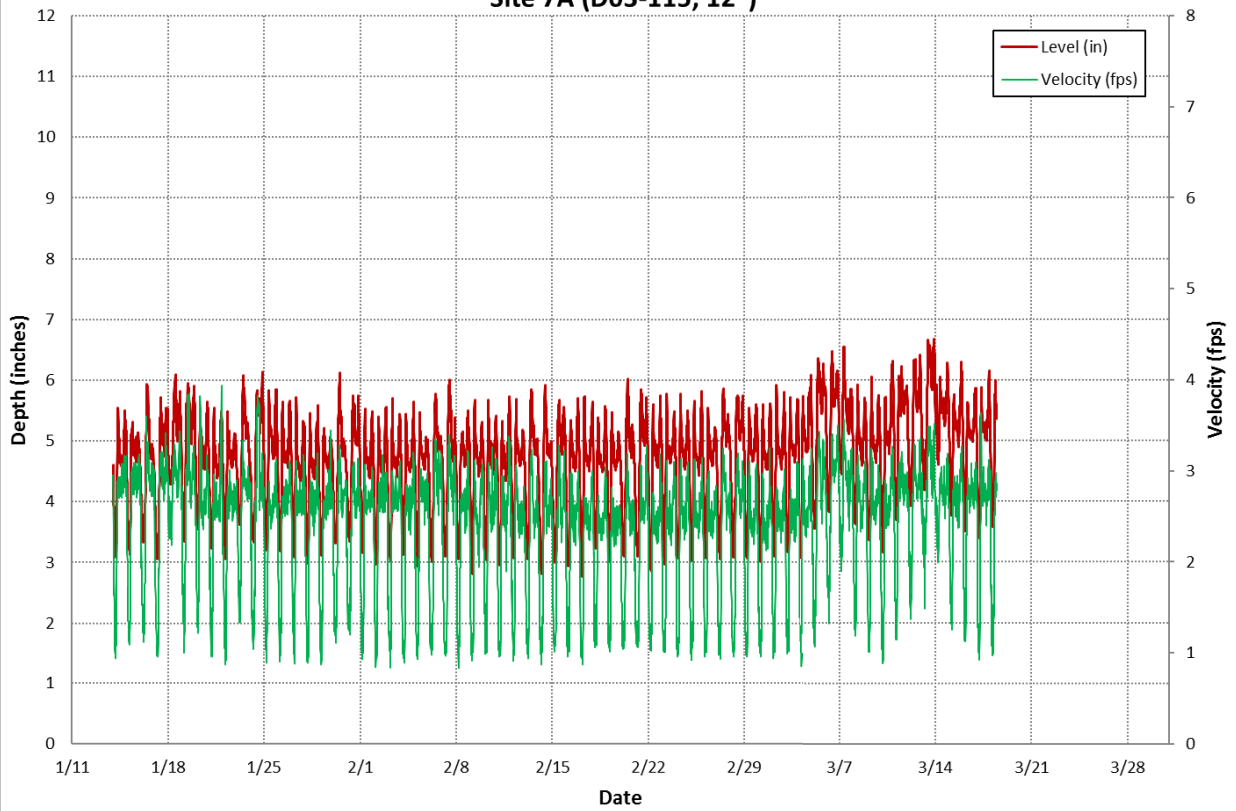
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 7 (D02-354, 23.5")



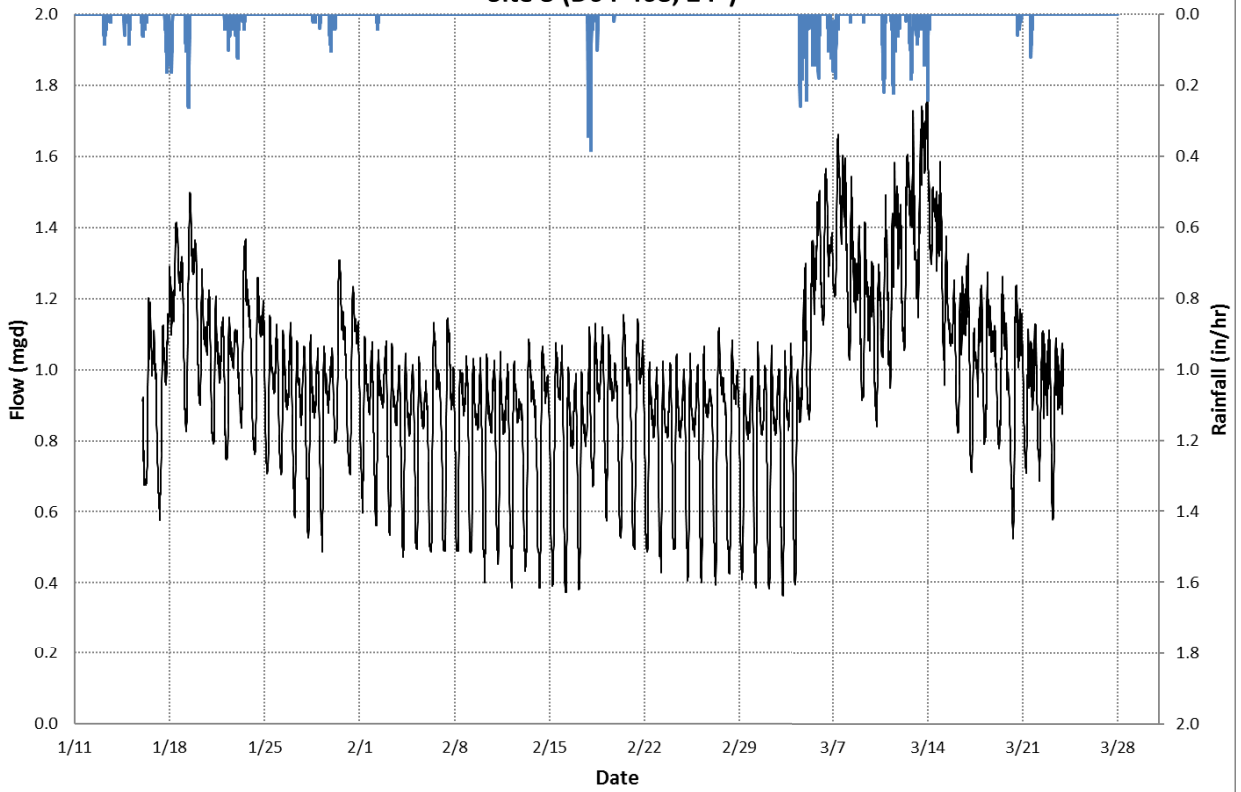
Roseville 2015/2016 Wet Weather Flow Monitoring Site 7A (D03-115, 12")



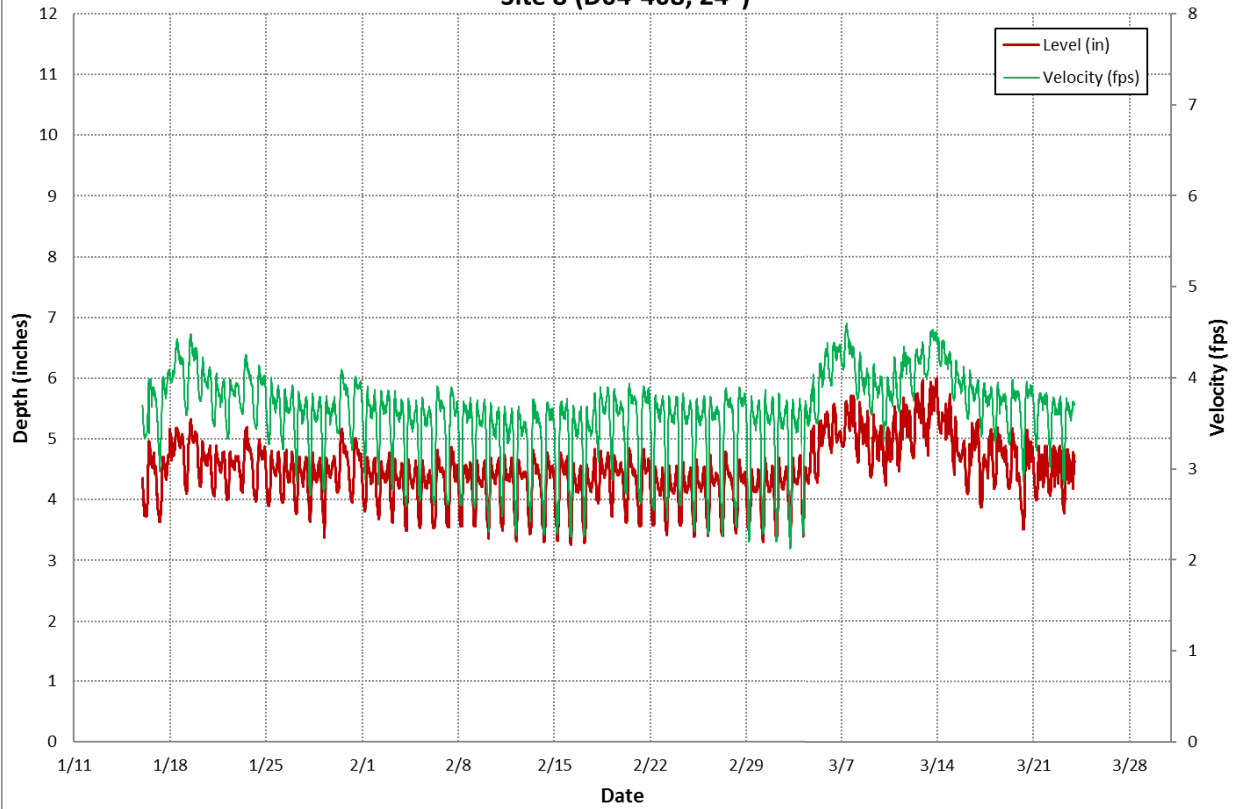
Roseville 2015/2016 Wet Weather Flow Monitoring Site 7A (D03-115, 12")

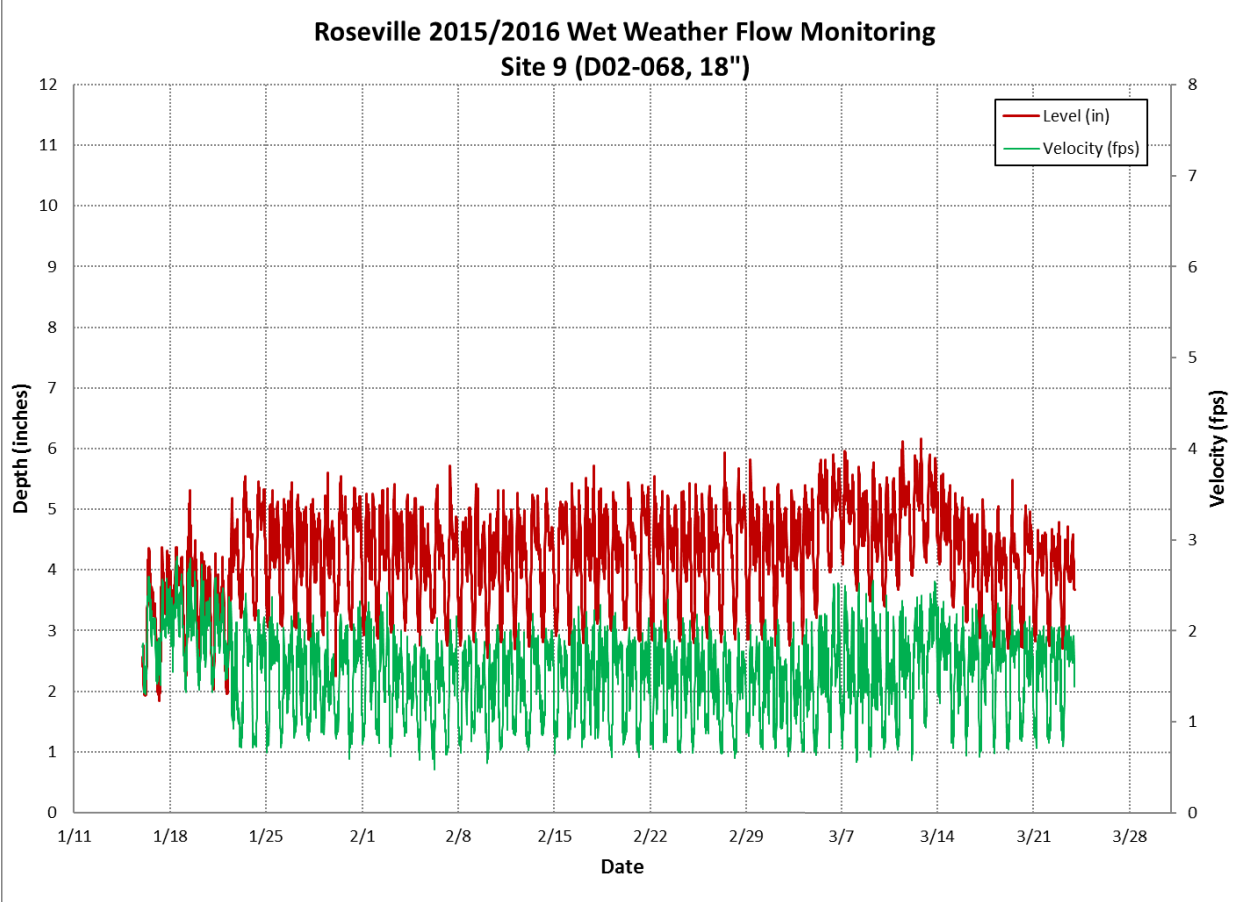
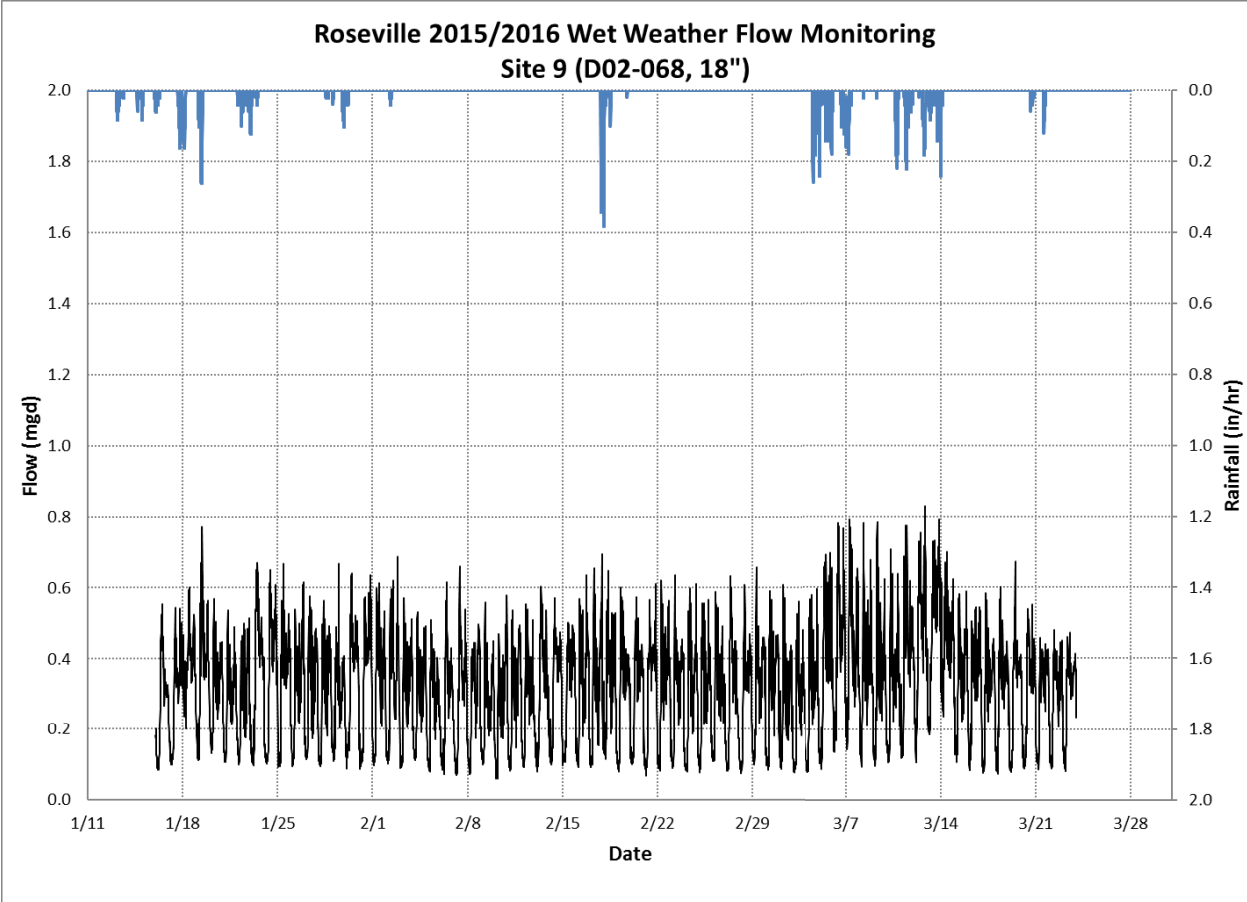


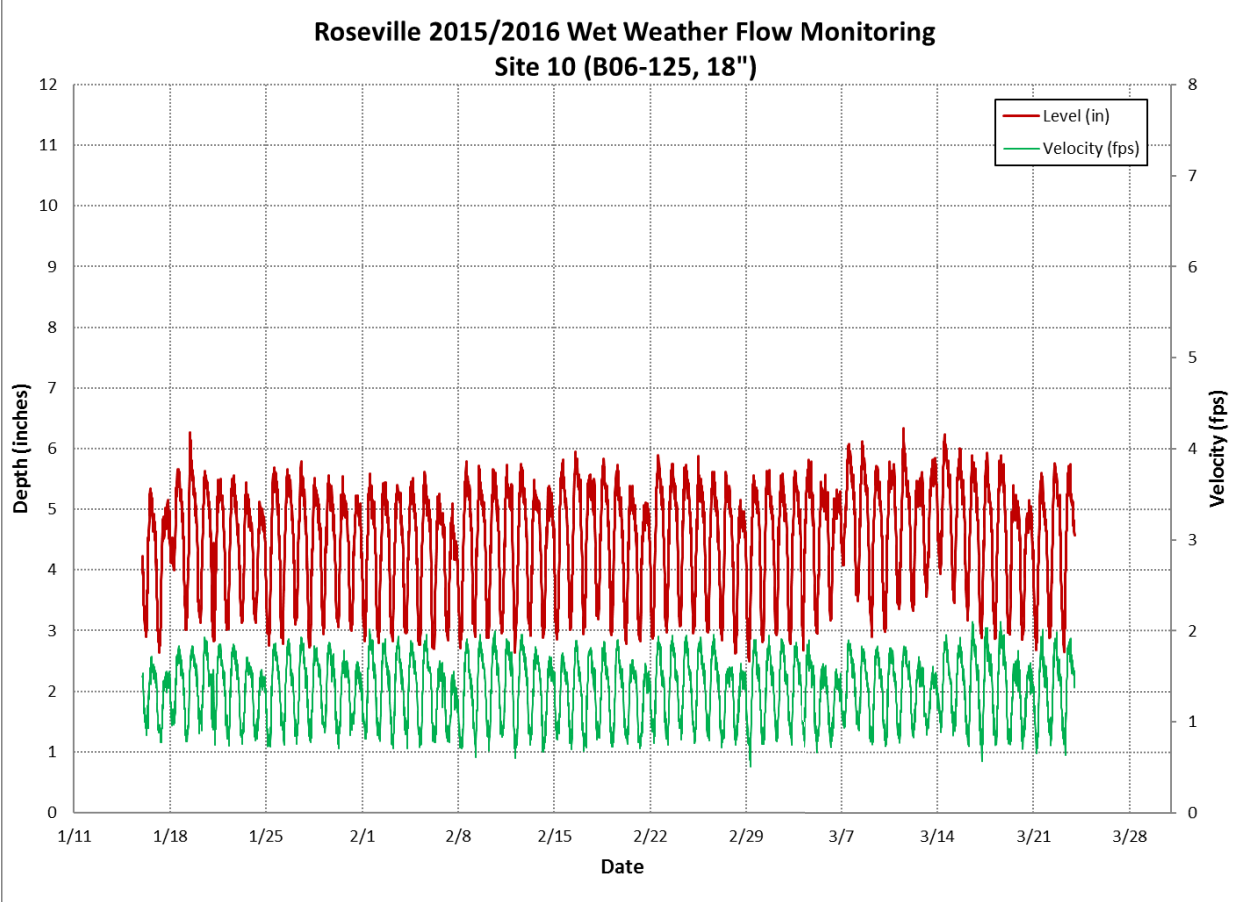
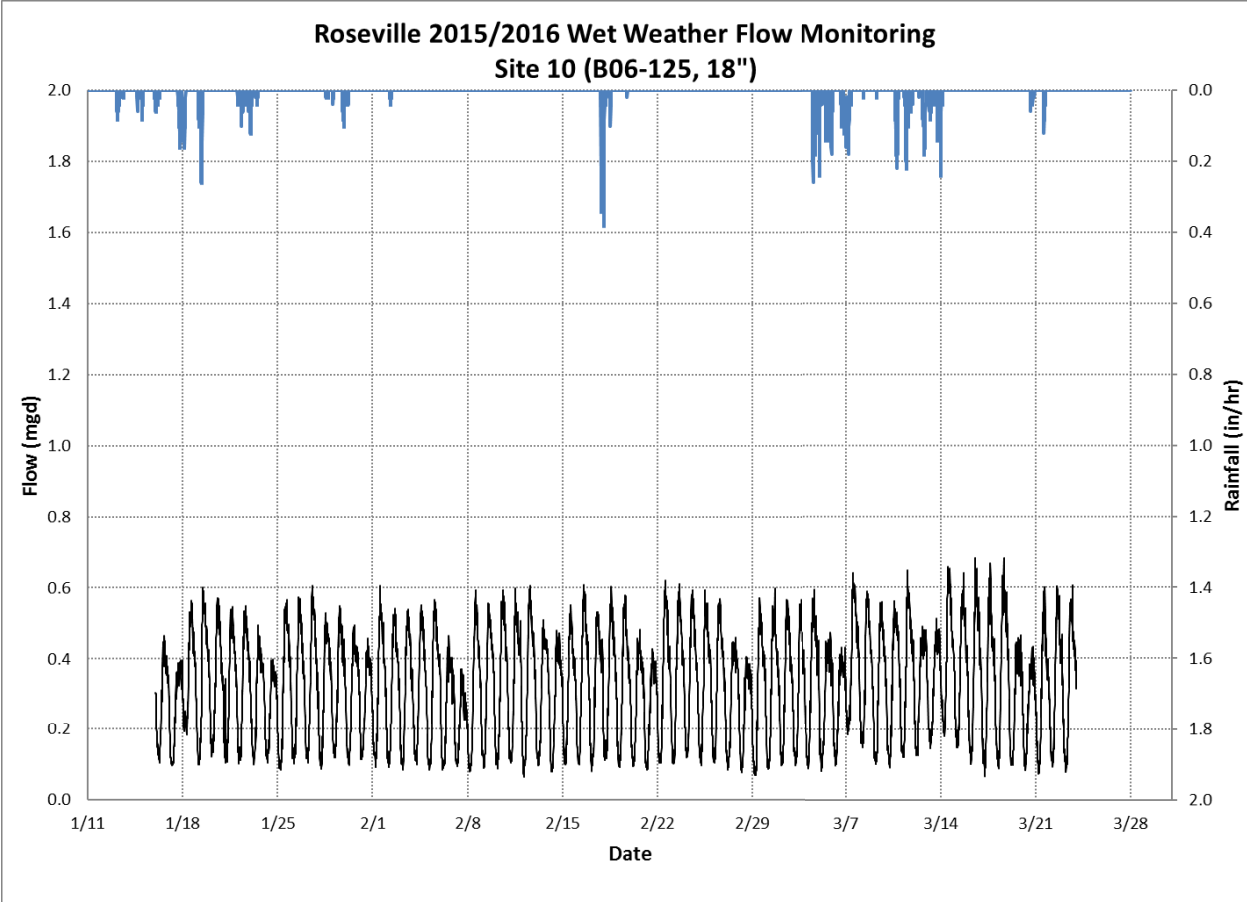
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 8 (D04-408, 24")



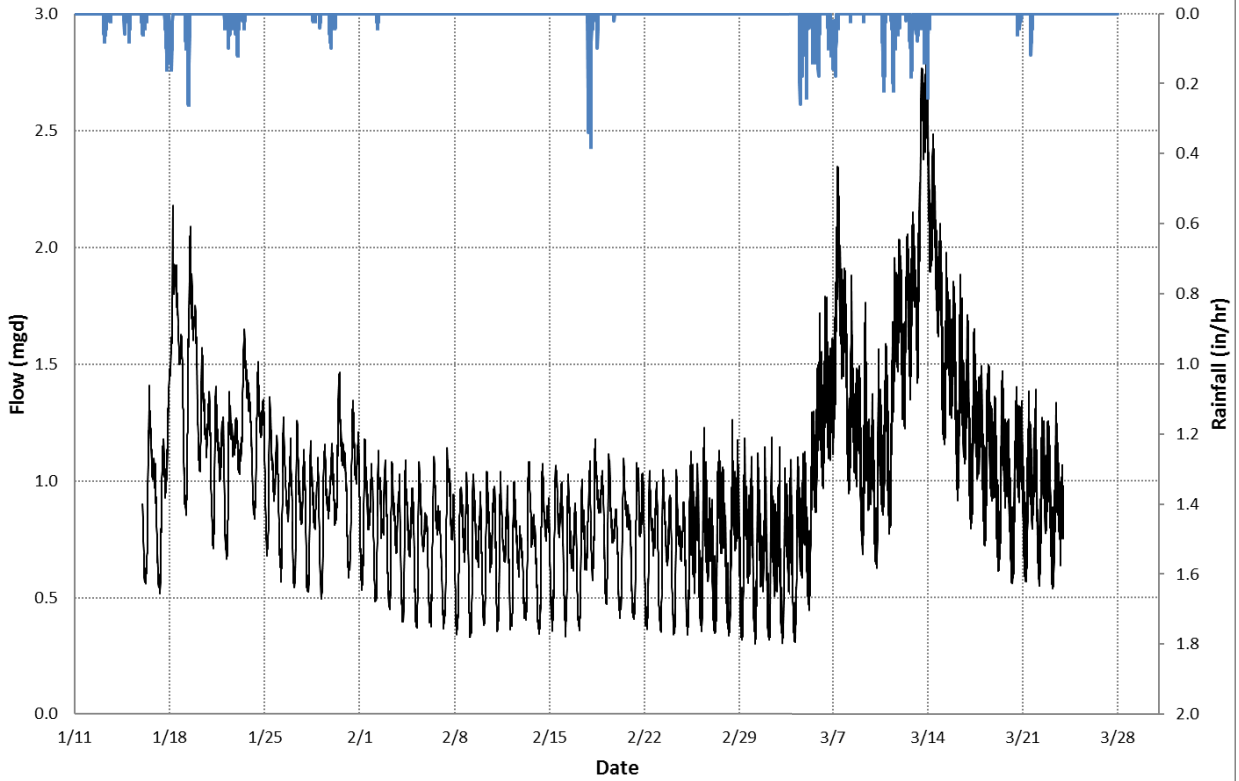
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 8 (D04-408, 24")



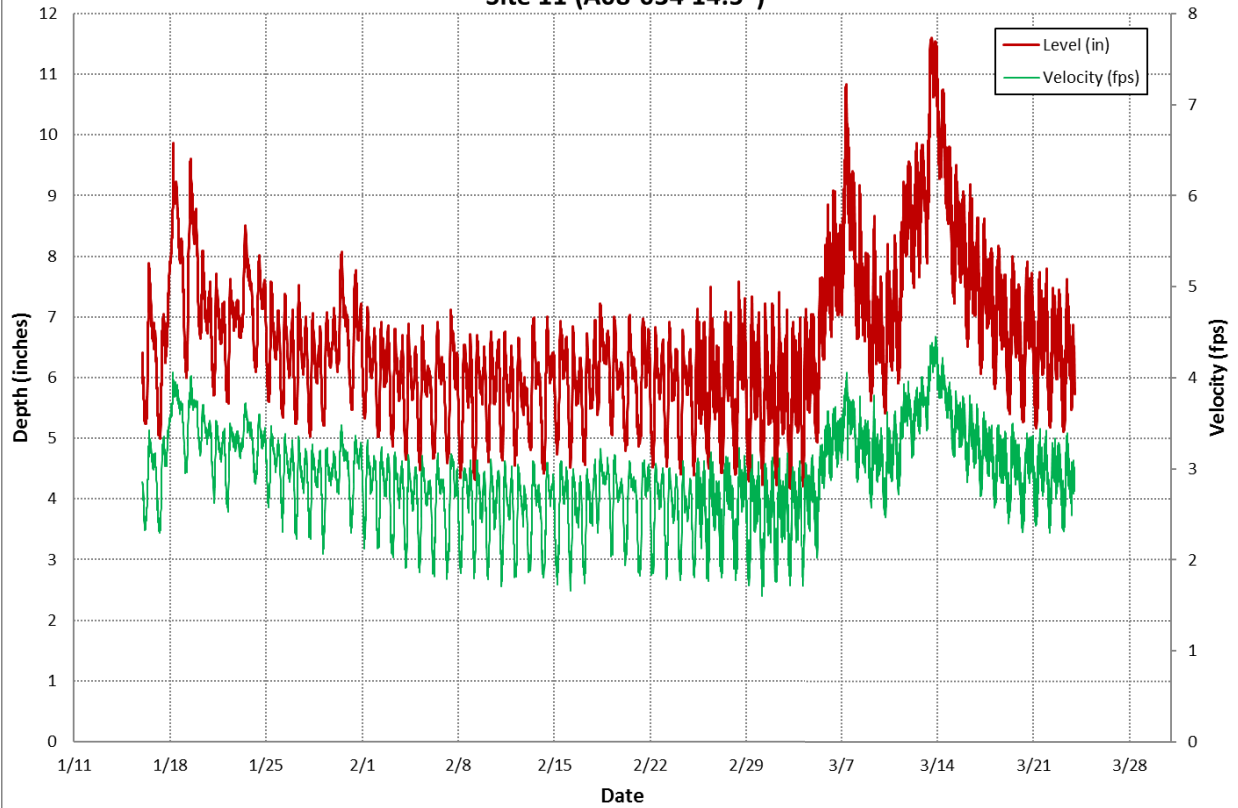




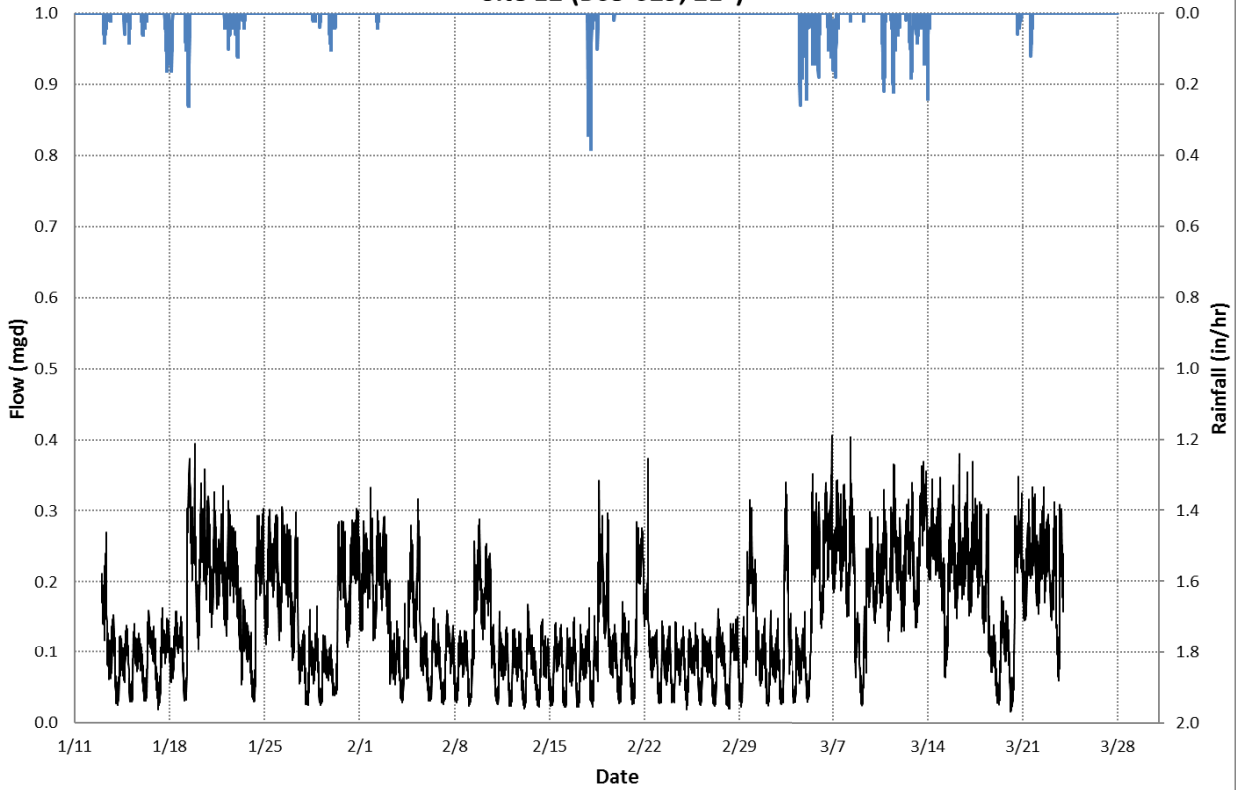
**Roseville 2015/2016 Wet Weather Flow Monitoring
Site 11 (A08-034 14.5")**



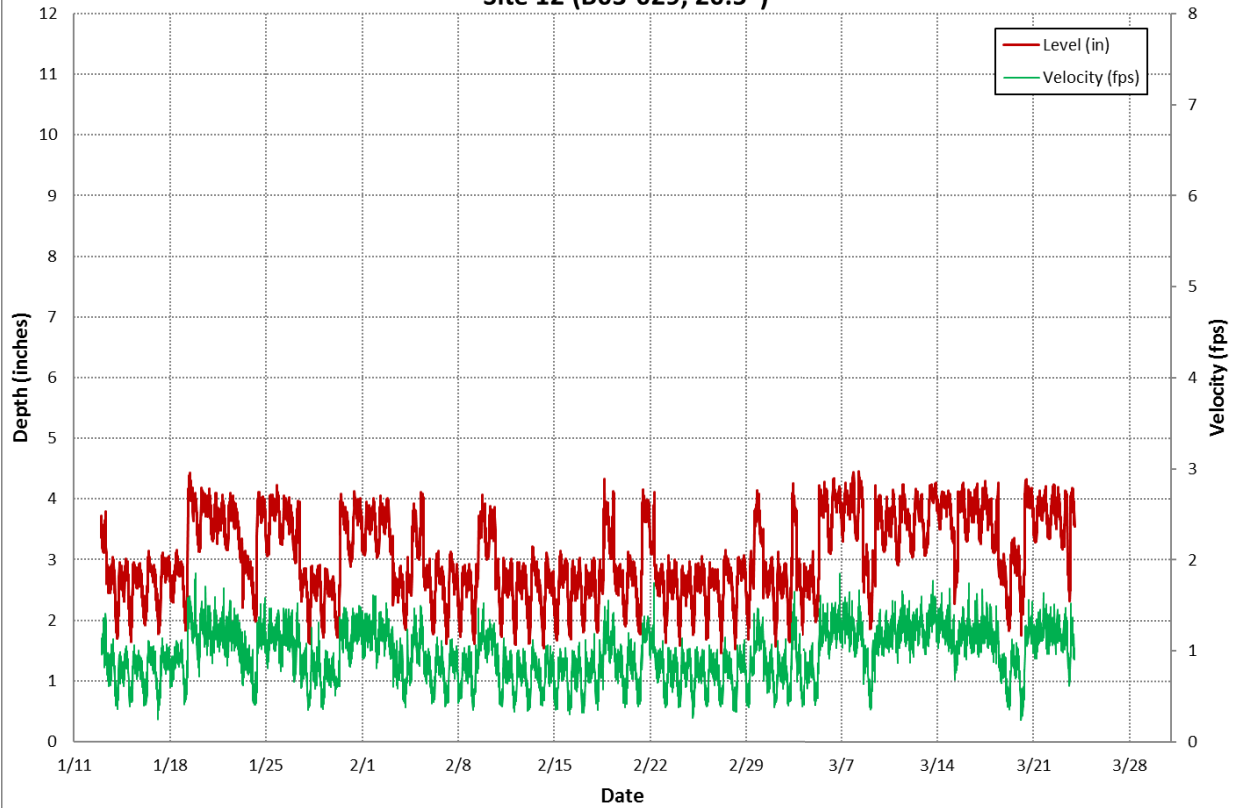
**Roseville 2015/2016 Wet Weather Flow Monitoring
Site 11 (A08-034 14.5")**

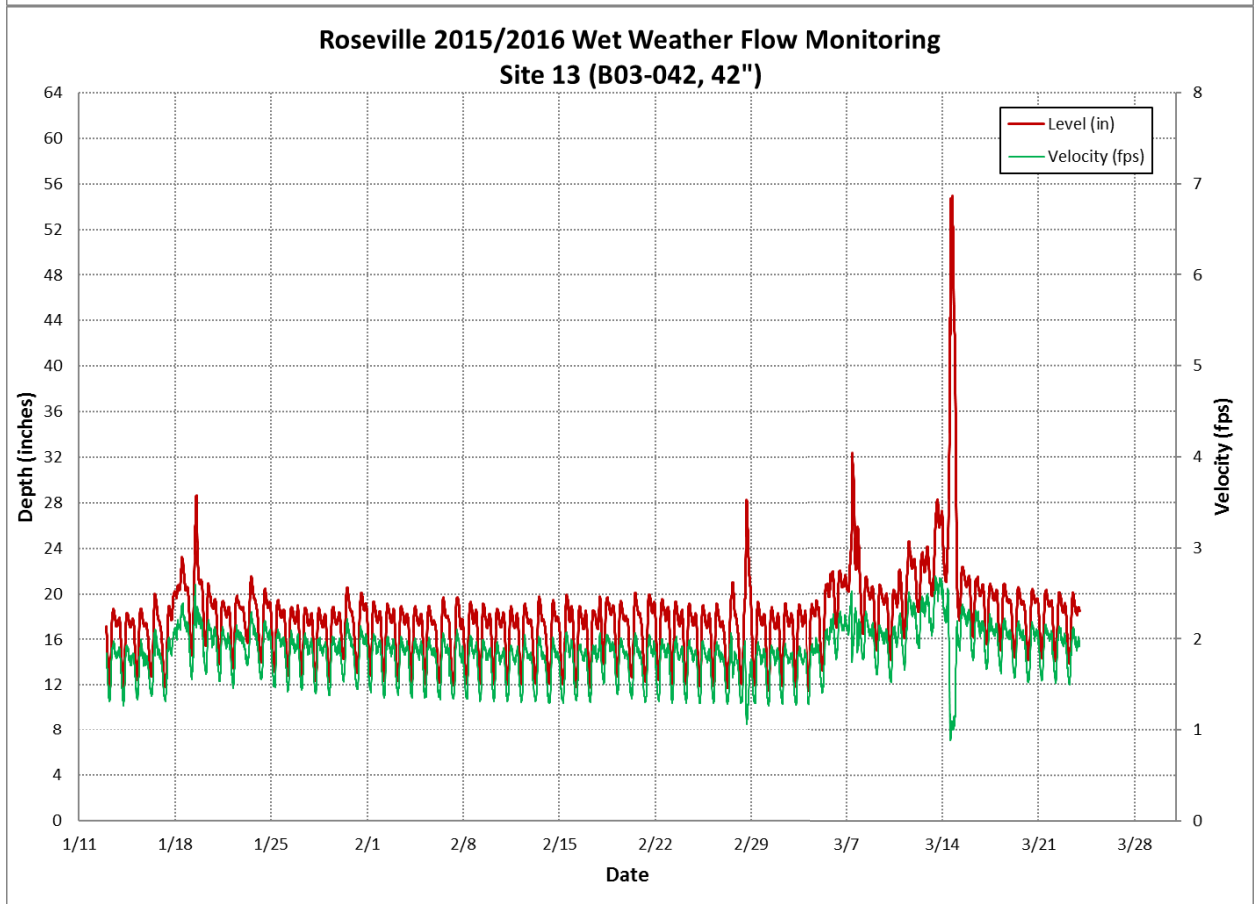
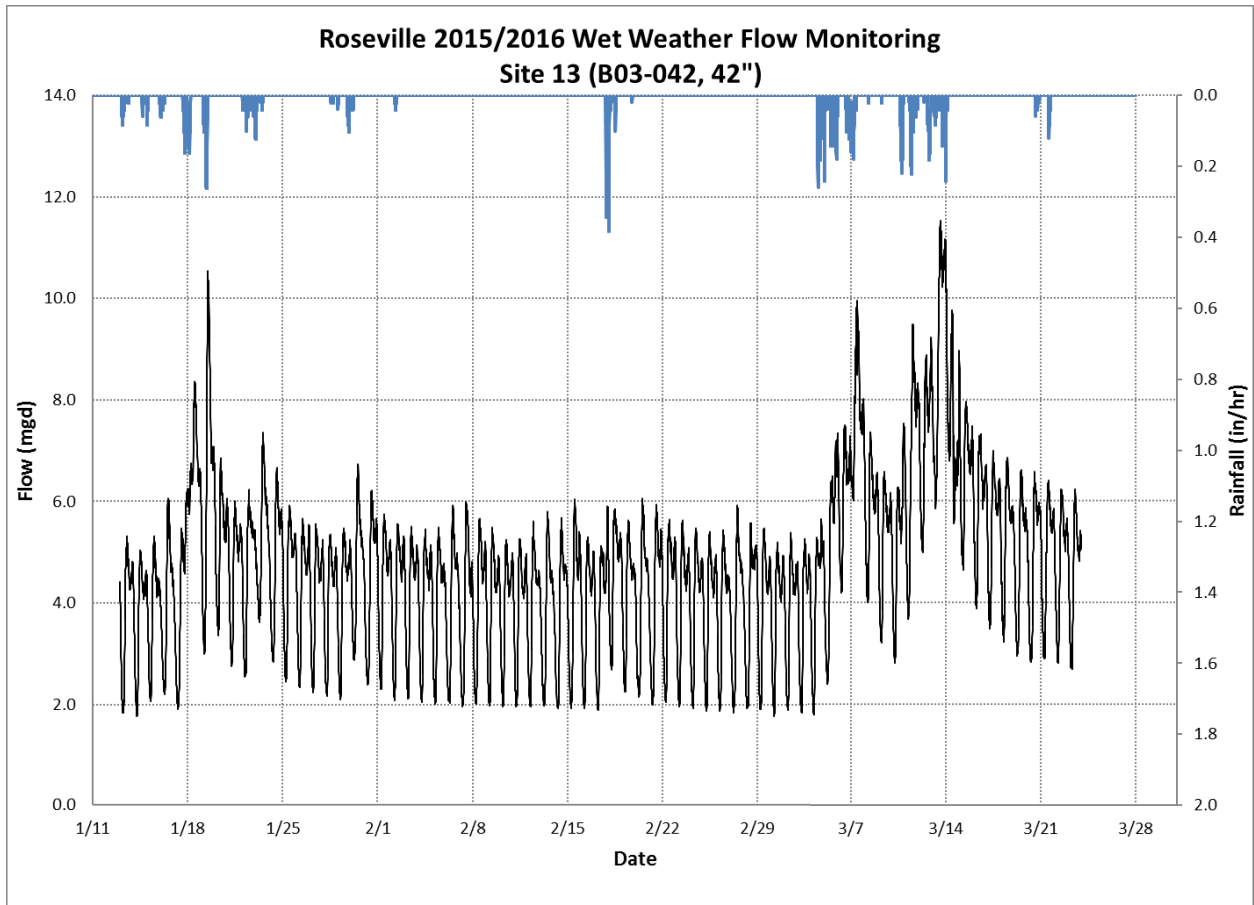


Roseville 2015/2016 Wet Weather Flow Monitoring
Site 12 (B03-029, 21")

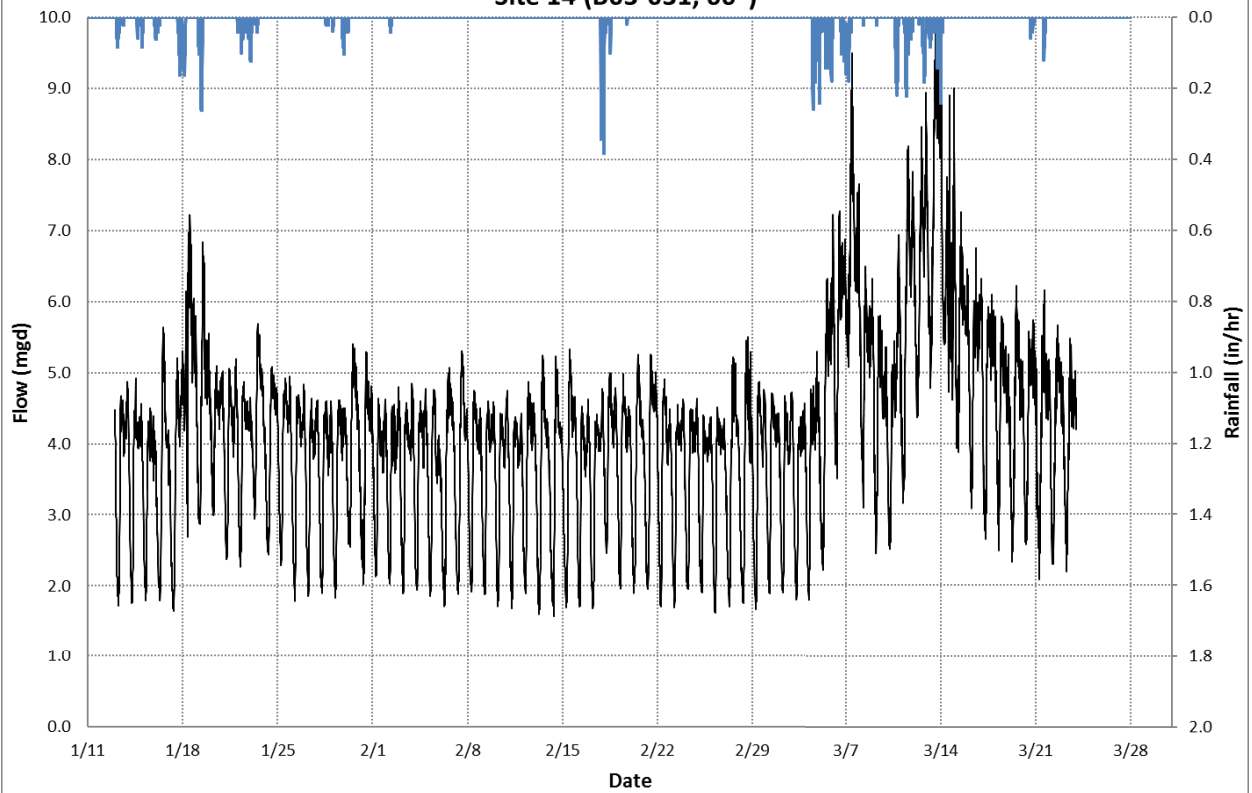


Roseville 2015/2016 Wet Weather Flow Monitoring
Site 12 (B03-029, 20.5")

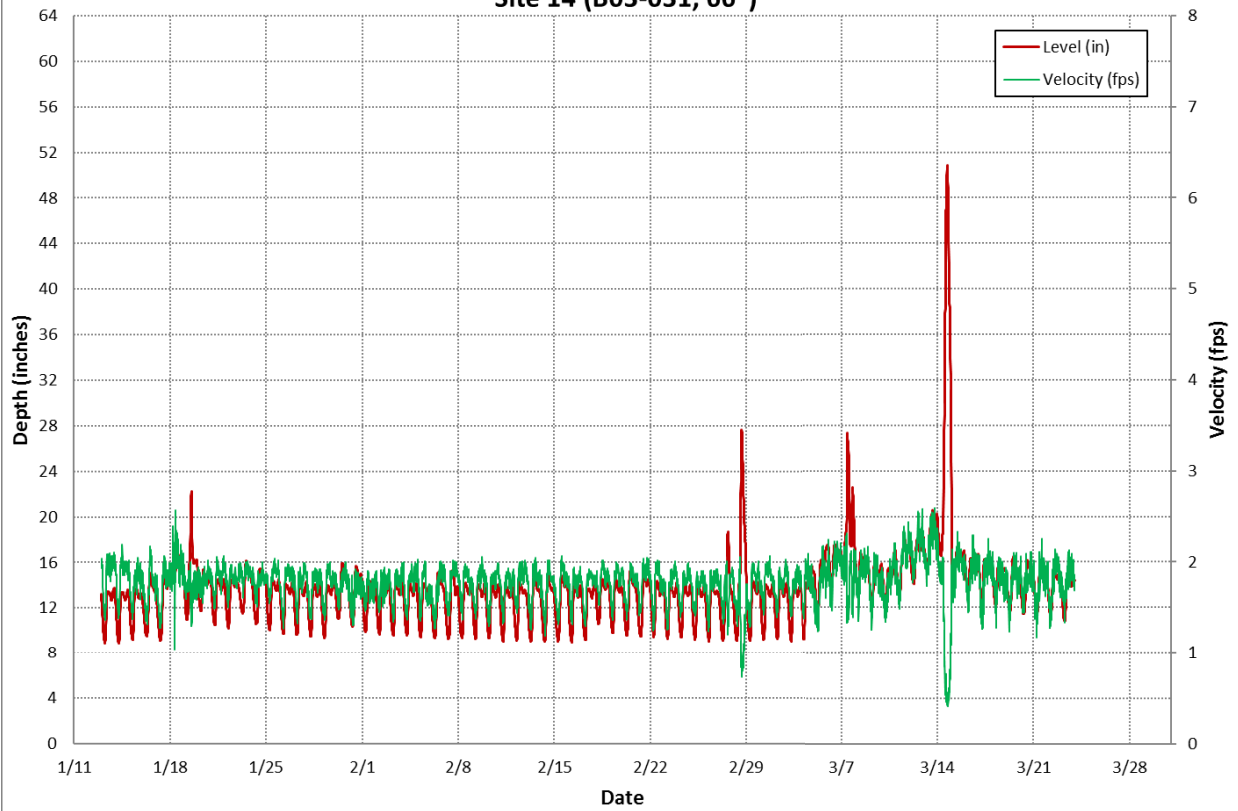


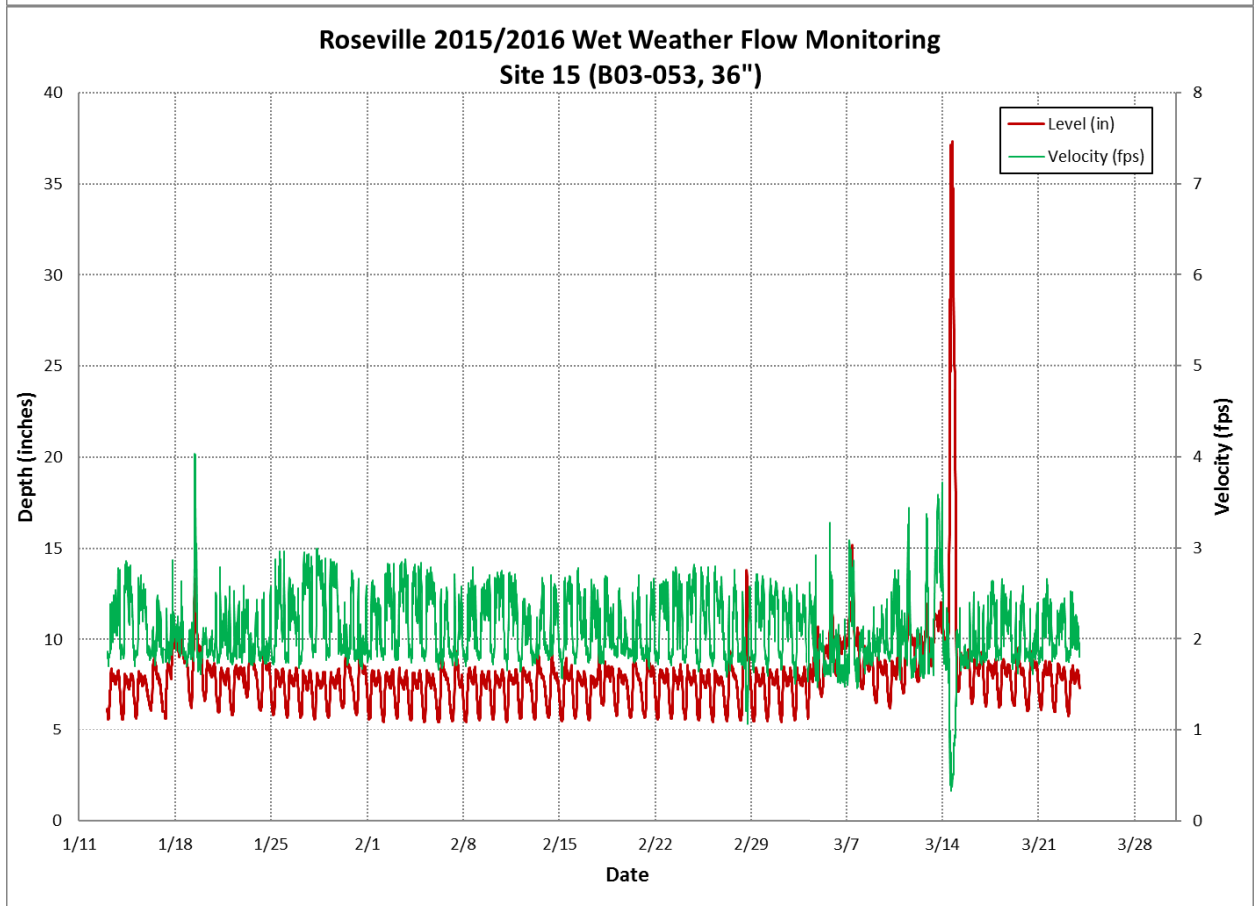
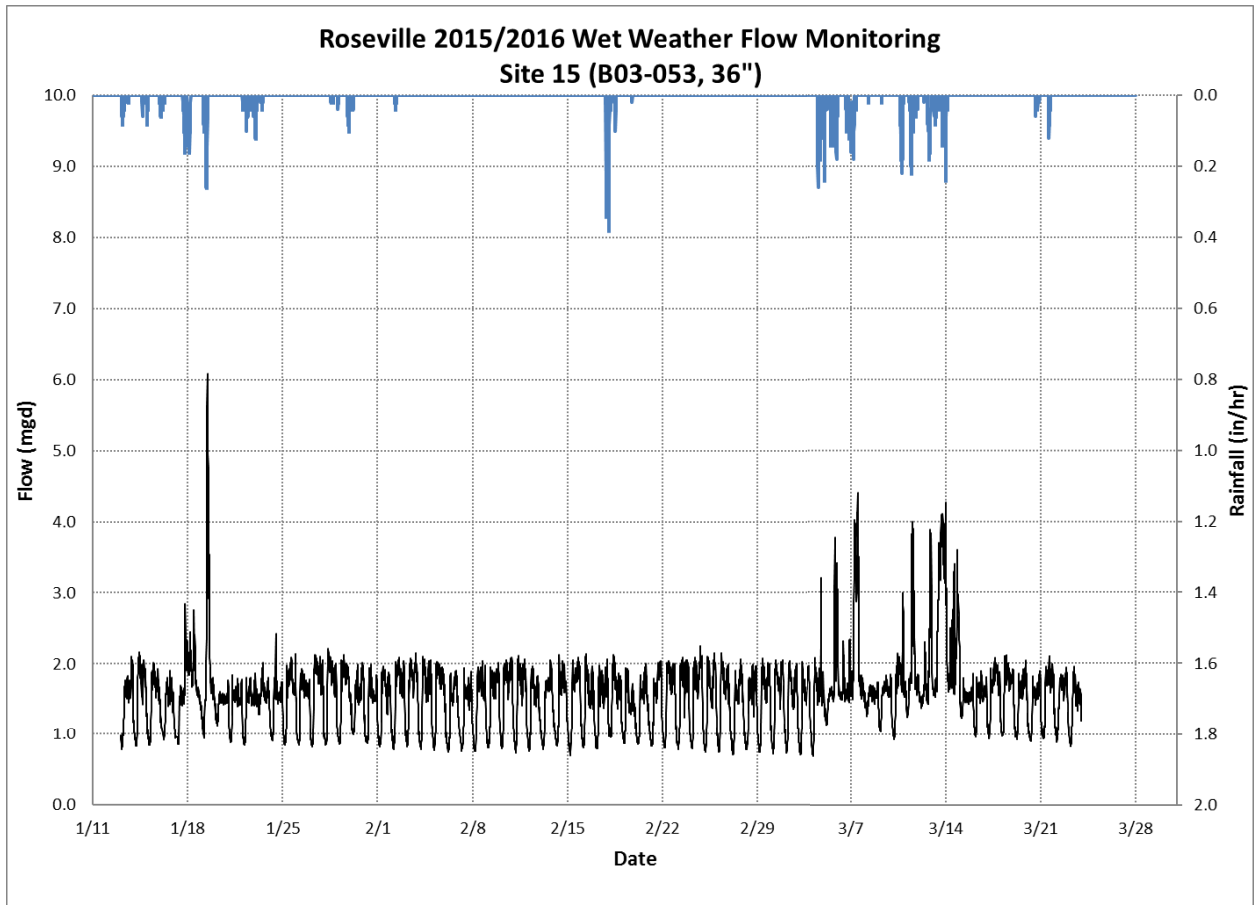


Roseville 2015/2016 Wet Weather Flow Monitoring
Site 14 (B03-031, 66")

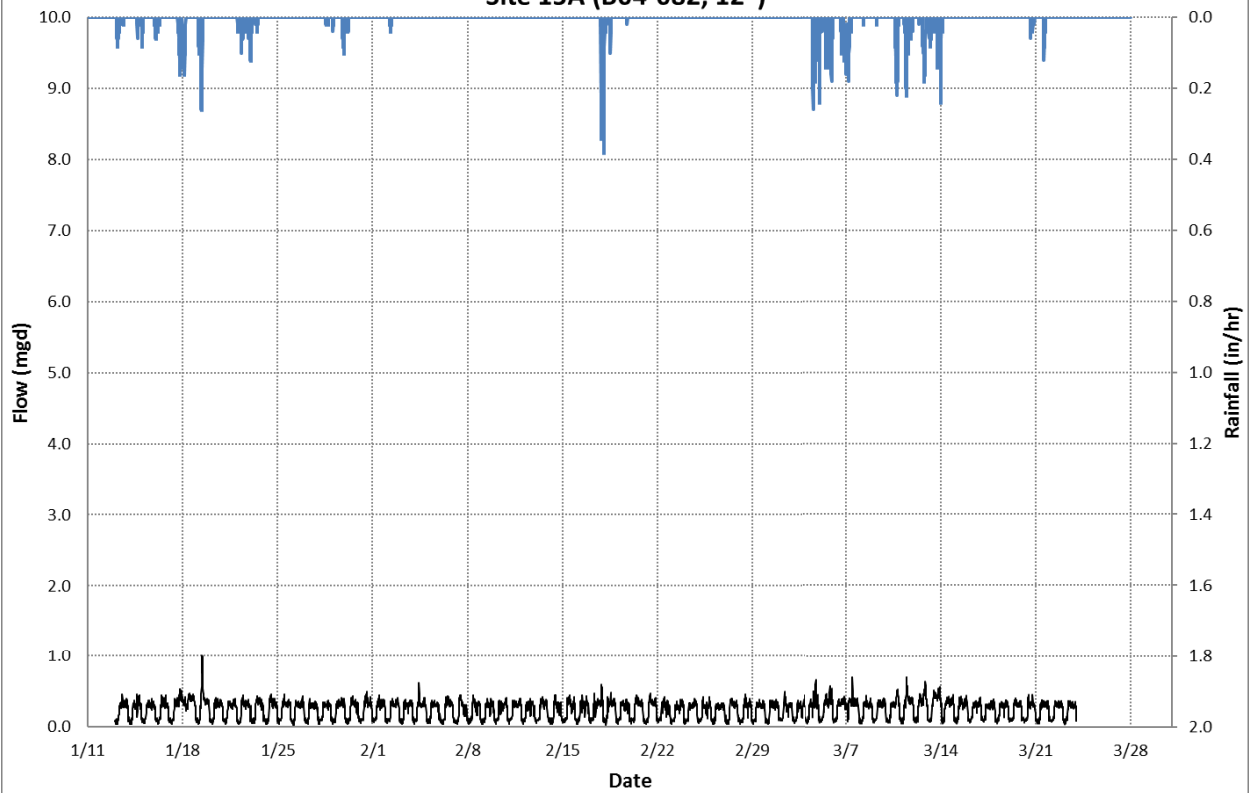


Roseville 2015/2016 Wet Weather Flow Monitoring
Site 14 (B03-031, 66")

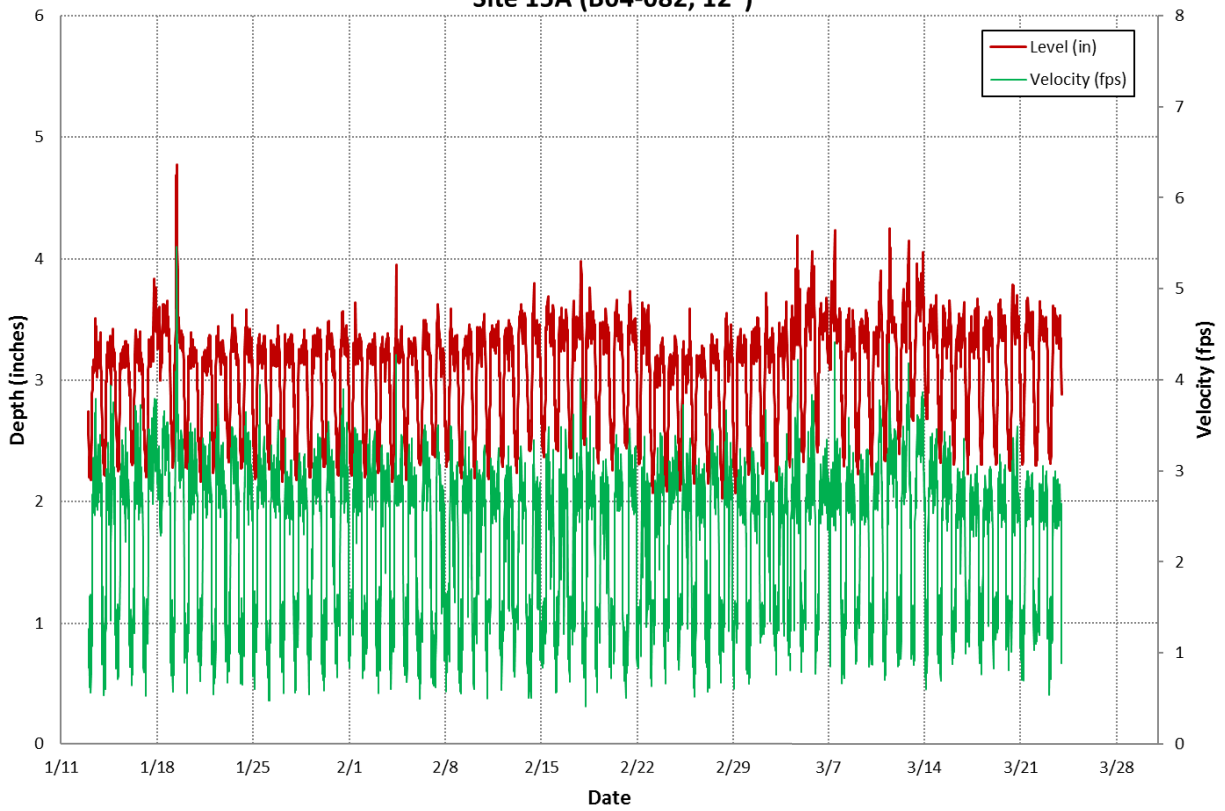


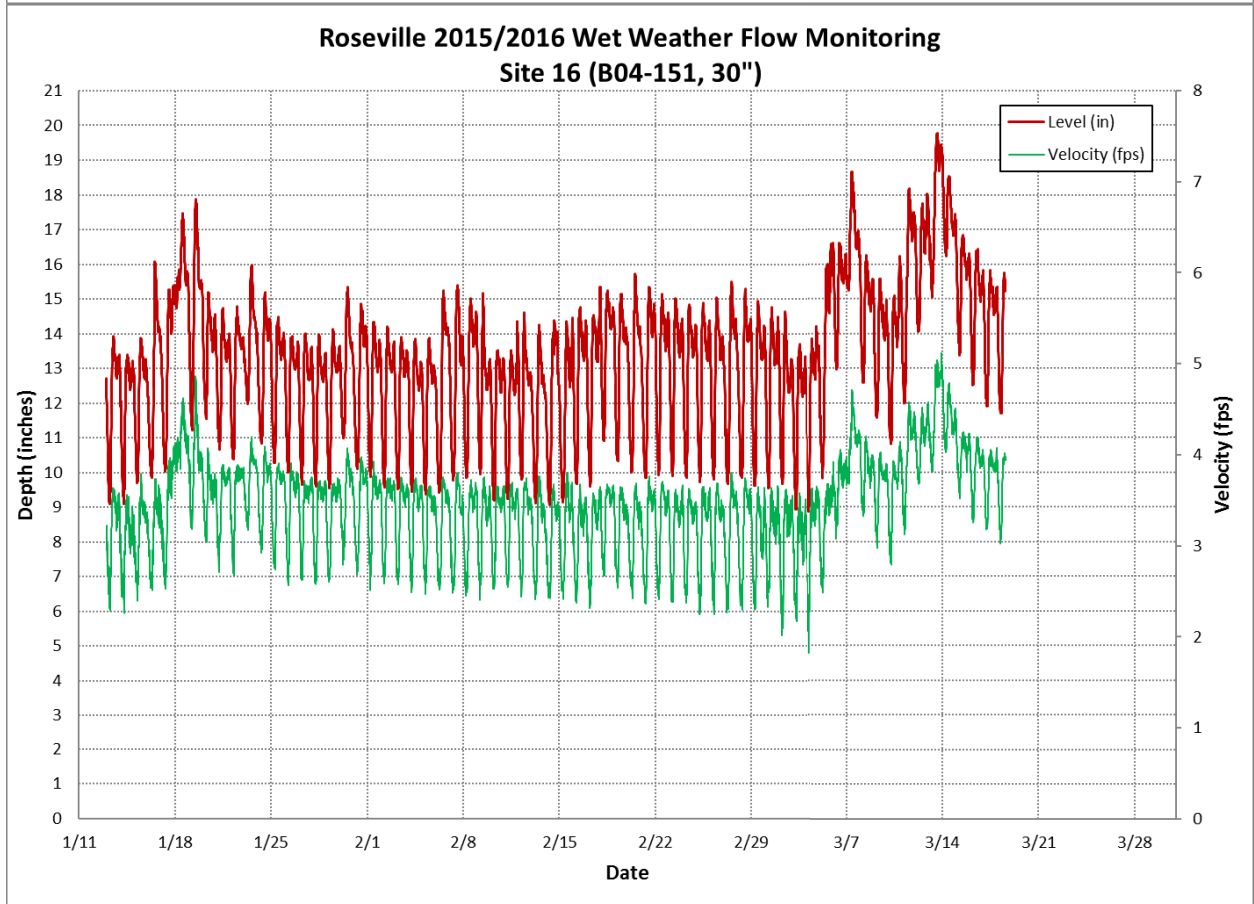
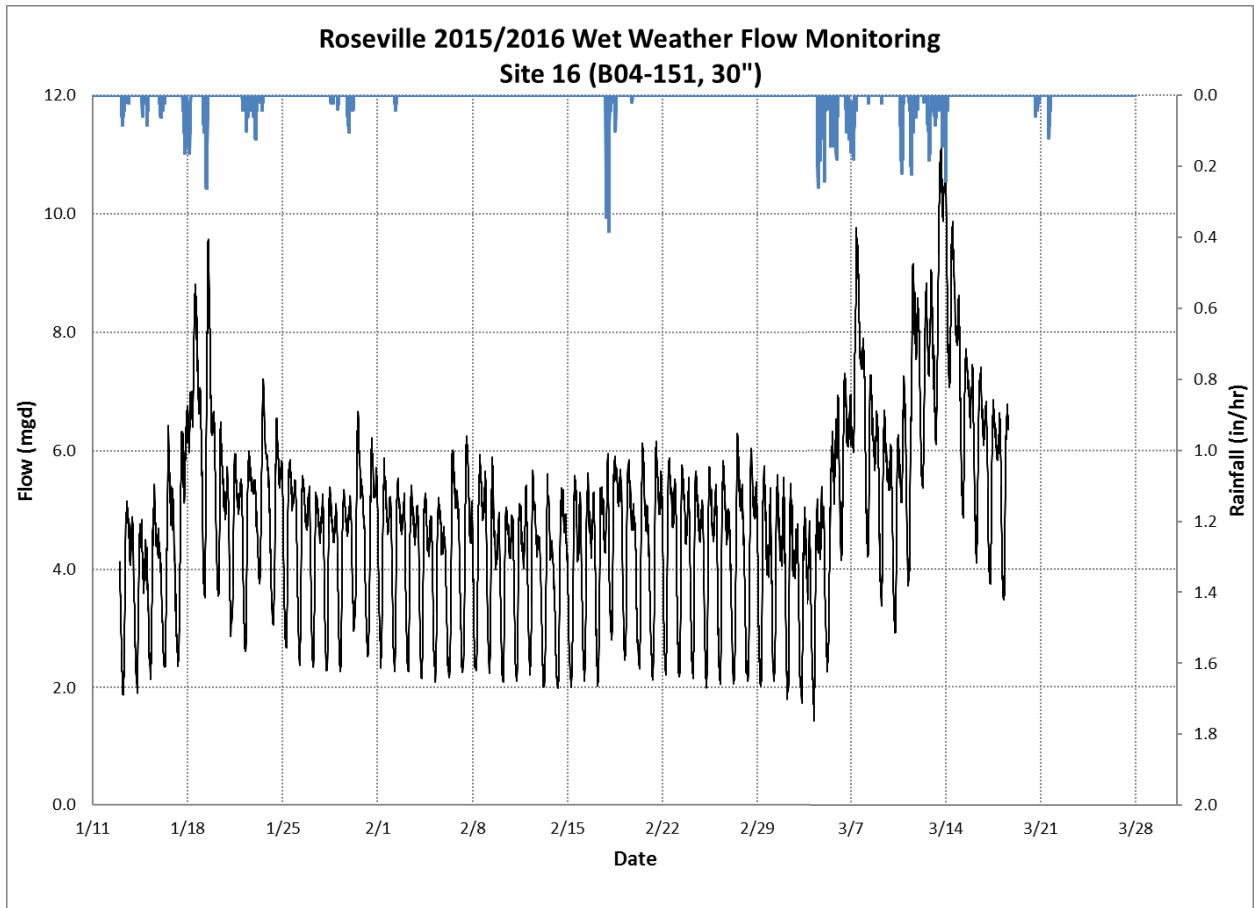


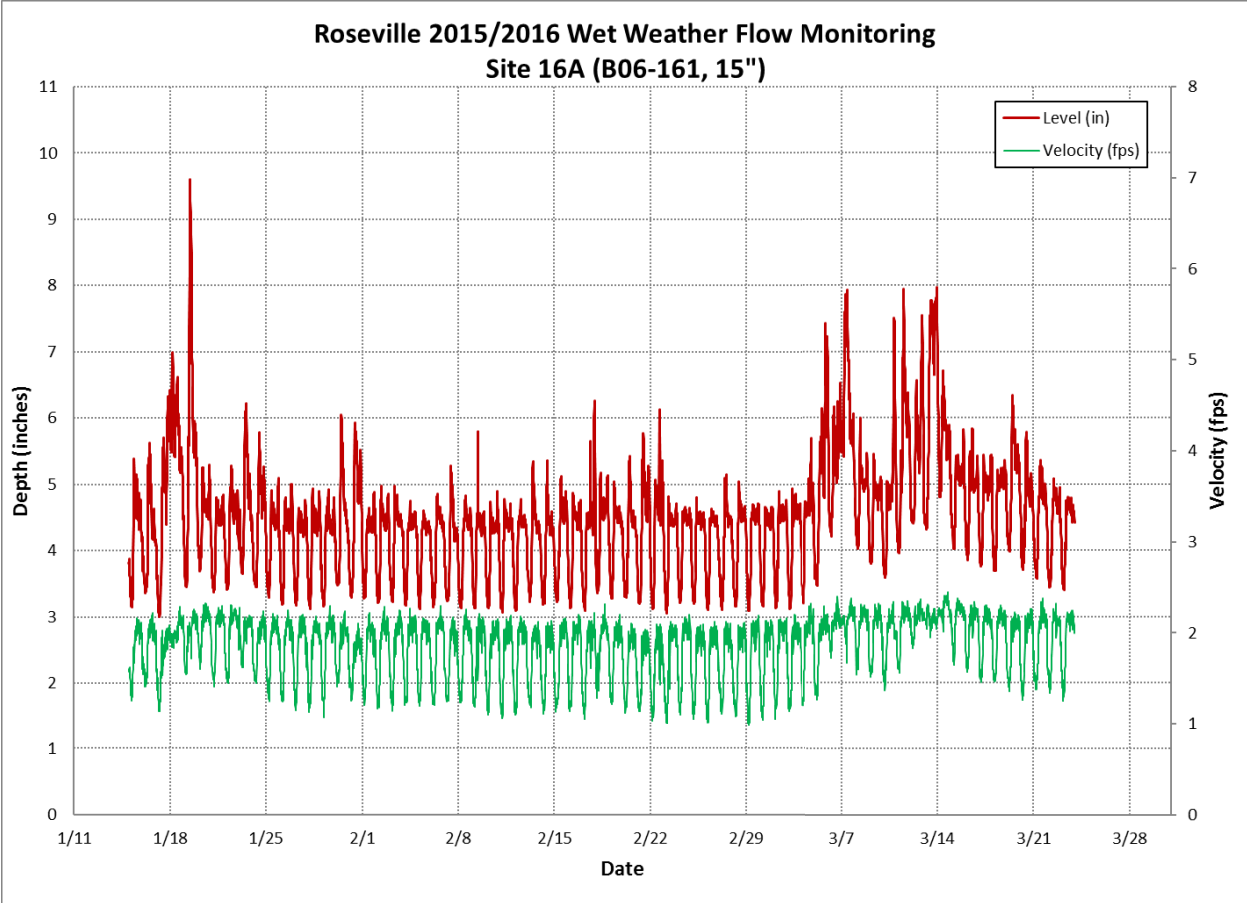
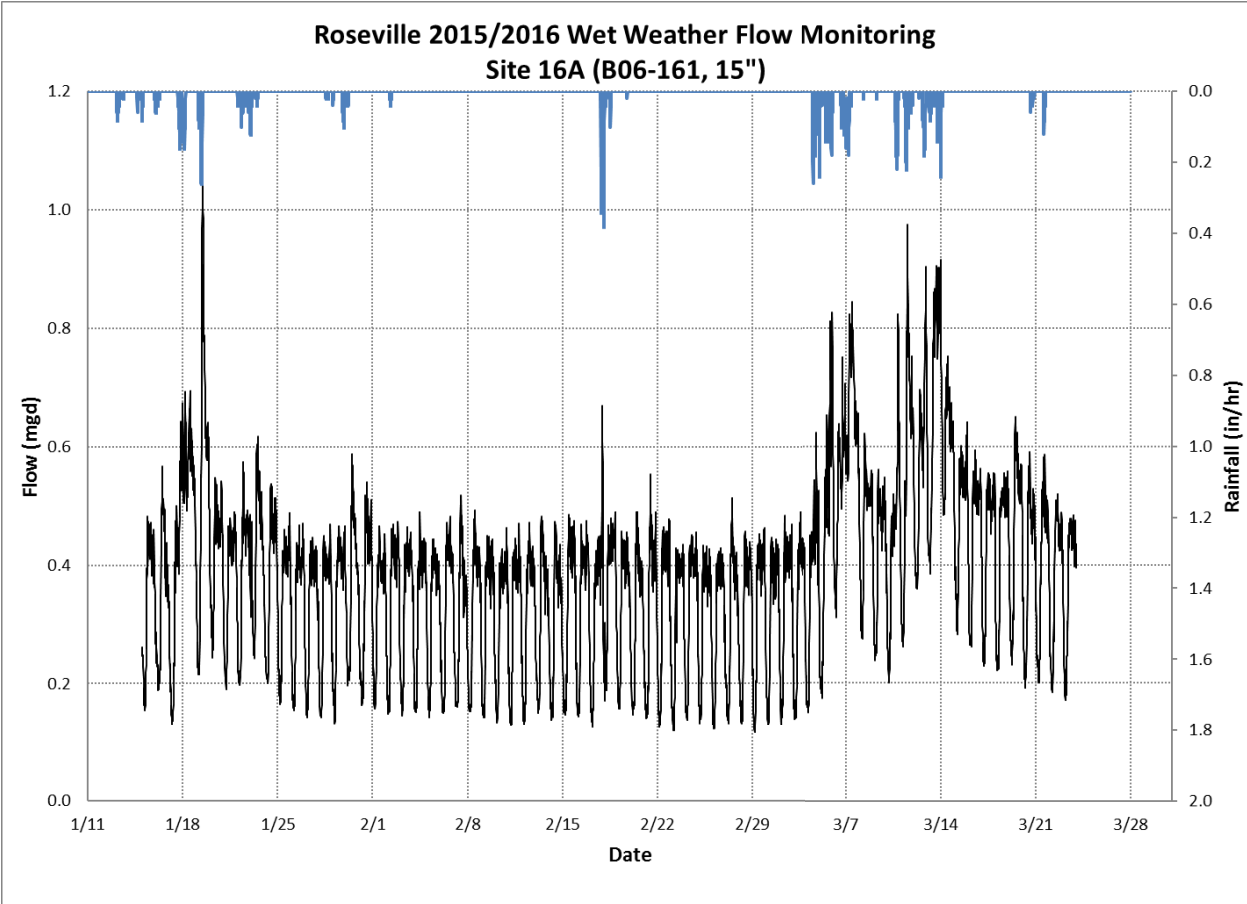
Roseville 2015/2016 Wet Weather Flow Monitoring Site 15A (B04-082, 12")

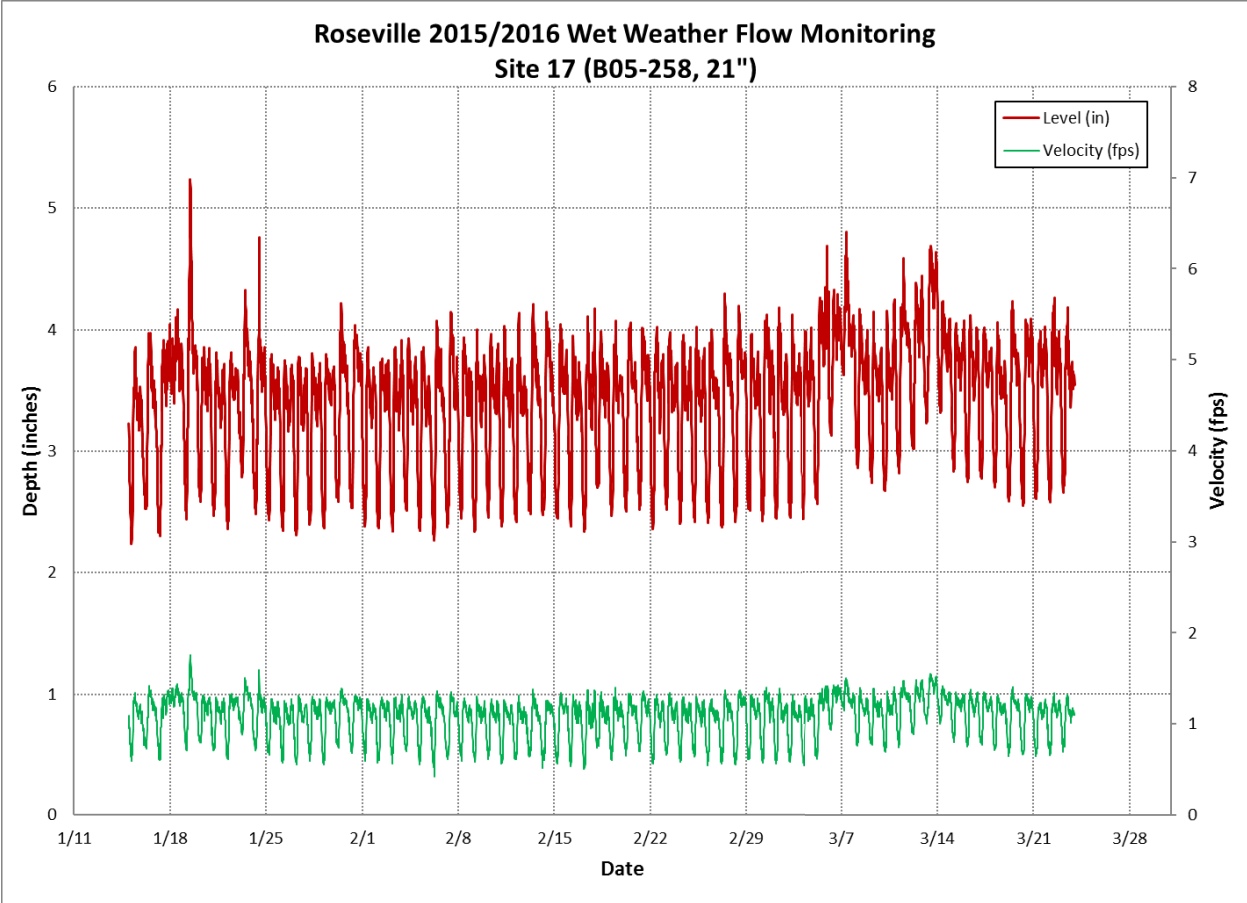
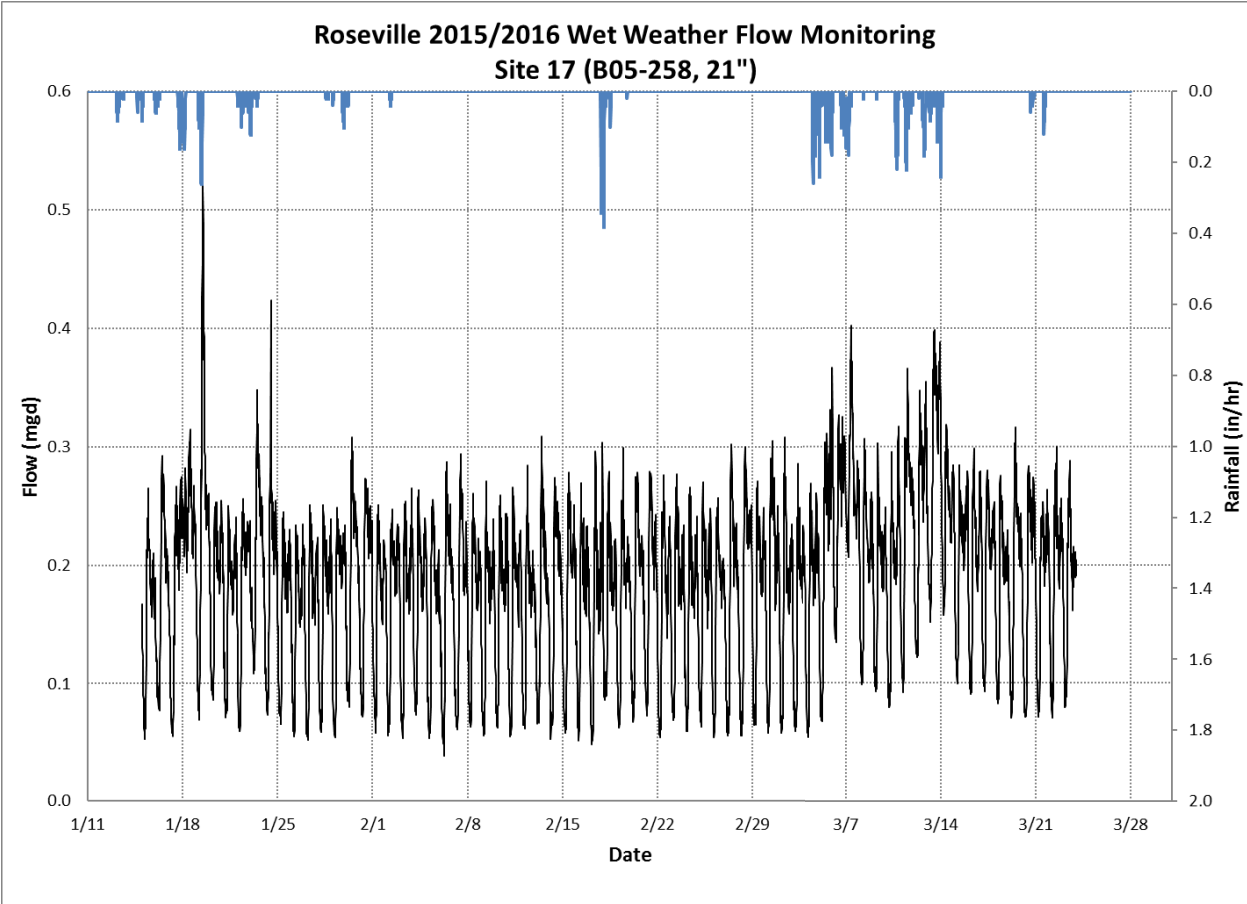


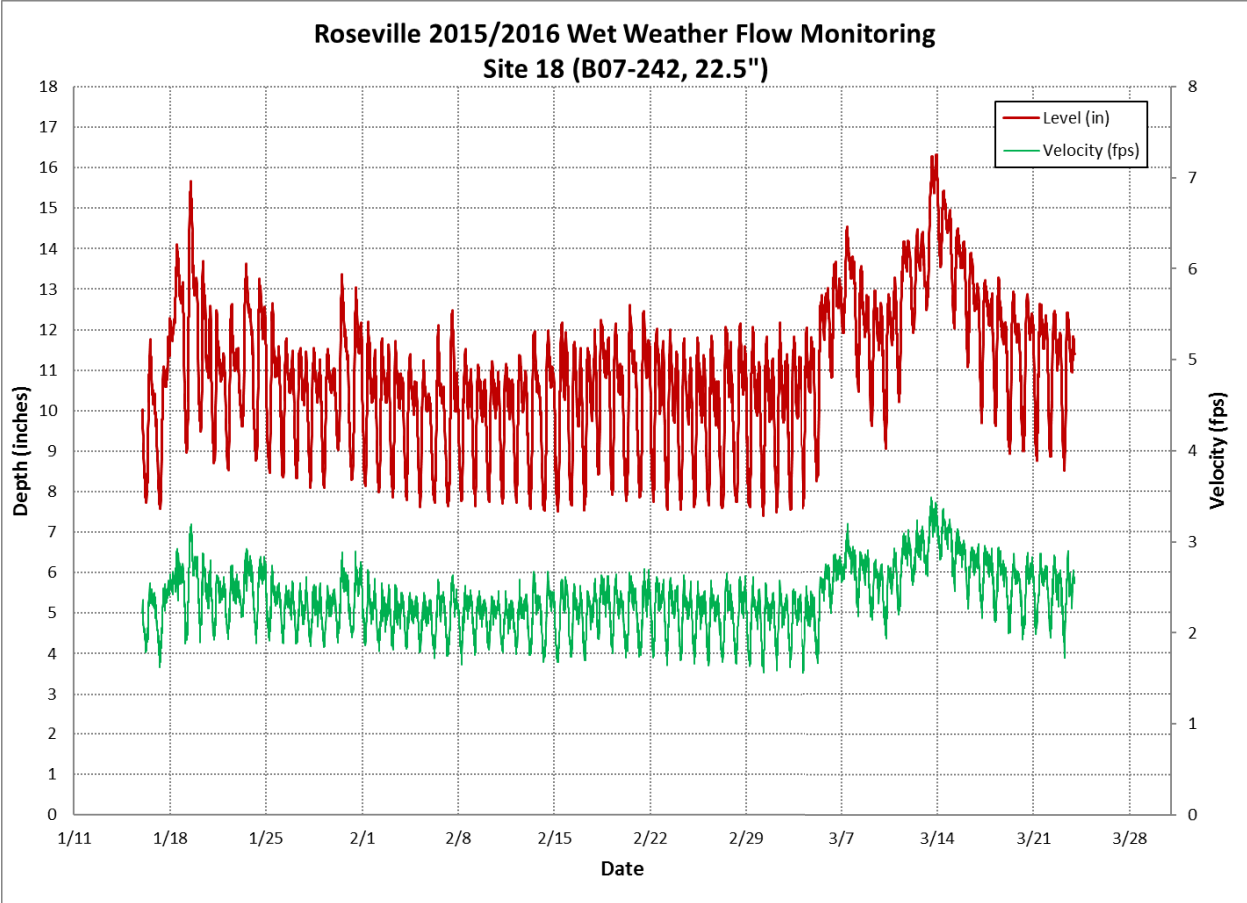
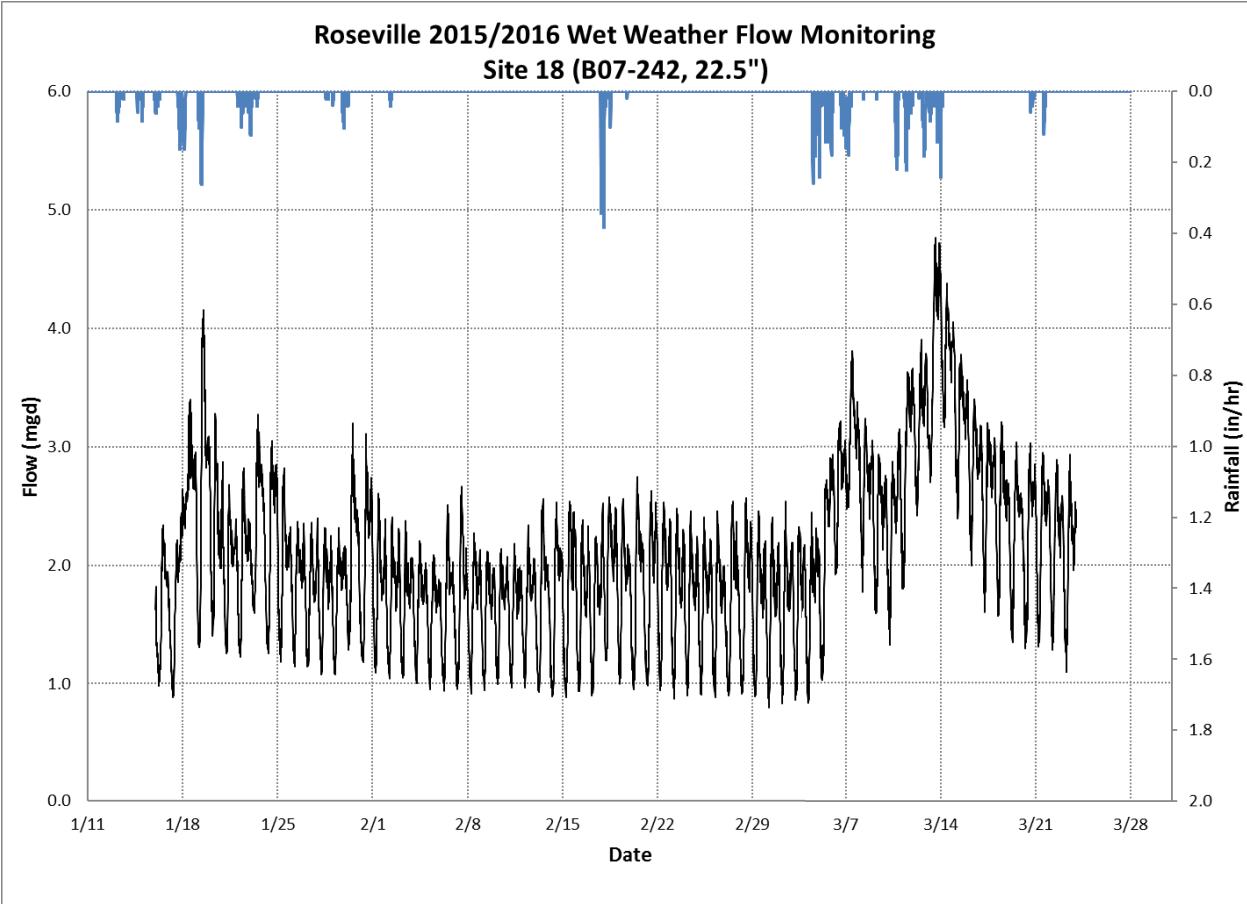
Roseville 2015/2016 Wet Weather Flow Monitoring Site 15A (B04-082, 12")

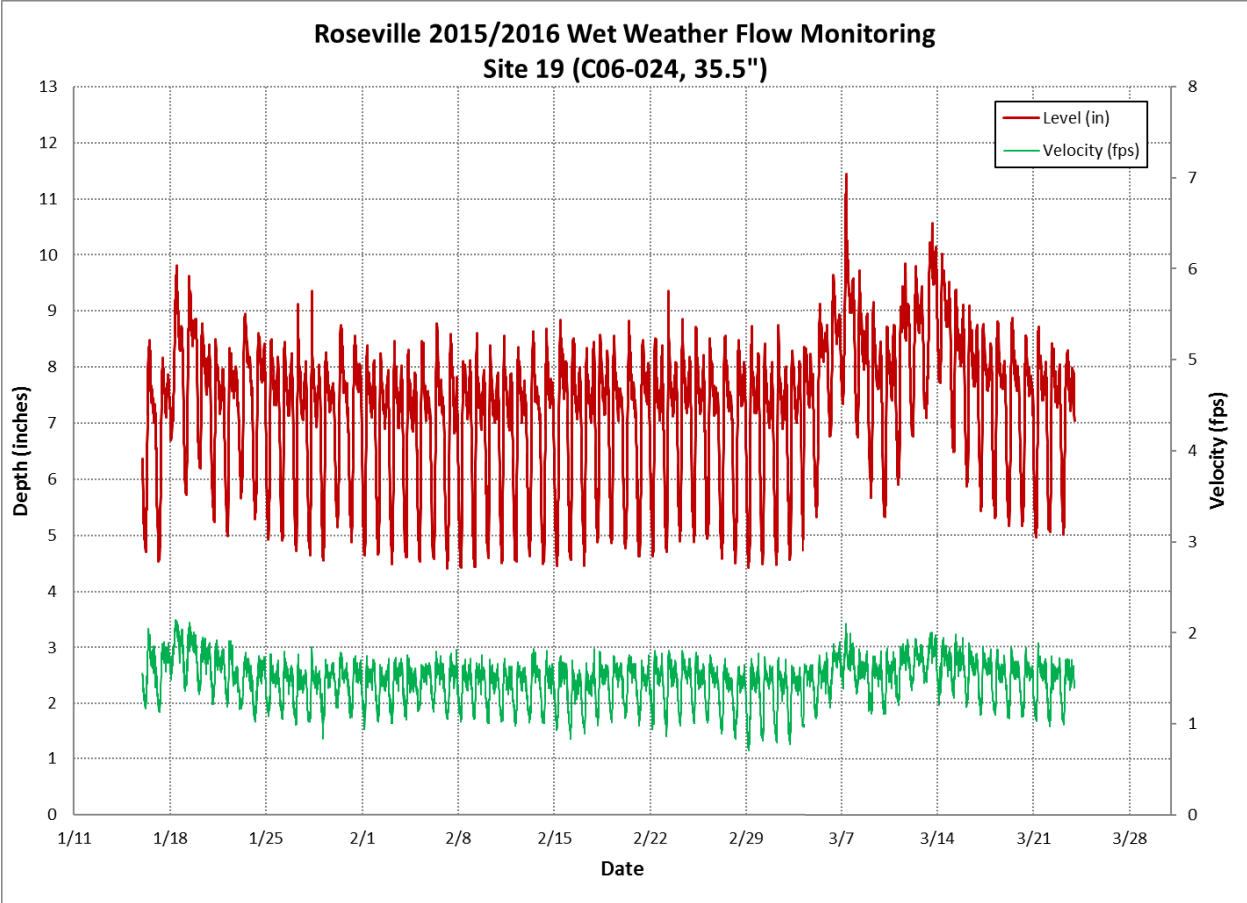
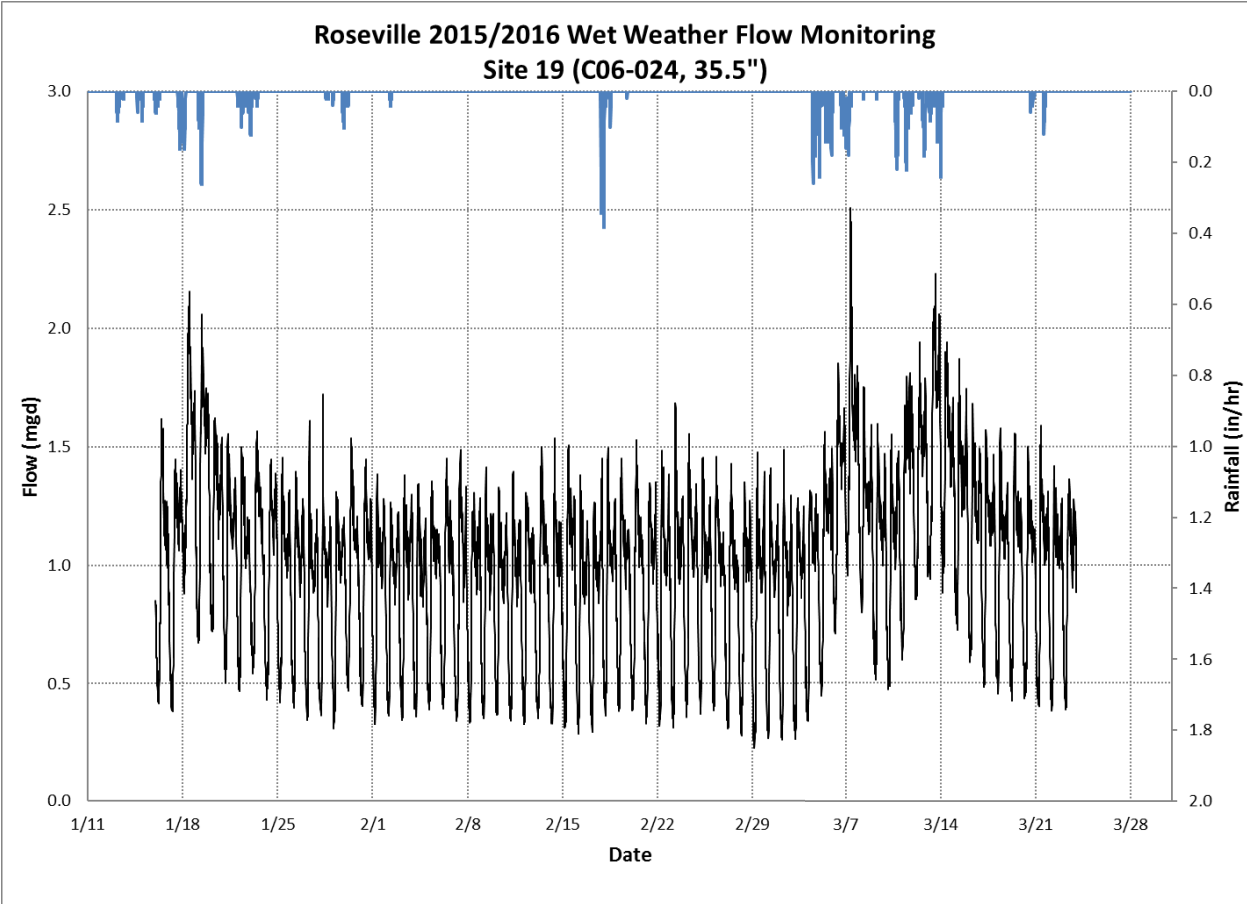




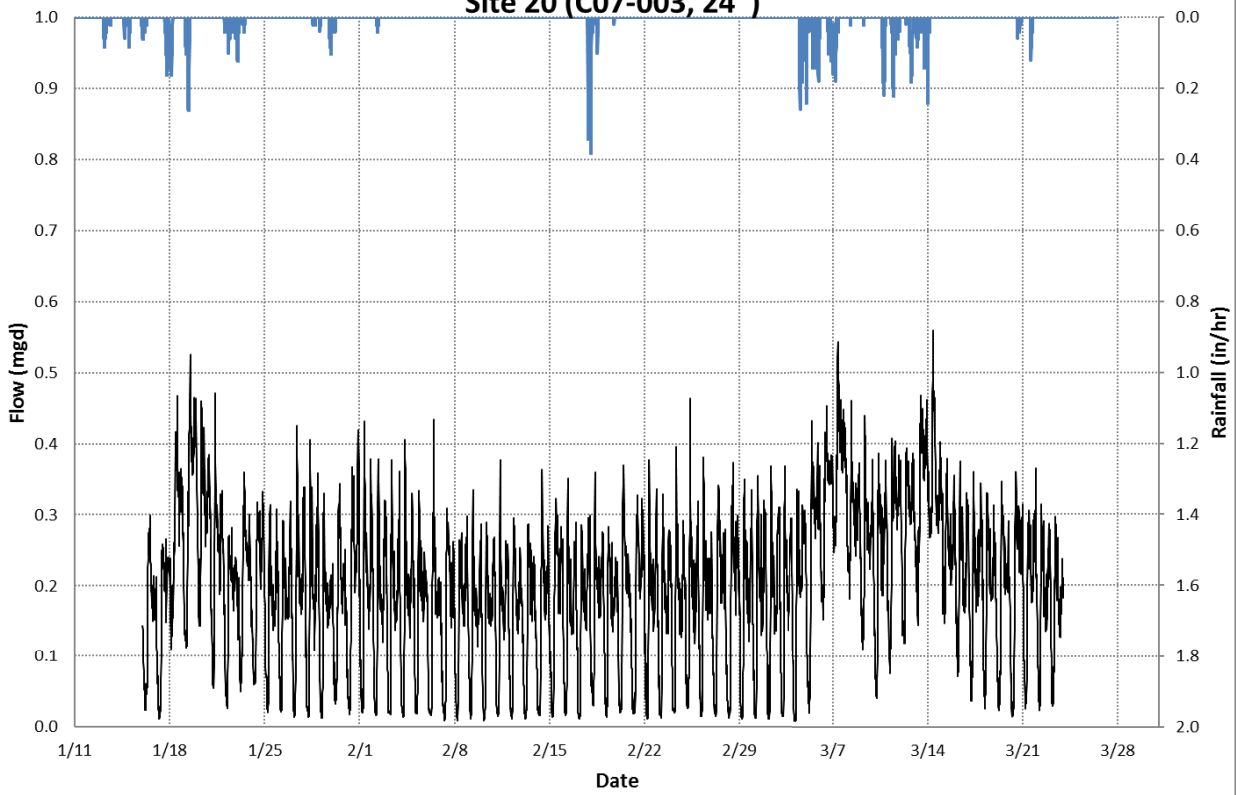




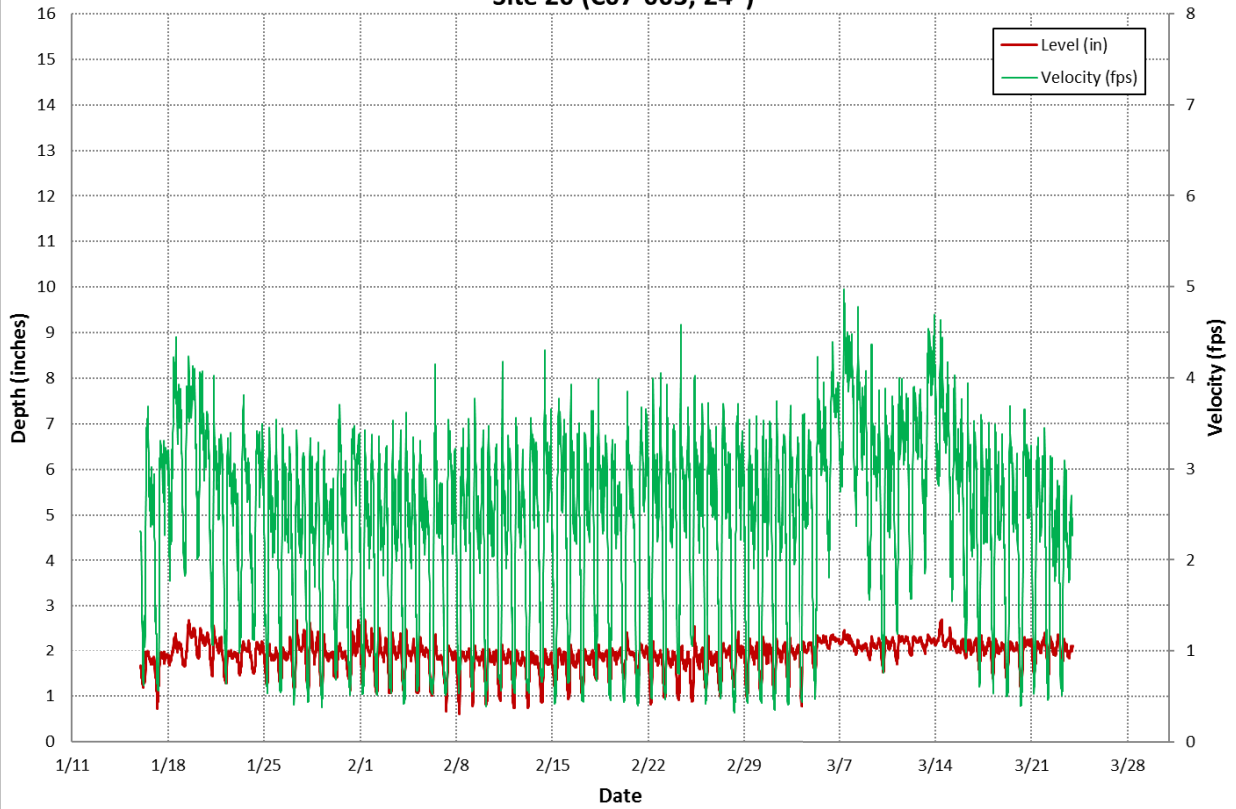




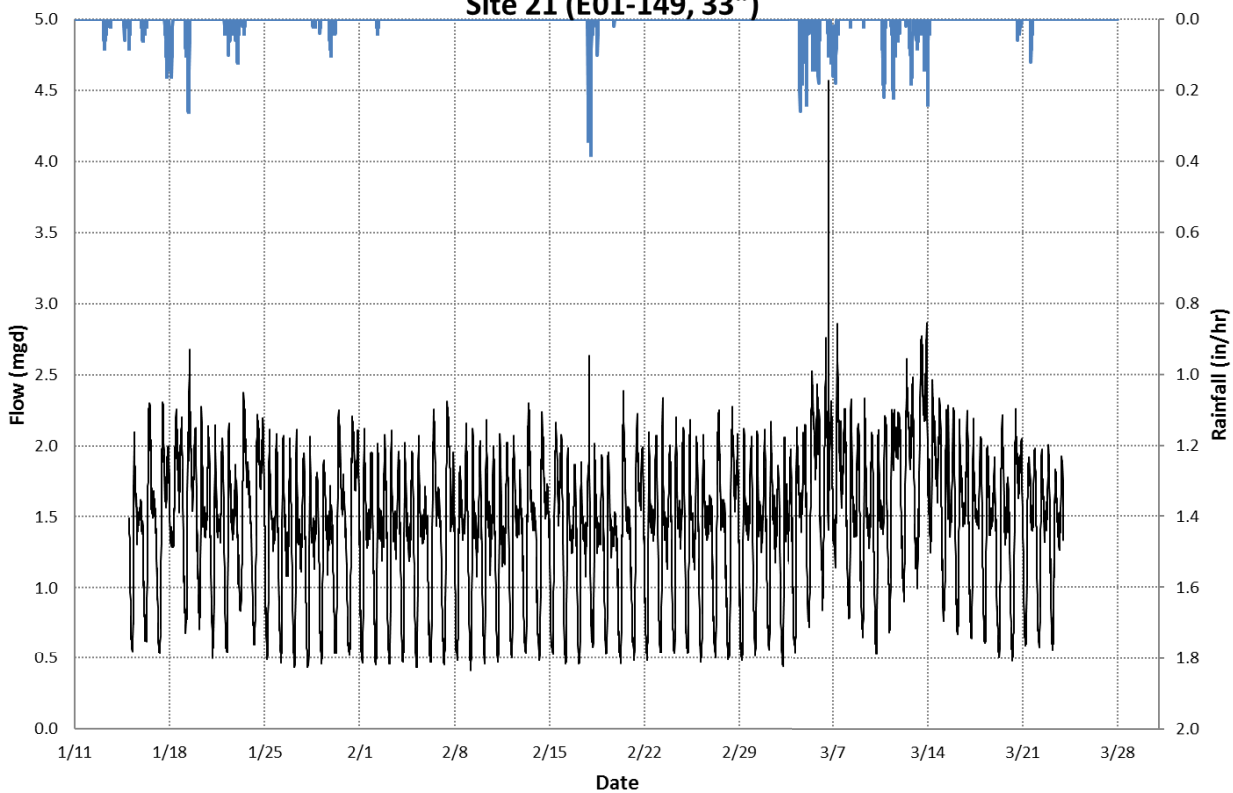
**Roseville 2015/2016 Wet Weather Flow Monitoring
Site 20 (C07-003, 24")**



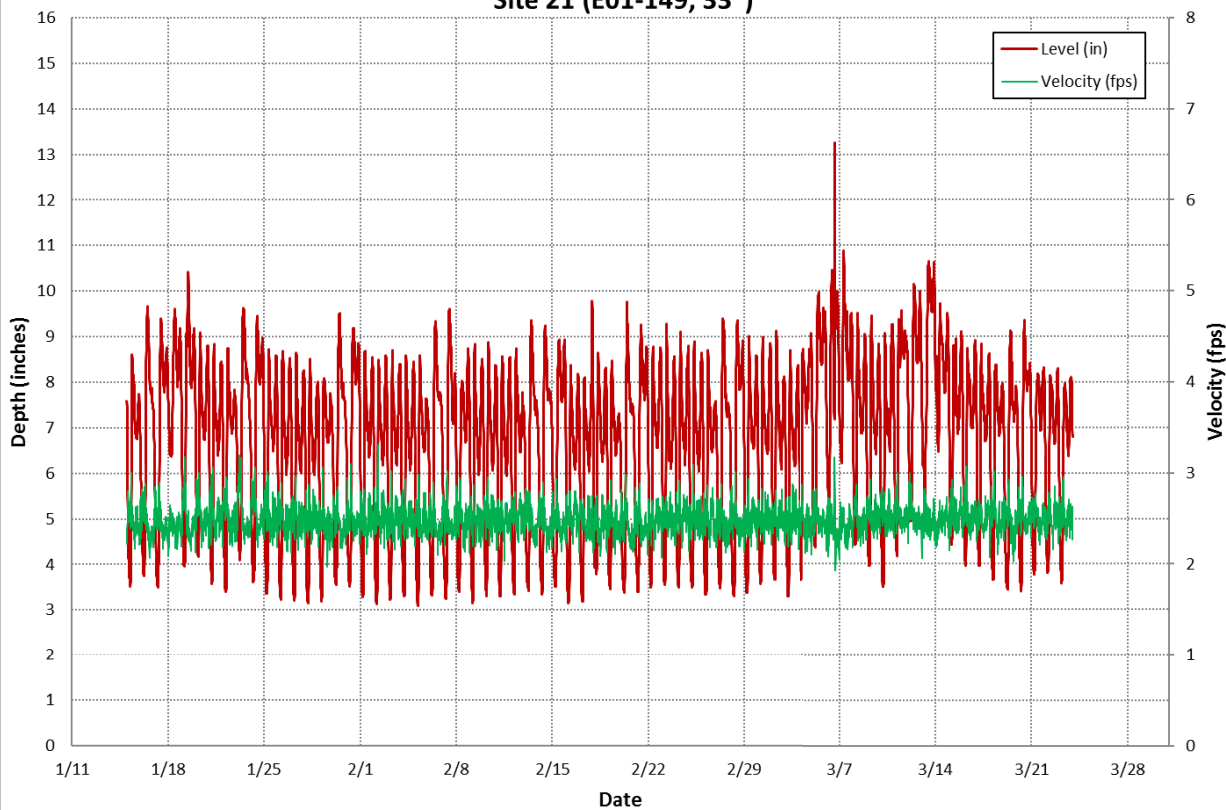
**Roseville 2015/2016 Wet Weather Flow Monitoring
Site 20 (C07-003, 24")**

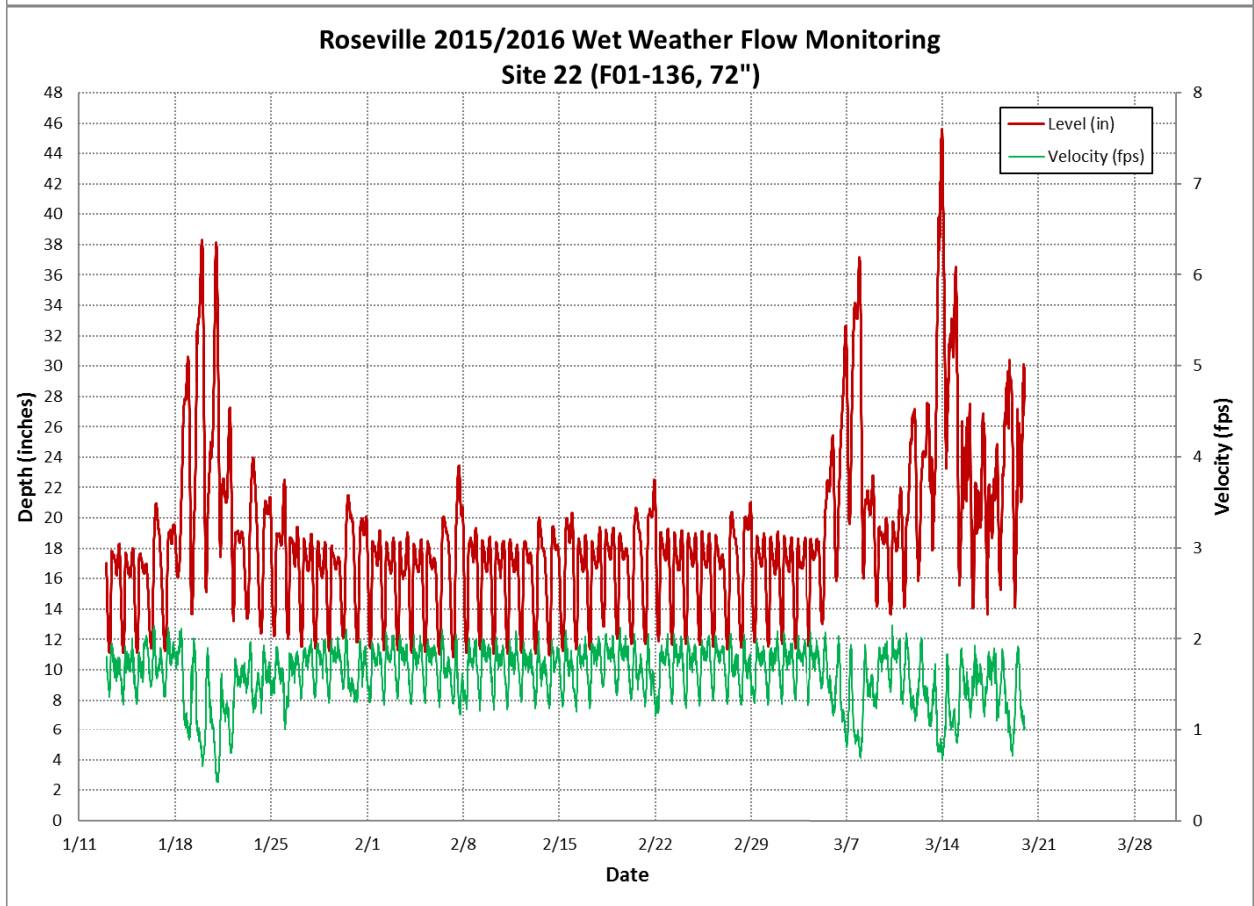
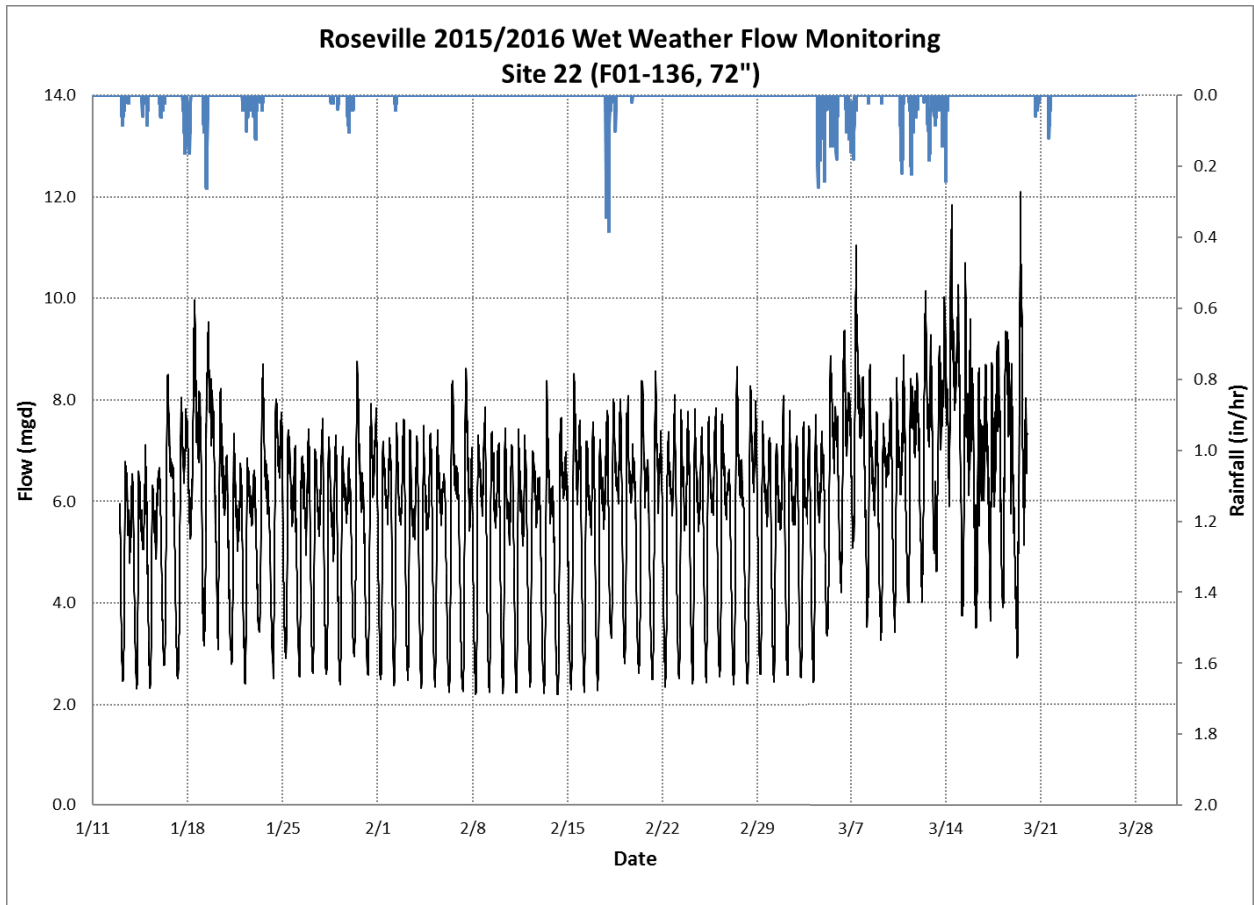


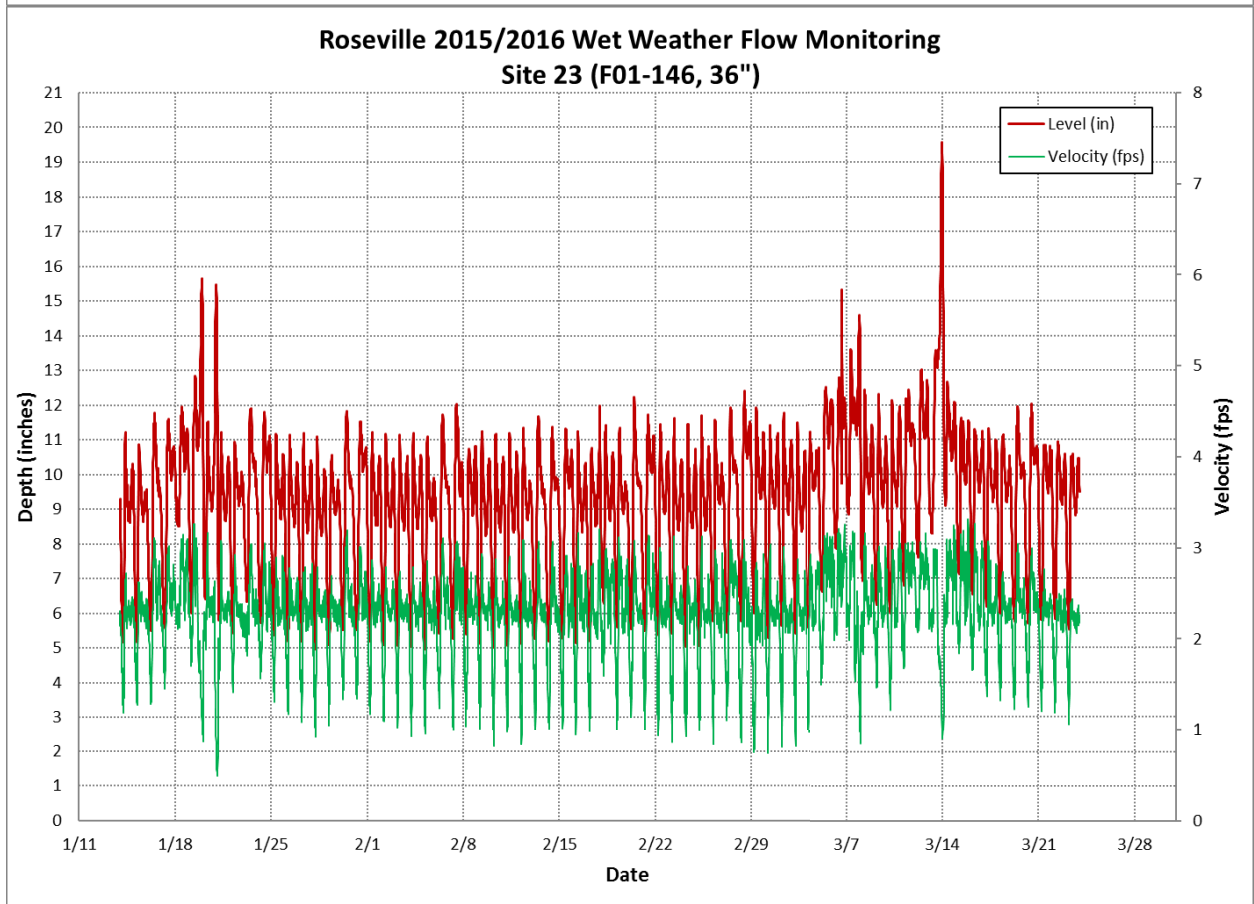
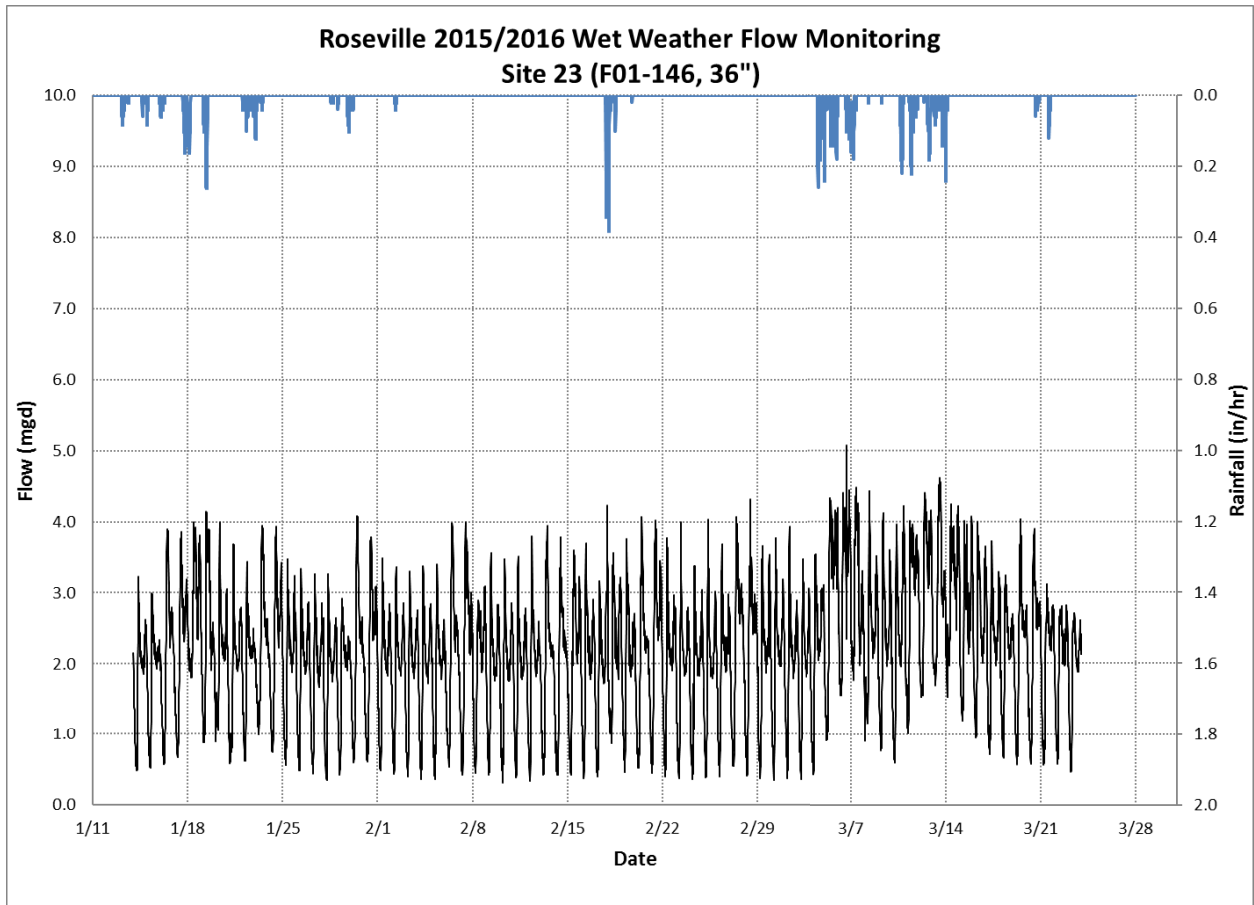
Roseville 2015/2016 Wet Weather Flow Monitoring Site 21 (E01-149, 33")

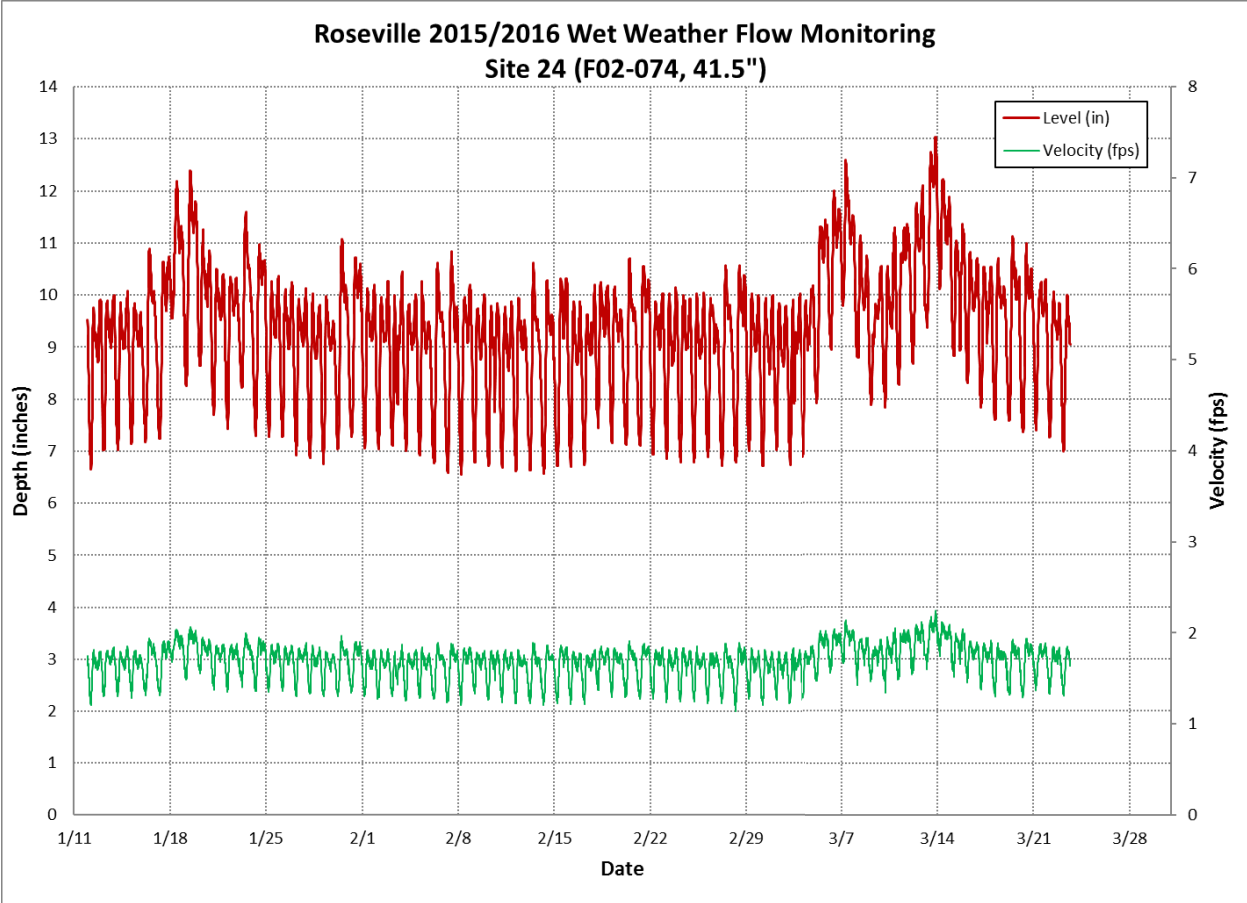
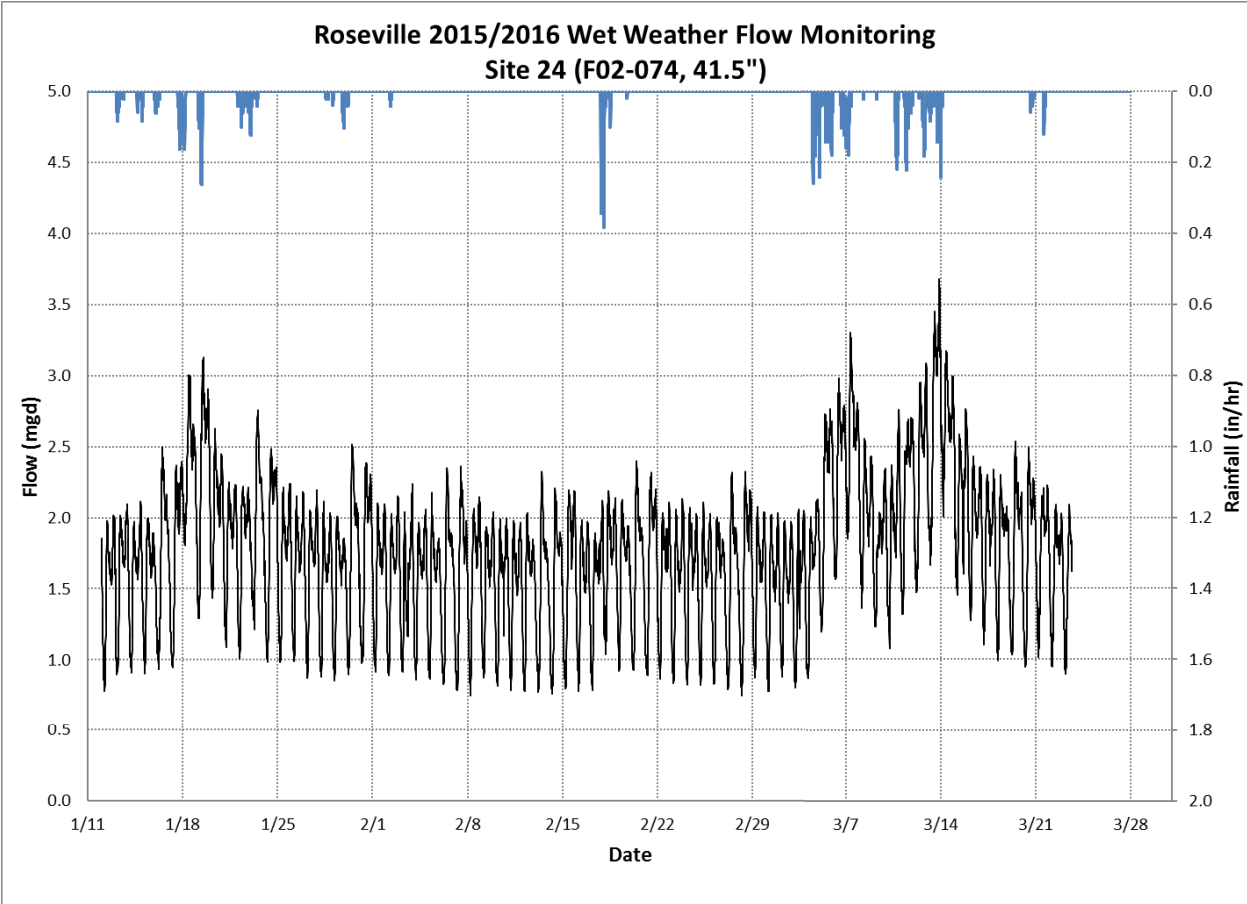


Roseville 2015/2016 Wet Weather Flow Monitoring Site 21 (E01-149, 33")

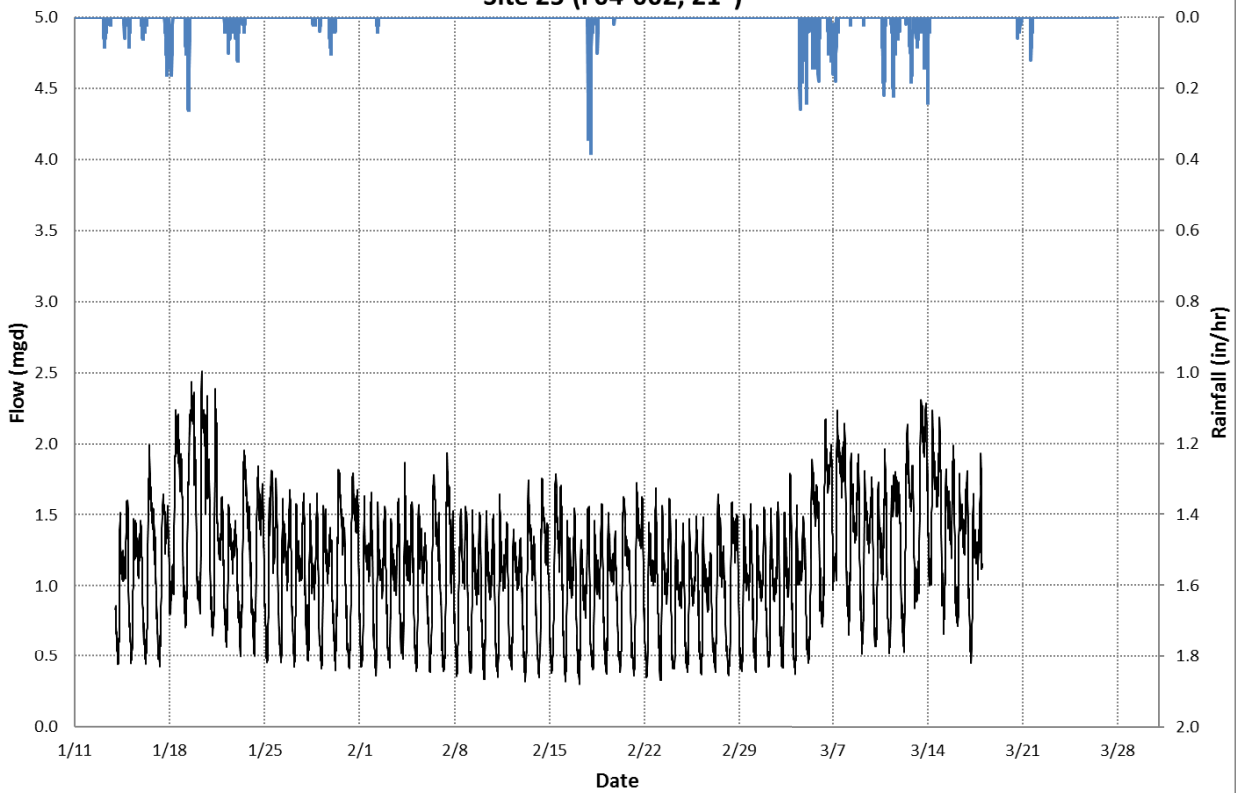




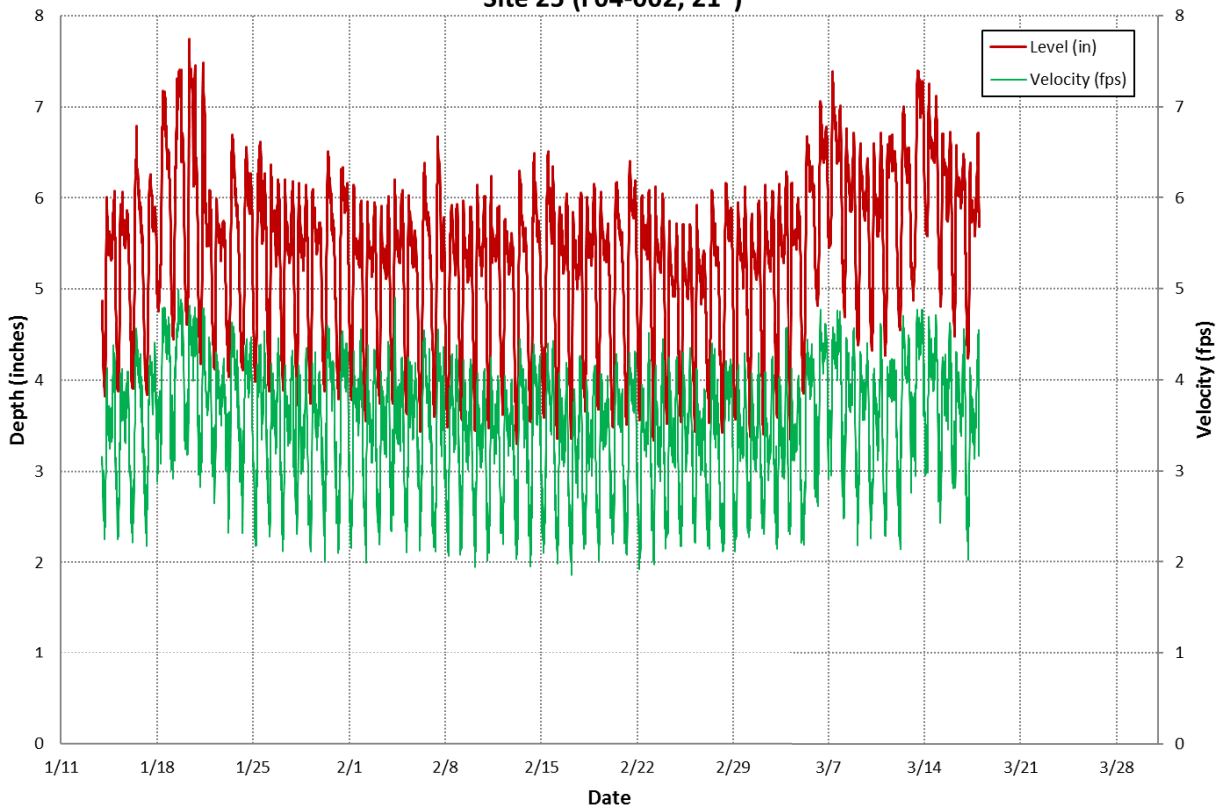




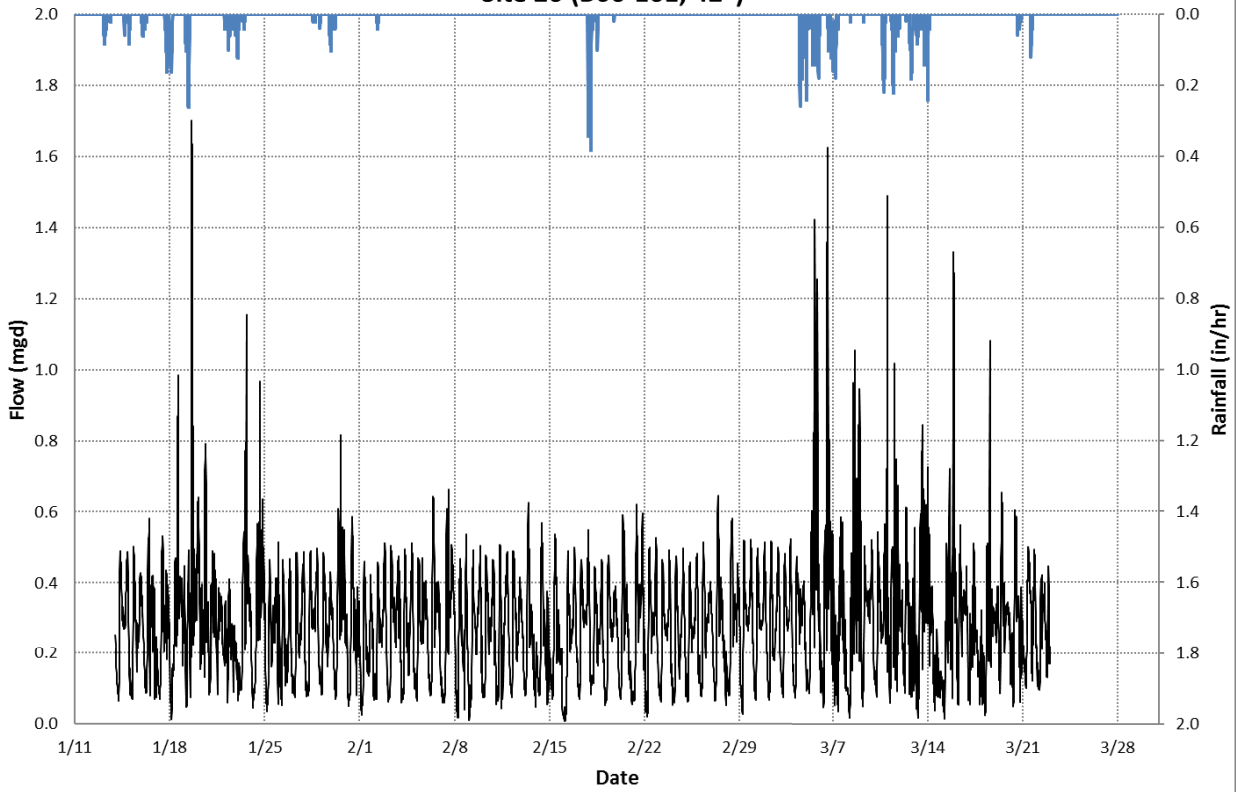
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 25 (F04-002, 21")



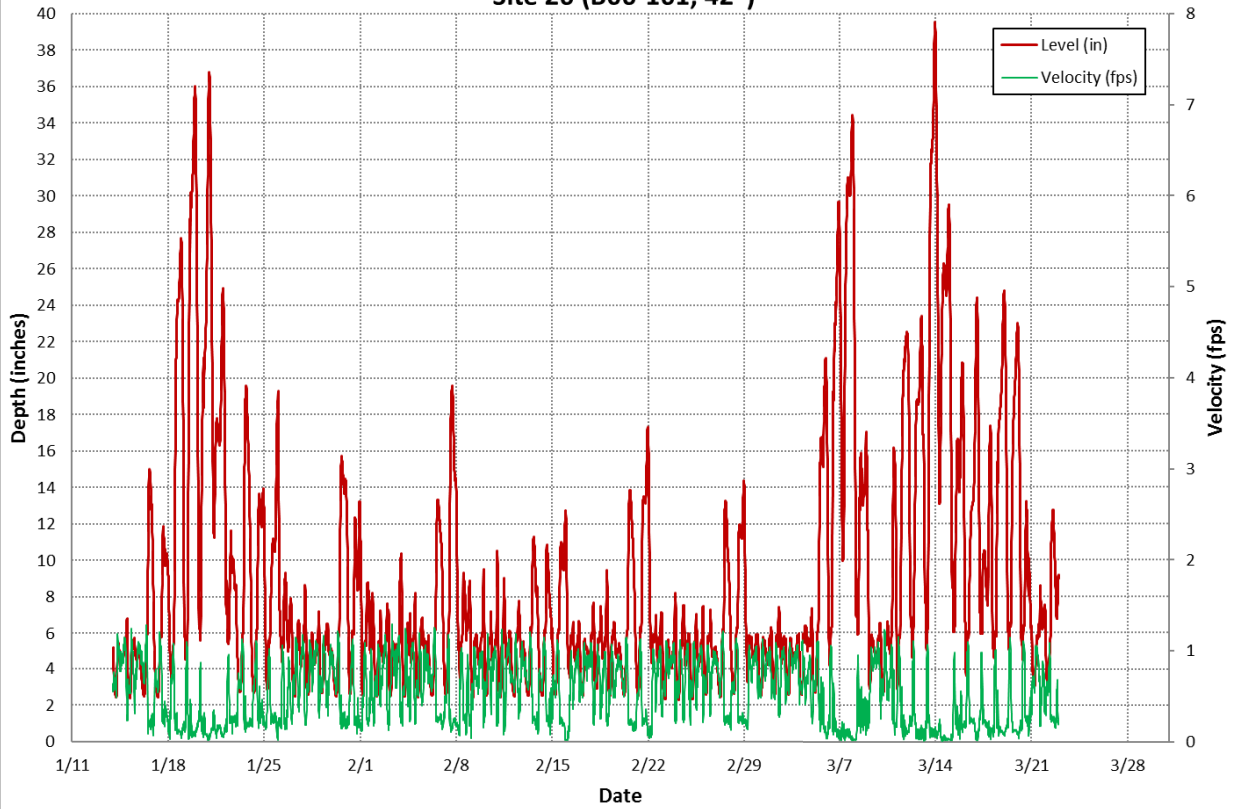
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 25 (F04-002, 21")



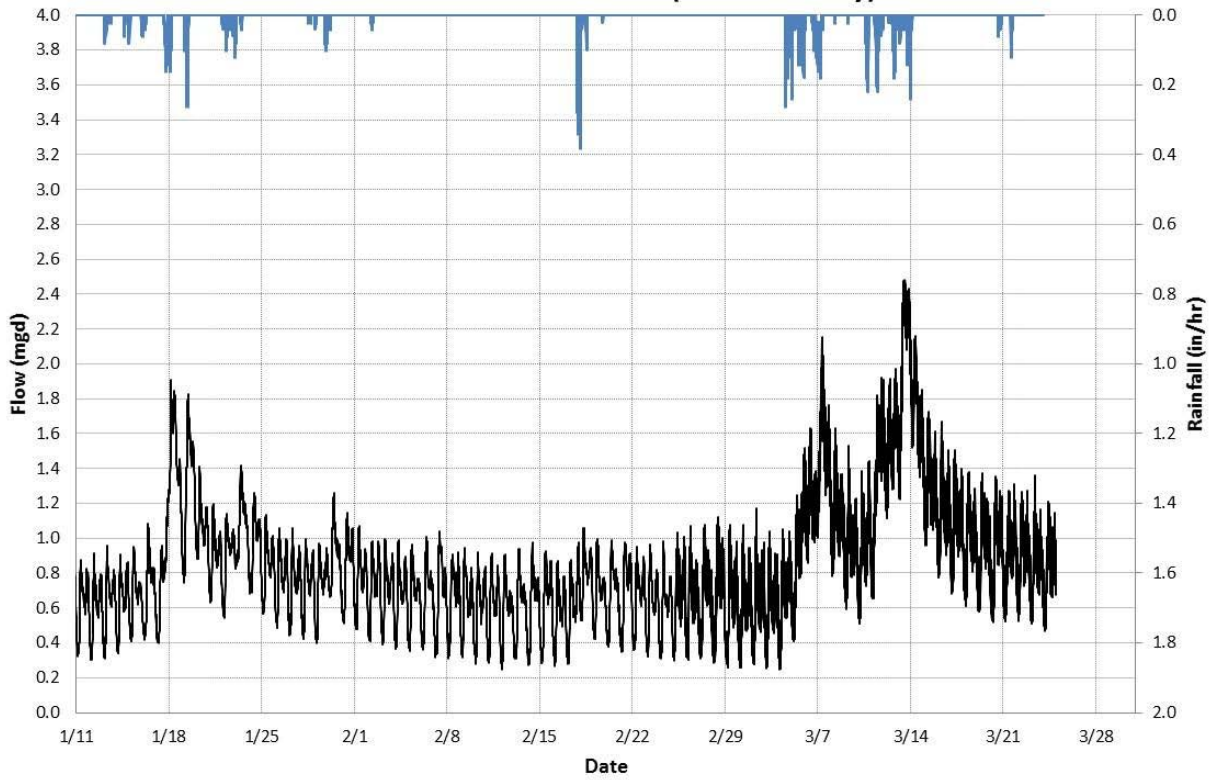
Roseville 2015/2016 Wet Weather Flow Monitoring
Site 26 (B06-161, 42")



Roseville 2015/2016 Wet Weather Flow Monitoring
Site 26 (B06-161, 42")

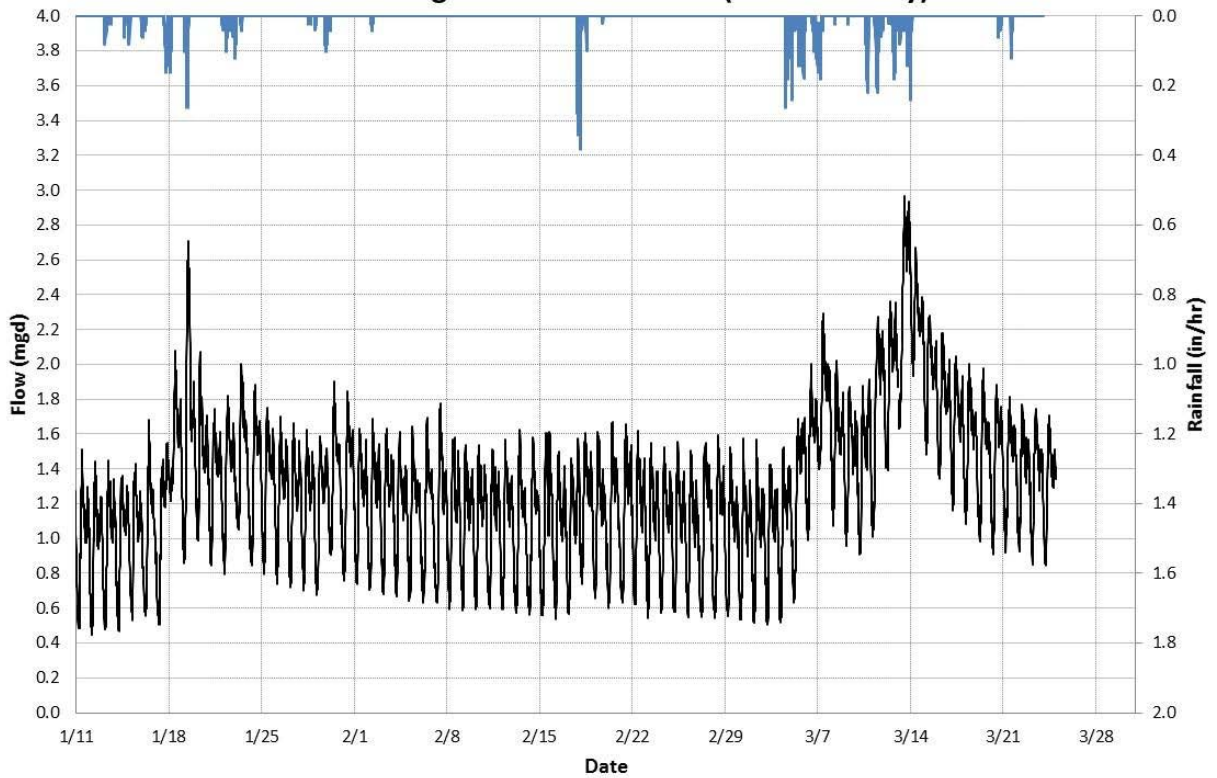


Roseville 2016 Wet Weather Flow Monitoring SMD2 Permanent Meter (Placer County)

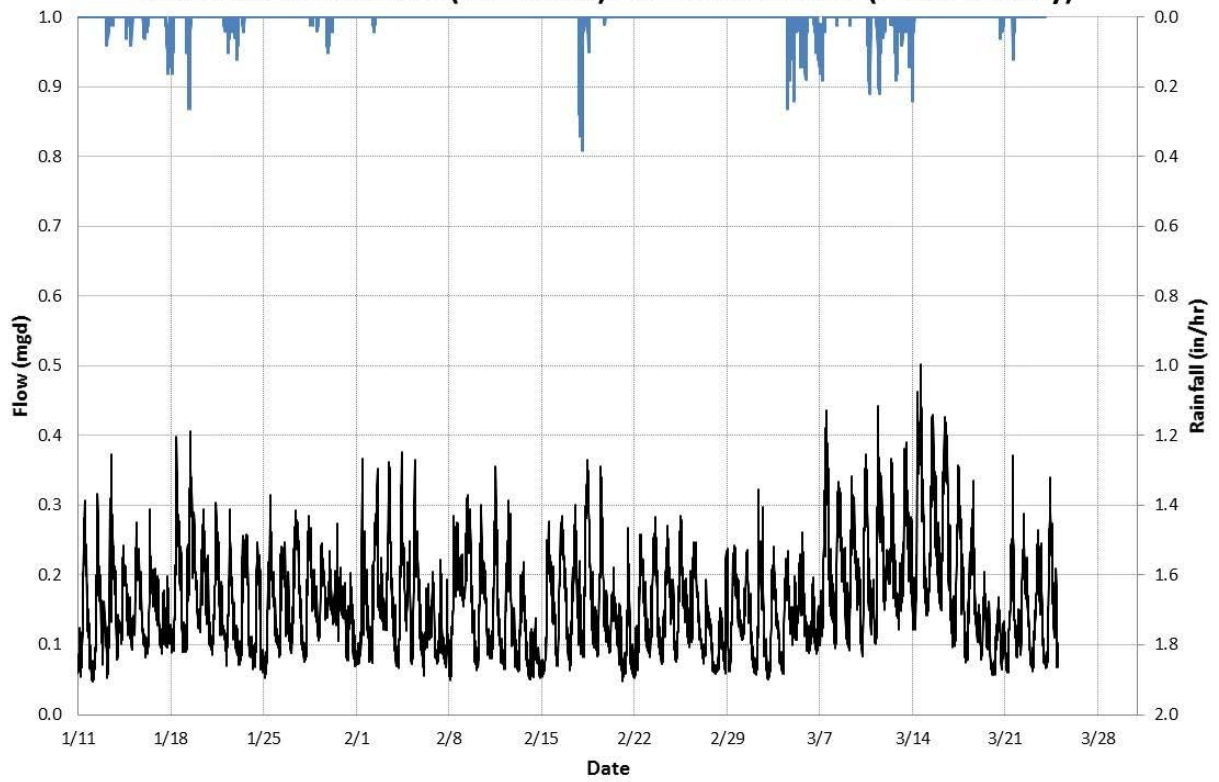


Roseville 2016 Wet Weather Flow Monitoring Sierra College Permanent Meter (Placer County)

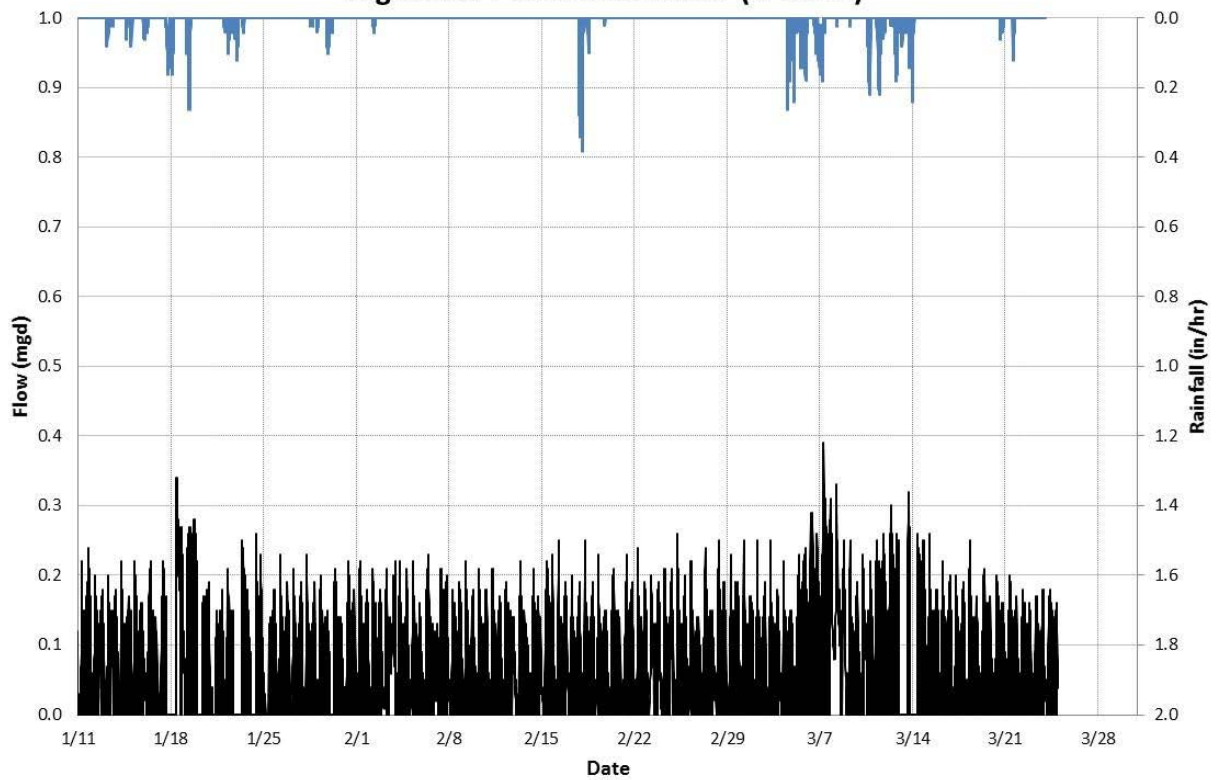
Draft



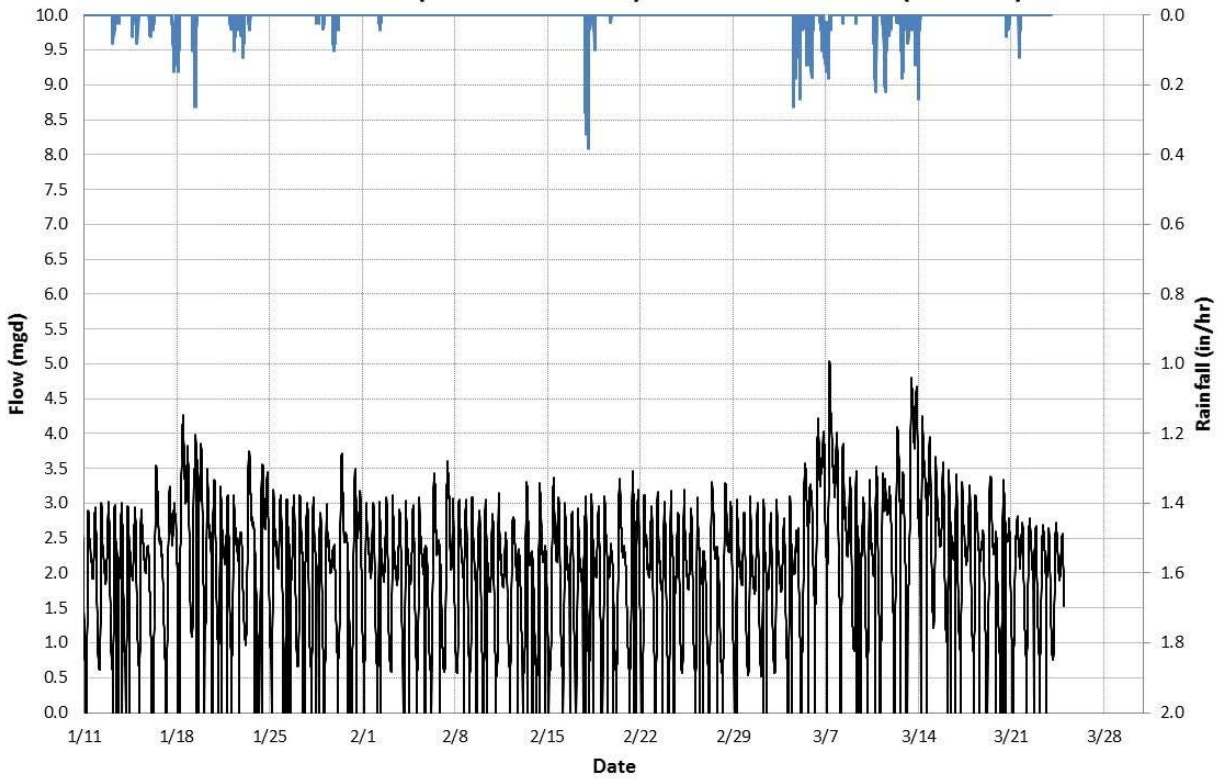
**Roseville 2016 Wet Weather Flow Monitoring
Cincinnati & Industrial (Combined) Permanent Meter (Placer County)**



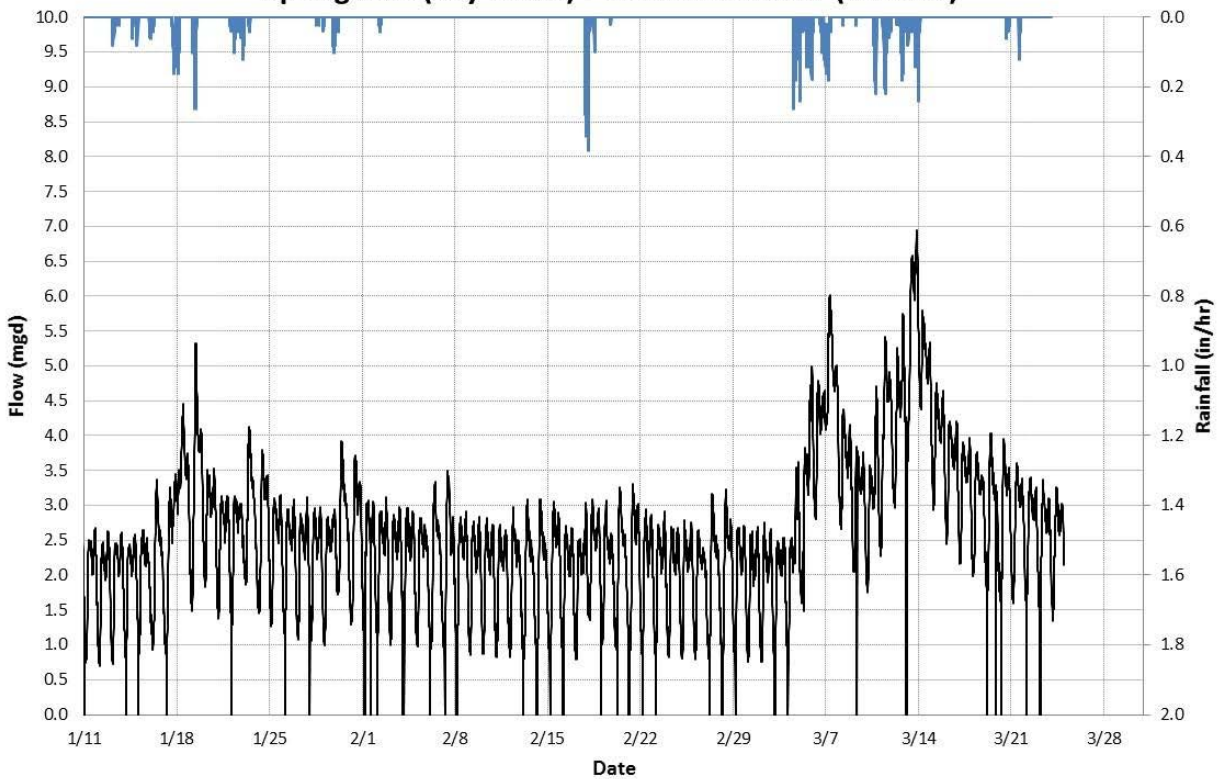
**Roseville 2016 Wet Weather Flow Monitoring
Highlands Permanent Meter (SPMUD)**

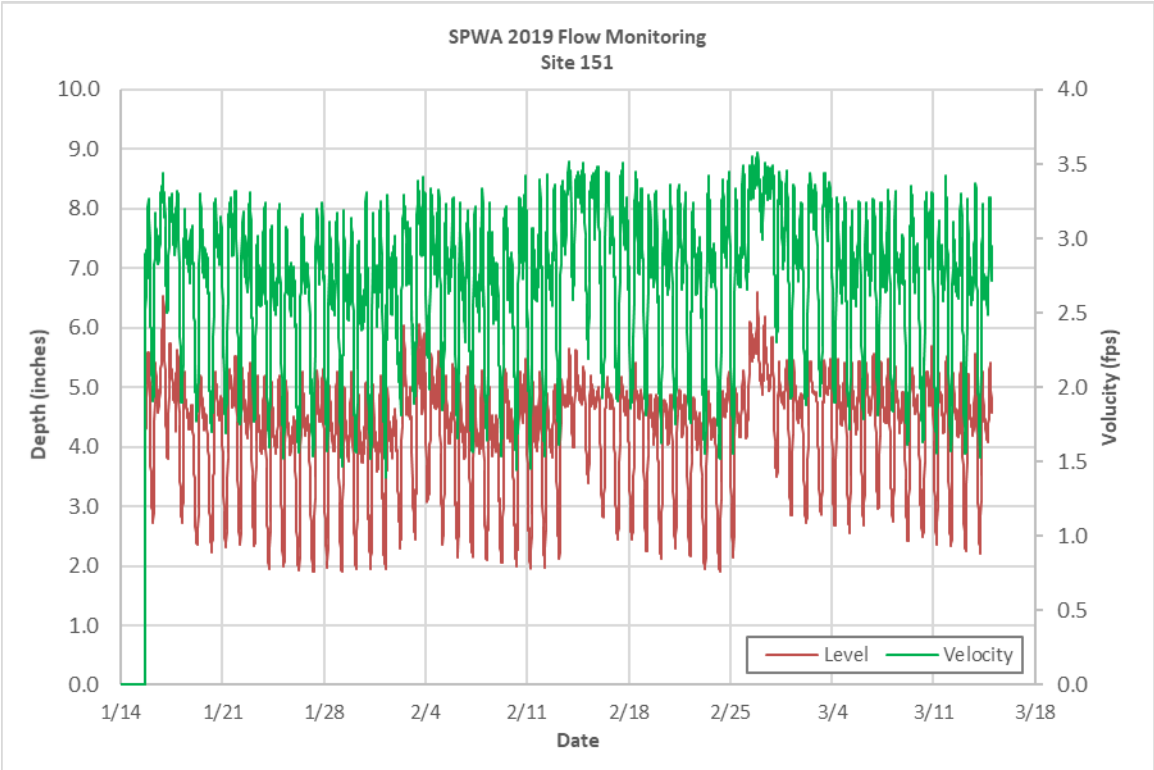
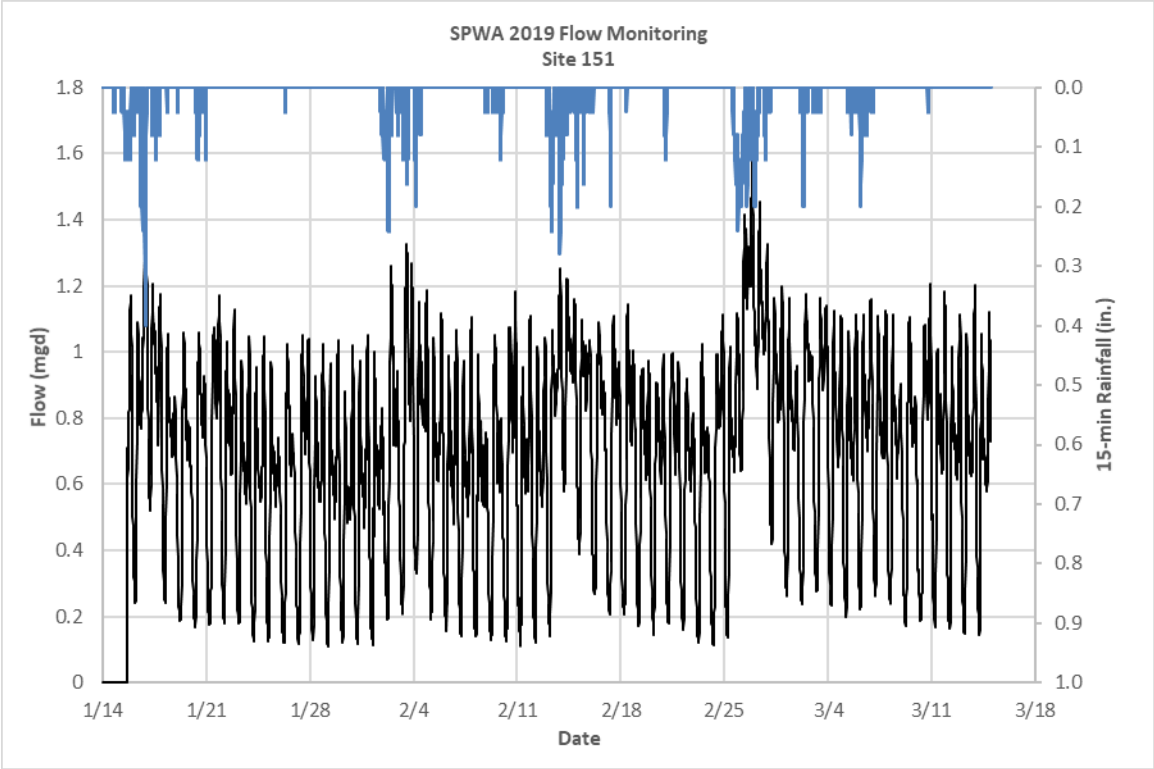


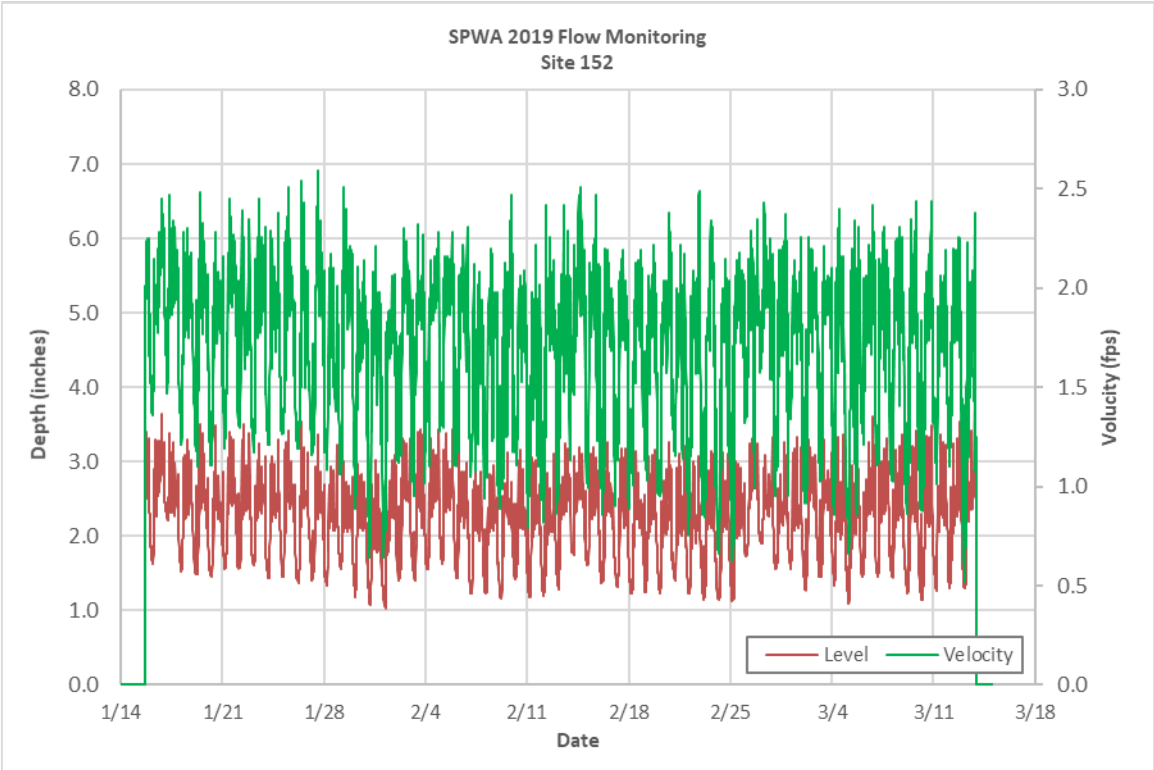
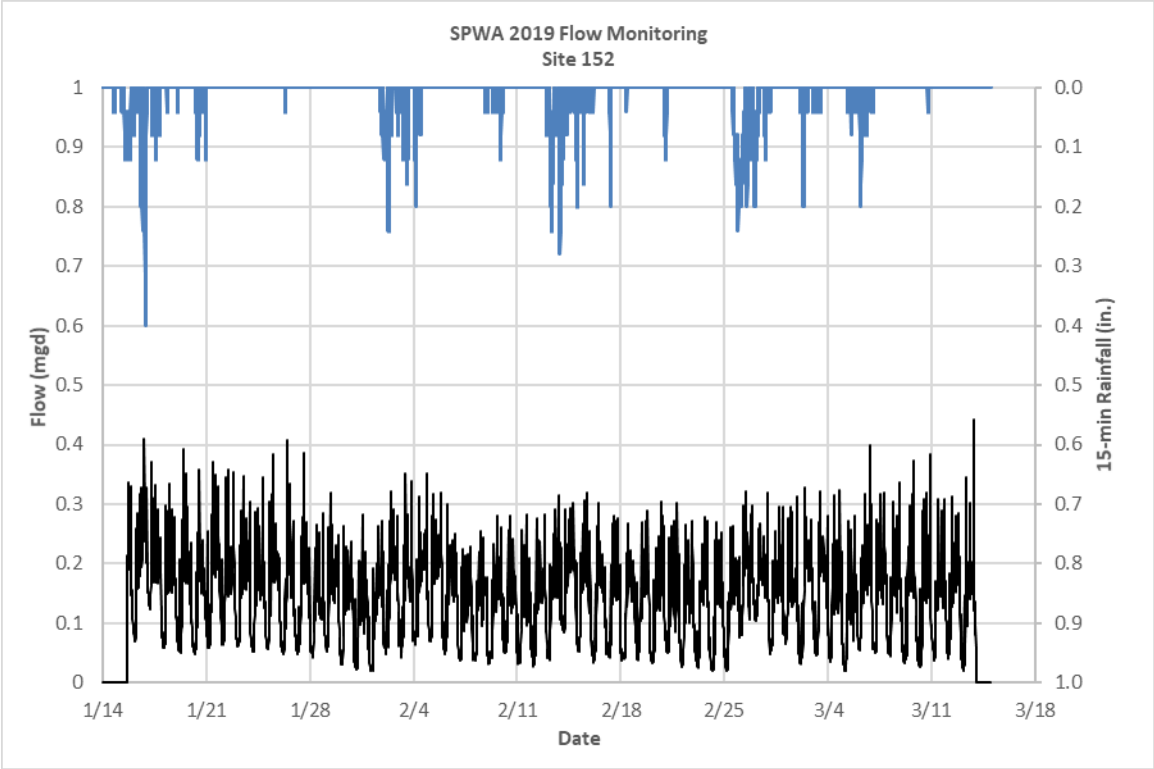
Roseville 2016 Wet Weather Flow Monitoring North Roseville (Pleasant Grove) Permanent Meter (SPMUD)

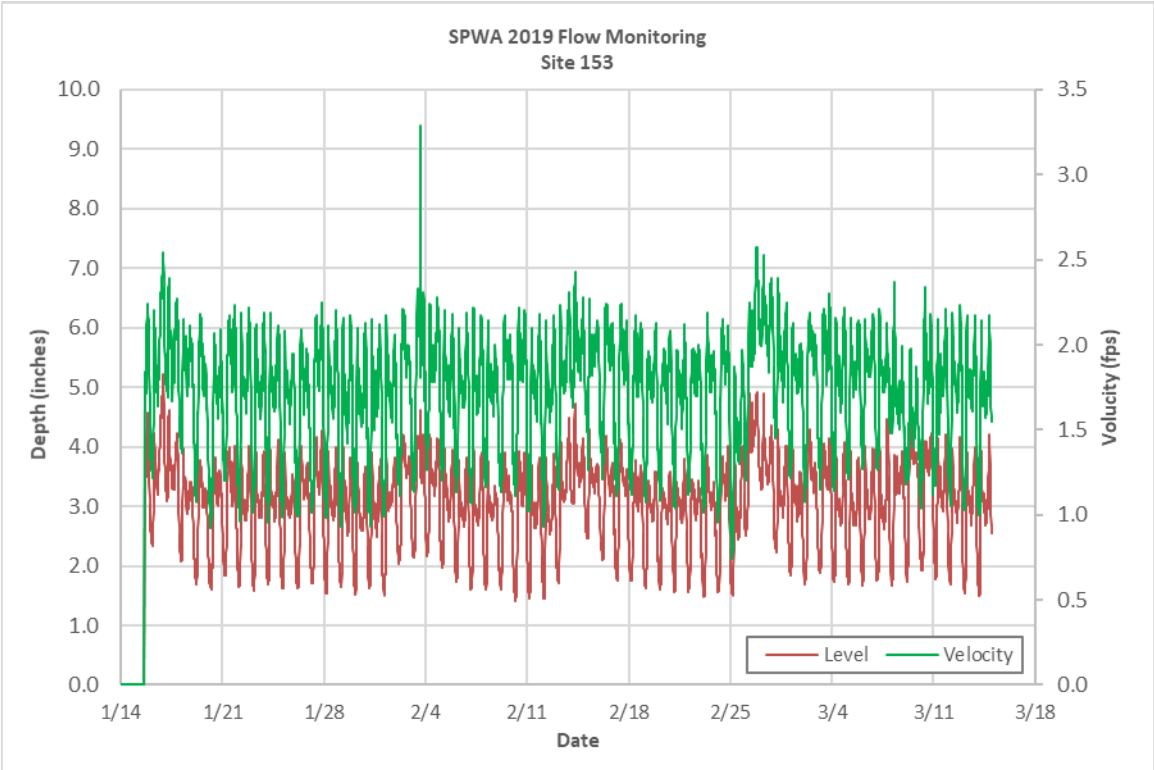
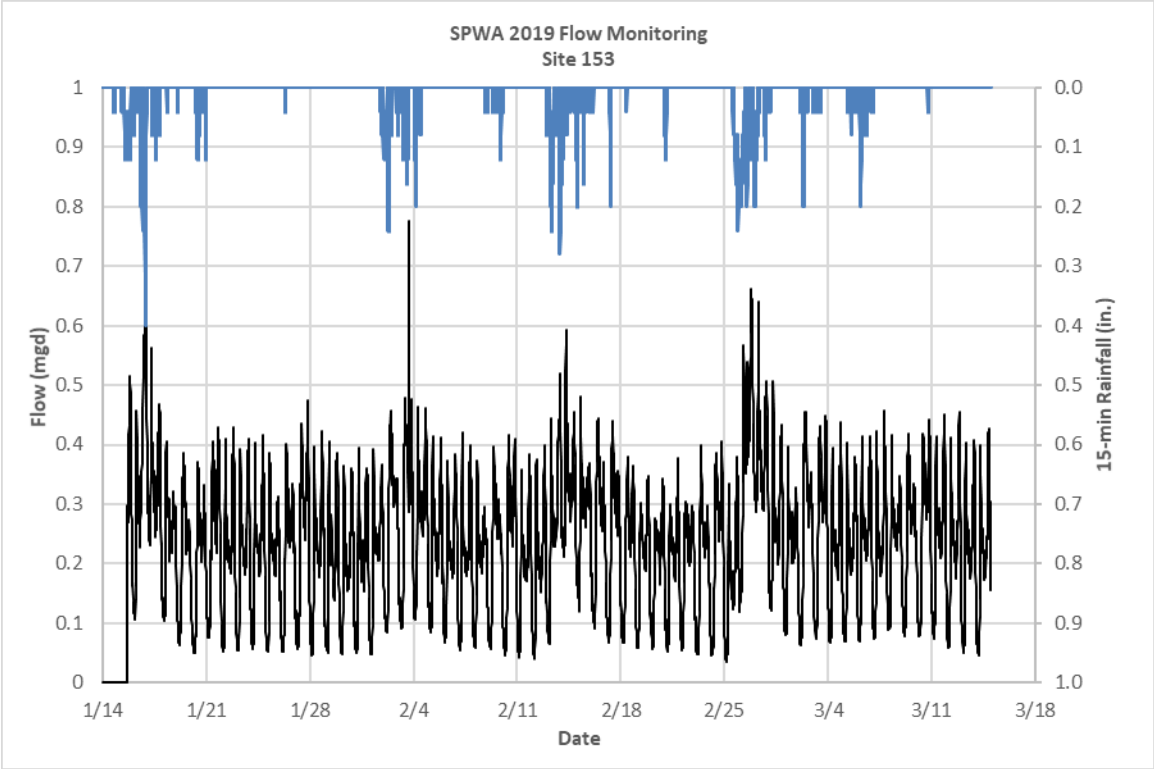


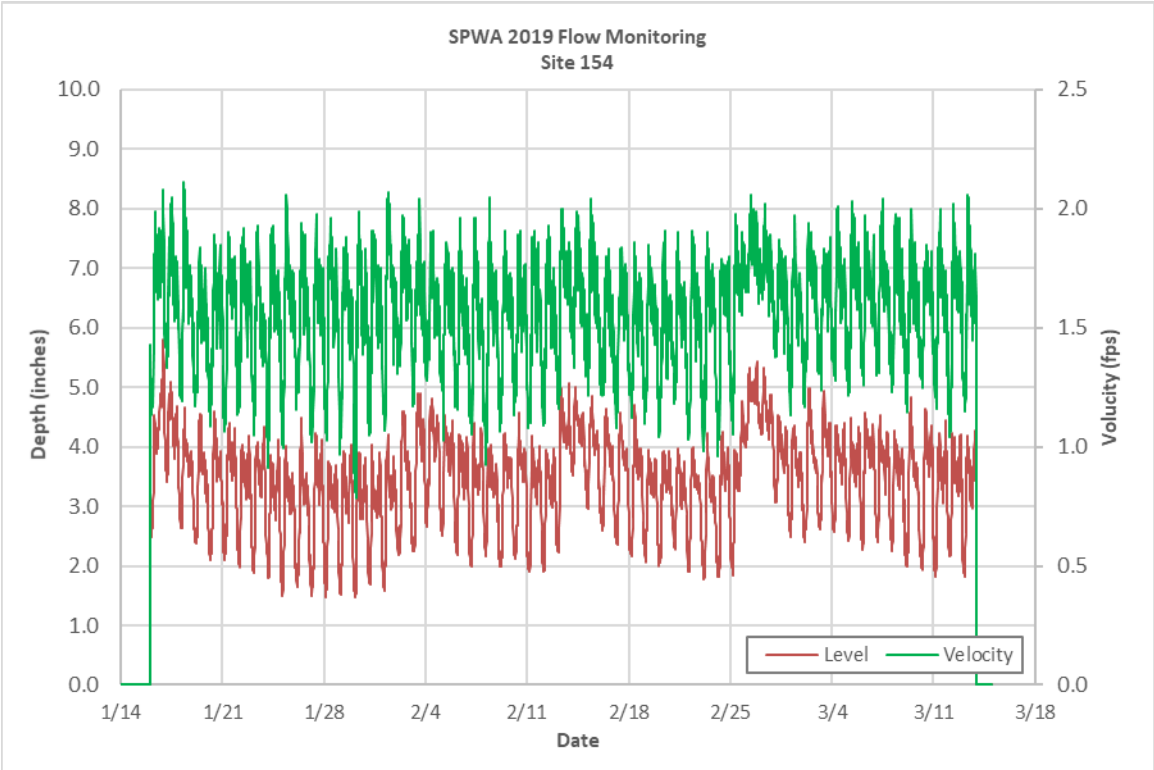
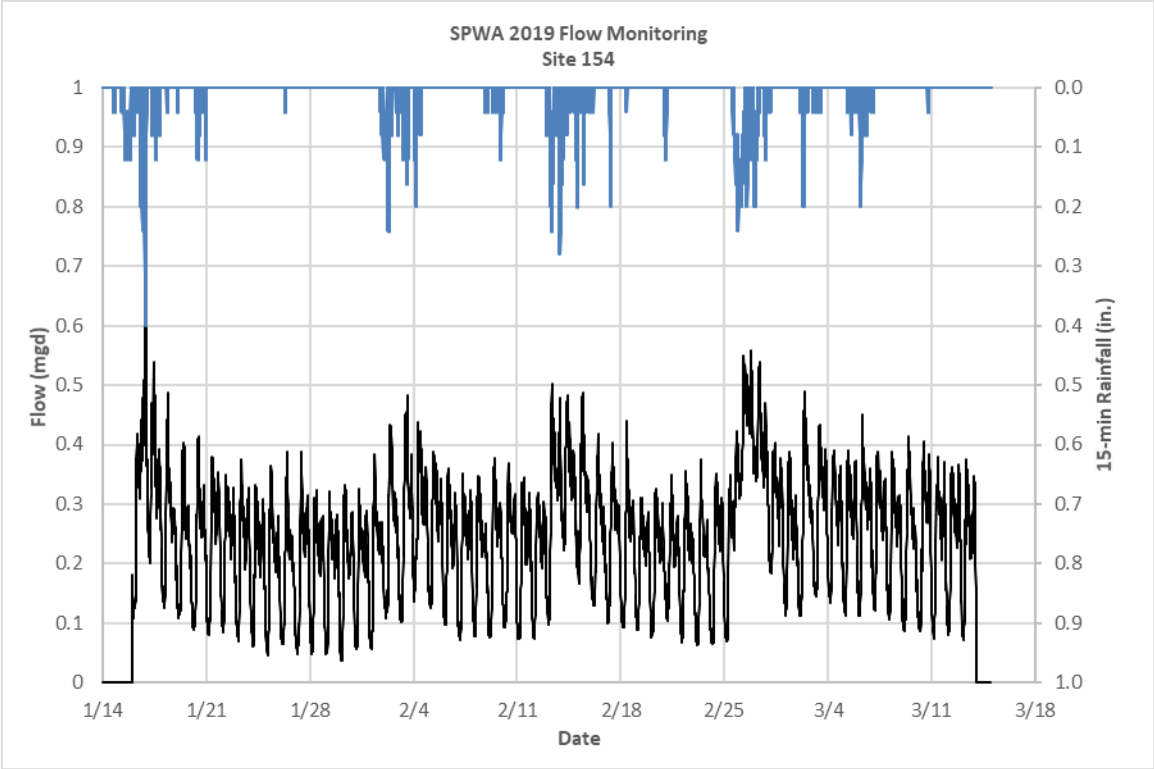
Roseville 2016 Wet Weather Flow Monitoring Springview (Dry Creek) Permanent Meter (SPMUD)

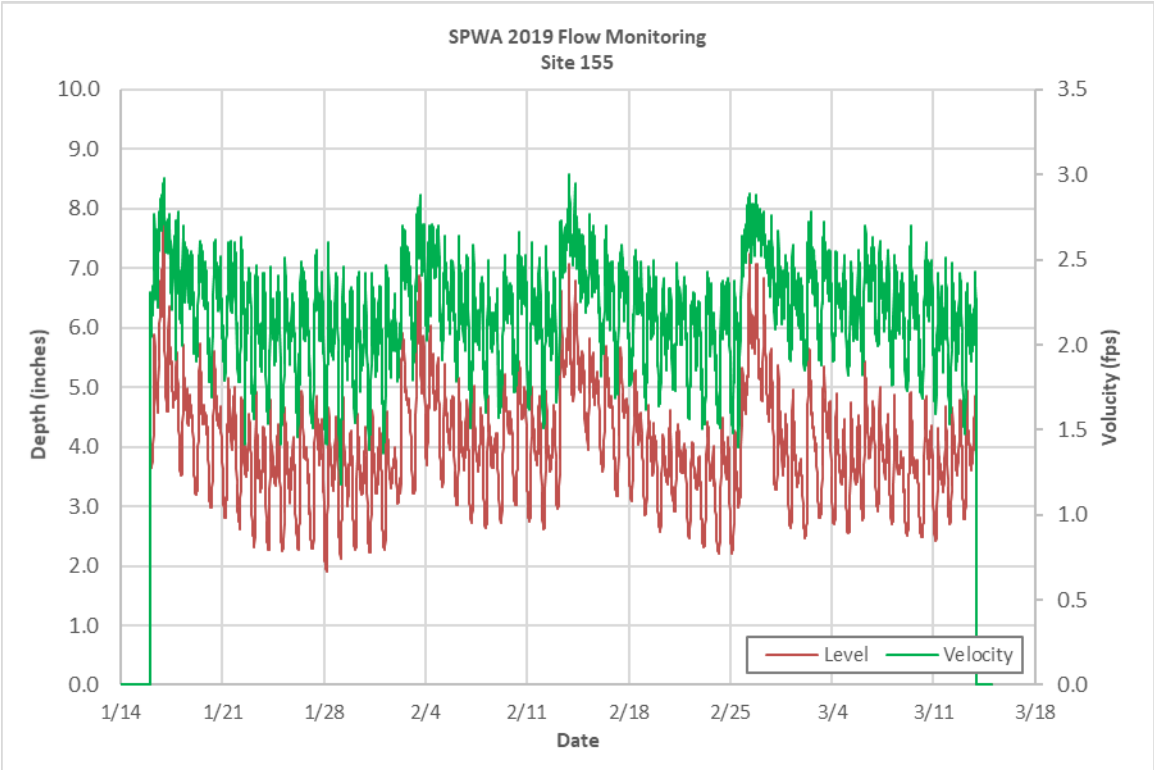
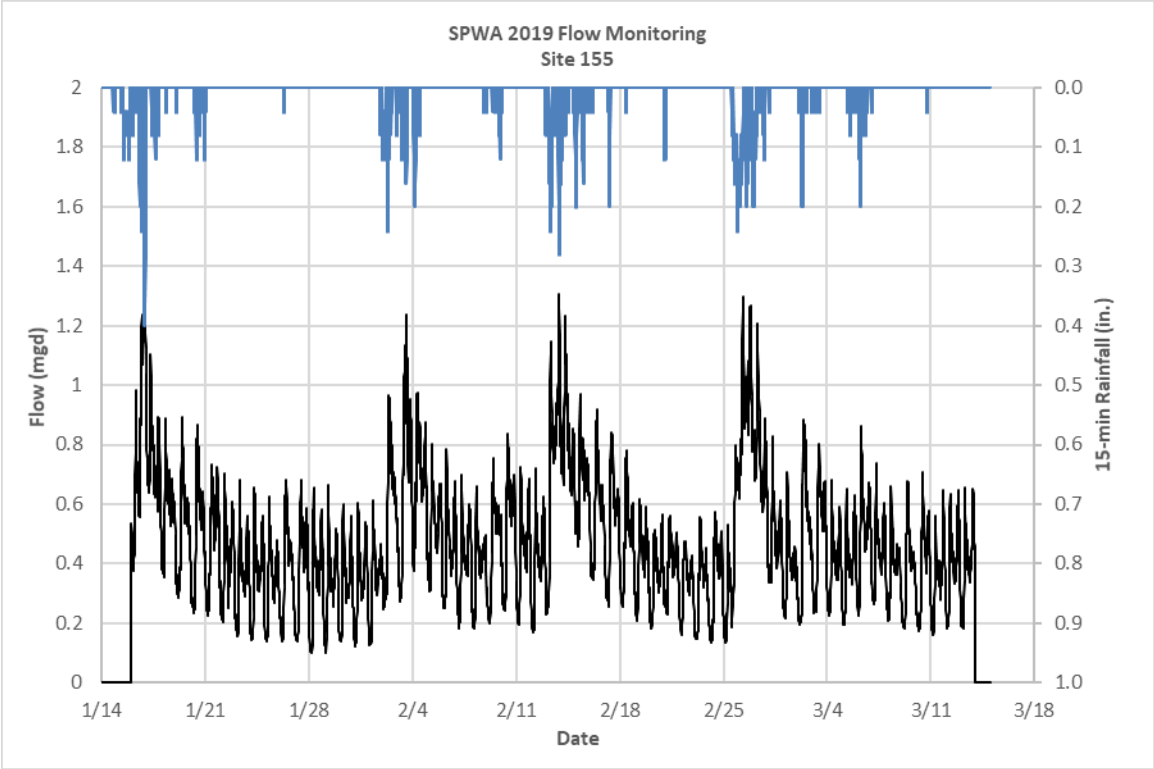


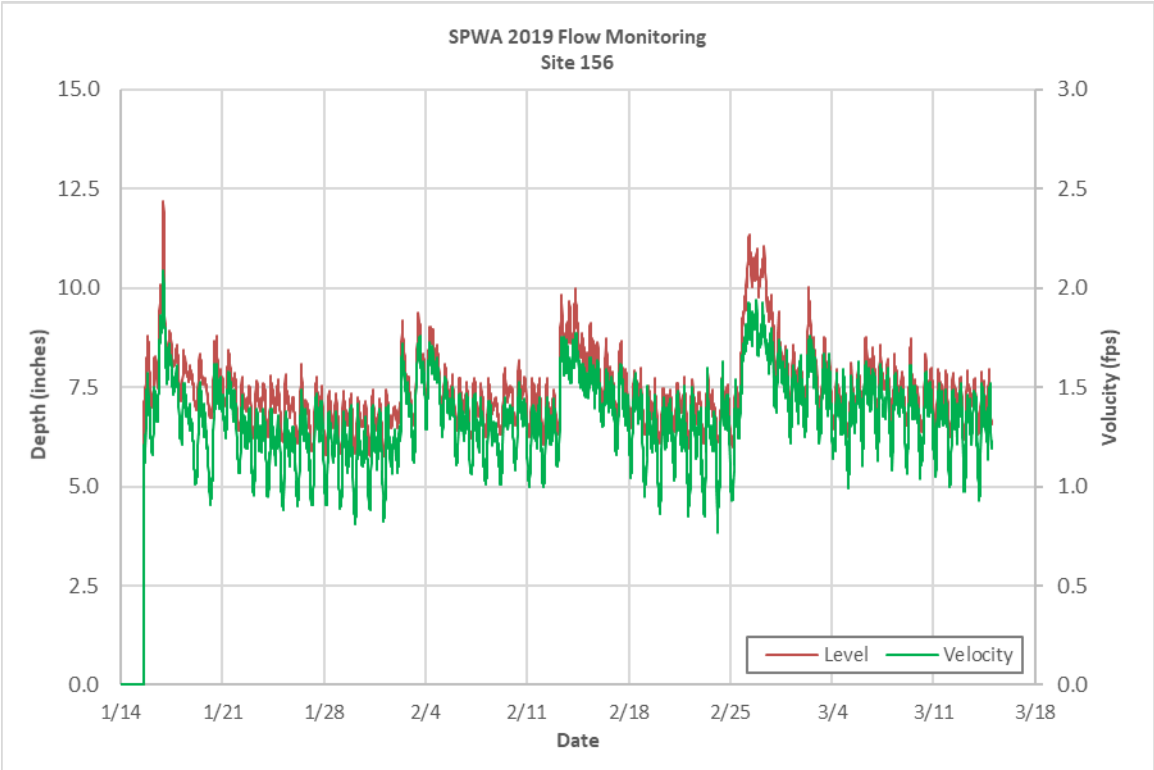
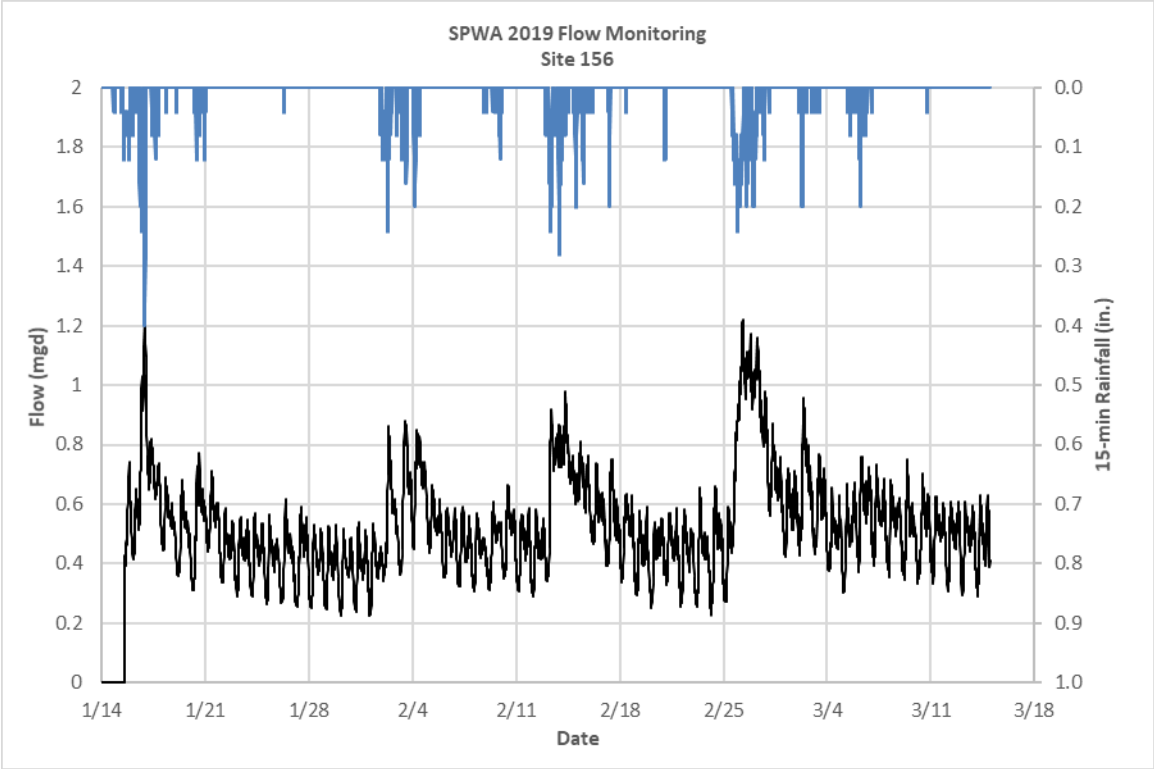


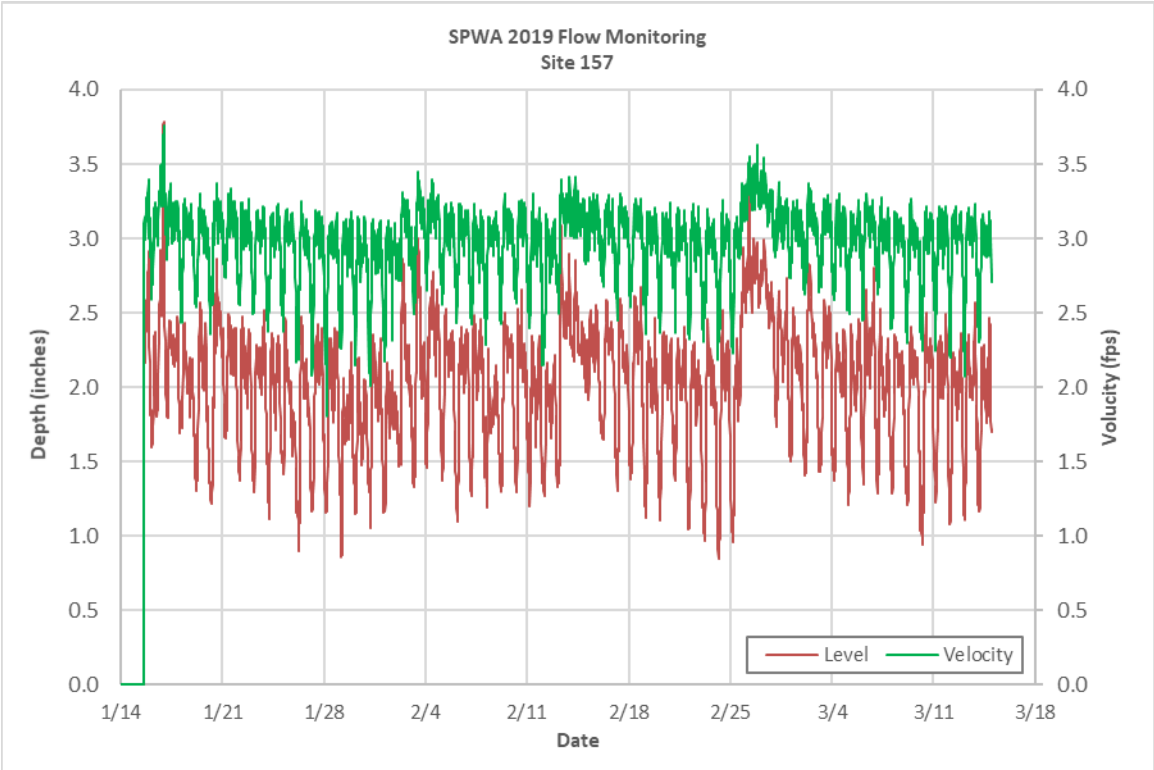
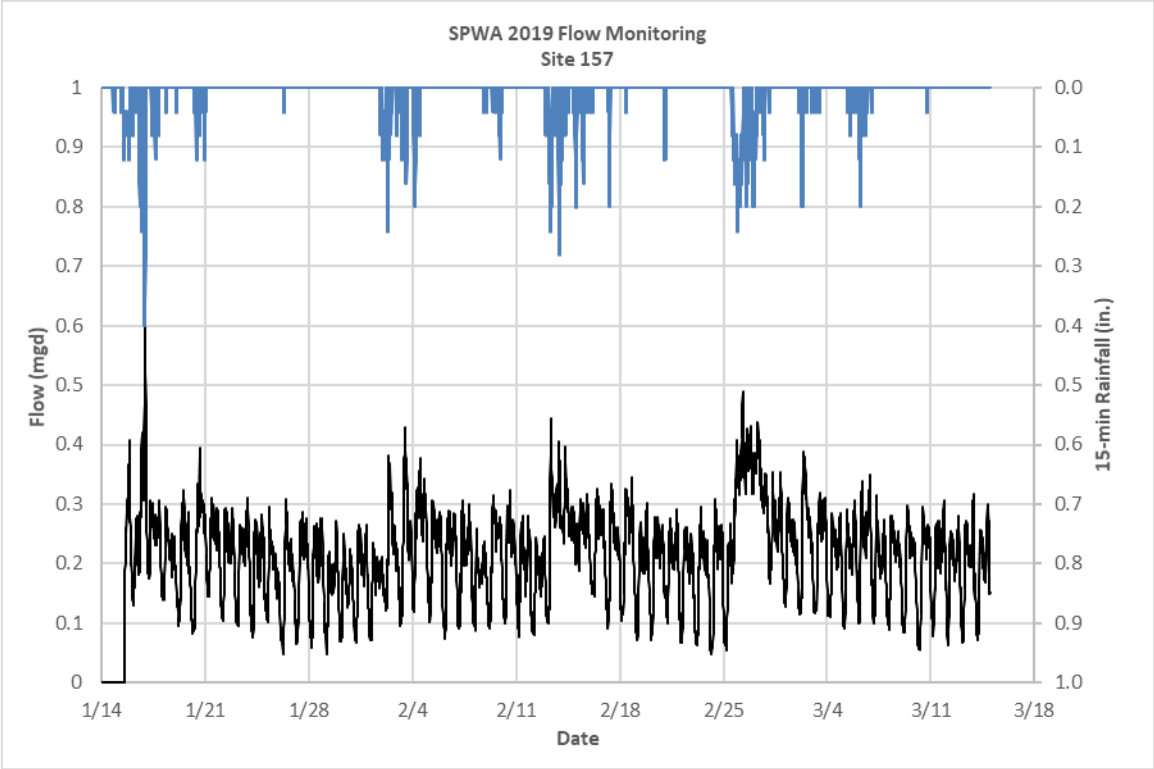


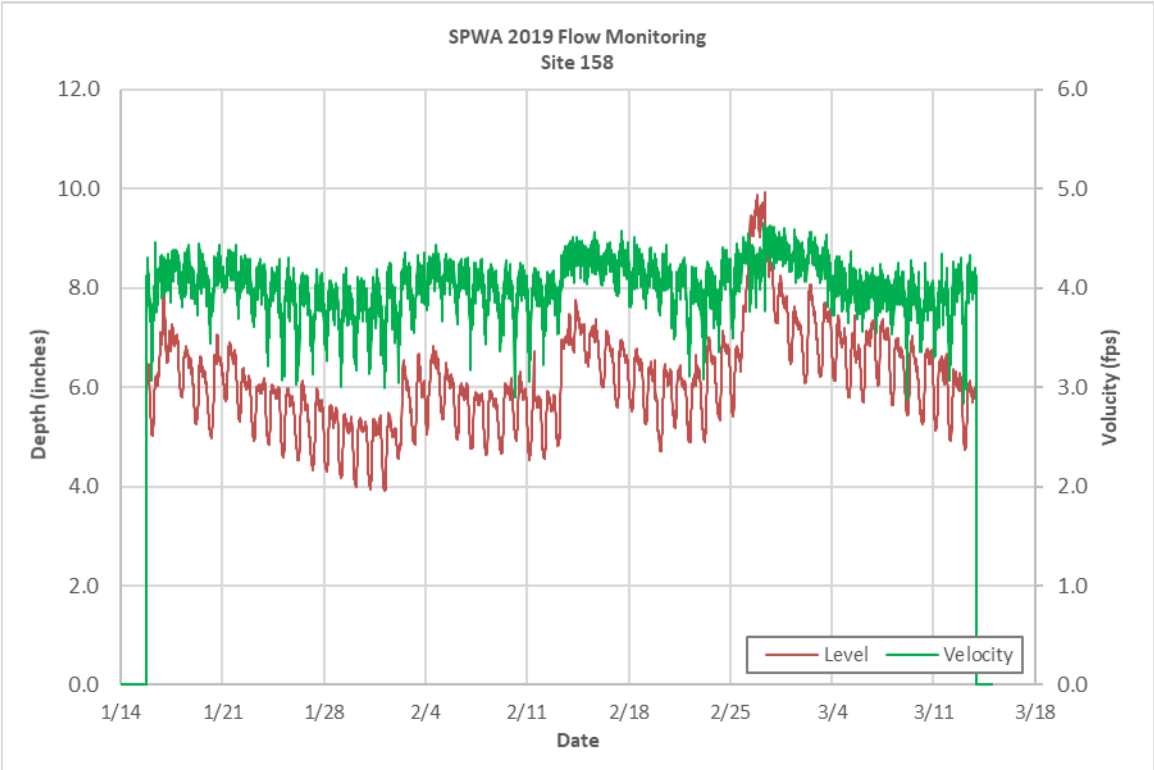
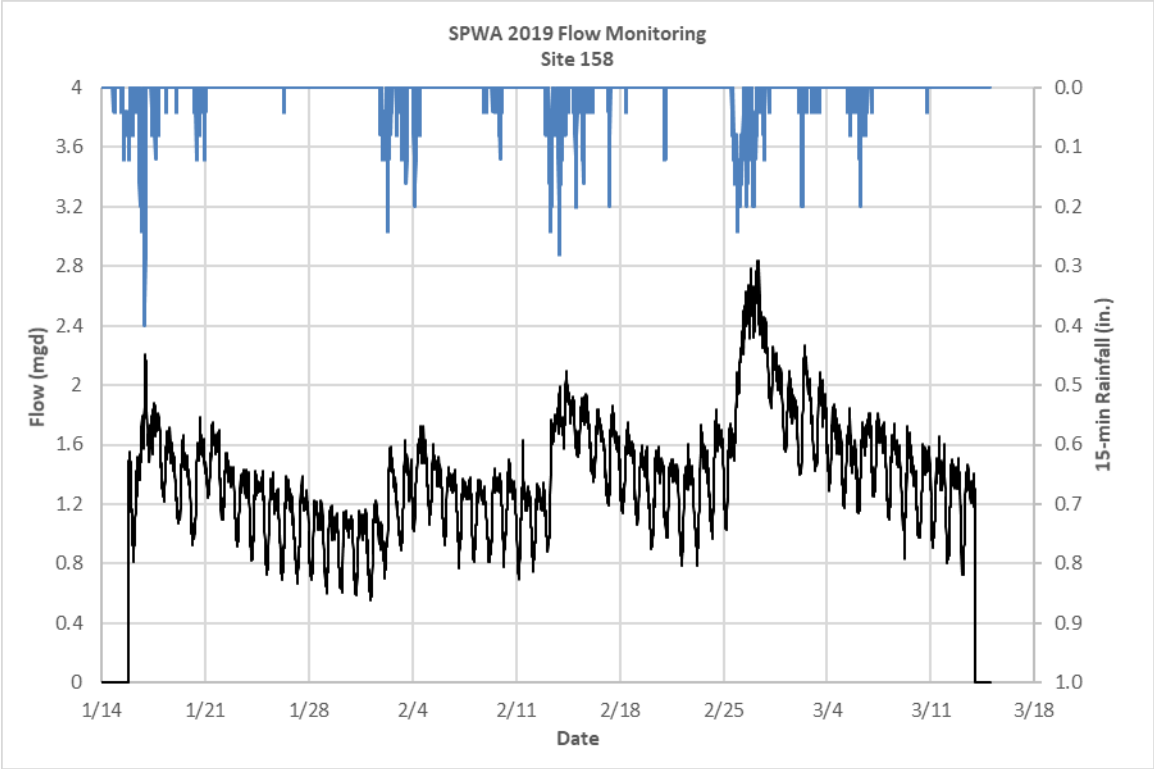


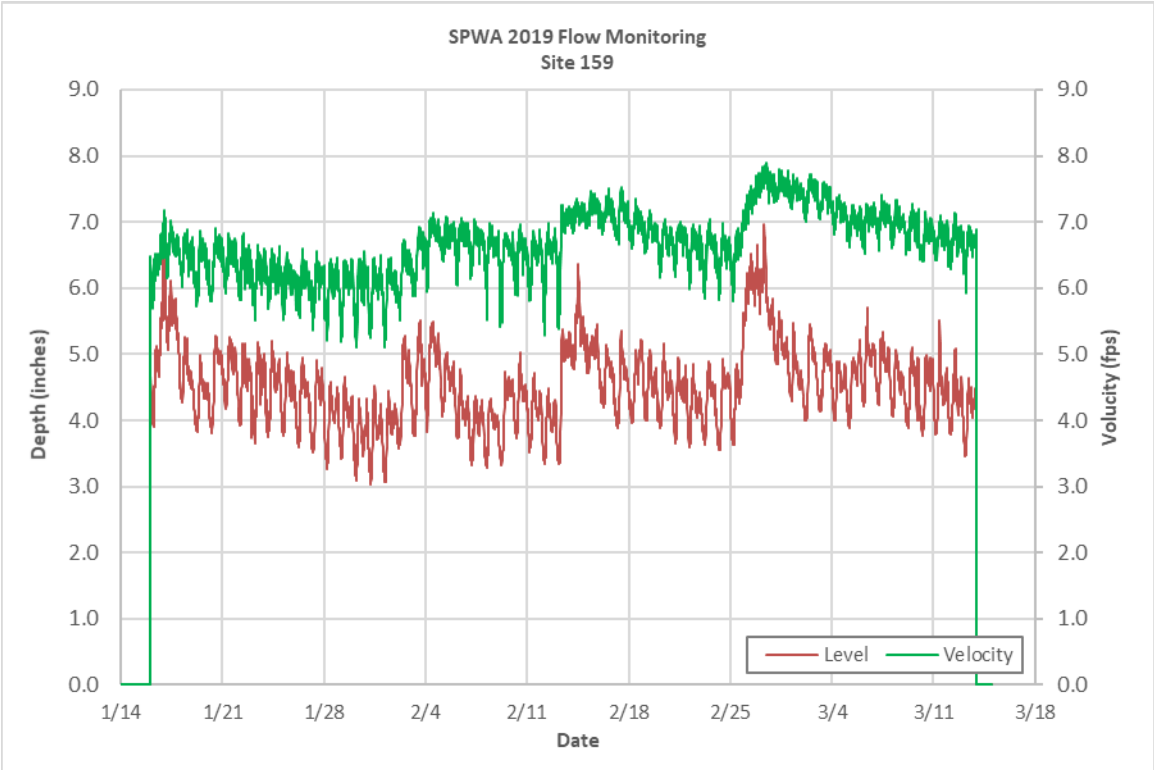
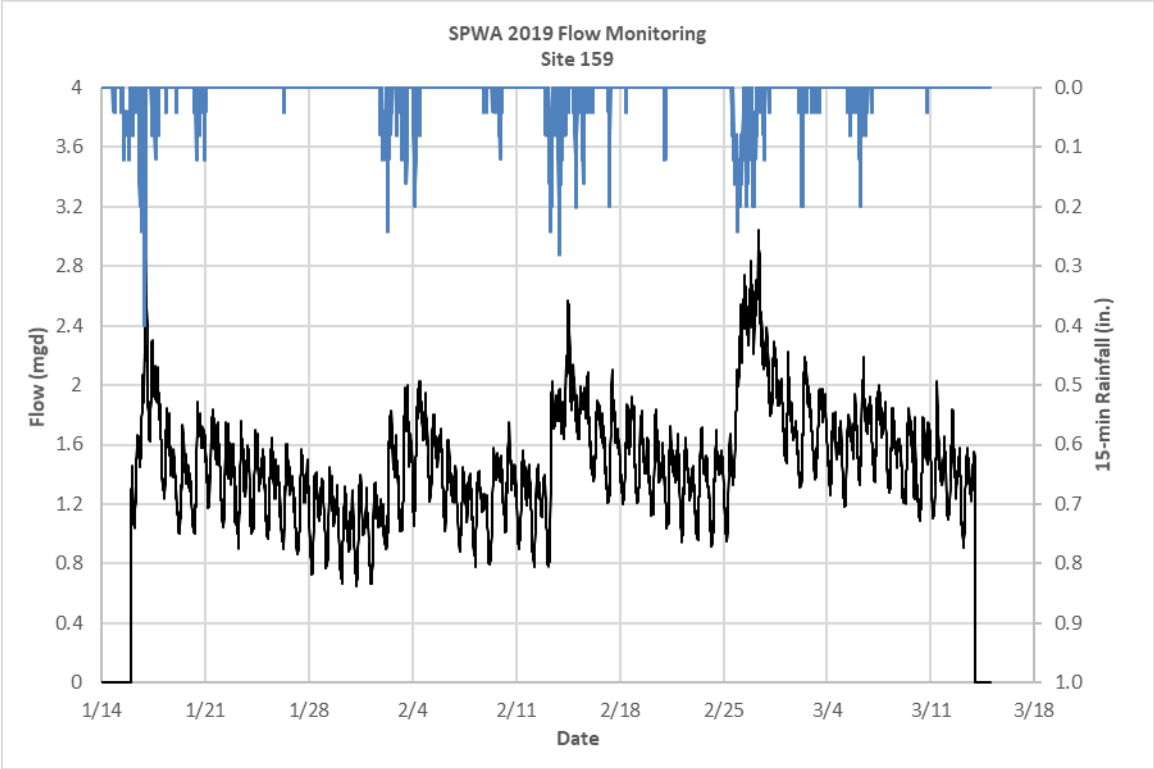


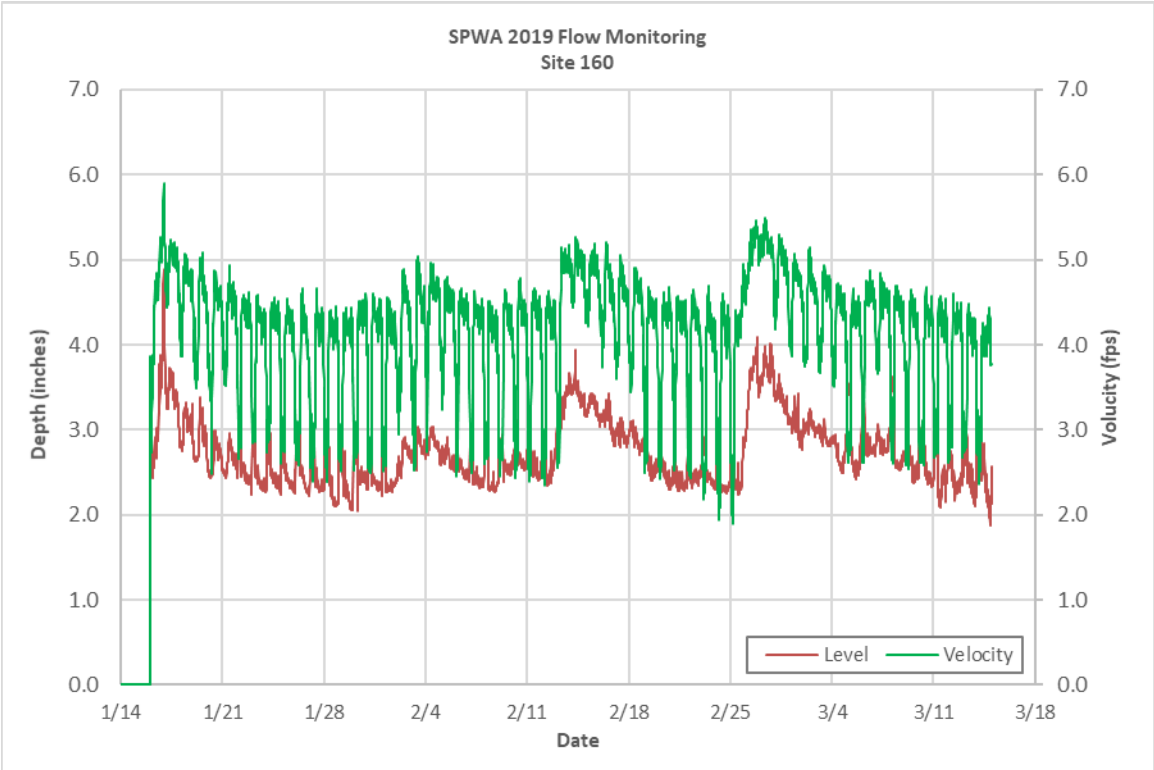
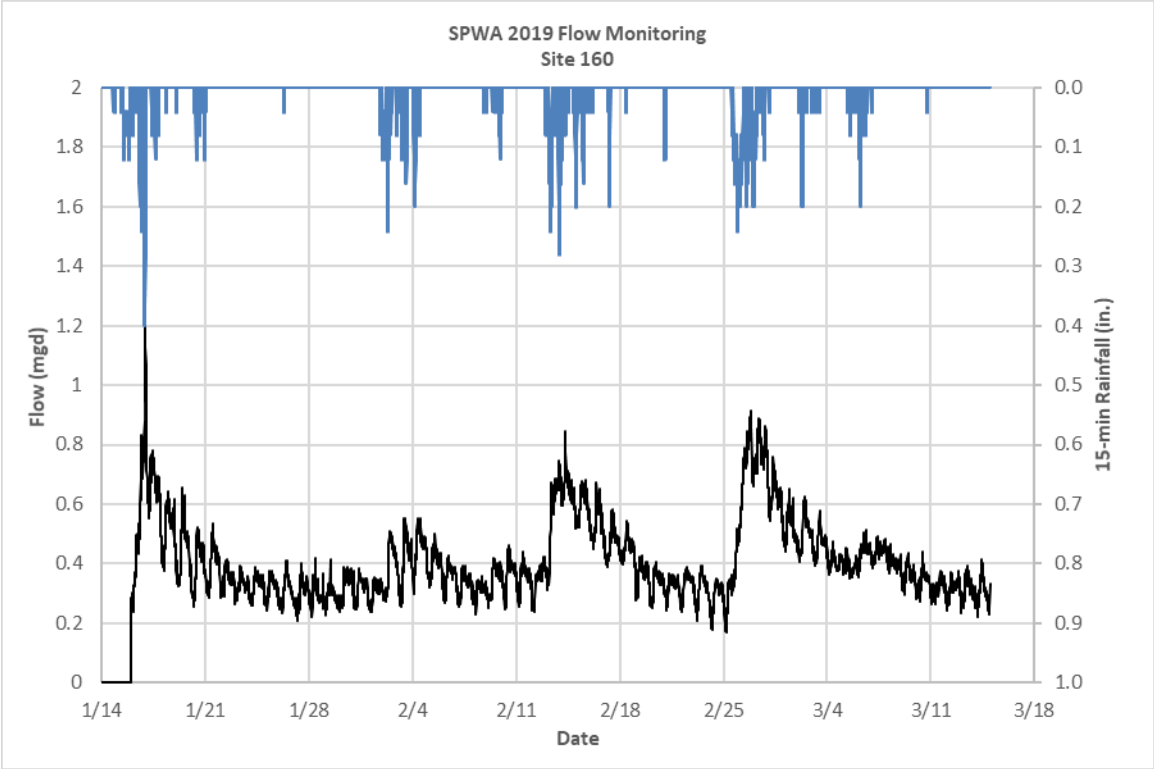


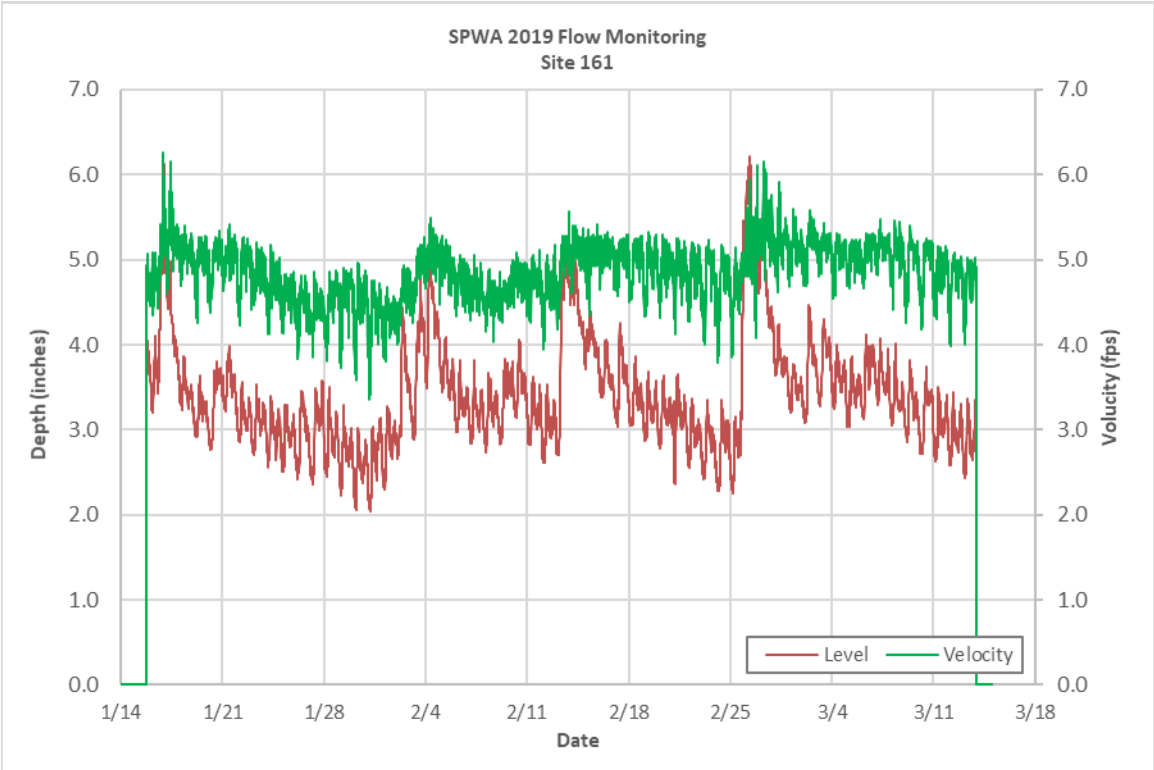
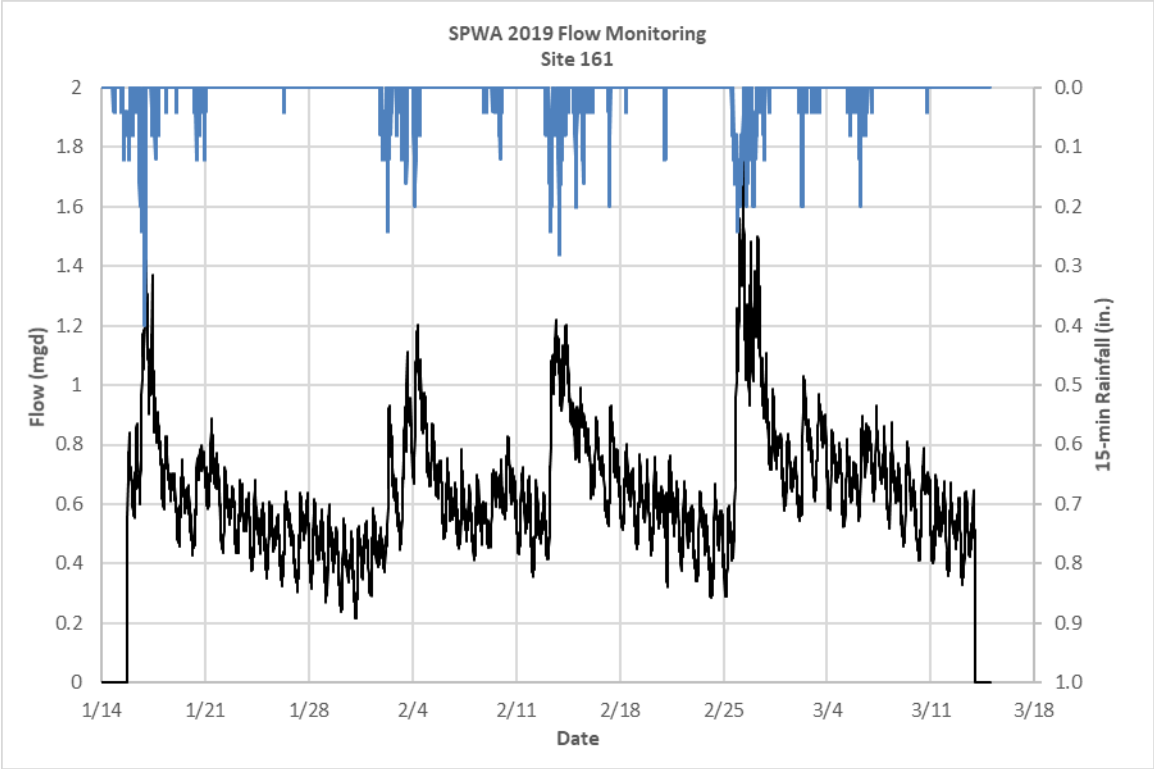


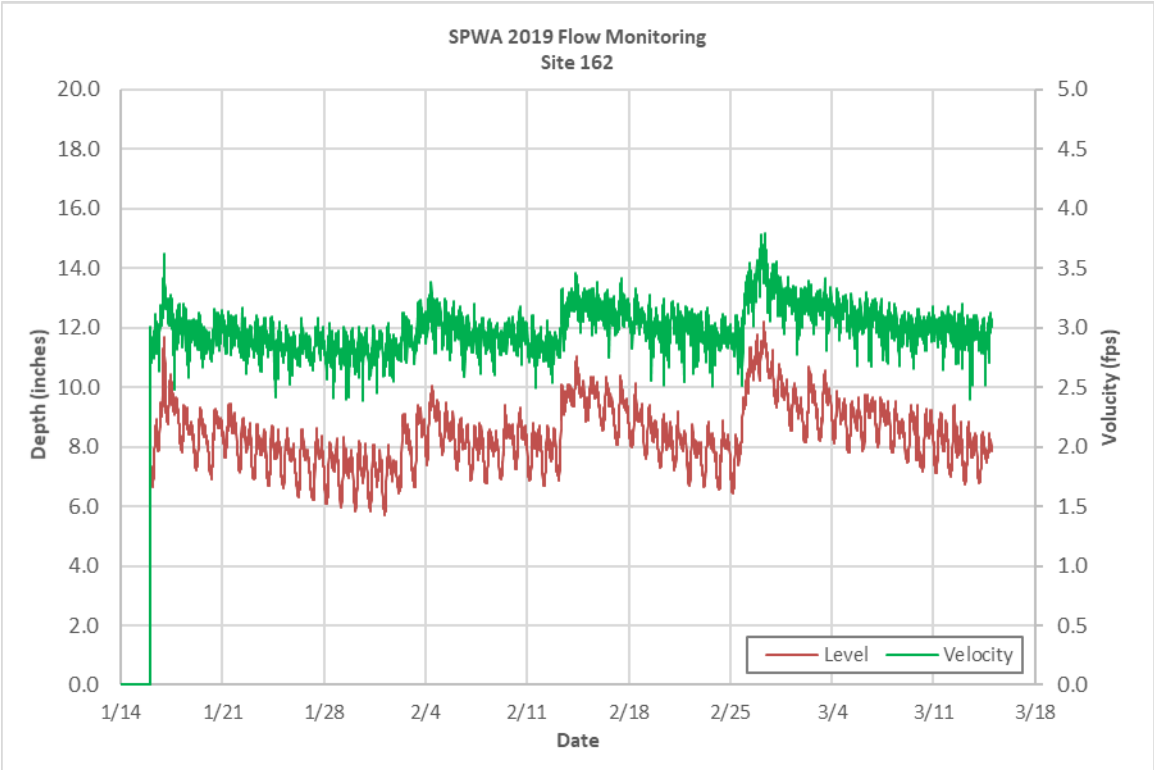
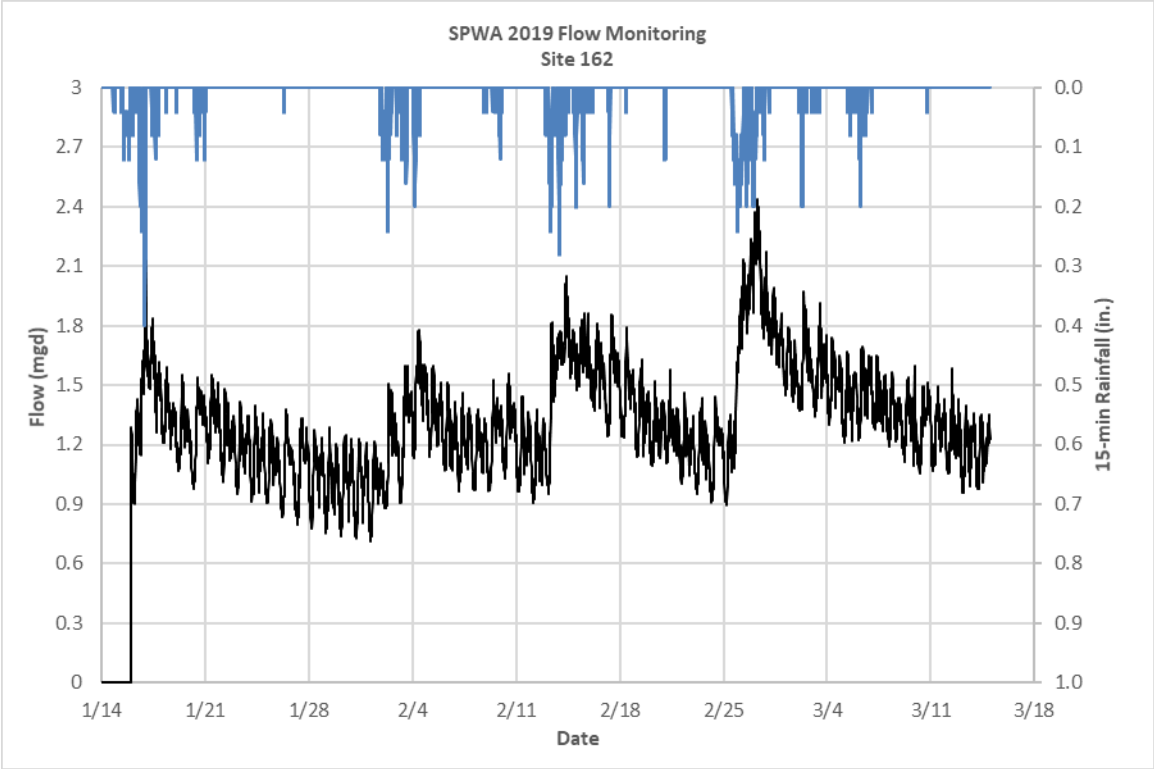


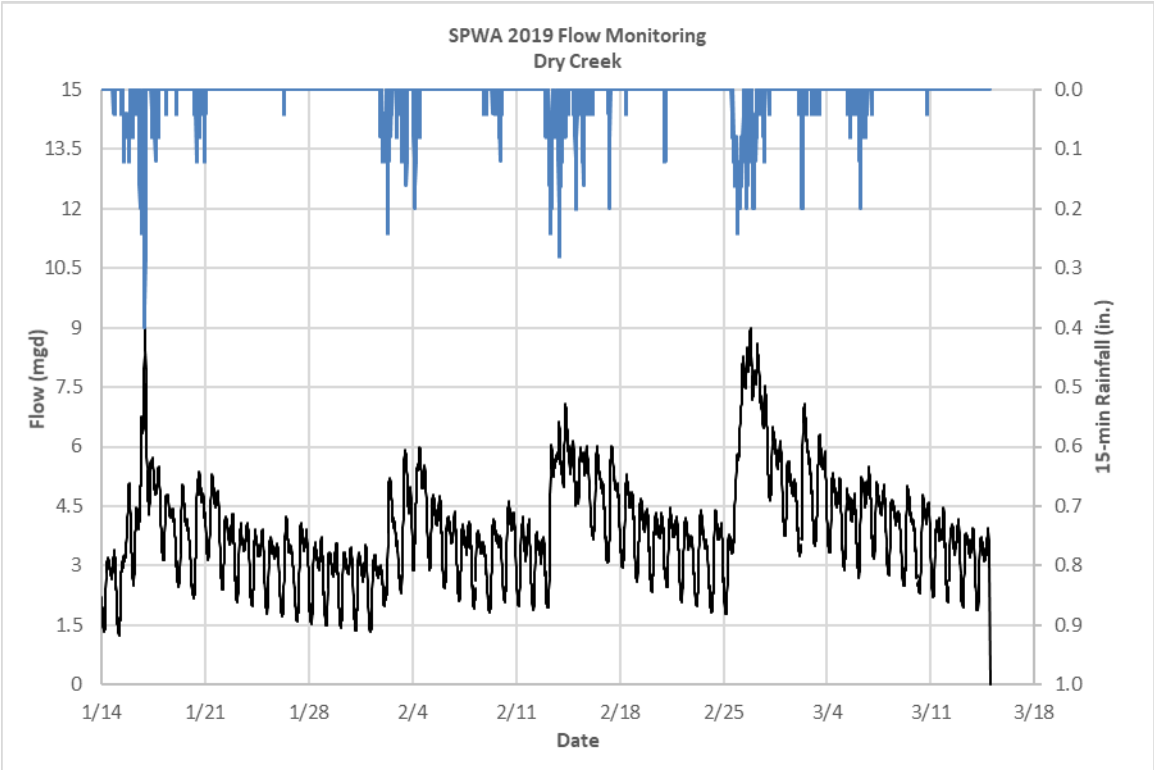
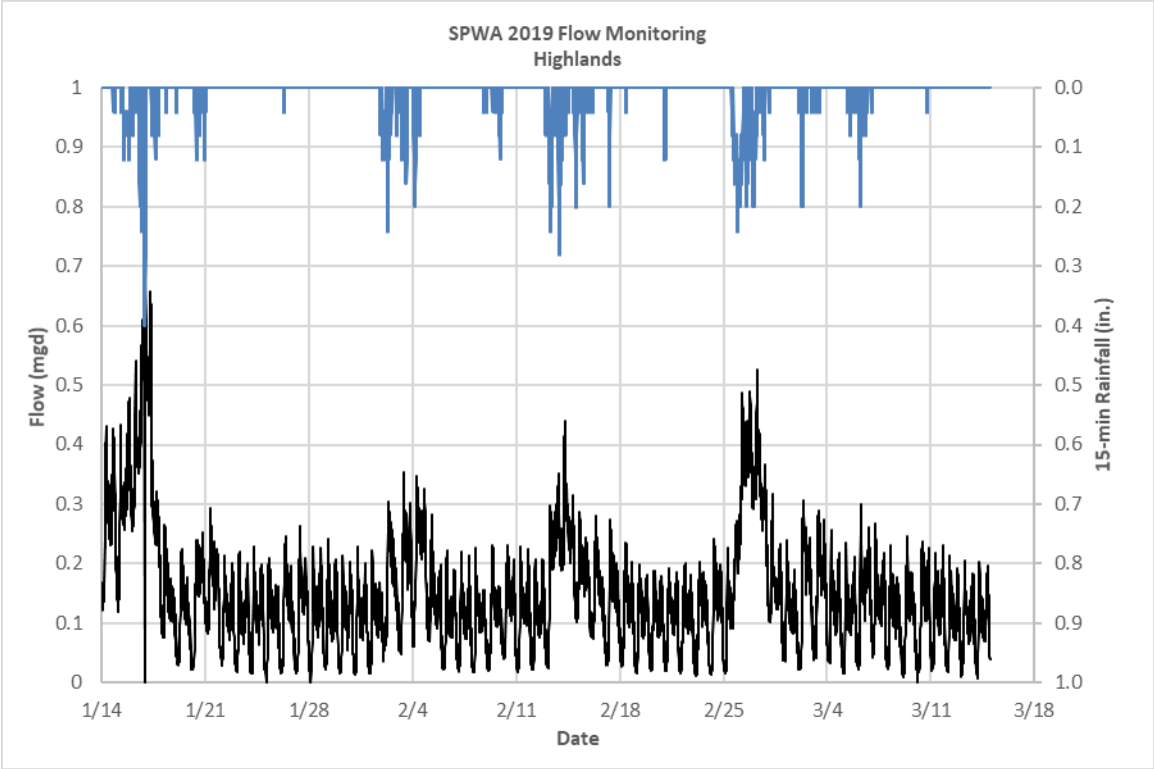


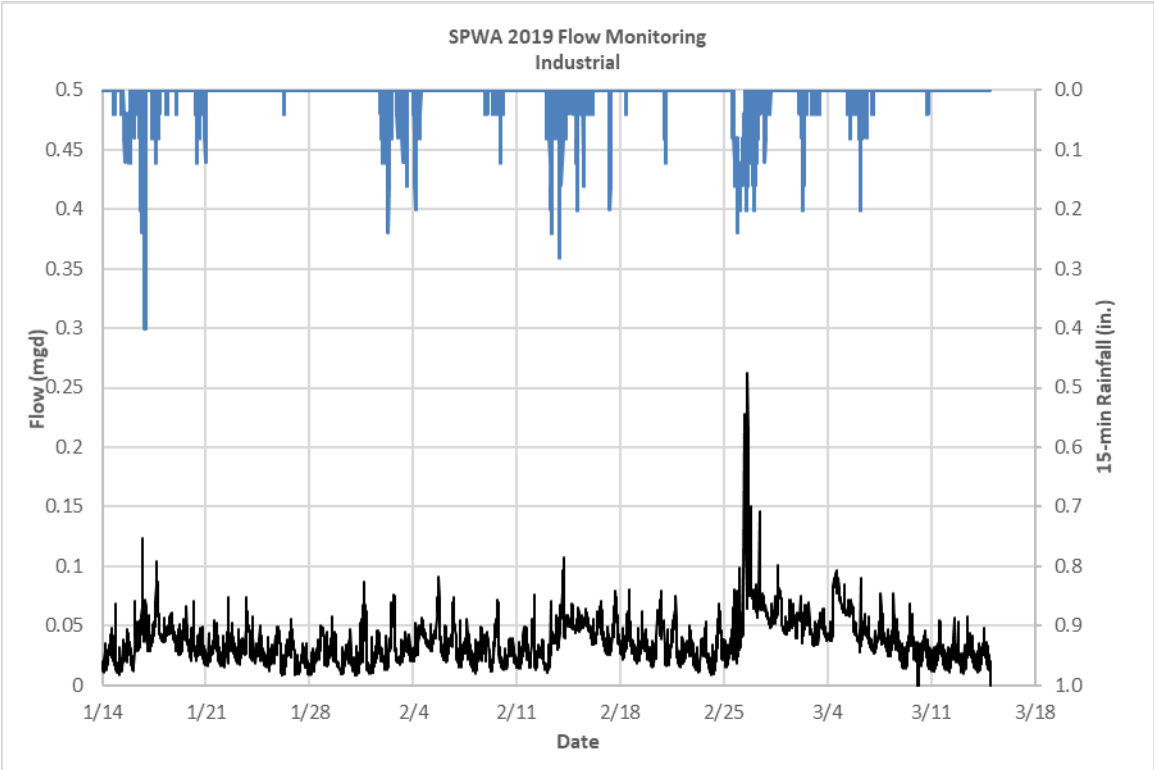
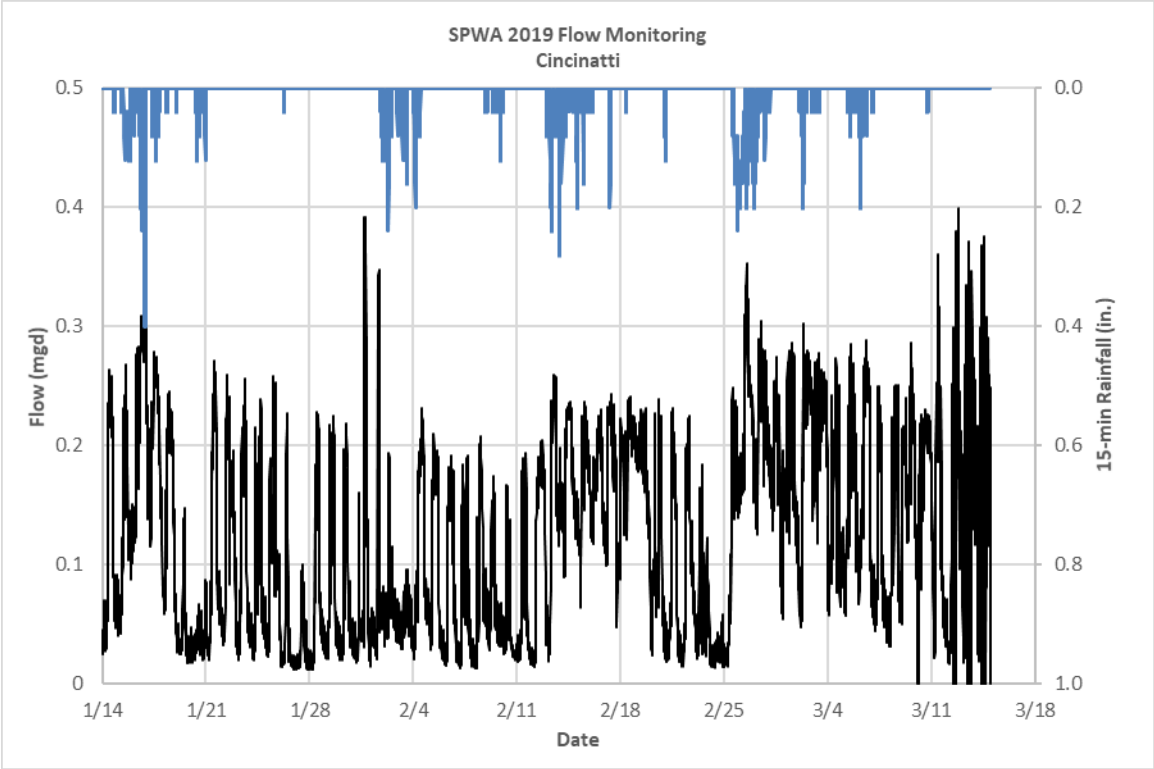


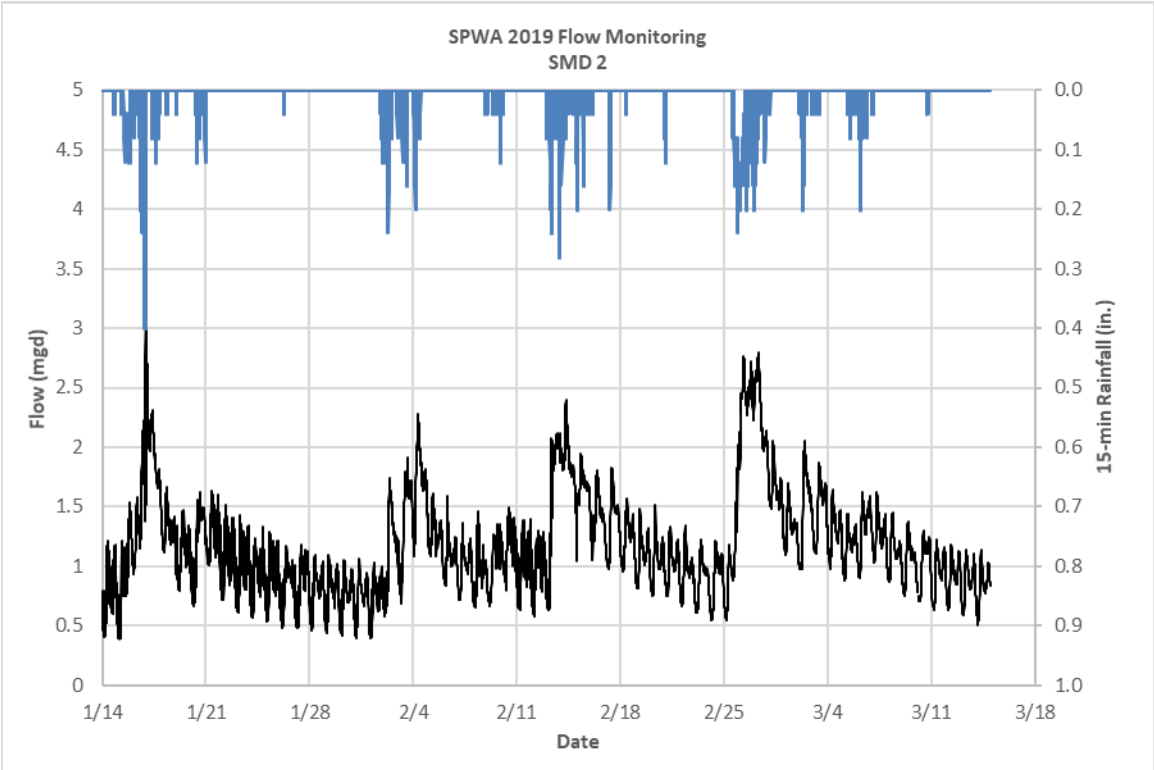
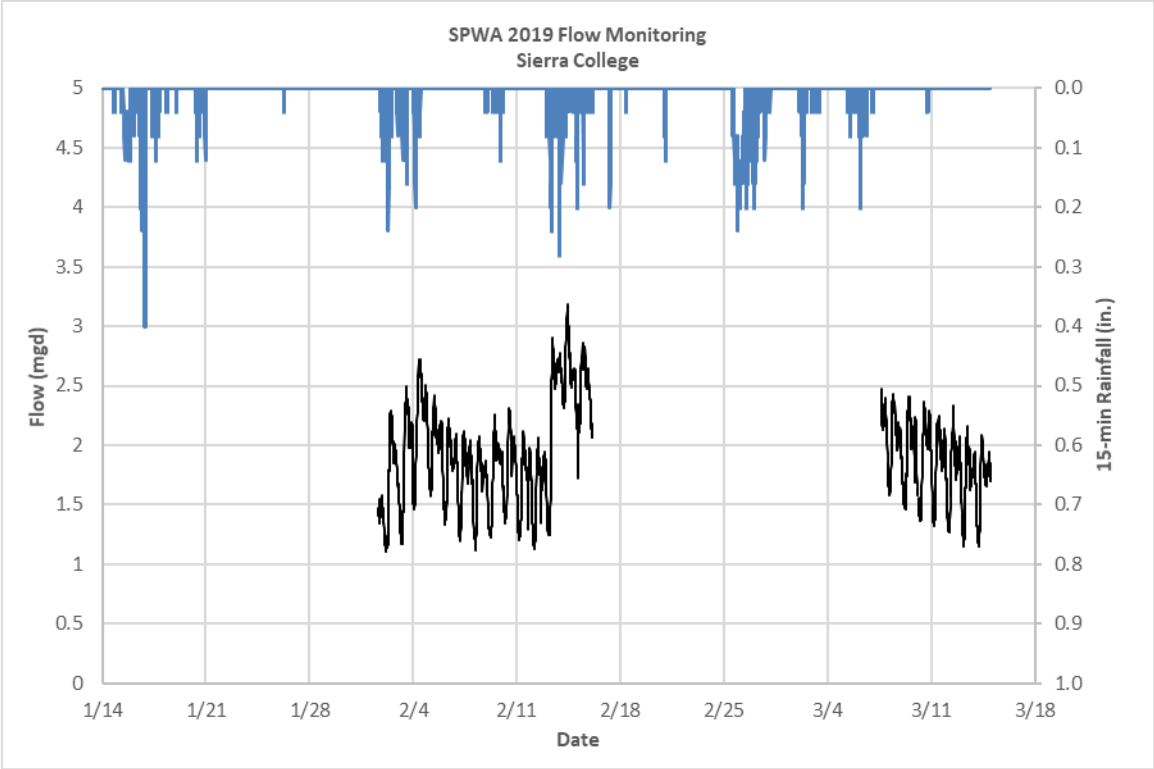






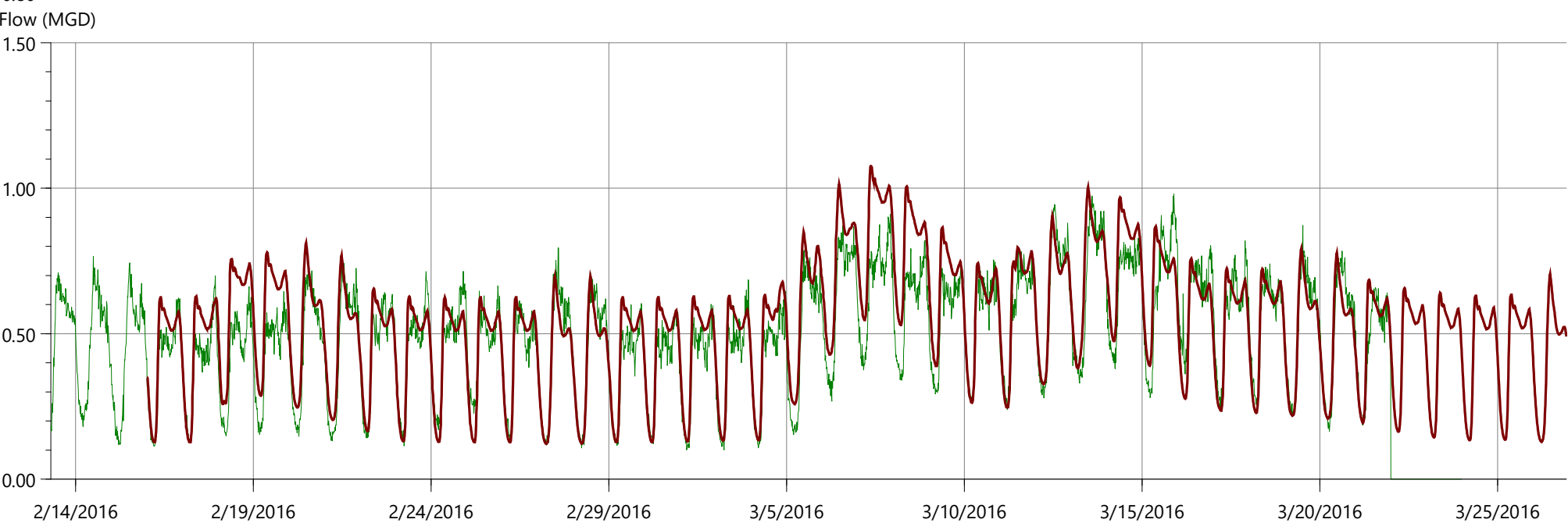
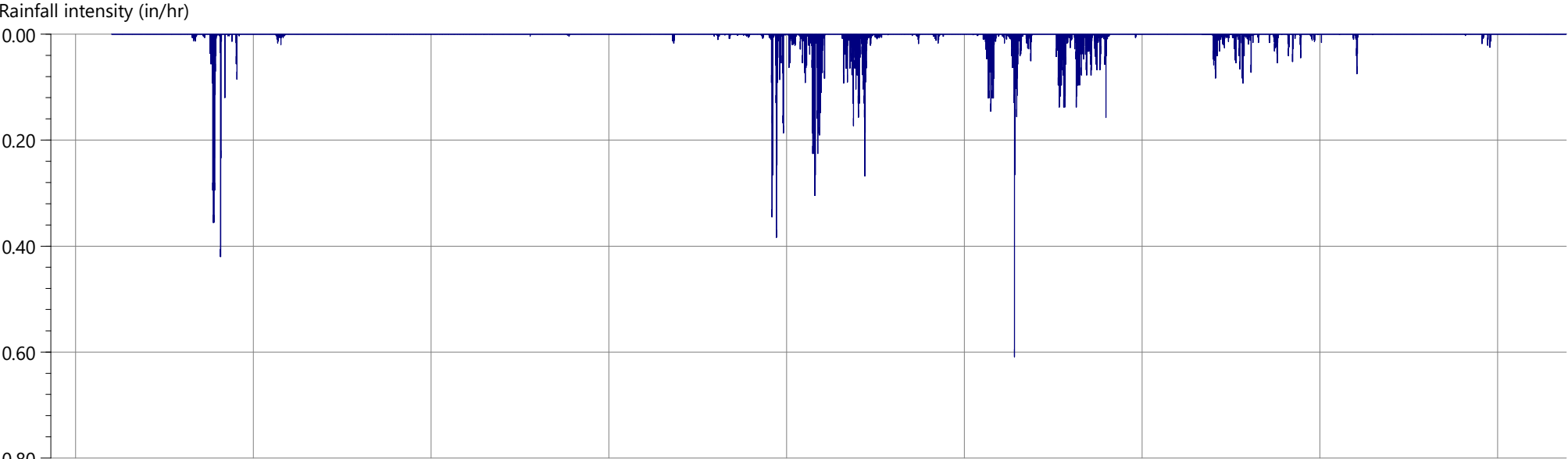






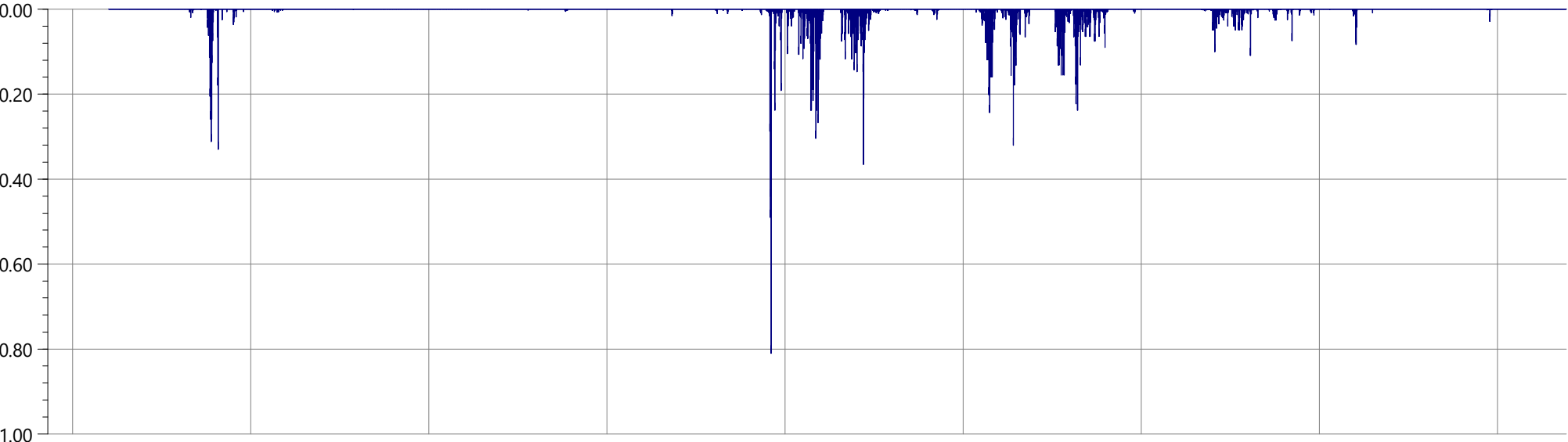
APPENDIX D – CALIBRATION GRAPHS

Flow Survey Location (Obs.) FM 1, Model Location (Pred.) D/S SMH E04-043.1, Rainfall Profile: 311

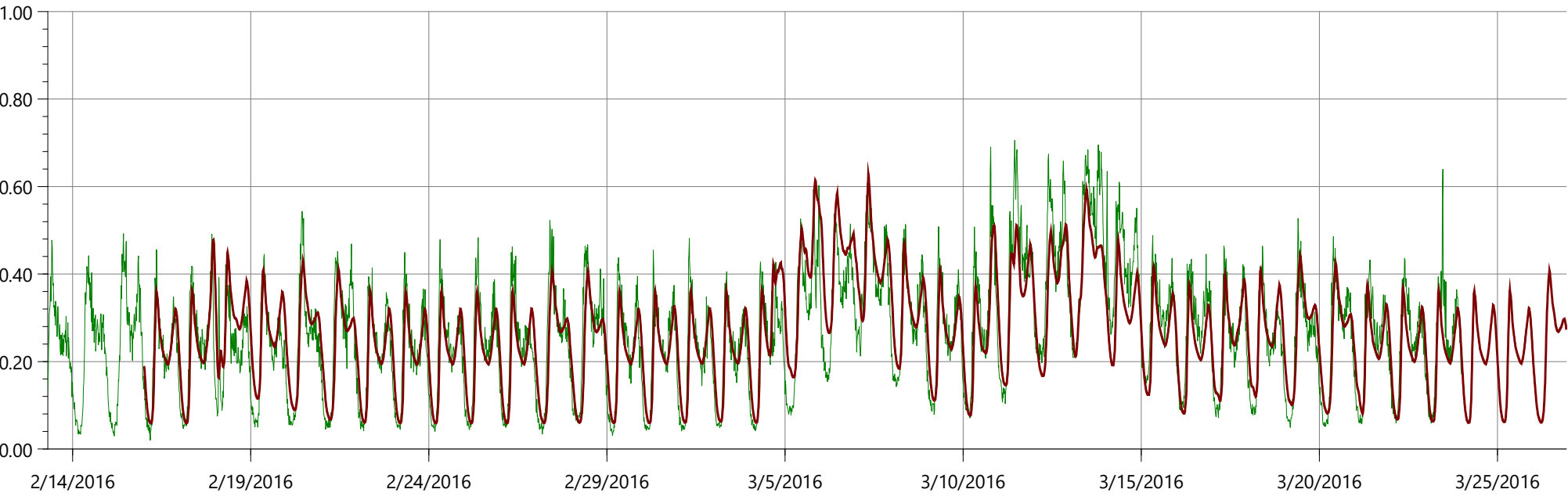


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.950	0.609	0.007			
Observed				0.000	0.981	1628041.595
...ta20160215_20160315				0.121	1.076	1849194.017

Rainfall intensity (in/hr)

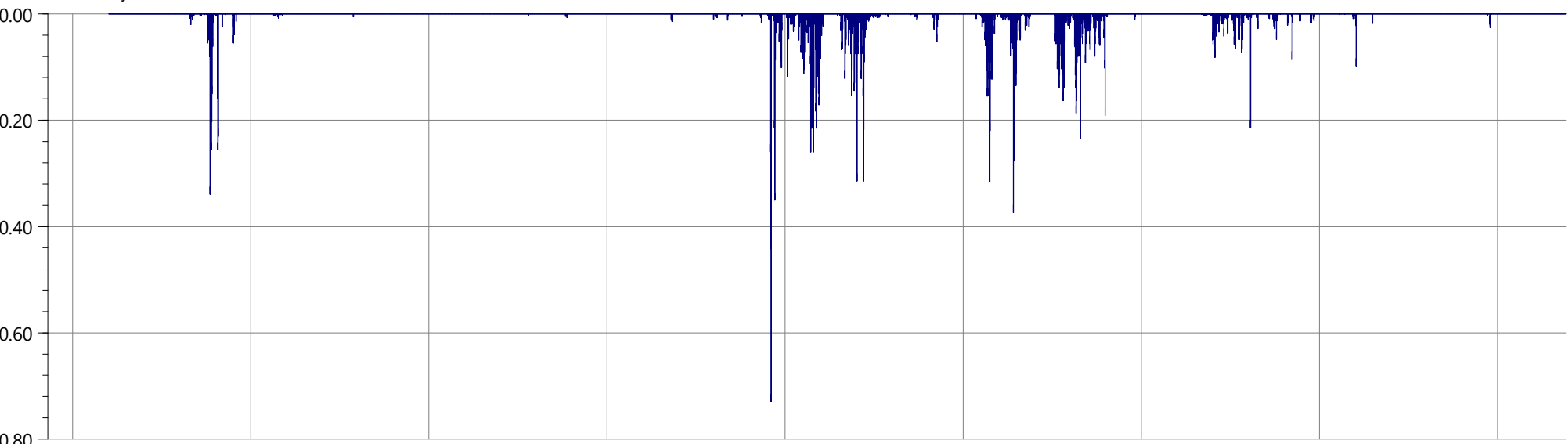


Flow (MGD)

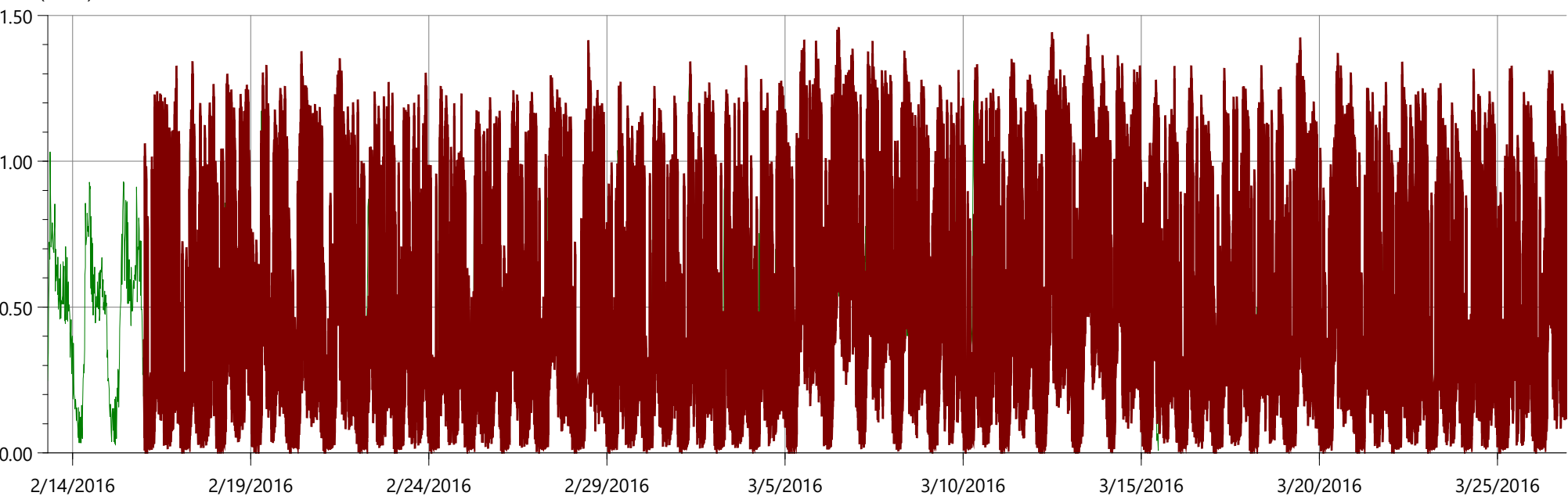


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	7.168	0.810	0.007	0.020	0.706	914240.023
...ta20160215_20160315				0.059	0.629	906202.549

Rainfall intensity (in/hr)

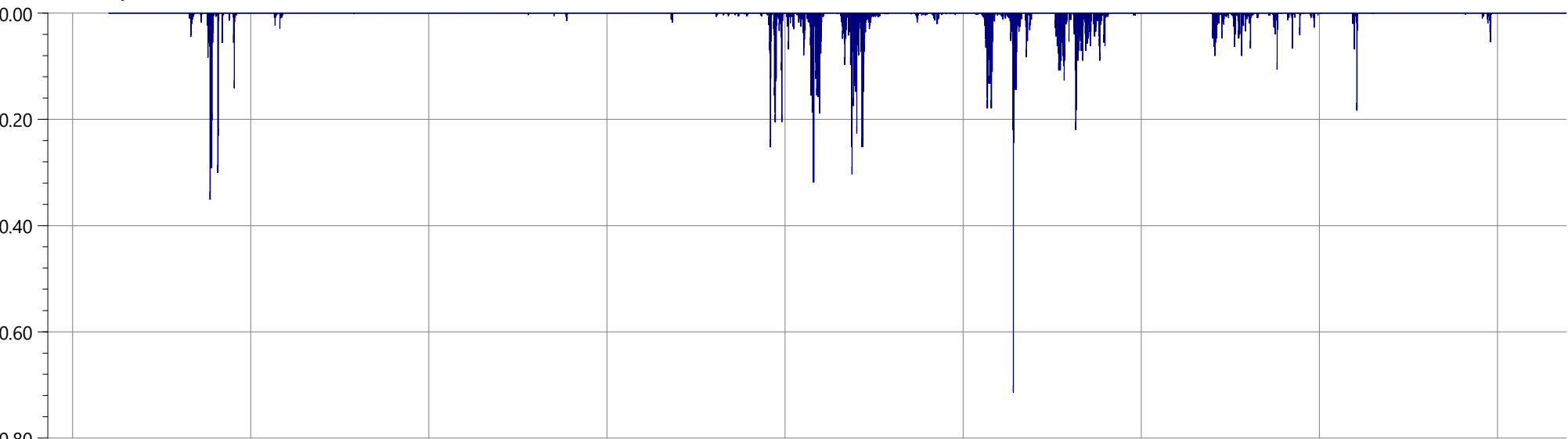


Flow (MGD)

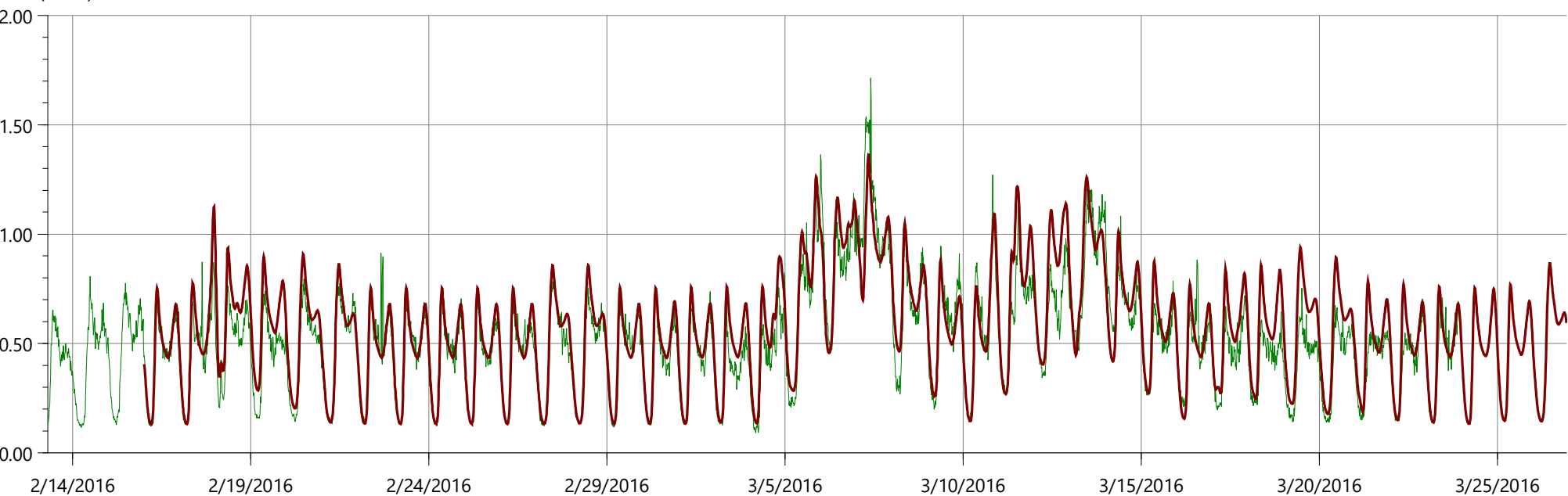


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.131	0.730	0.007			
Observed				0.007	1.272	1577879.095
...ta20160215_20160315				0.014	1.417	1694134.628

Rainfall intensity (in/hr)

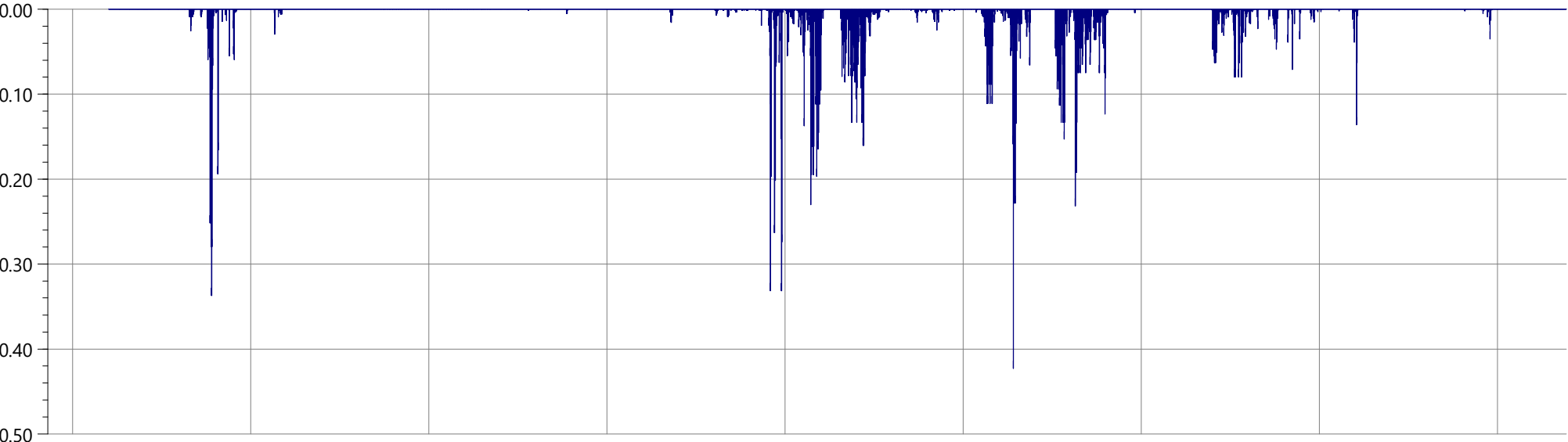


Flow (MGD)

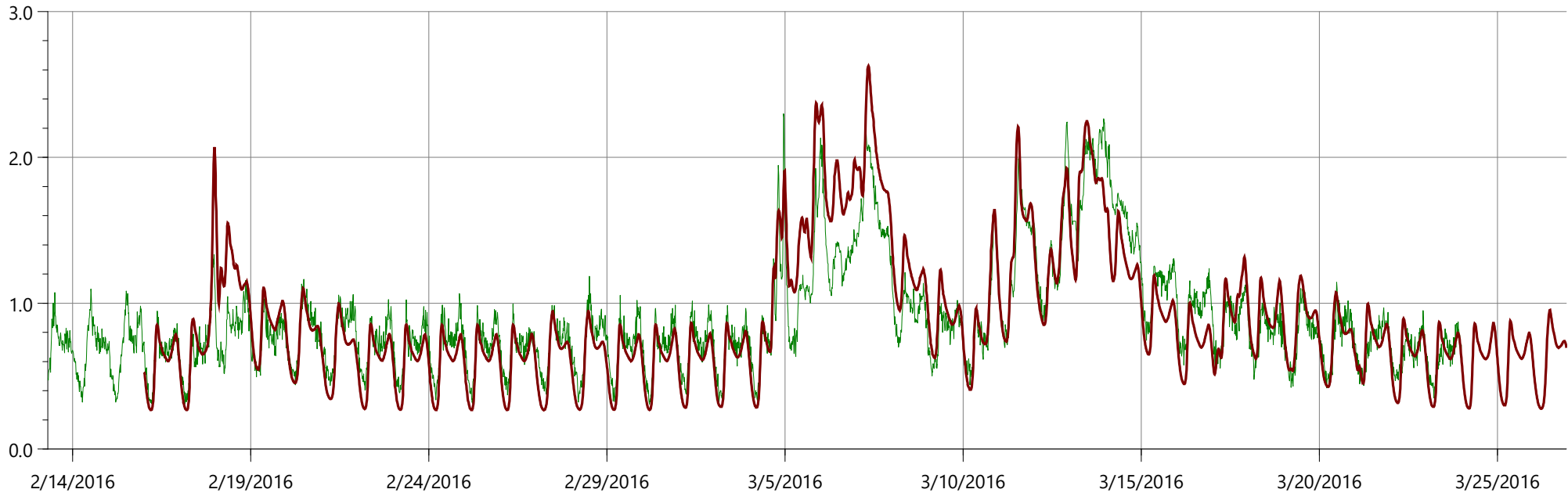


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.006	0.714	0.007			
Observed				0.092	1.713	1767988.571
...ta20160215_20160315				0.132	1.364	1962773.049

Rainfall intensity (in/hr)

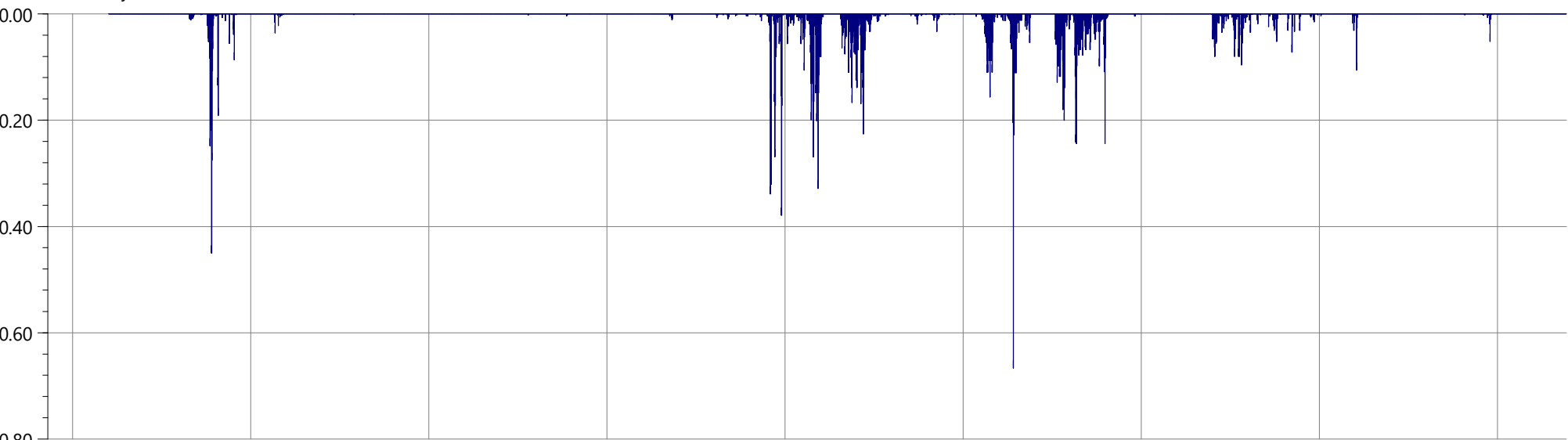


Flow (MGD)

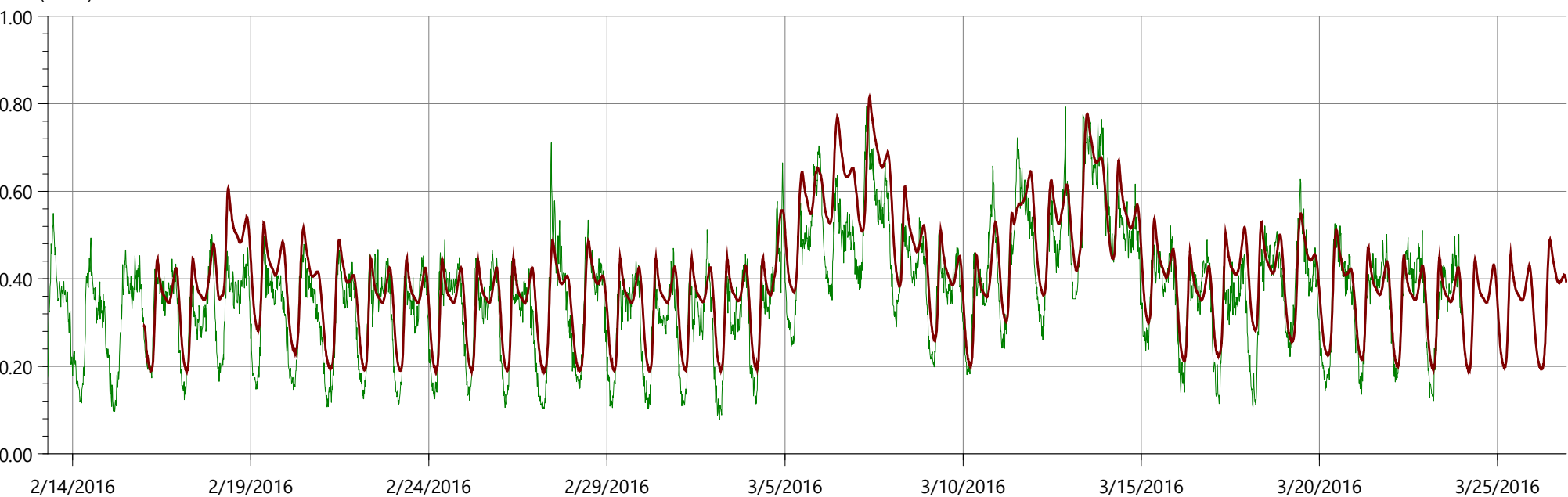


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.524	0.423	0.007			
Observed				0.308	2.299	3030867.347
...ta20160215_20160315				0.267	2.627	3046741.062

Rainfall intensity (in/hr)

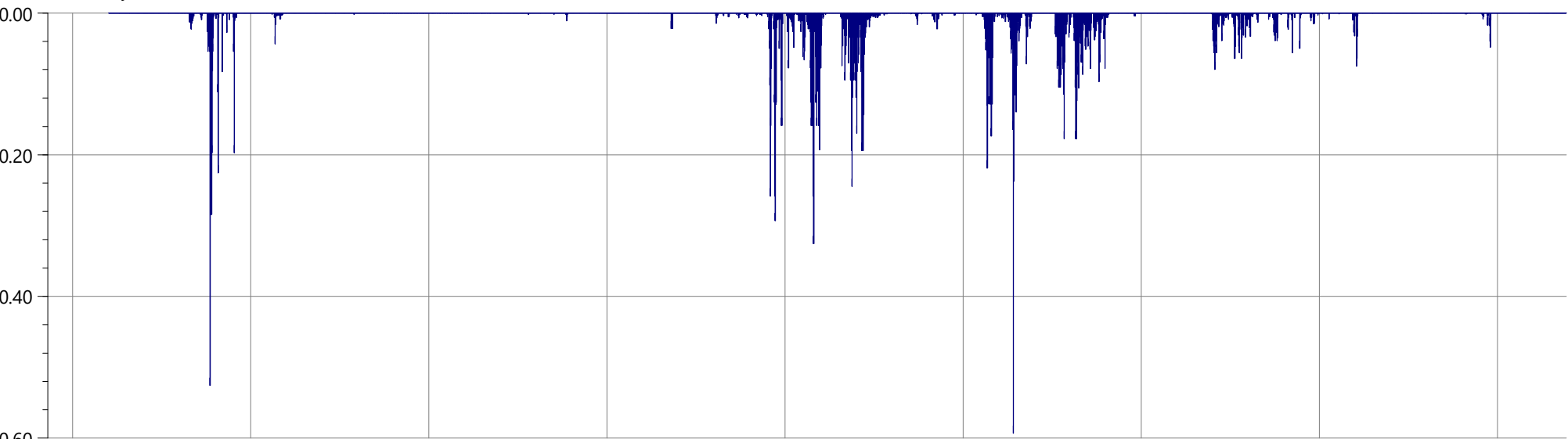


Flow (MGD)

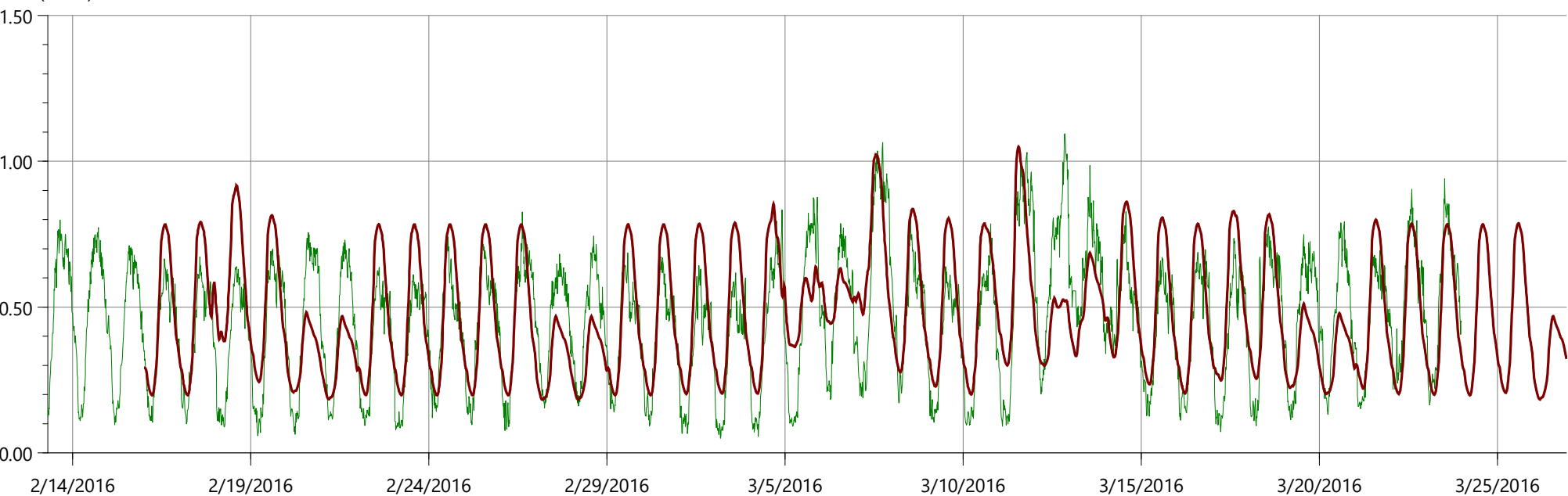


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.650	0.666	0.007			
Observed				0.078	0.796	1250814.058
...ta20160215_20160315				0.189	0.815	1385997.841

Rainfall intensity (in/hr)

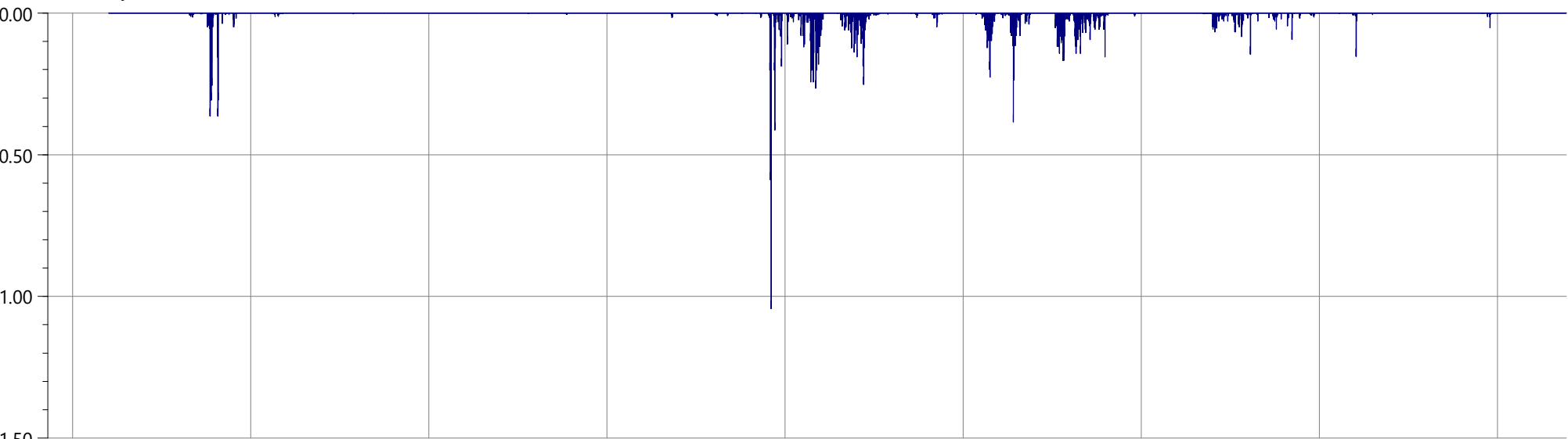


Flow (MGD)

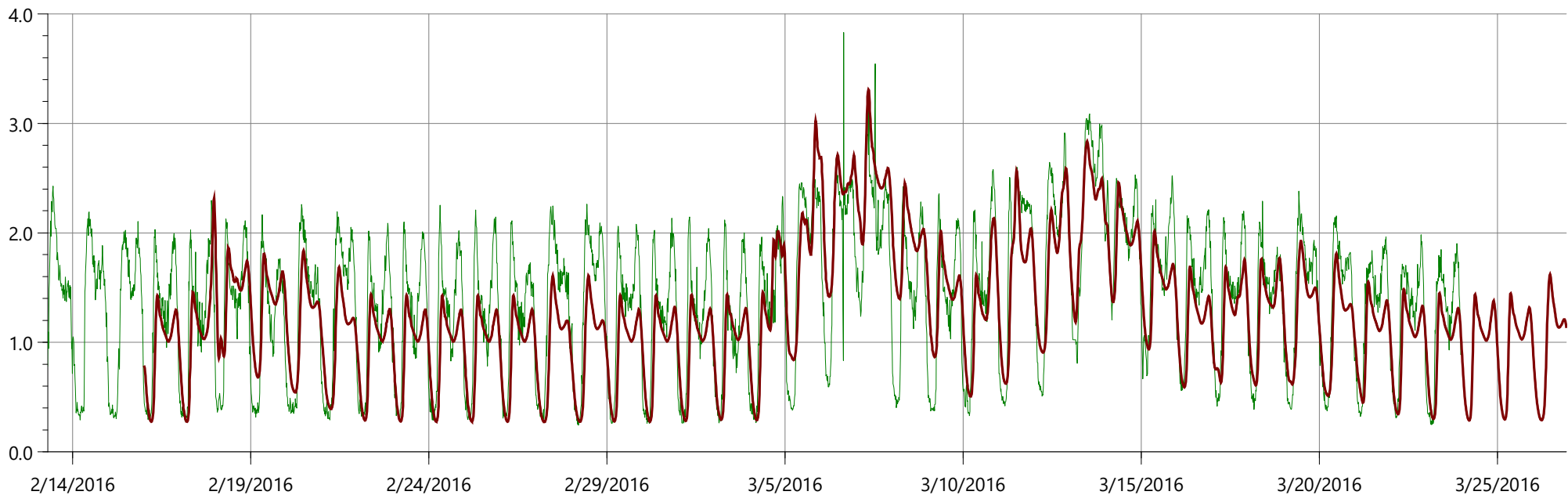


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.748	0.593	0.007			
Observed				0.050	1.095	1561247.890
...ta20160215_20160315				0.182	1.050	1627844.217

Rainfall intensity (in/hr)

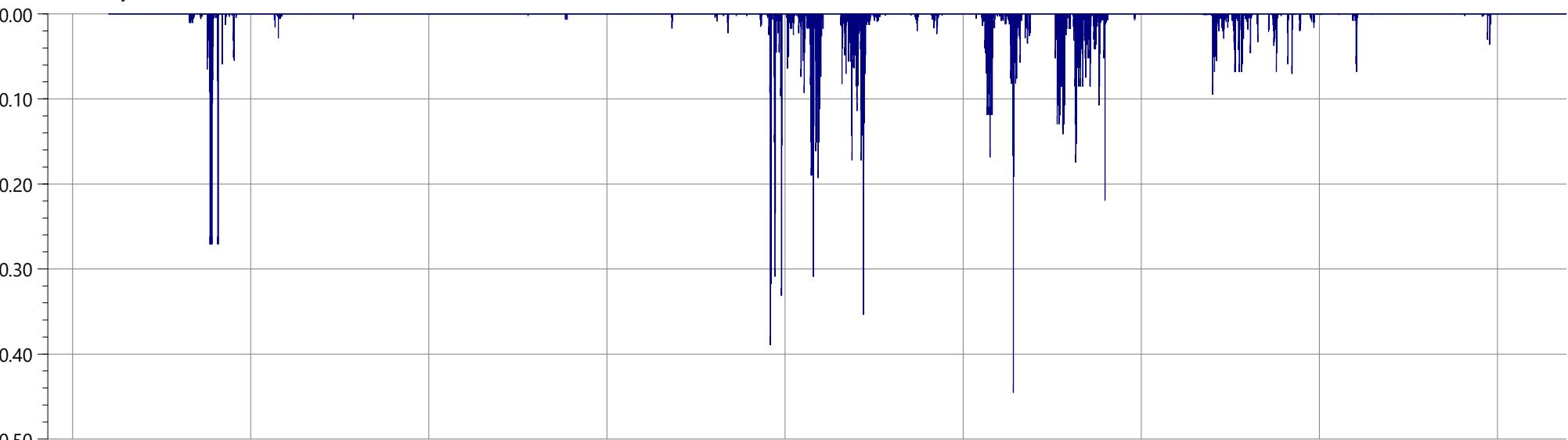


Flow (MGD)

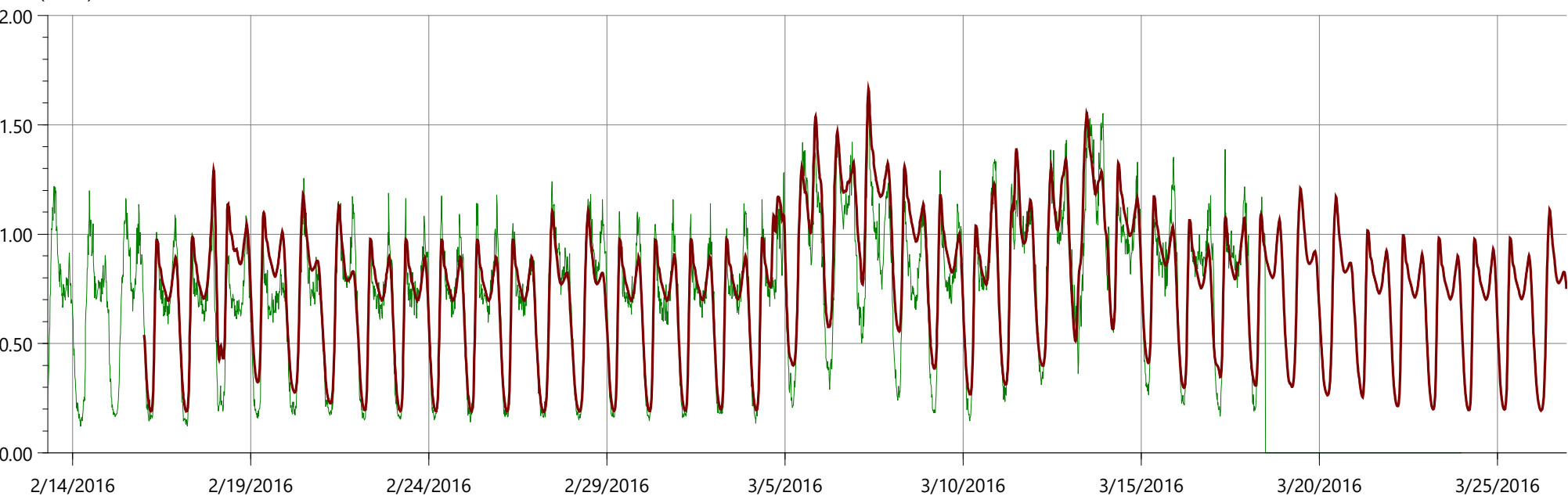


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.005	1.043	0.007			
Observed				0.243	3.830	4848161.759
...ta20160215_20160315				0.272	3.309	4389105.386

Rainfall intensity (in/hr)

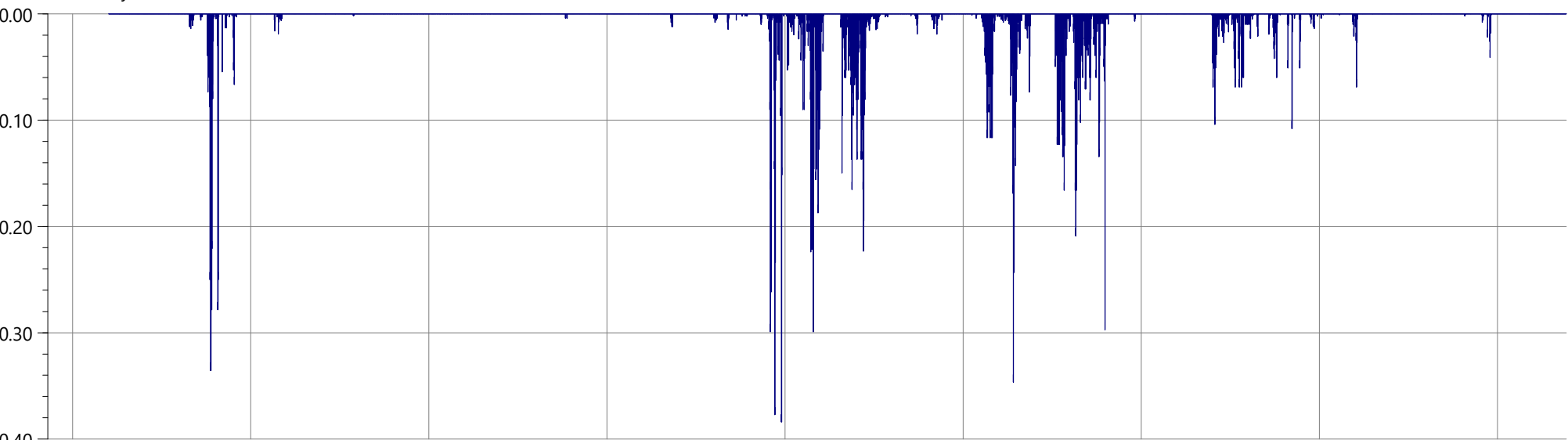


Flow (MGD)

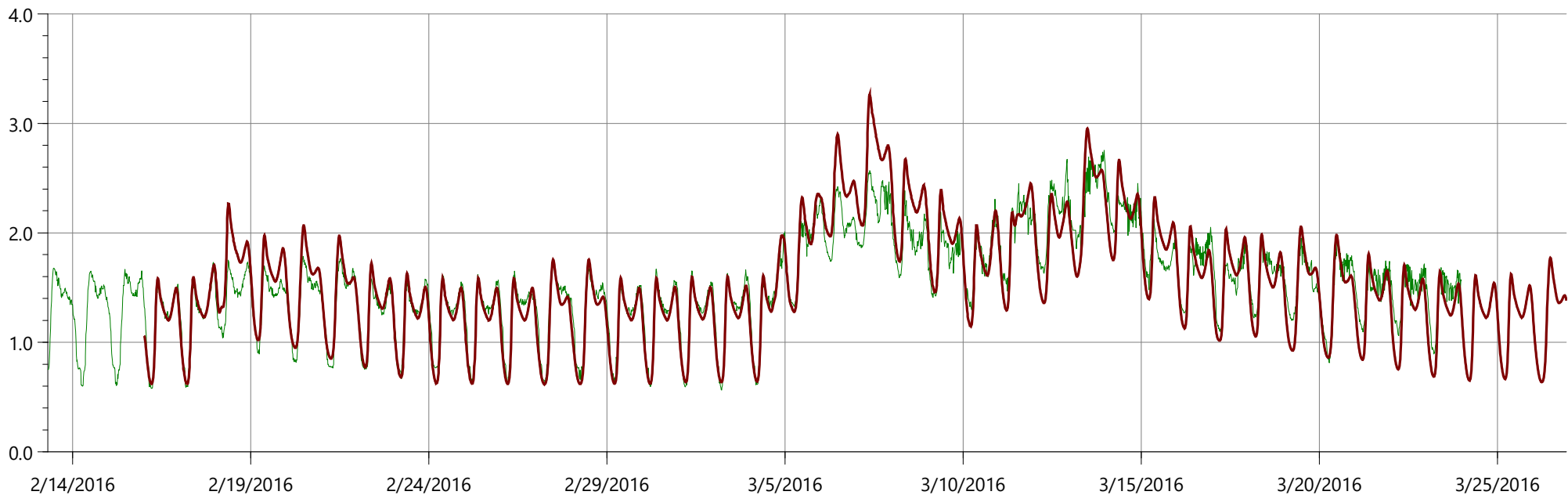


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.644	0.445	0.007			
Observed				0.000	1.560	2175152.424
...ta20160215_20160315				0.188	1.664	2640259.610

Rainfall intensity (in/hr)

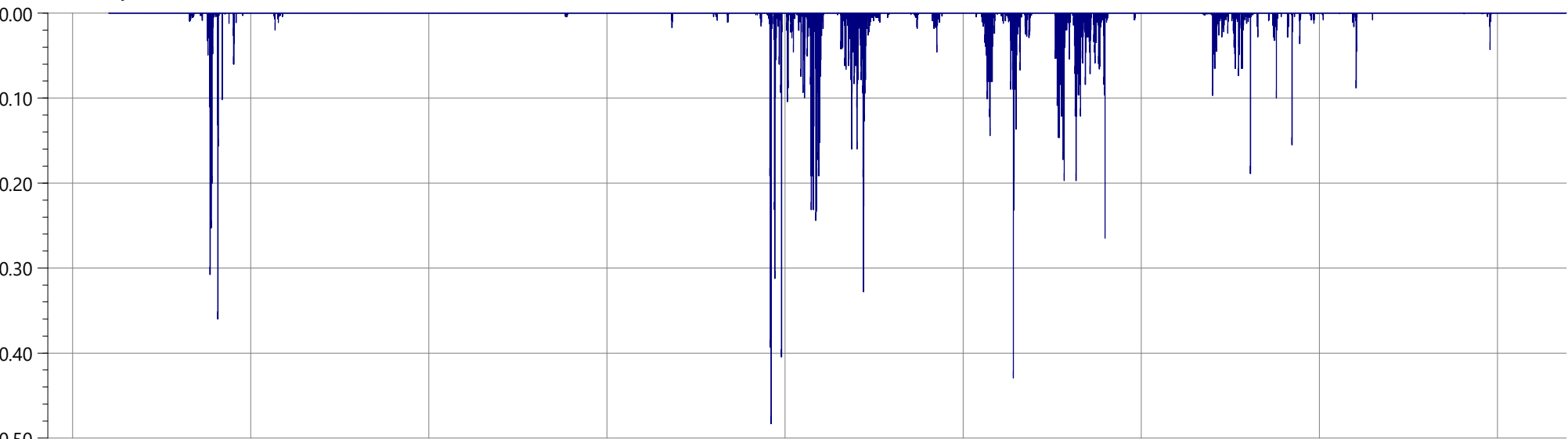


Flow (MGD)

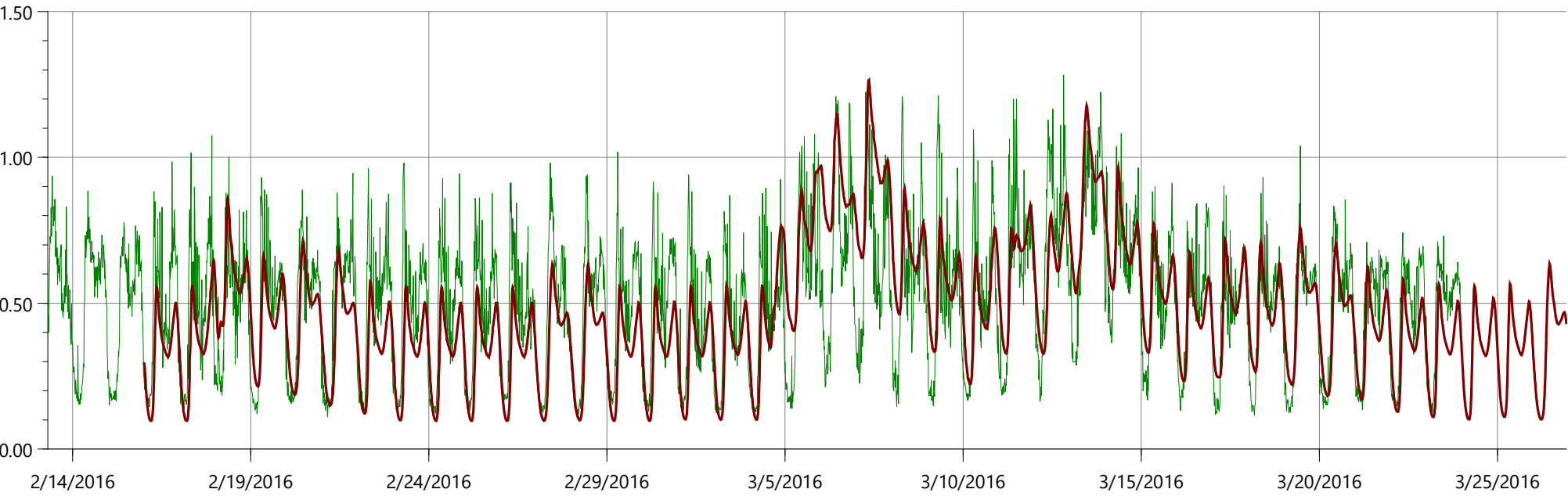


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.750	0.384	0.007			
Observed				0.563	2.756	5257075.125
...ta20160215_20160315				0.617	3.265	5297174.358

Rainfall intensity (in/hr)

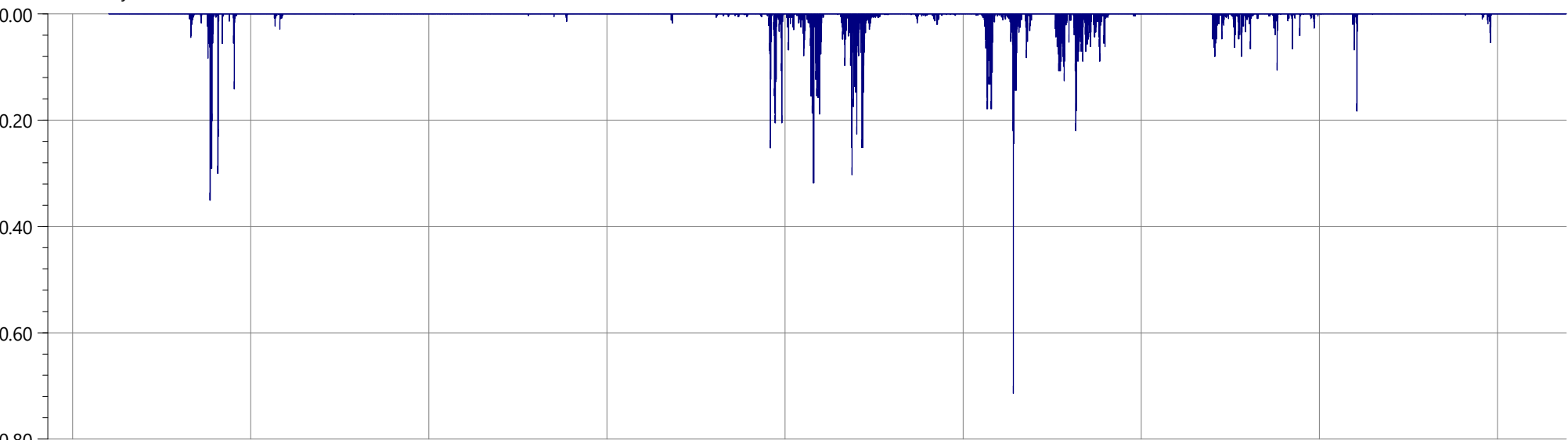


Flow (MGD)

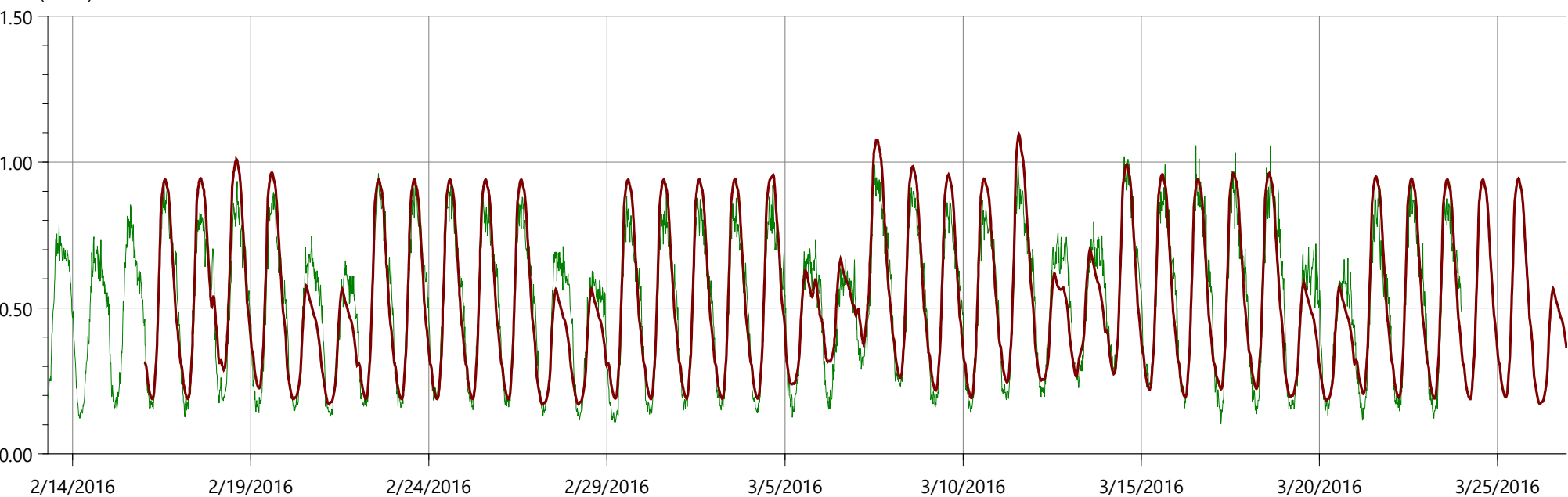


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	6.982	0.483	0.007	0.110	1.283	1753822.349
...ta20160215_20160315				0.097	1.266	1626219.910

Rainfall intensity (in/hr)

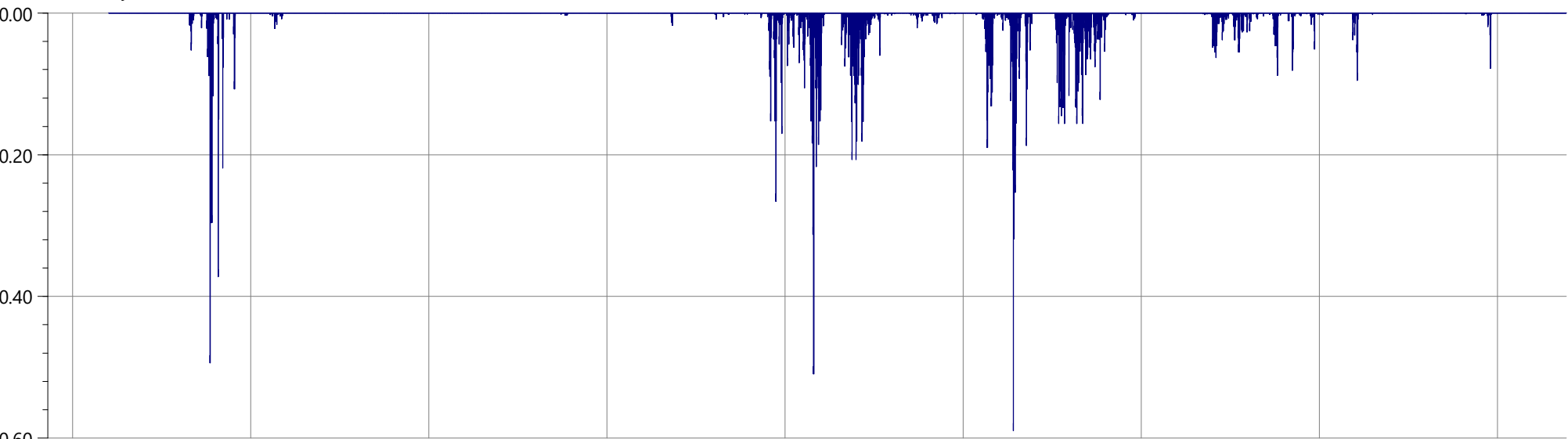


Flow (MGD)

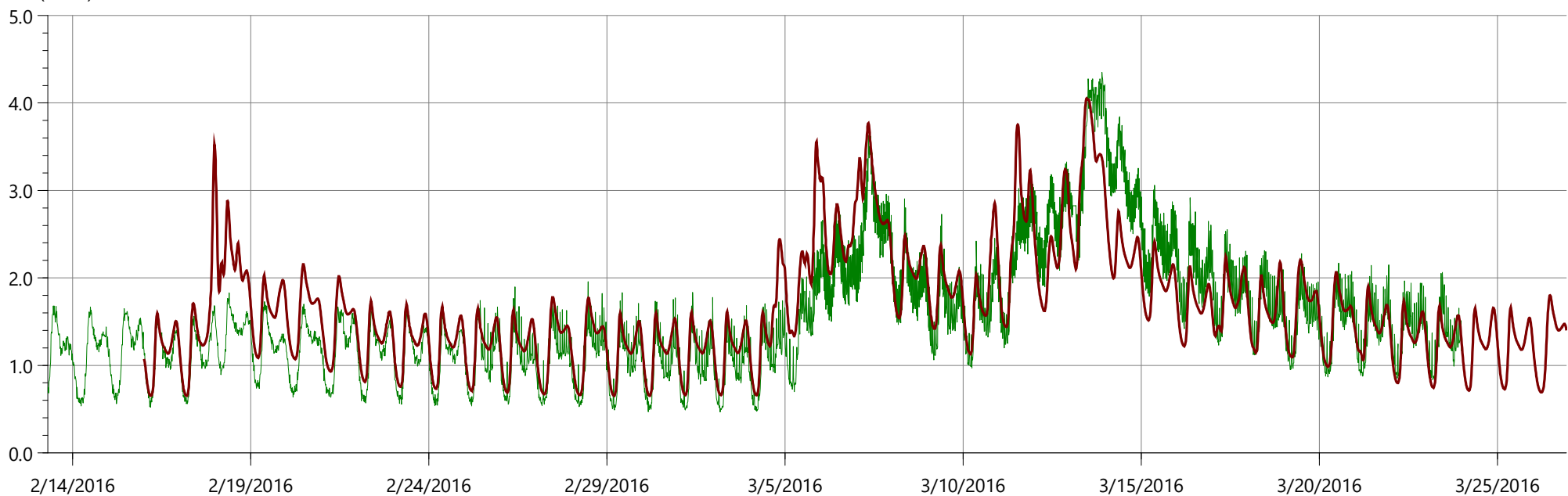


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.006	0.714	0.007			
Observed				0.103	1.057	1756657.949
...ta20160215_20160315				0.169	1.096	1787262.390

Rainfall intensity (in/hr)

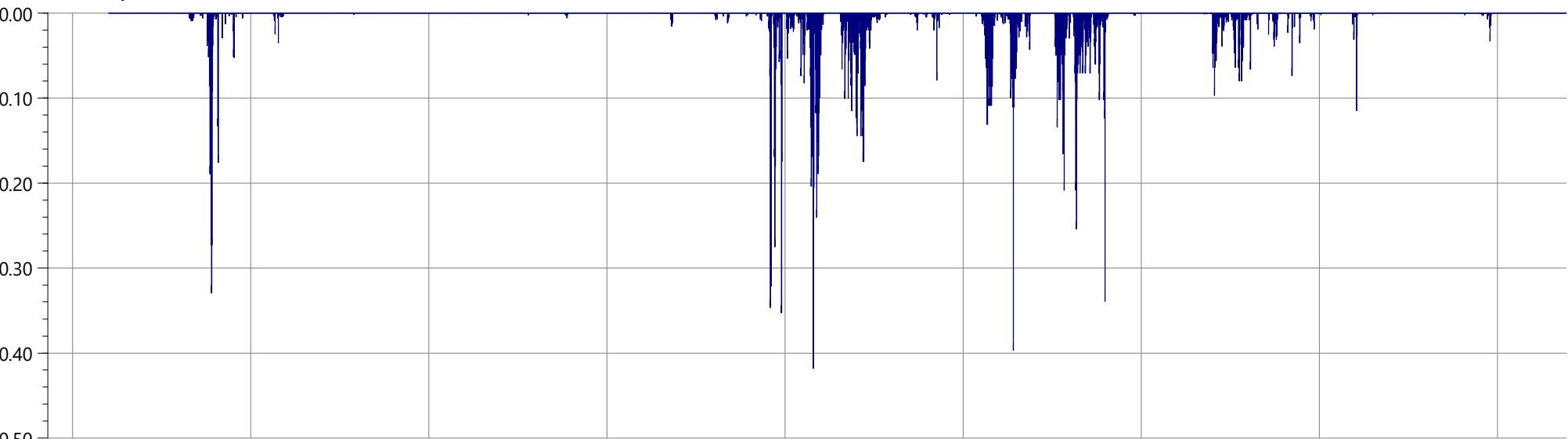


Flow (MGD)

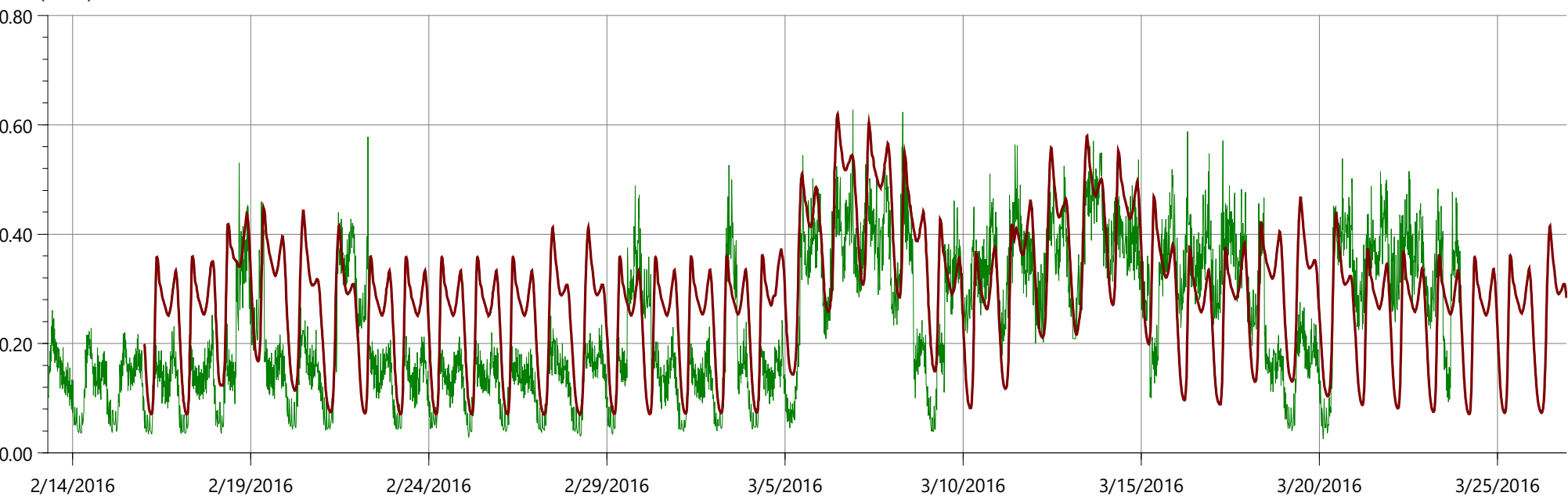


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.634	0.590	0.008			
Observed				0.468	4.351	5269869.468
...ta20160215_20160315				0.651	4.054	5683303.761

Rainfall intensity (in/hr)

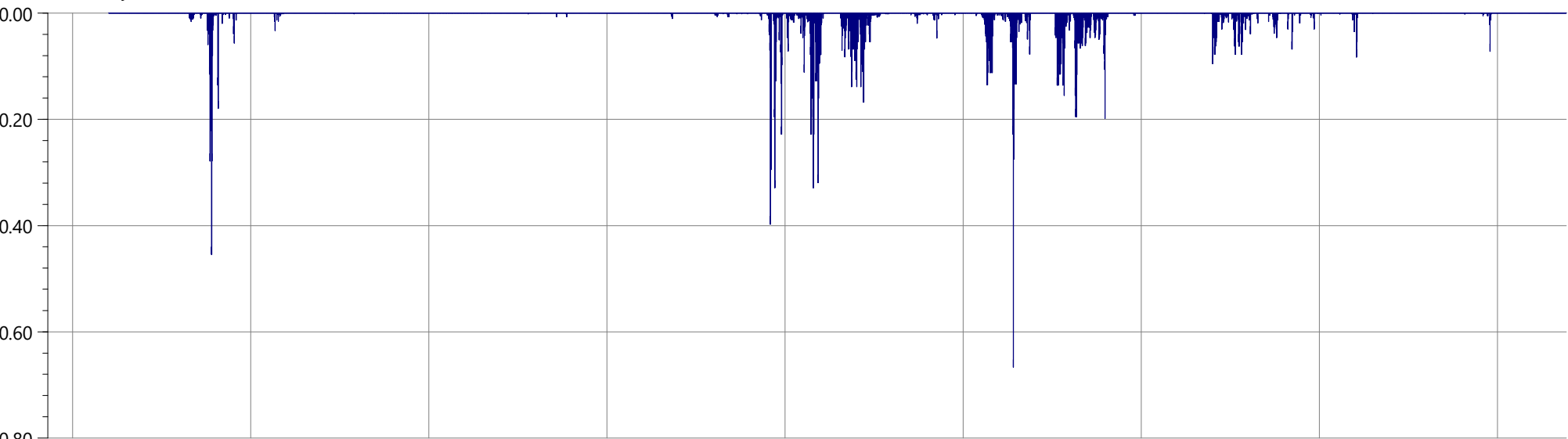


Flow (MGD)

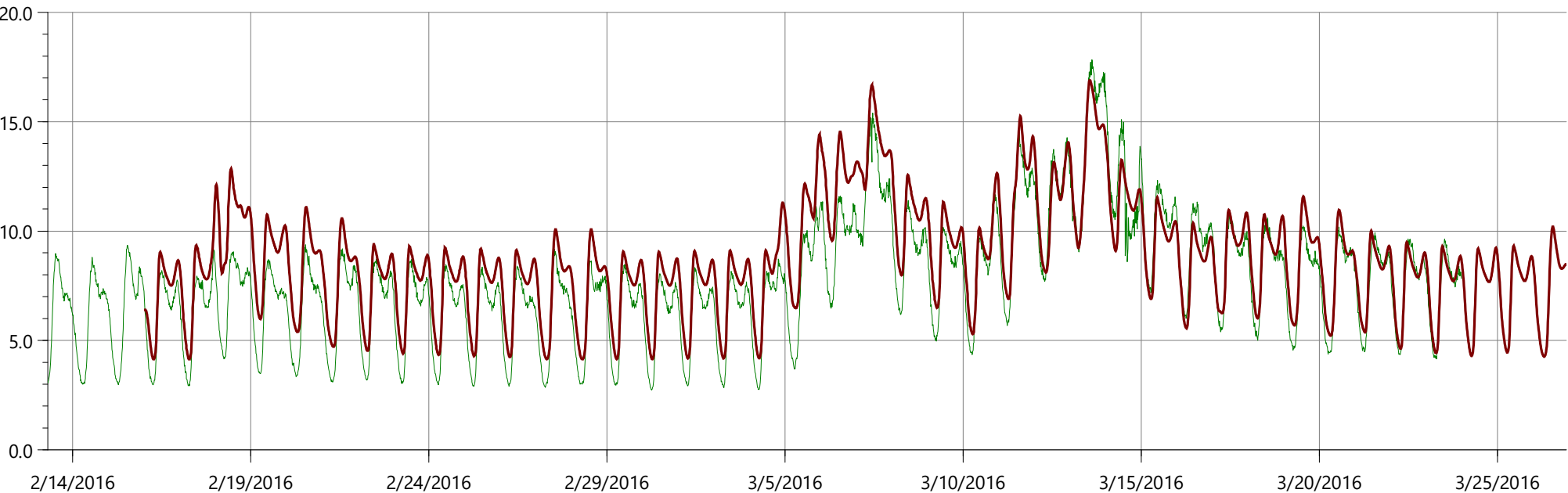


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.394	0.418	0.007			
Observed				0.025	0.627	798653.119
...ta20160215_20160315				0.070	0.620	991725.521

Rainfall intensity (in/hr)

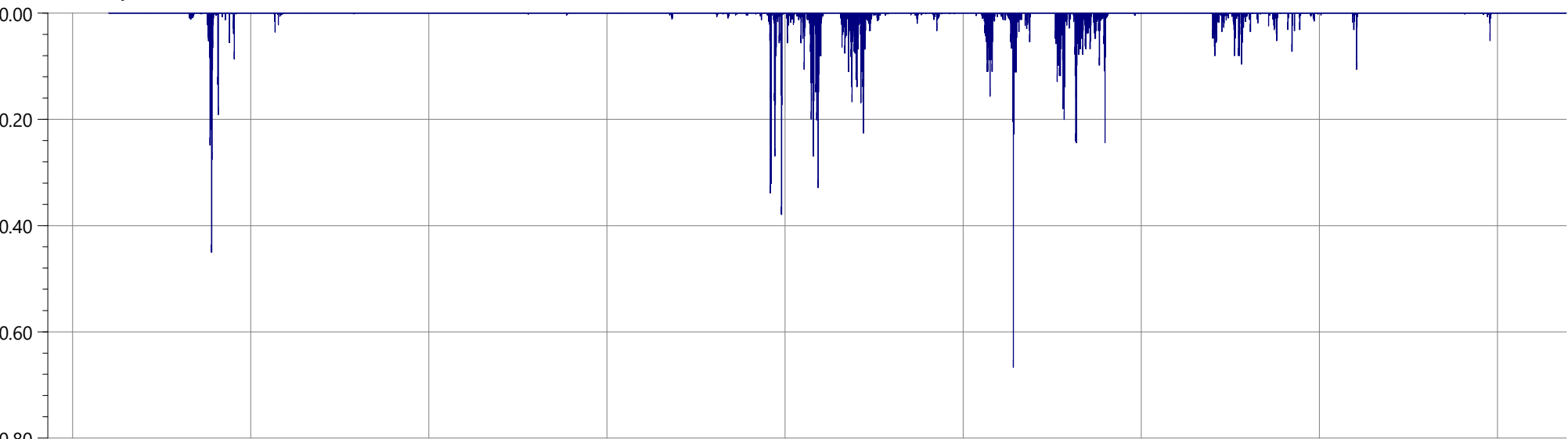


Flow (MGD)

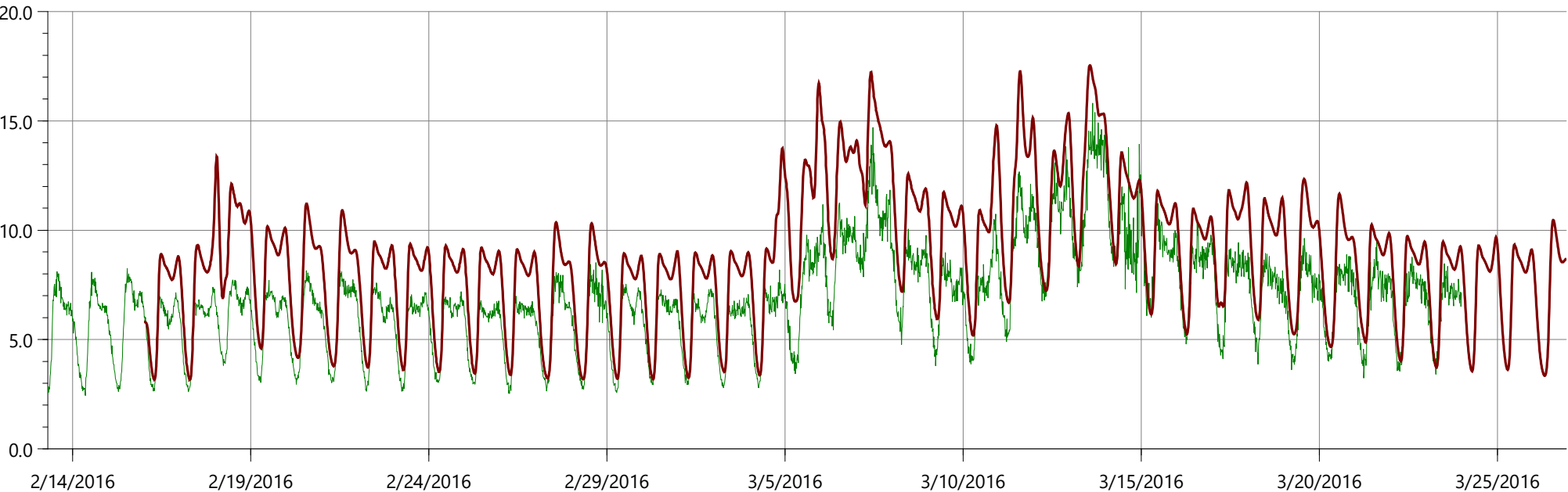


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.618	0.666	0.007			
Observed				2.731	17.837	26538612.826
...ta20160215_20160315				4.129	16.903	30158188.130

Rainfall intensity (in/hr)

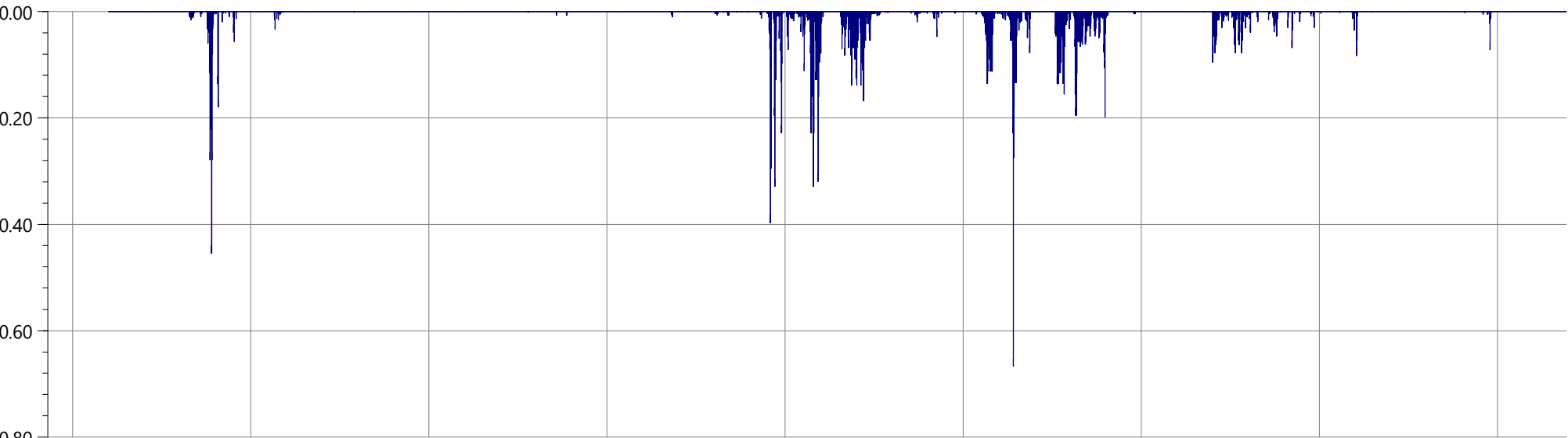


Flow (MGD)

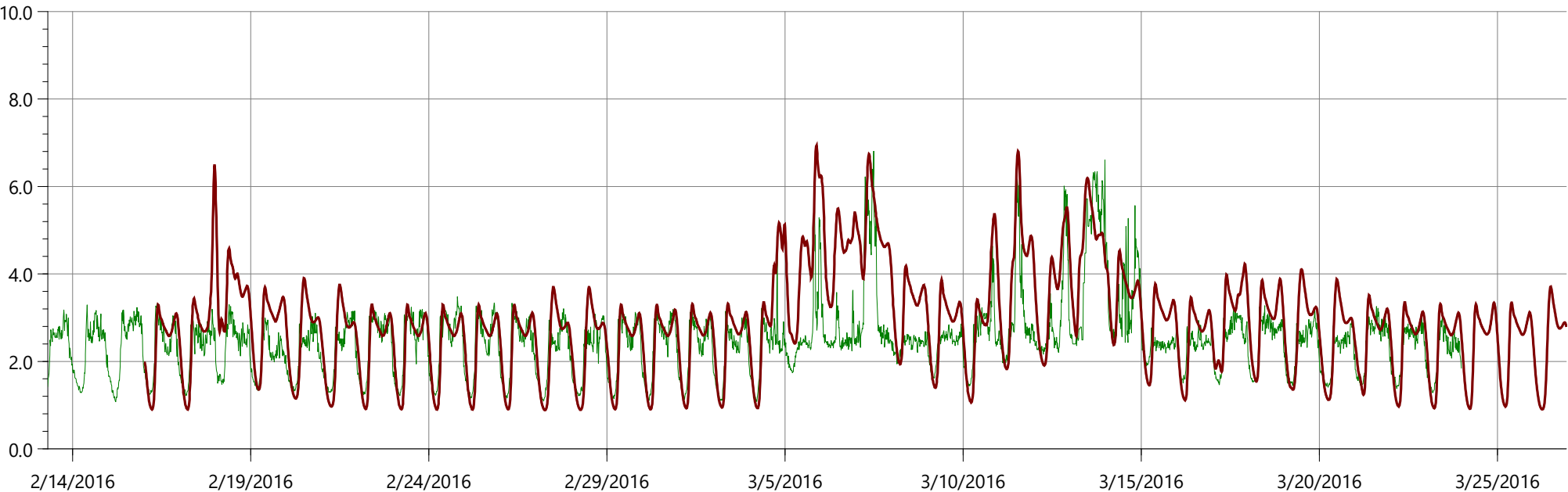


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.650	0.666	0.007			
Observed				2.435	15.807	23553734.551
...ta20160215_20160315				3.164	17.544	30549718.631

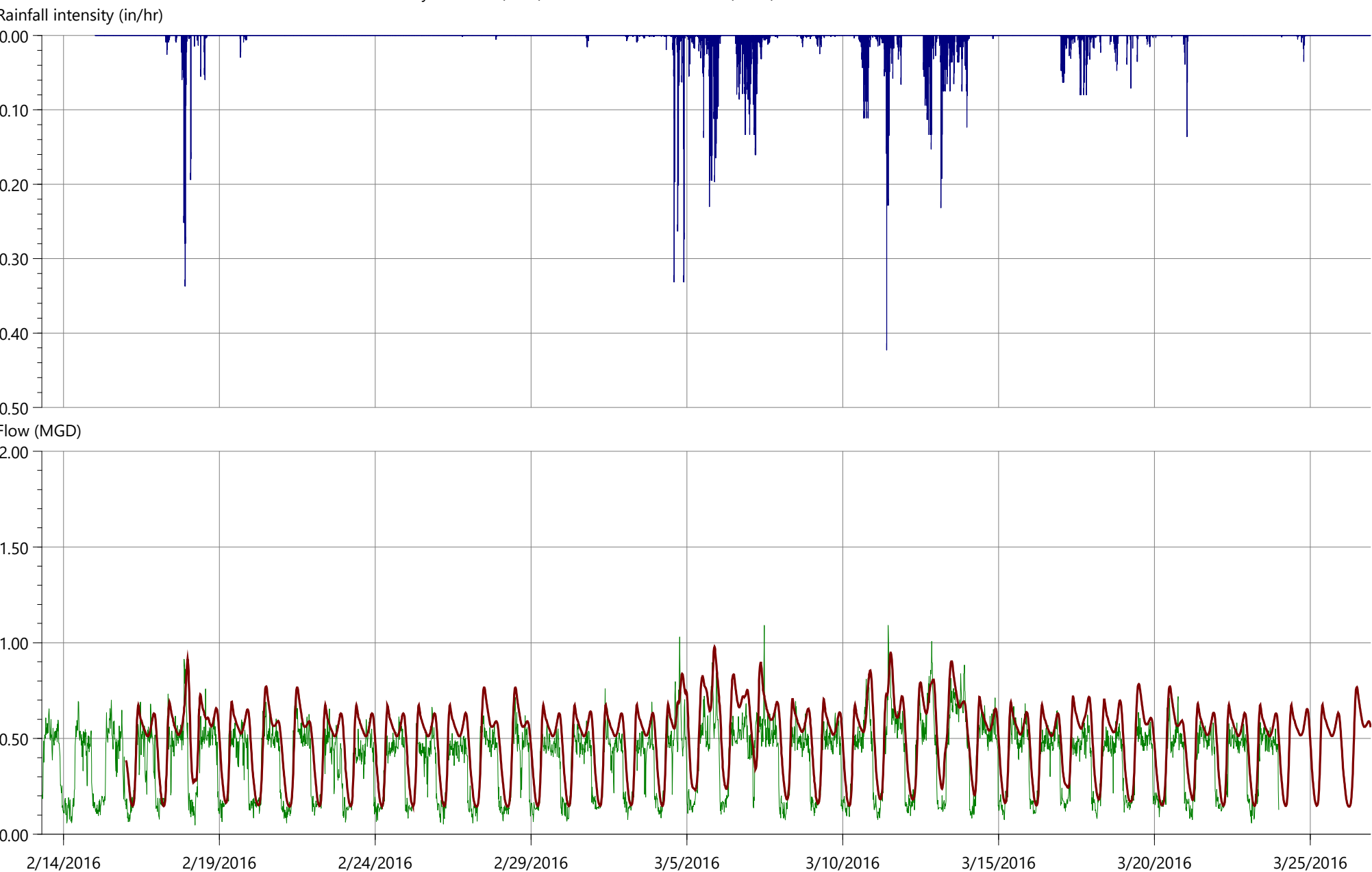
Rainfall intensity (in/hr)



Flow (MGD)

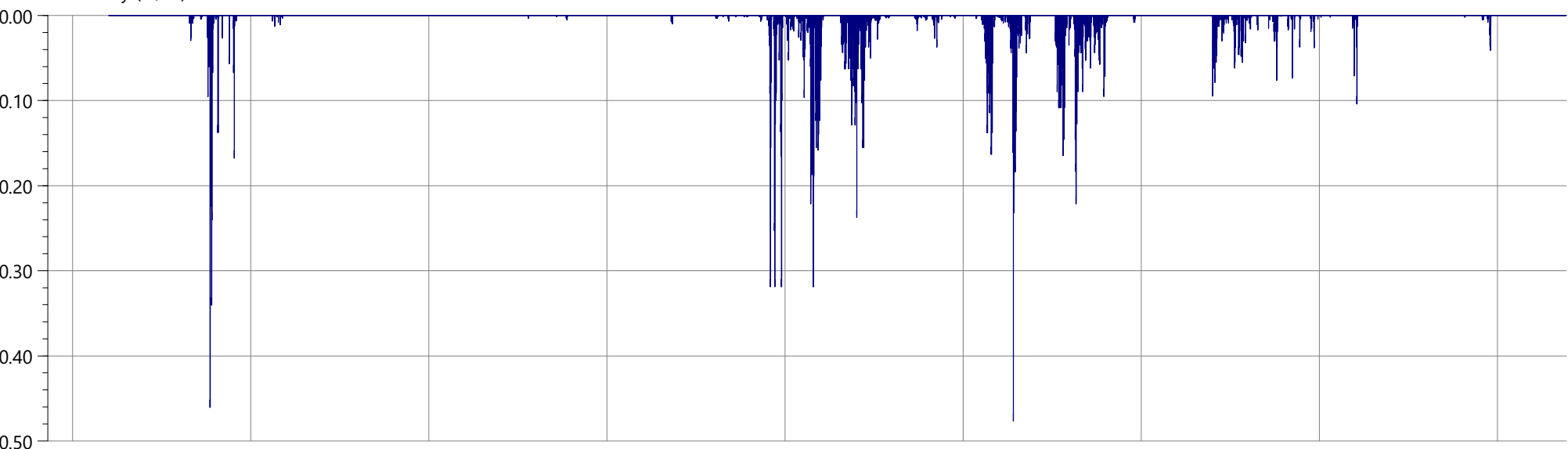


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.618	0.666	0.007			
Observed				1.071	6.810	8508039.397
...ta20160215_20160315				0.886	6.940	9988758.893

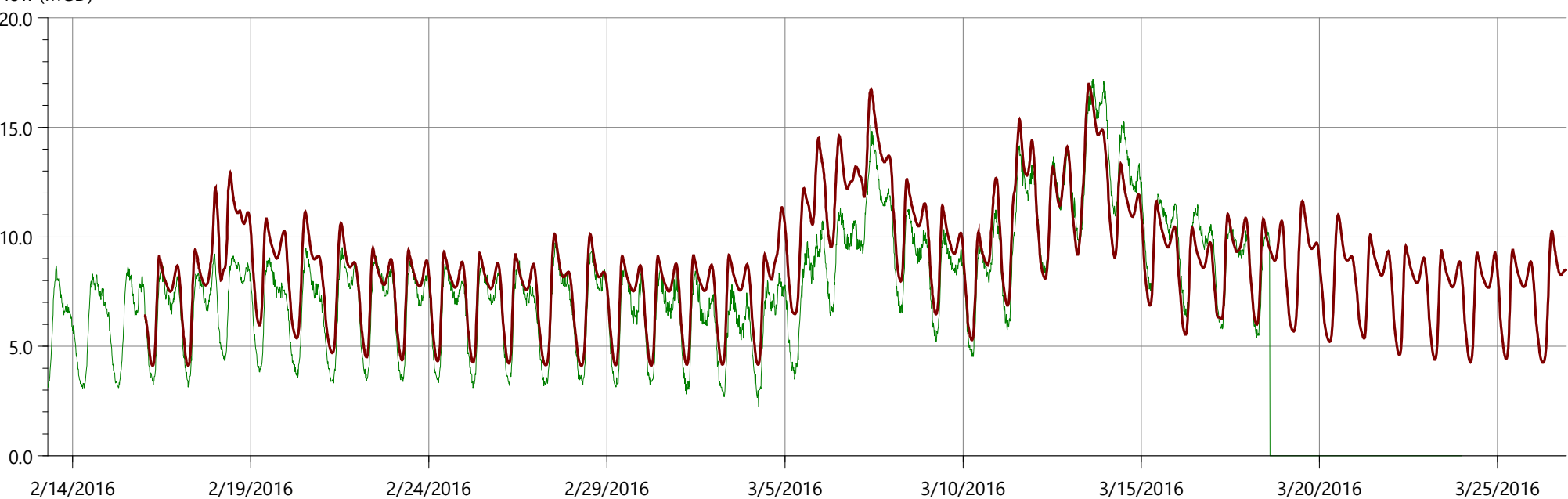


		Rainfall			Flow		
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	— (blue line)	6.524	0.423	0.007			
Observed	— (green line)				0.048	1.091	1332963.500
...ta20160215_20160315	— (red line)				0.143	0.978	1724557.621

Rainfall intensity (in/hr)



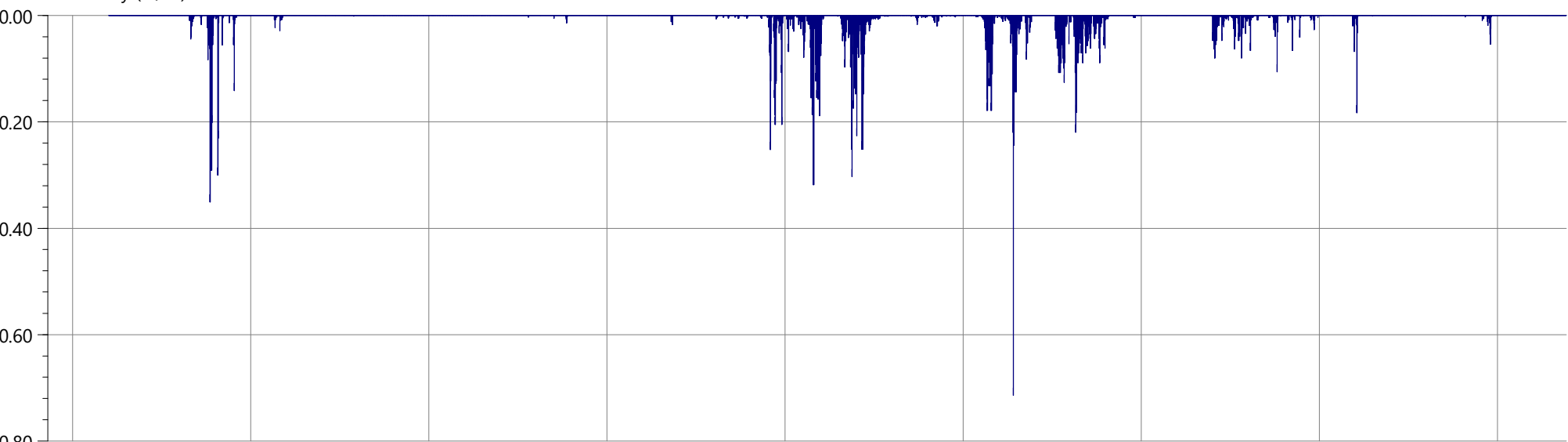
Flow (MGD)



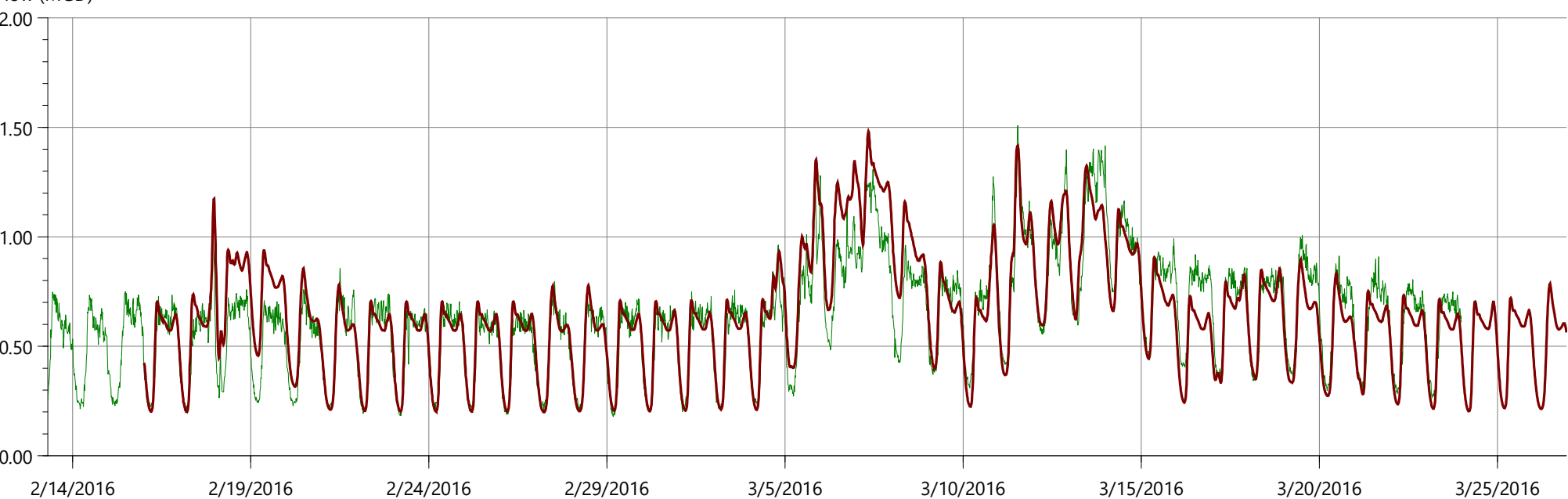
2/14/2016 2/19/2016 2/24/2016 2/29/2016 3/5/2016 3/10/2016 3/15/2016 3/20/2016 3/25/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.581	0.476	0.007			
Observed				0.000	17.190	23376320.562
...ta20160215_20160315				4.111	16.980	30162930.049

Rainfall intensity (in/hr)

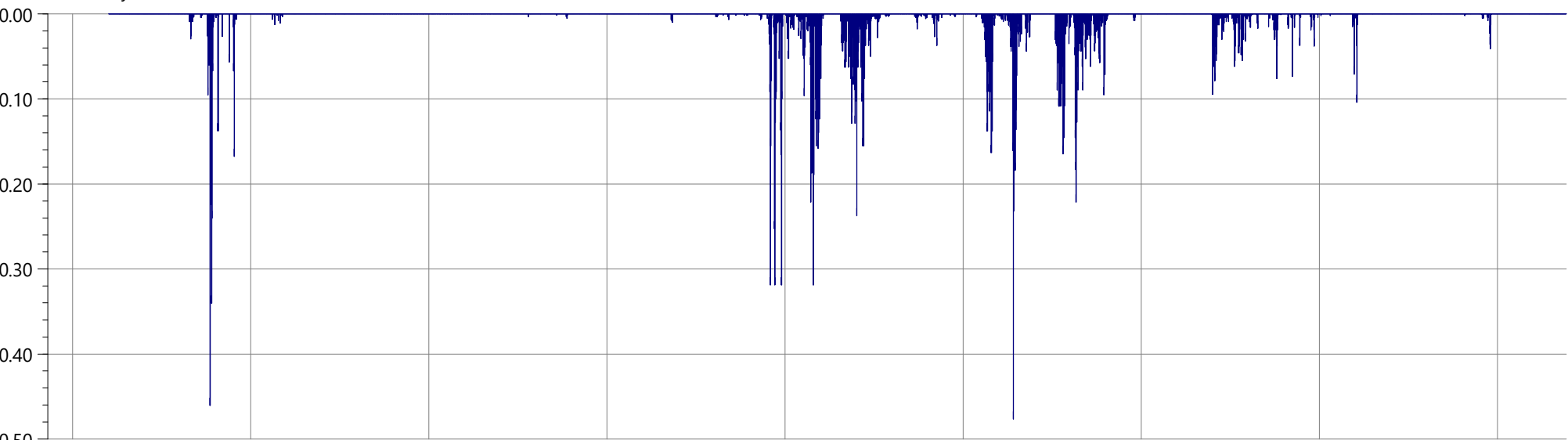


Flow (MGD)

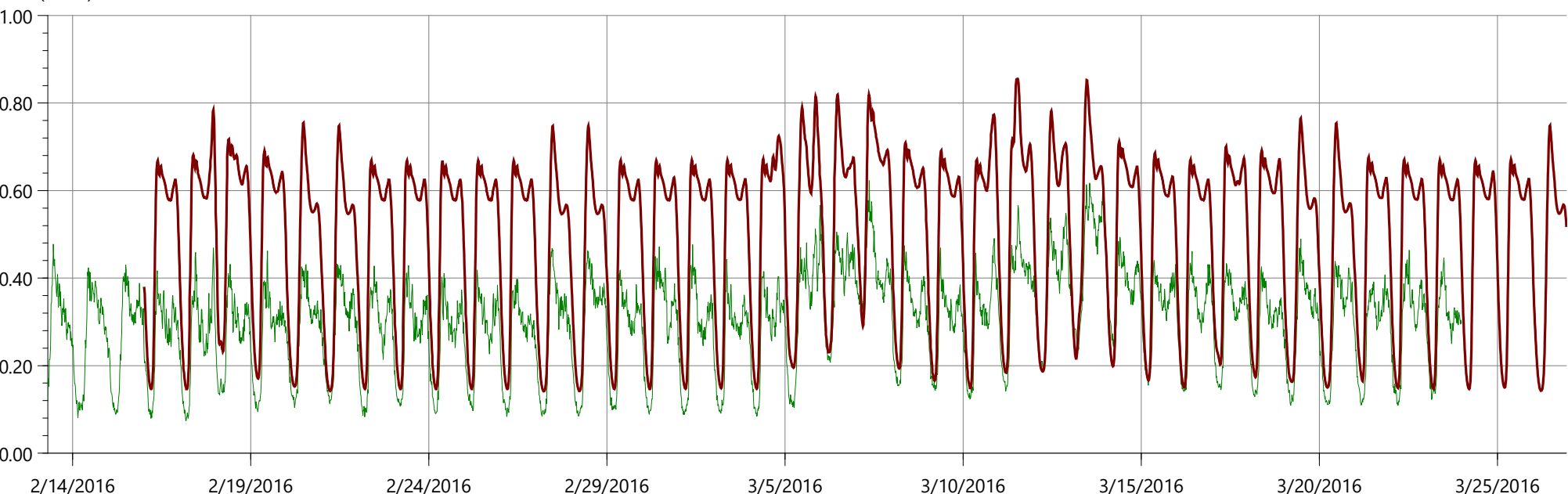


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	7.006	0.714	0.007	0.179	1.509	2154876.607
...ta20160215_20160315				0.200	1.482	2224728.980

Rainfall intensity (in/hr)

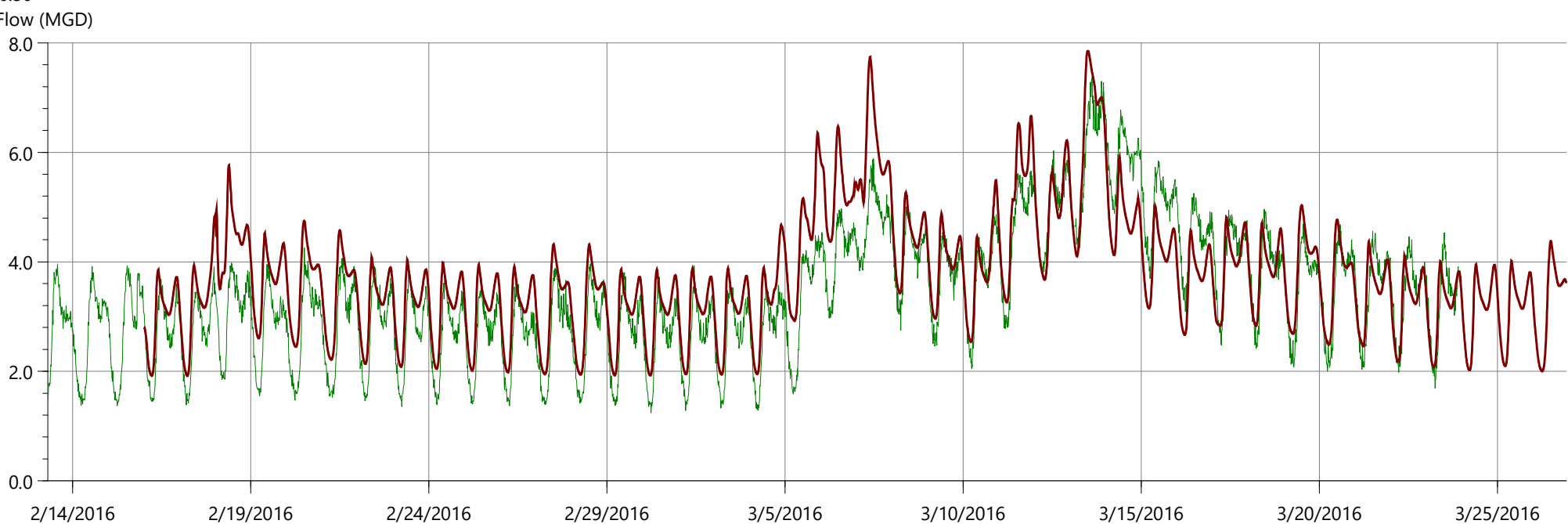
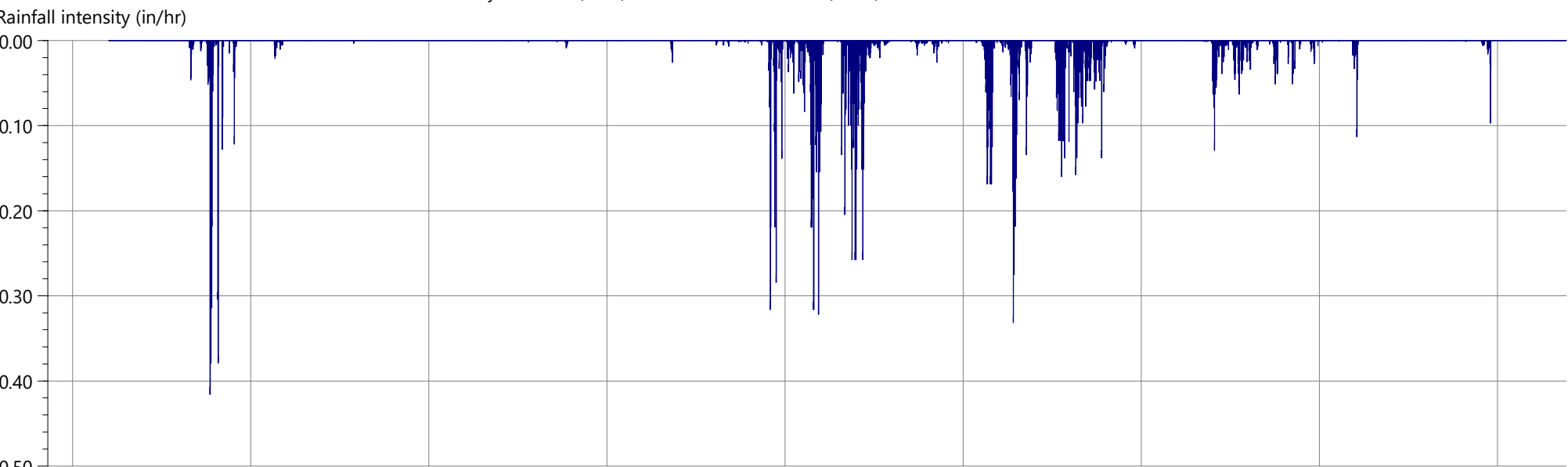


Flow (MGD)



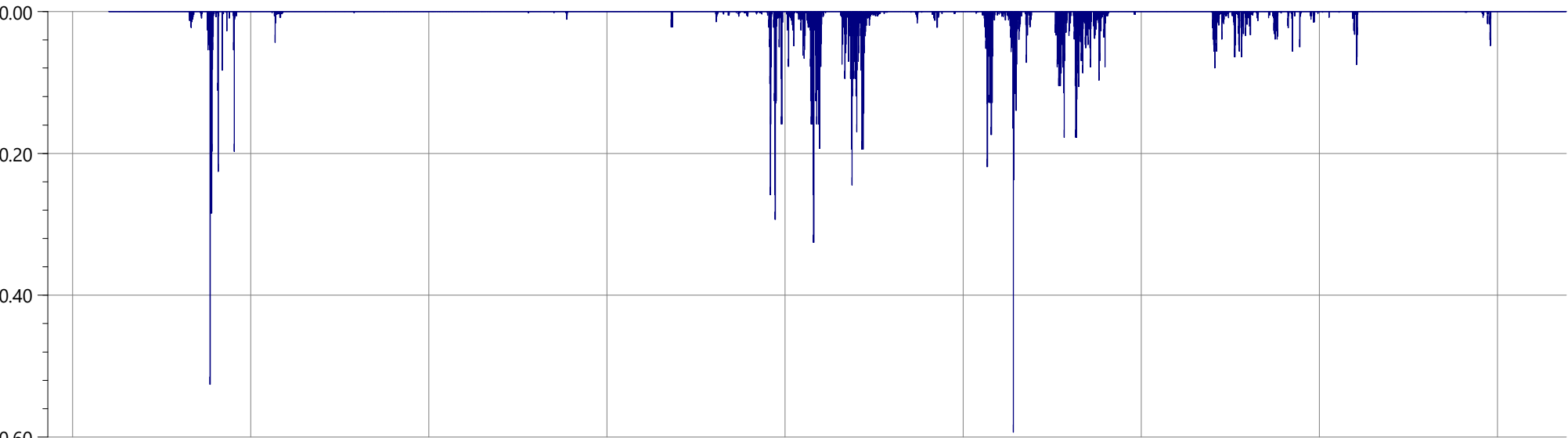
2/14/2016 2/19/2016 2/24/2016 2/29/2016 3/5/2016 3/10/2016 3/15/2016 3/20/2016 3/25/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.581	0.476	0.007			
Observed				0.074	0.623	1027152.765
...ta20160215_20160315				0.141	0.855	1734444.106

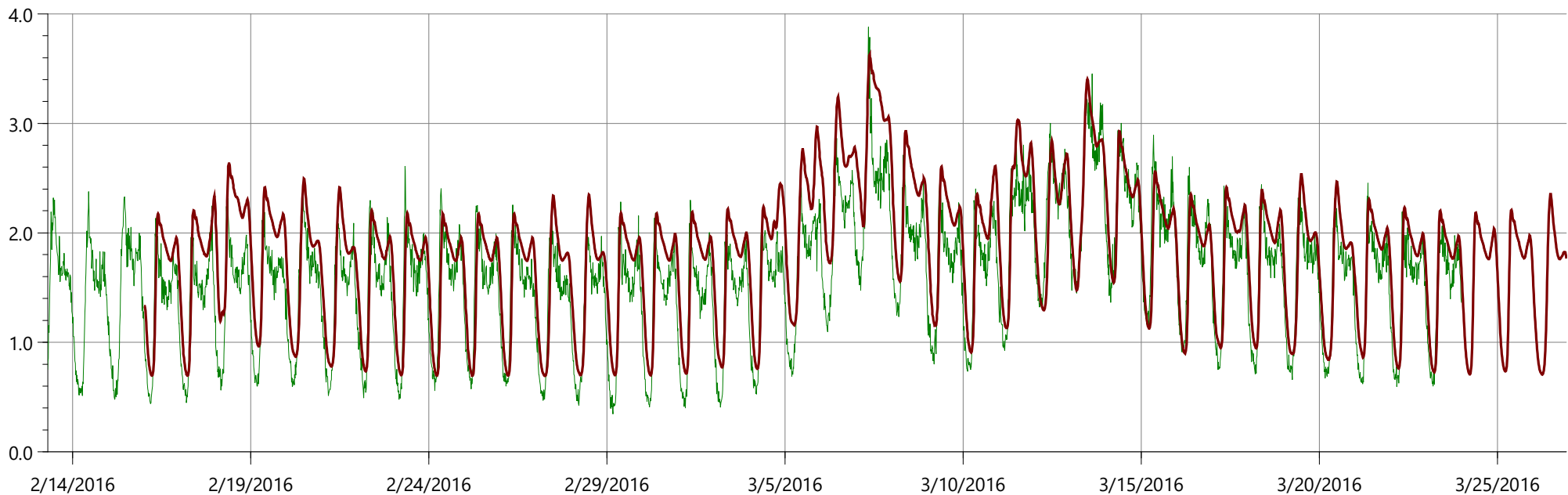


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.452	0.416	0.008			
Observed				1.241	7.372	11745270.797
...ta20160215_20160315				1.920	7.850	12994404.563

Rainfall intensity (in/hr)

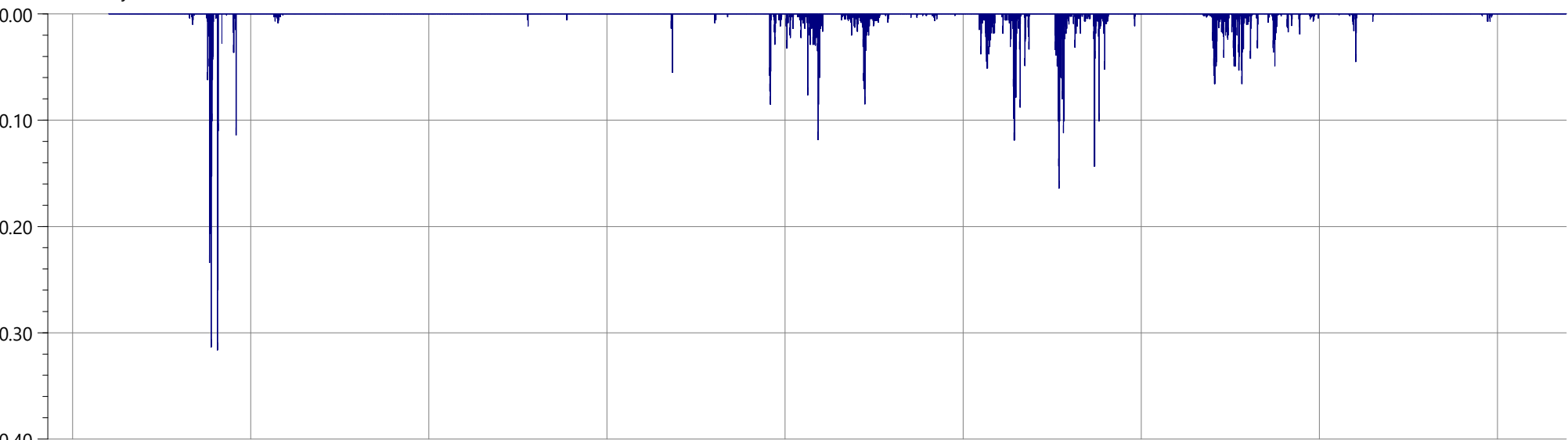


Flow (MGD)

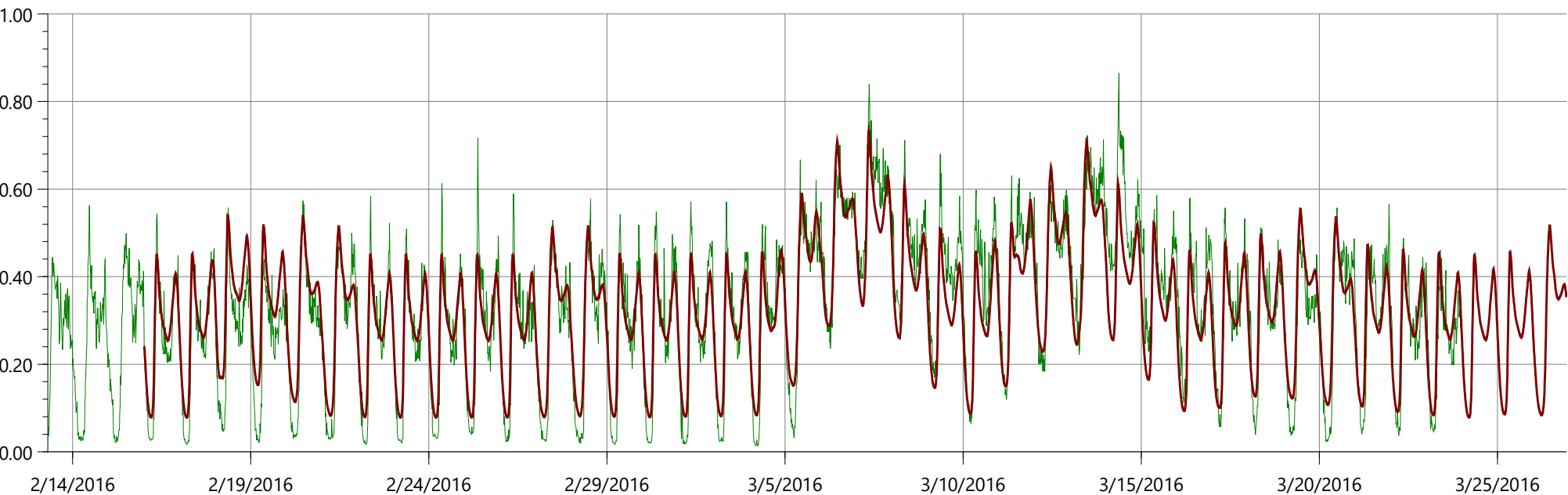


		Rainfall			Flow		
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	— (blue line)	6.748	0.593	0.007			
Observed	— (green line)				0.347	3.882	552255.777
...ta20160215_20160315	— (red line)				0.691	3.629	6310657.038

Rainfall intensity (in/hr)

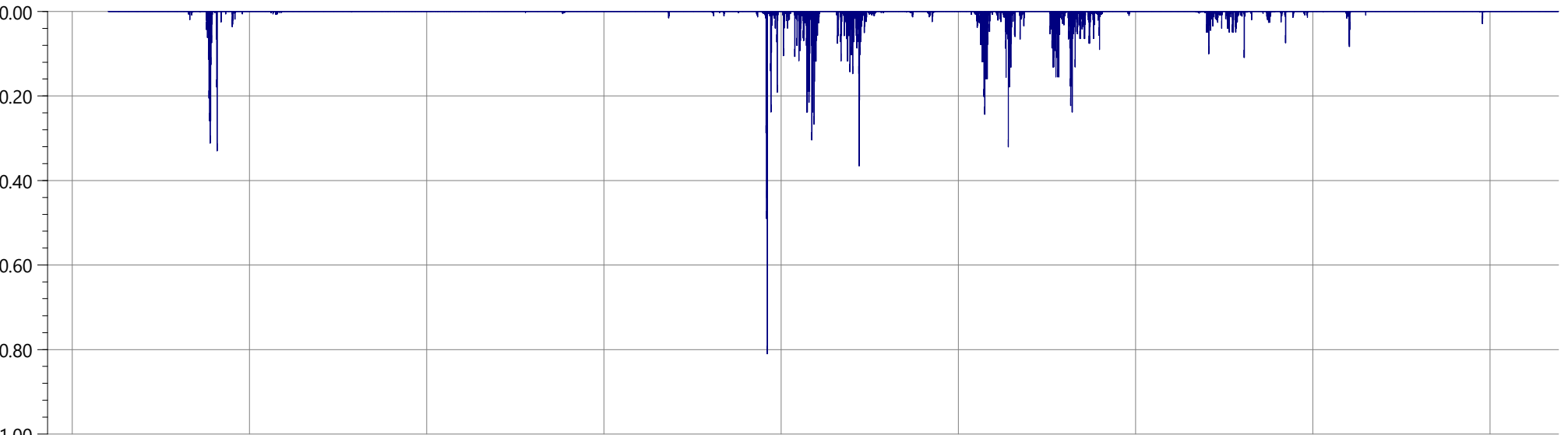


Flow (MGD)

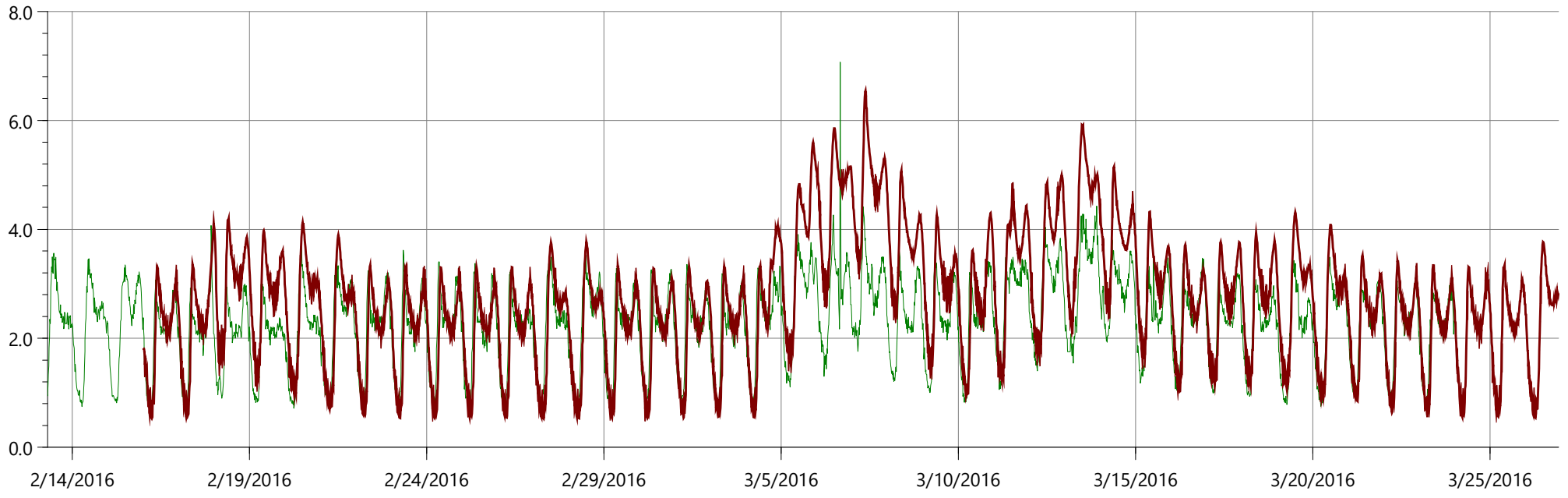


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	3.133	0.316	0.003			
Observed				0.014	0.865	1110452.108
...ta20160215_20160315				0.078	0.732	1119212.084

Rainfall intensity (in/hr)

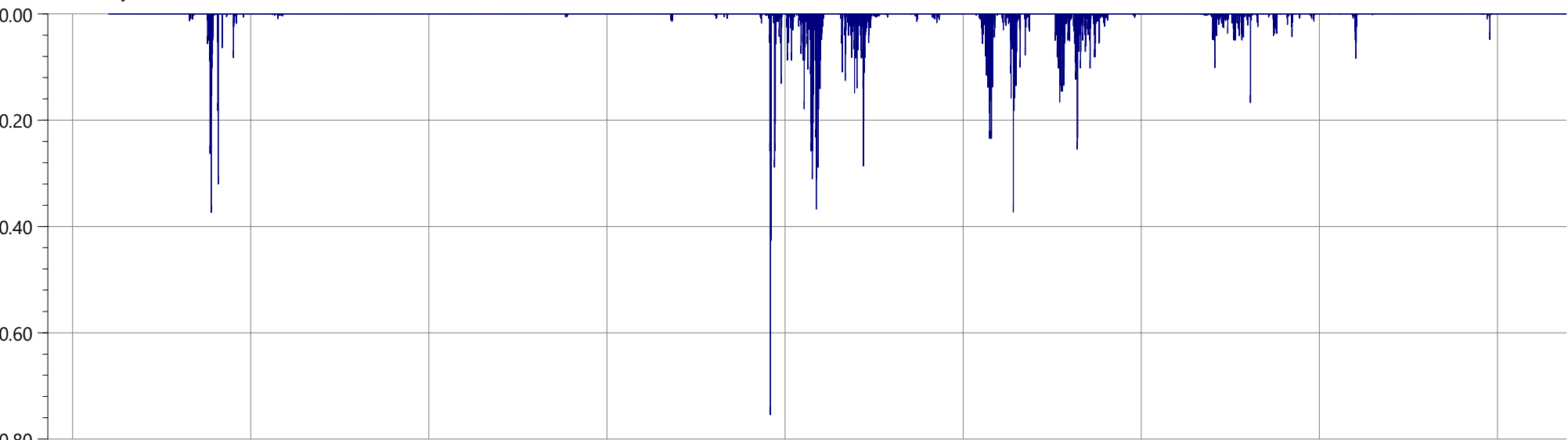


Flow (MGD)

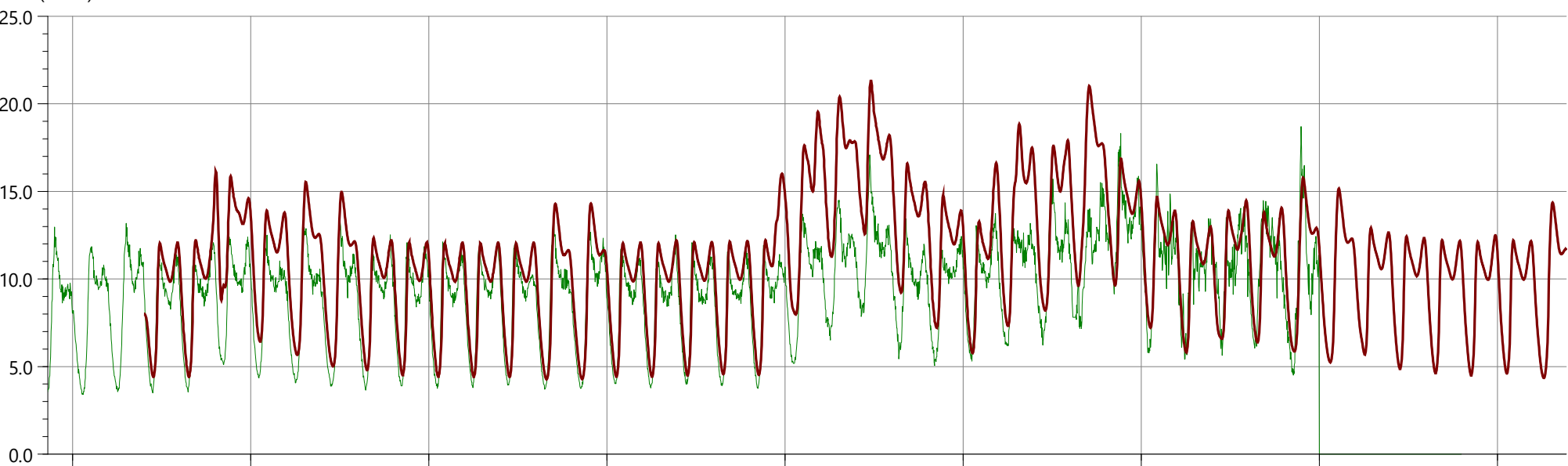


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.168	0.810	0.007			
Observed				0.681	7.071	7871327.215
...ta20160215_20160315				0.529	6.540	9303644.977

Rainfall intensity (in/hr)



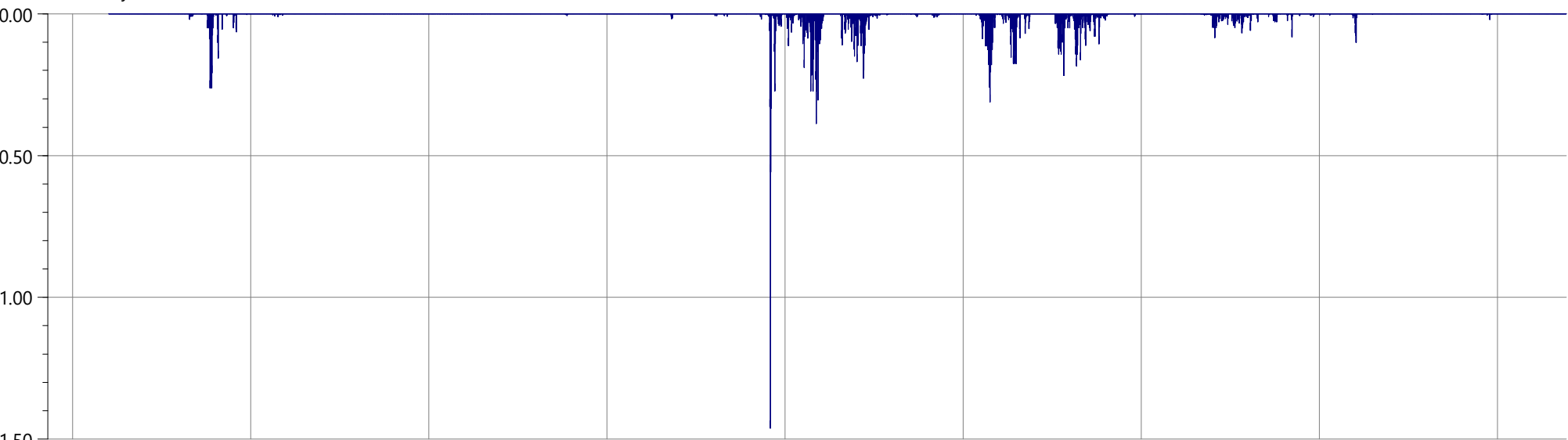
Flow (MGD)



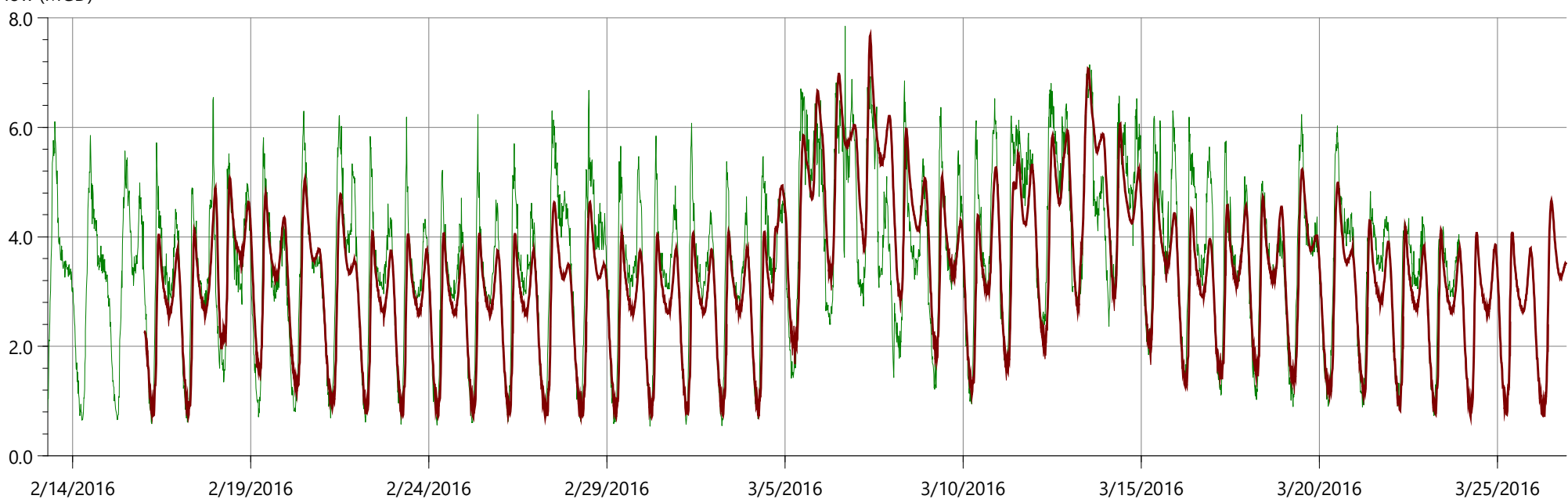
2/14/2016 2/19/2016 2/24/2016 2/29/2016 3/5/2016 3/10/2016 3/15/2016 3/20/2016 3/25/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.422	0.754	0.008			
Observed				0.000	18.708	29305470.700
...ta20160215_20160315				4.271	21.309	38289677.747

Rainfall intensity (in/hr)

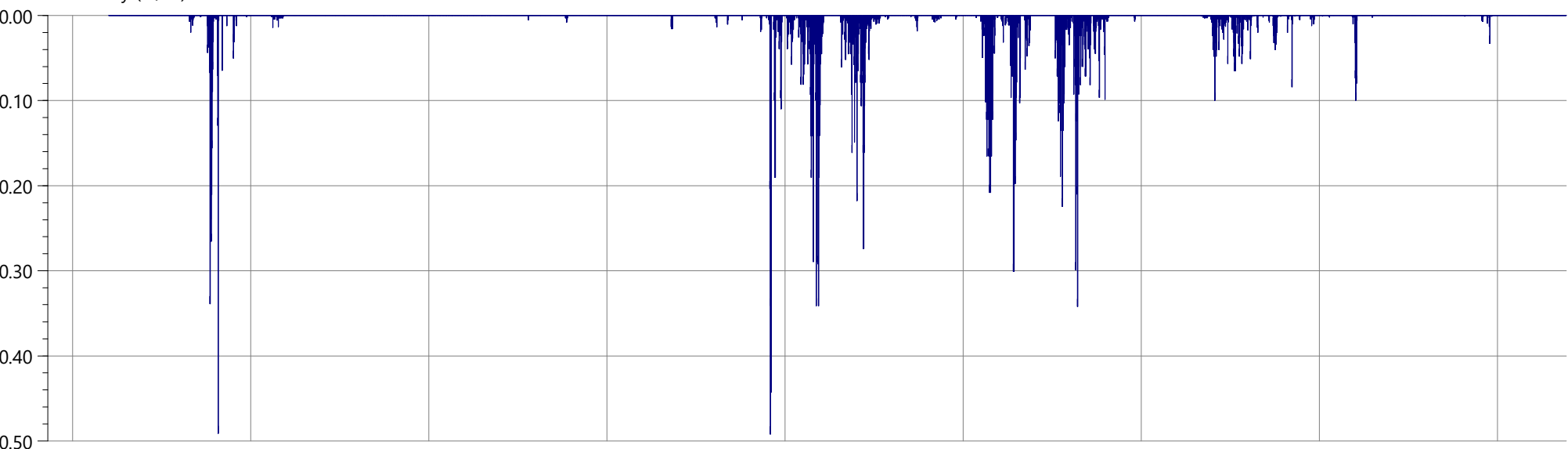


Flow (MGD)

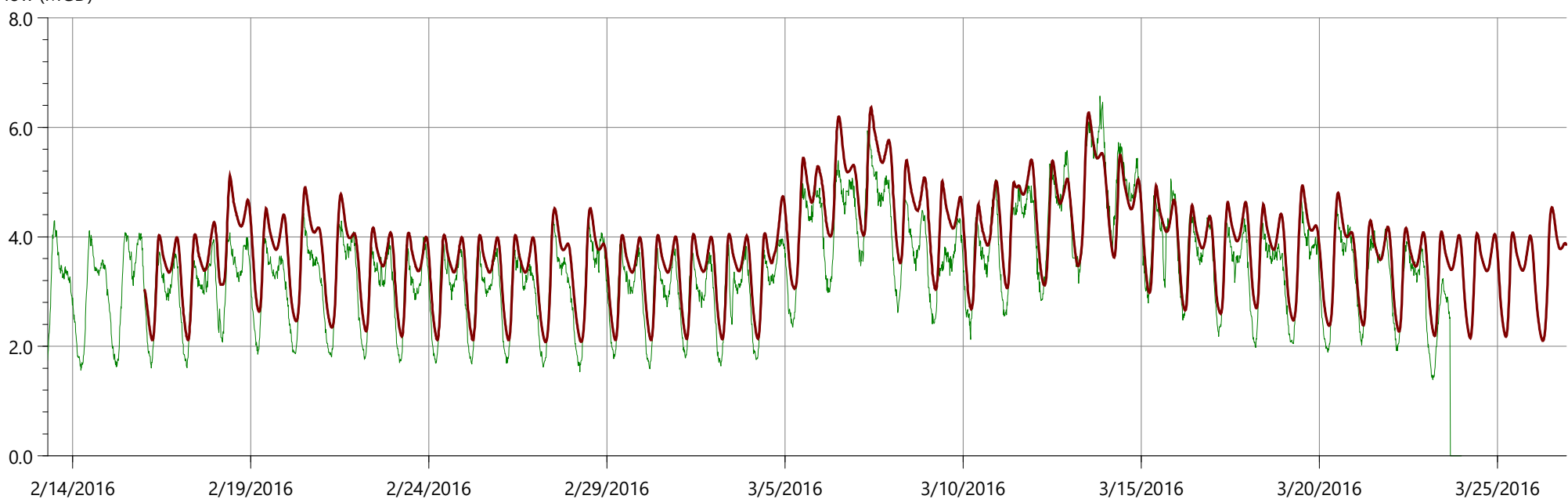


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.432	1.462	0.008			
Observed				0.542	7.848	12177525.807
...ta20160215_20160315				0.707	7.678	11302643.288

Rainfall intensity (in/hr)



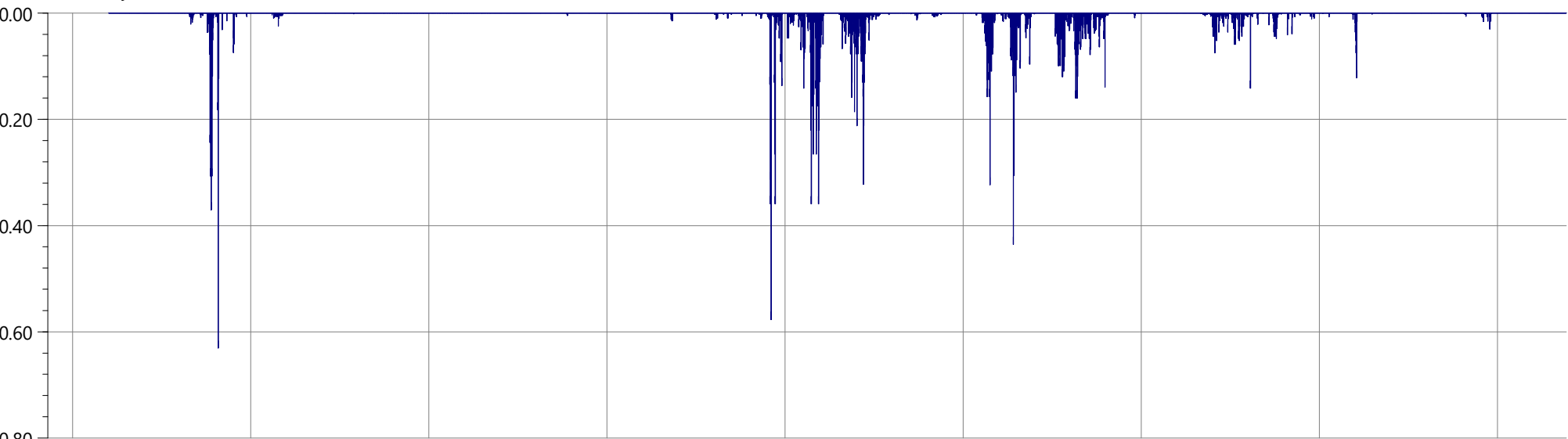
Flow (MGD)



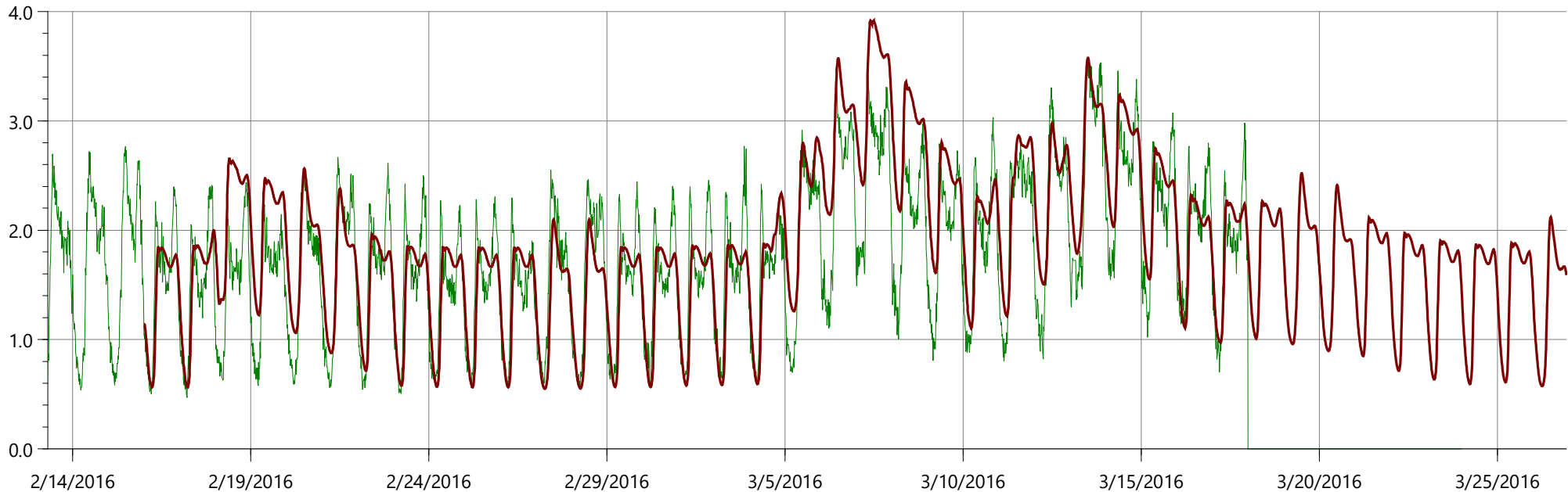
2/14/2016 2/19/2016 2/24/2016 2/29/2016 3/5/2016 3/10/2016 3/15/2016 3/20/2016 3/25/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.235	0.492	0.007			
Observed				0.000	6.569	11673591.208
...ta20160215_20160315				2.078	6.365	13083521.477

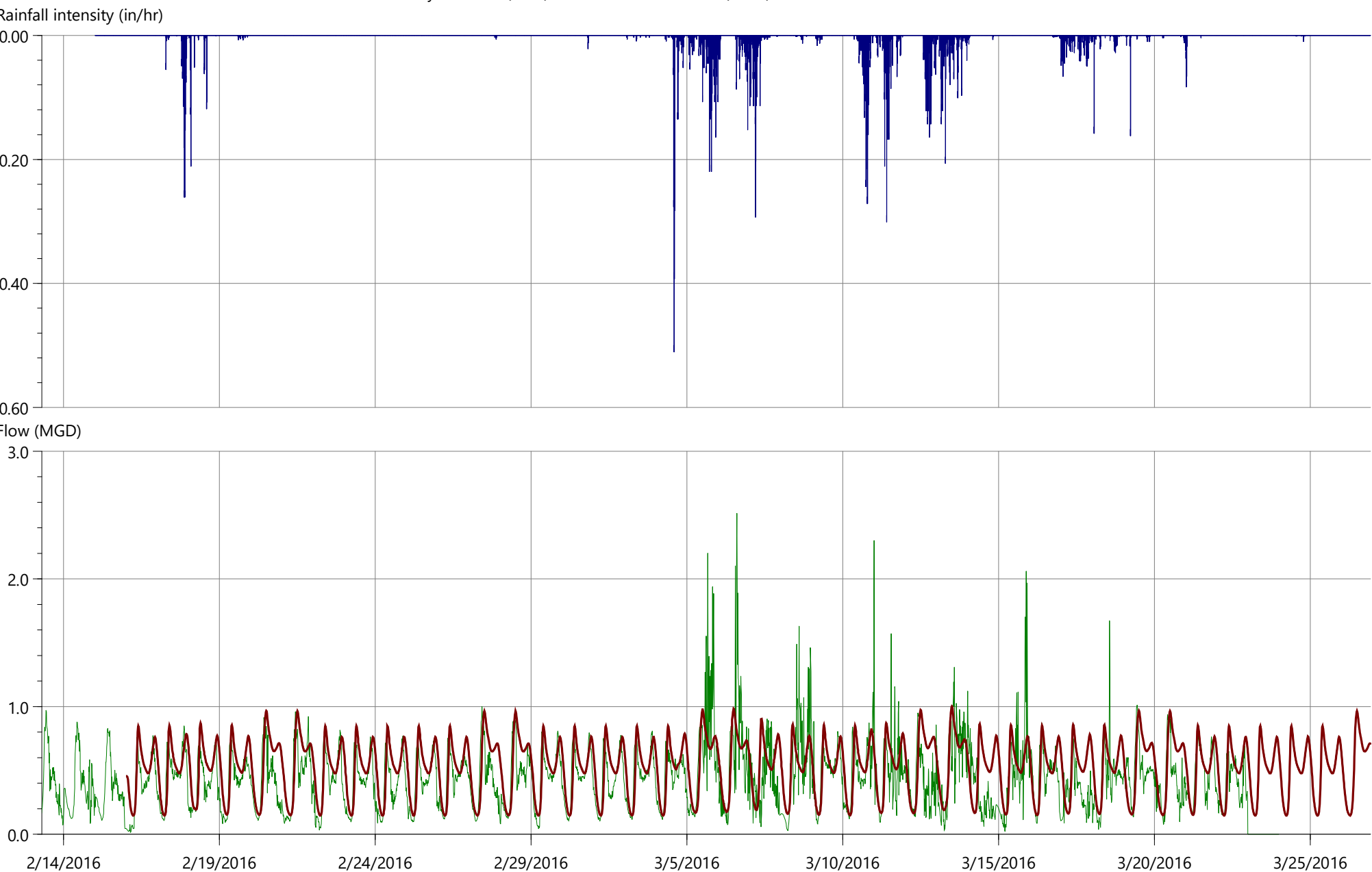
Rainfall intensity (in/hr)



Flow (MGD)

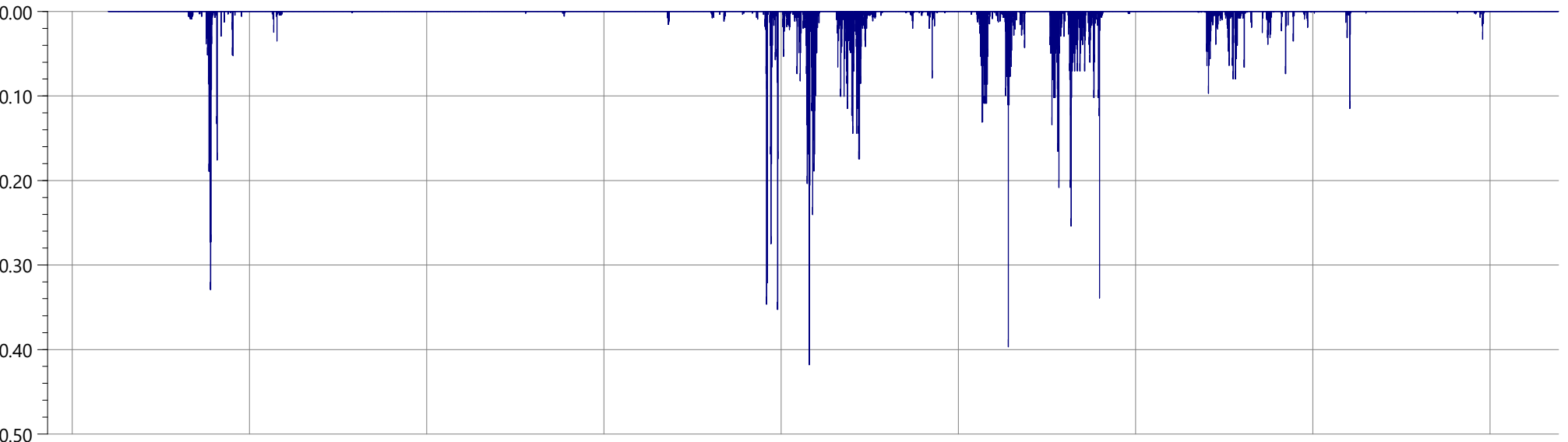


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.213	0.631	0.007			
Observed				0.000	3.566	5191133.127
...ta20160215_20160315				0.550	3.917	6371709.144

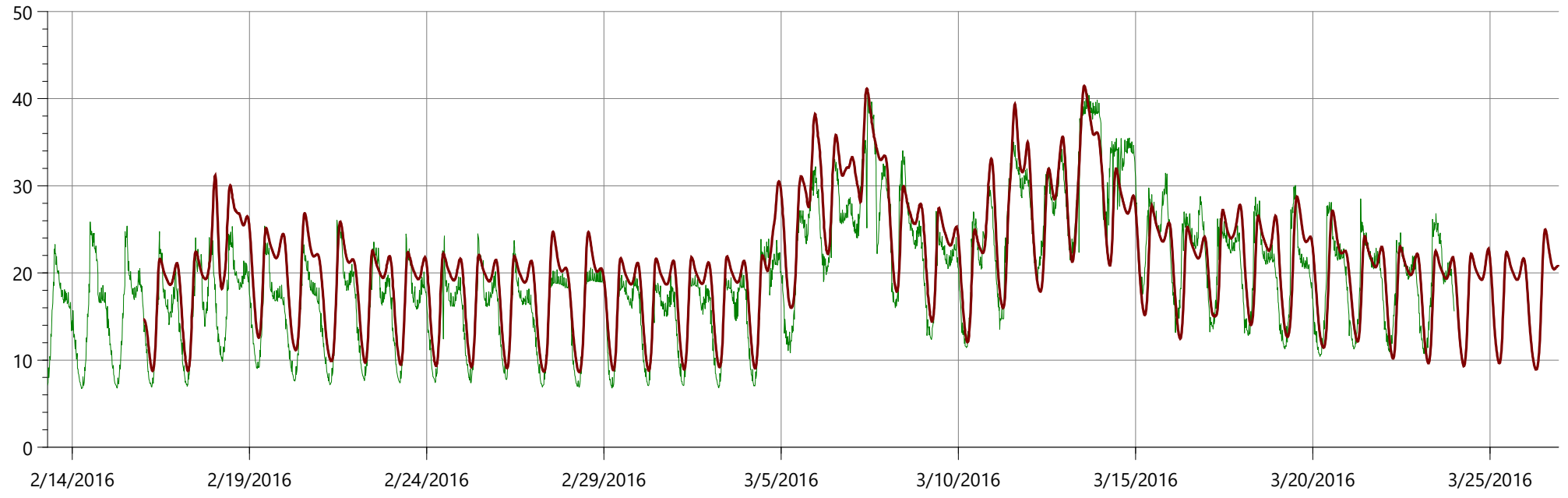


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.185	0.510	0.006			
Observed				0.000	2.513	1488940.567
...ta20160215_20160315				0.146	1.003	1837826.434

Rainfall intensity (in/hr)

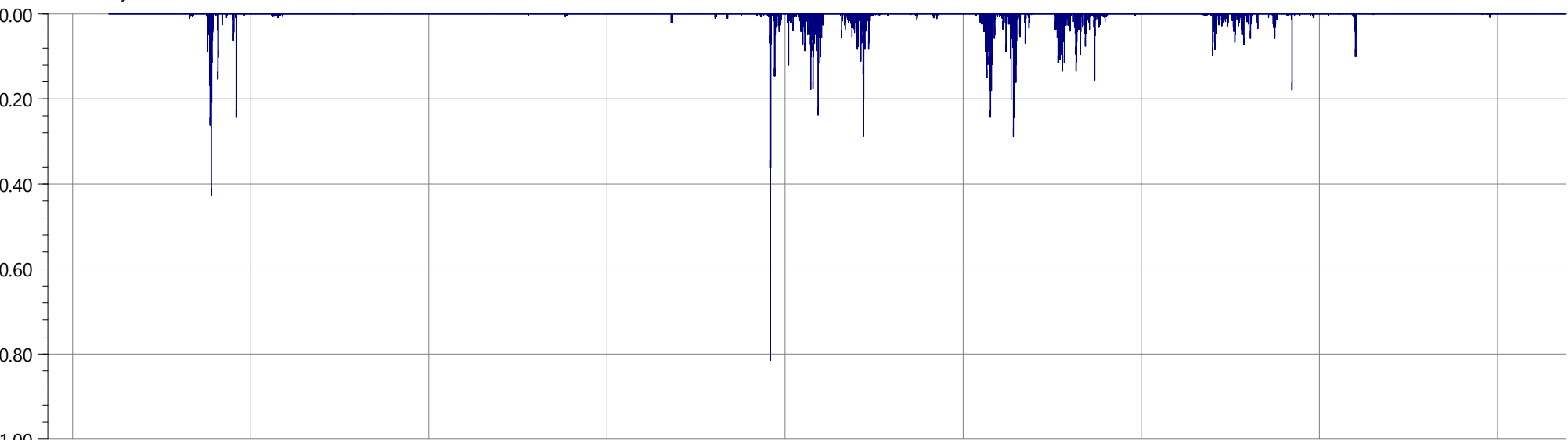


Flow (MGD)

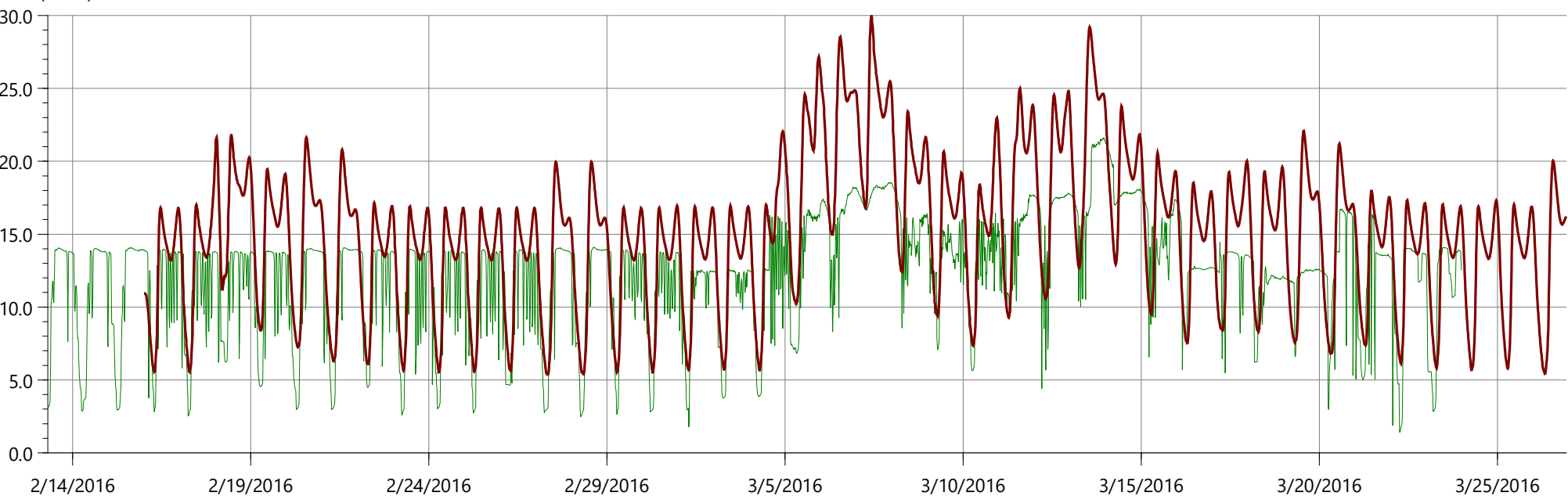


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.394	0.418	0.007			
Observed				6.736	40.725	66602465.109
...ta20160215_20160315				8.618	41.482	73053377.582

Rainfall intensity (in/hr)

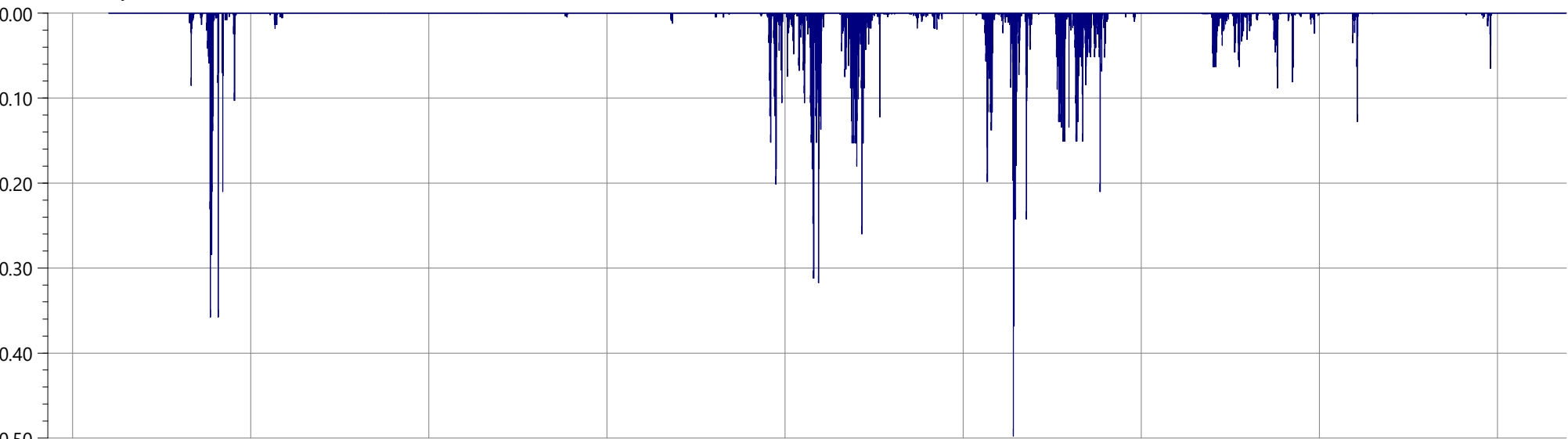


Flow (MGD)

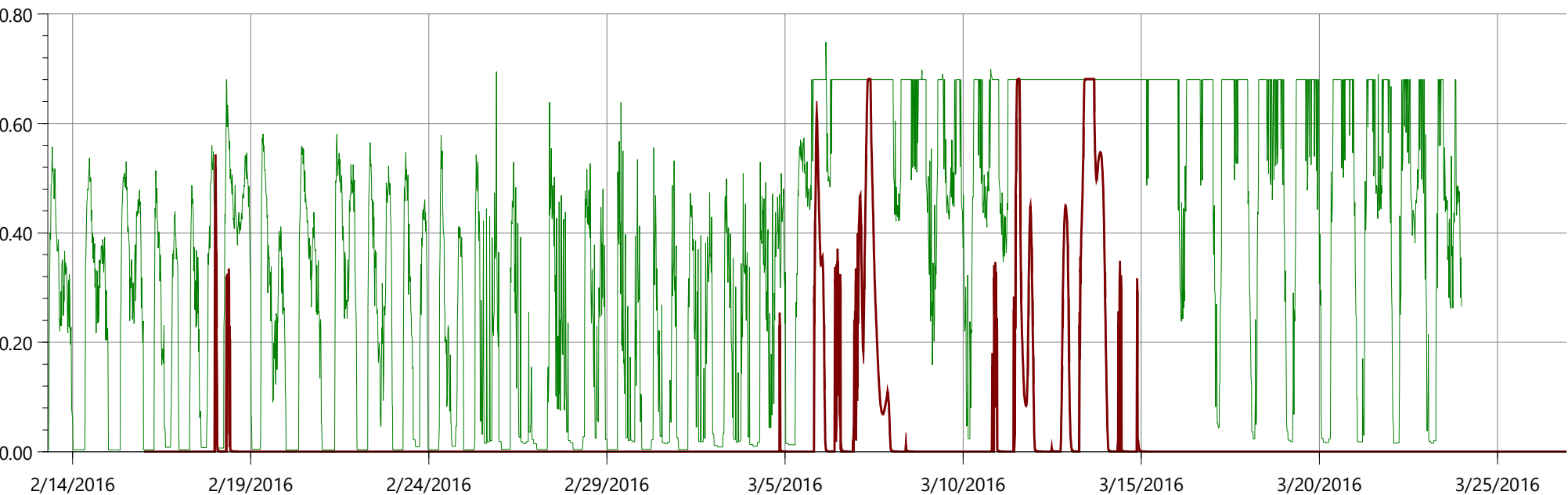


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	5.985	0.815	0.006			
Observed				1.411	21.613	42223364.633
...ta20160215_20160315				5.391	29.963	52253557.072

Rainfall intensity (in/hr)

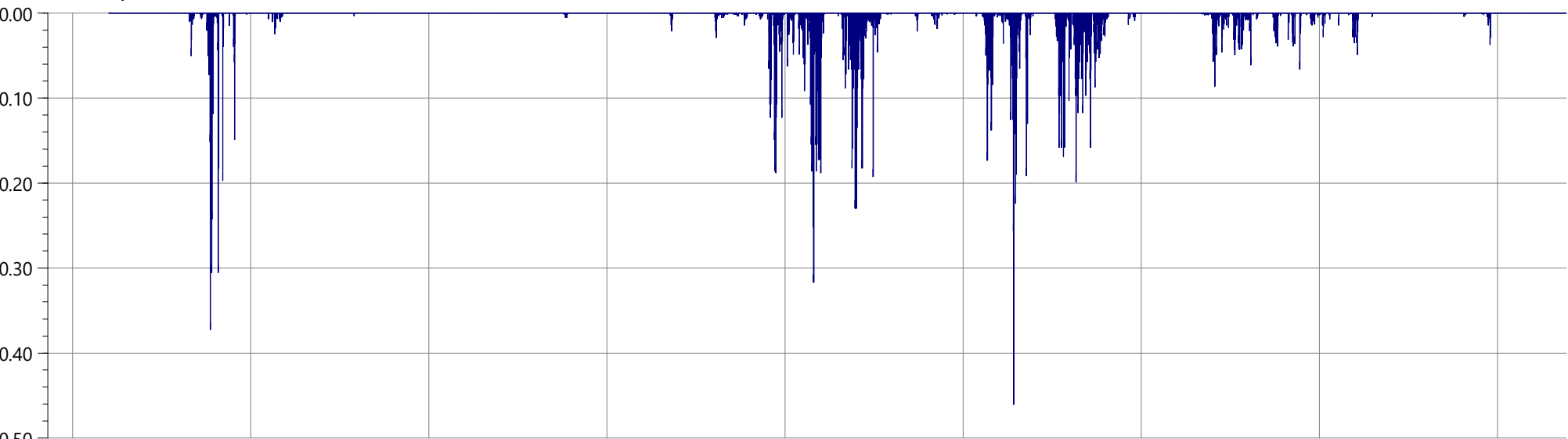


Flow (MGD)

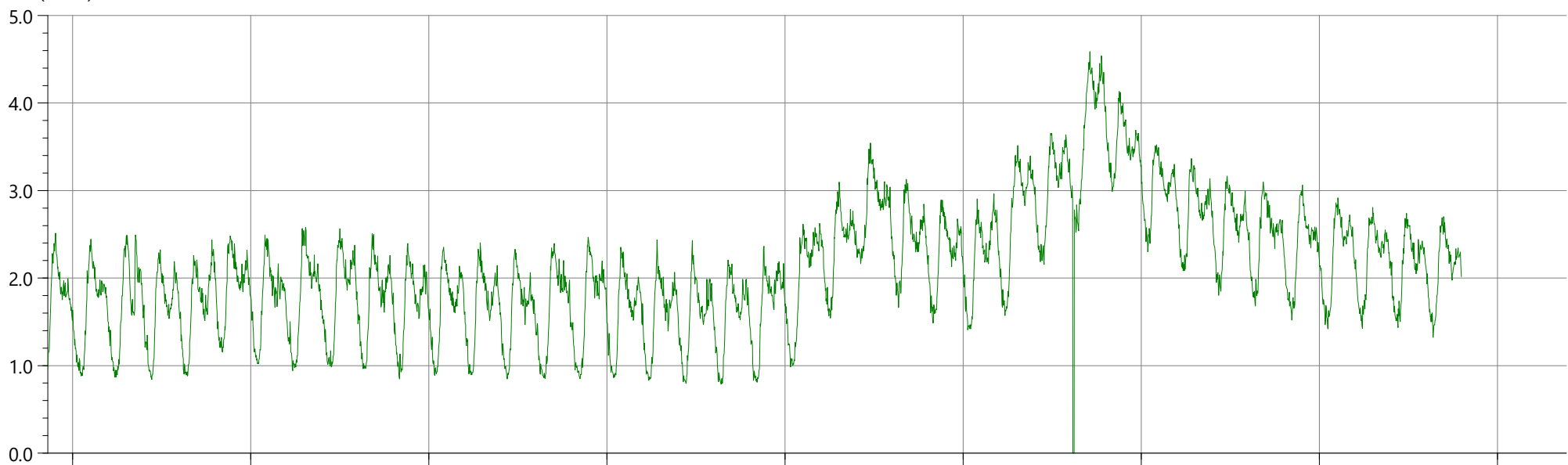


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.479	0.498	0.008			
Observed				0.003	0.748	1268714.090
...ta20160215_20160315				0.000	0.681	104826.425

Rainfall intensity (in/hr)



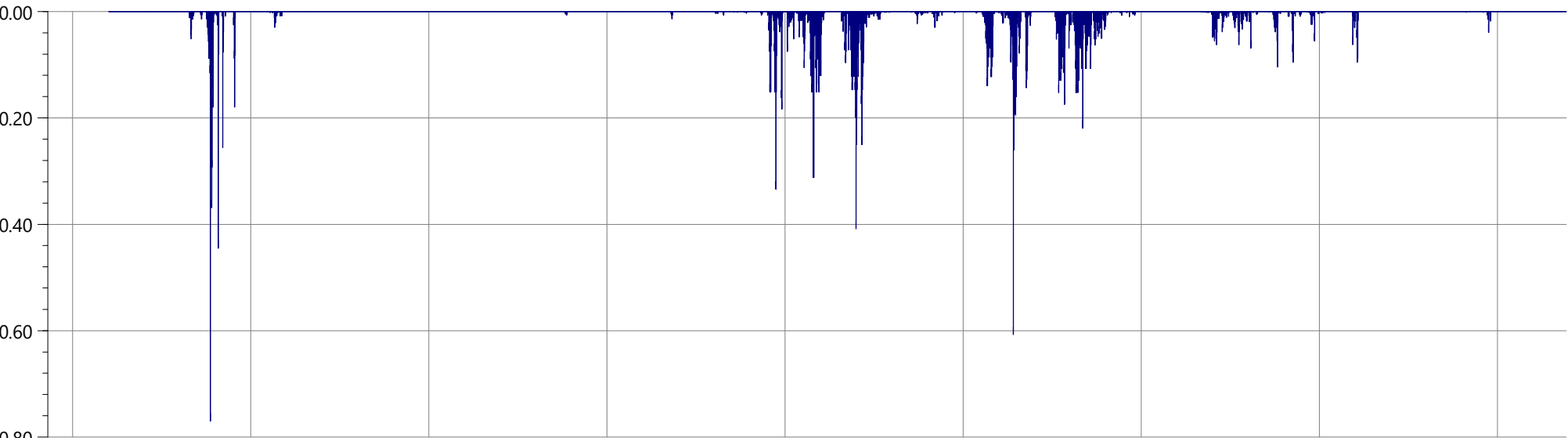
Flow (MGD)



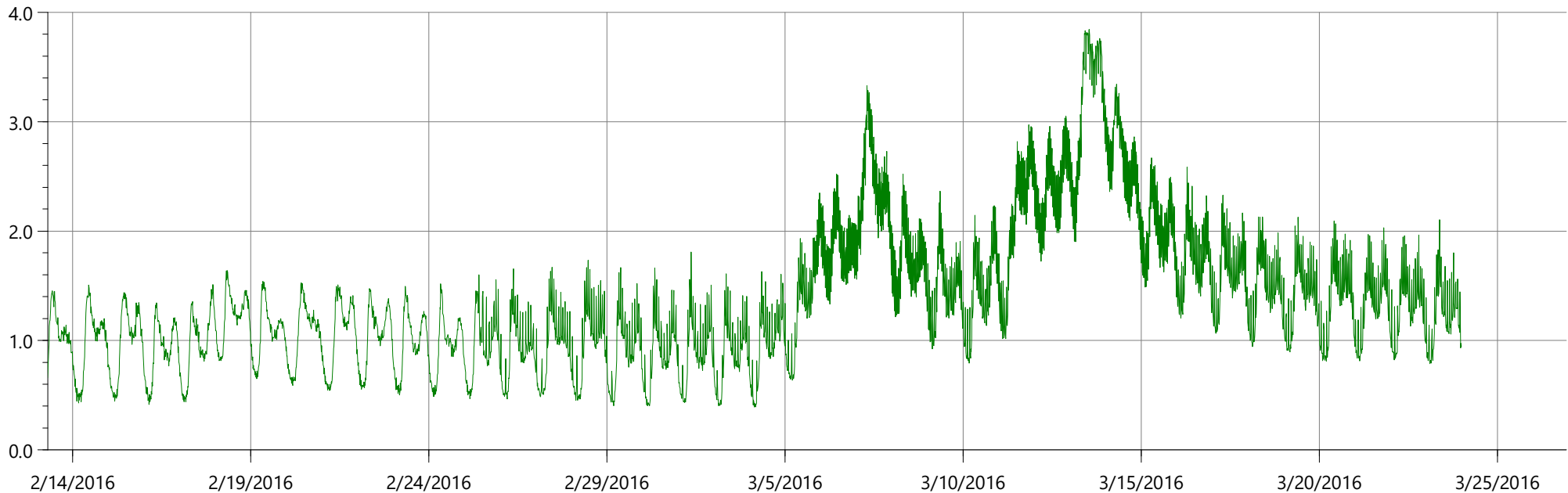
2/14/2016 2/19/2016 2/24/2016 2/29/2016 3/5/2016 3/10/2016 3/15/2016 3/20/2016 3/25/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	7.146	0.460	0.007			
...ta20160215_20160315				0.000	4.589	7230337.020

Rainfall intensity (in/hr)

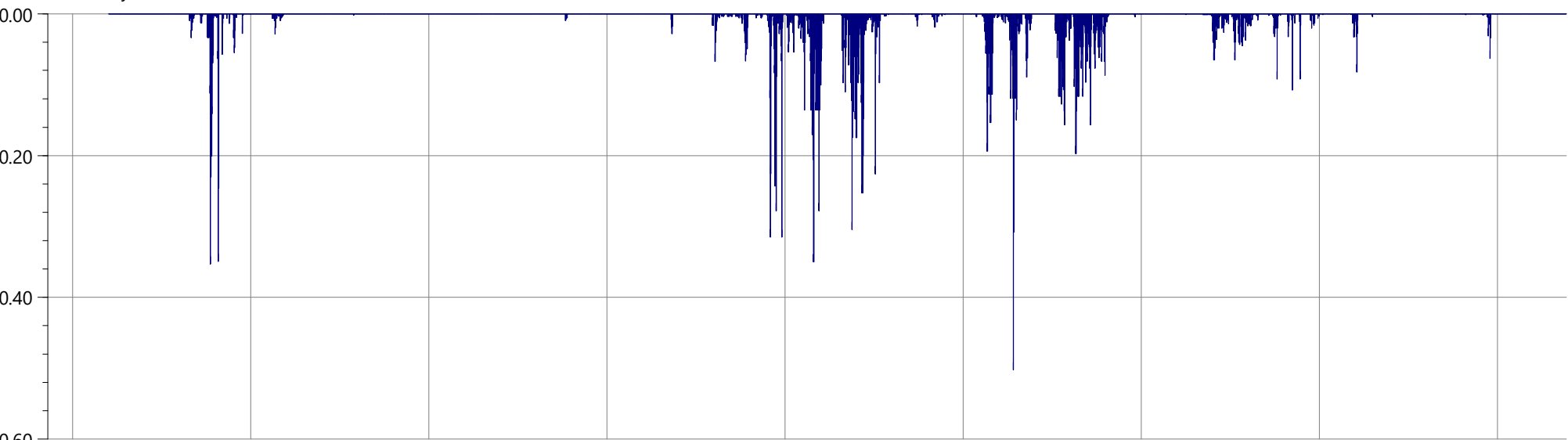


Flow (MGD)

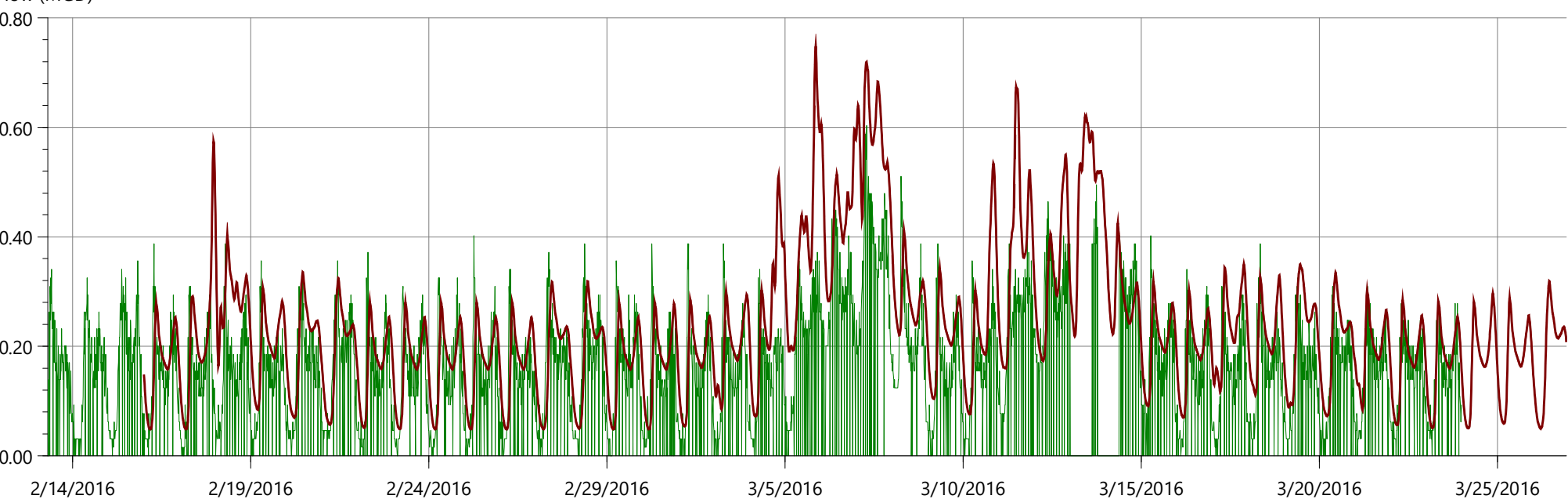


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.706	0.770	0.008			
Observed				0.391	3.843	4692173.351
...ta20160215_20160315						

Rainfall intensity (in/hr)

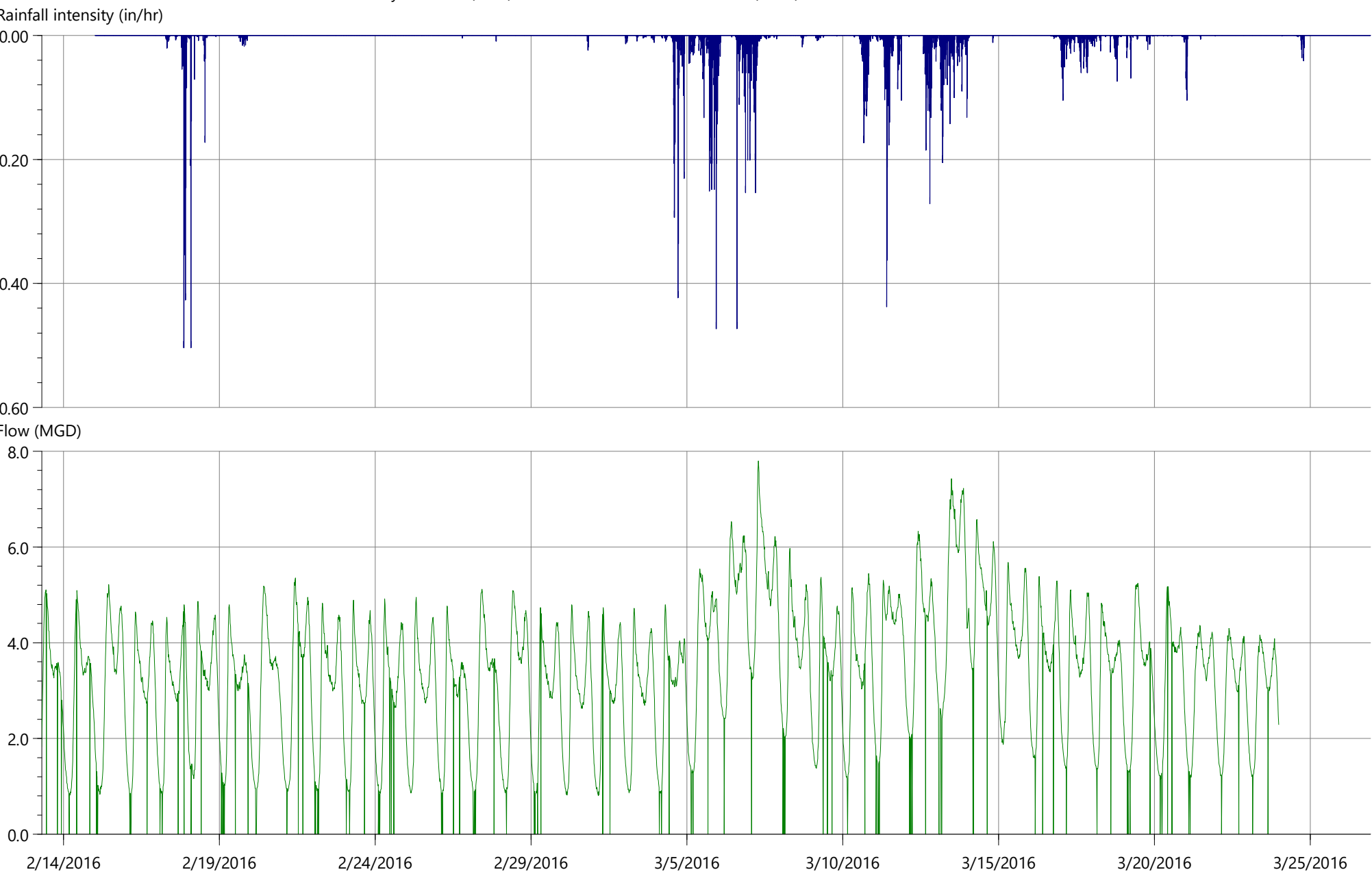


Flow (MGD)



	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.486	0.502	0.008			
Observed				0.000	0.603	498513.323
...ta20160215_20160315				0.048	0.748	814212.771

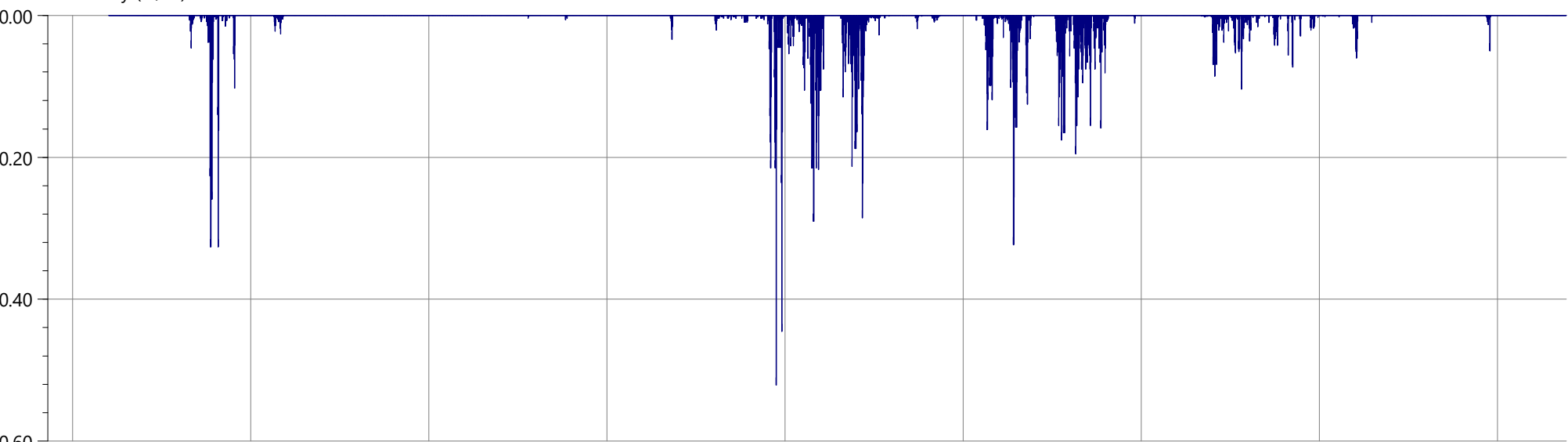
Flow Survey Location (Obs.) North Roseville, Model Location (Pred.) D/S NorthRoseville.1, Rainfall Profile: 479



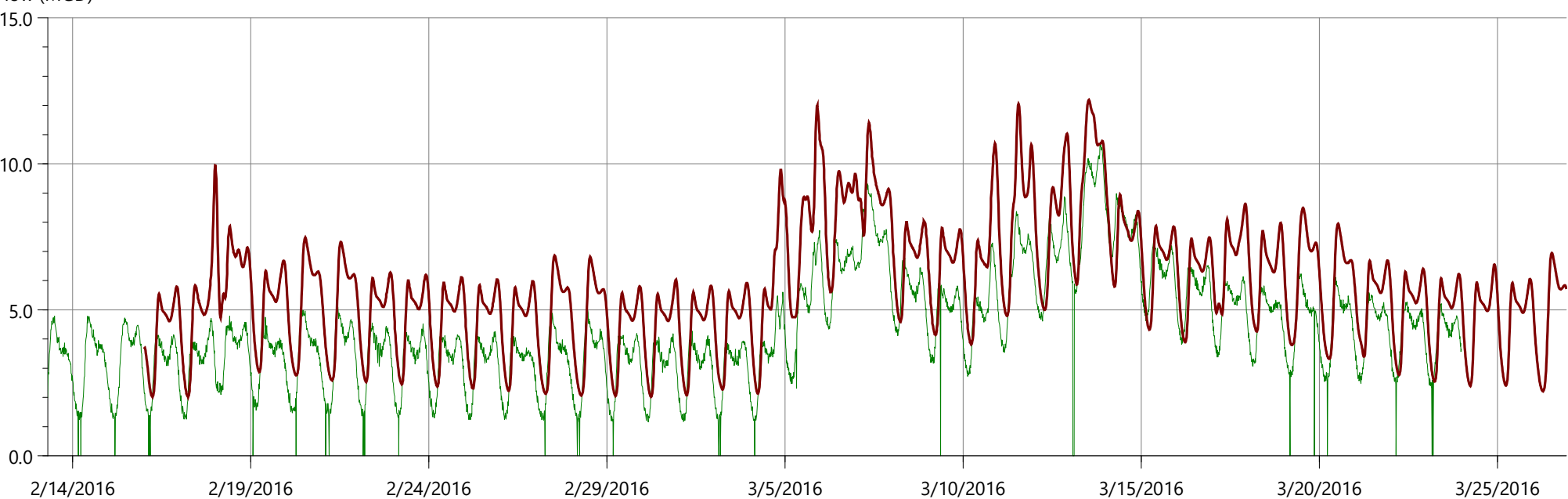
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.580	0.504	0.008			
Observed				0.000	7.798	11333261.397
...ta20160215_20160315						

Flow Survey Location (Obs.) Springview, Model Location (Pred.) D/S SMH C06-213.1, Rainfall Profile: 418

Rainfall intensity (in/hr)

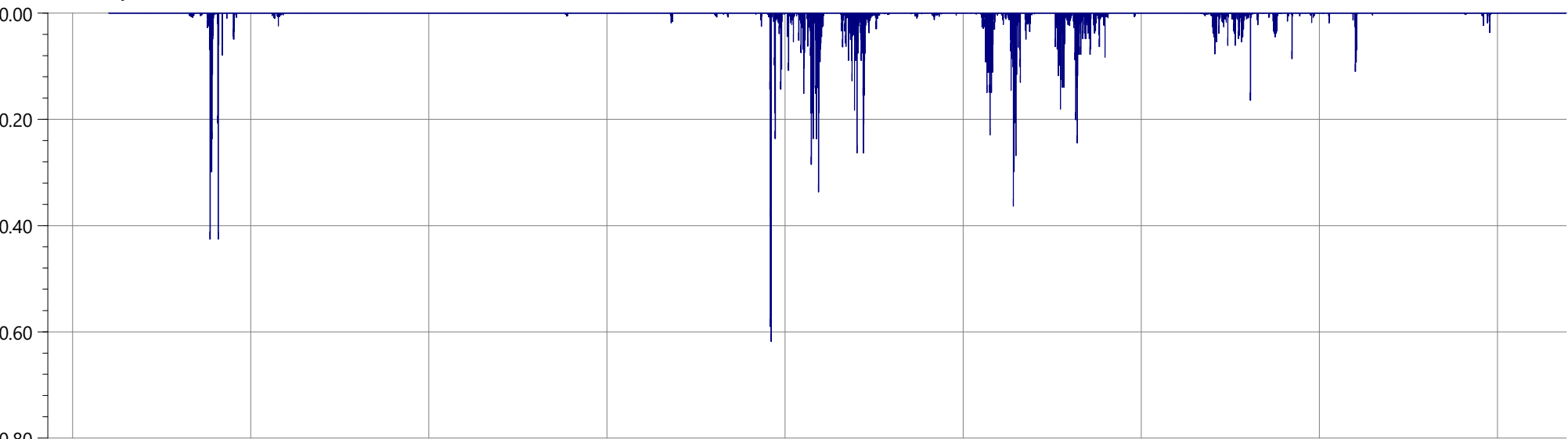


Flow (MGD)

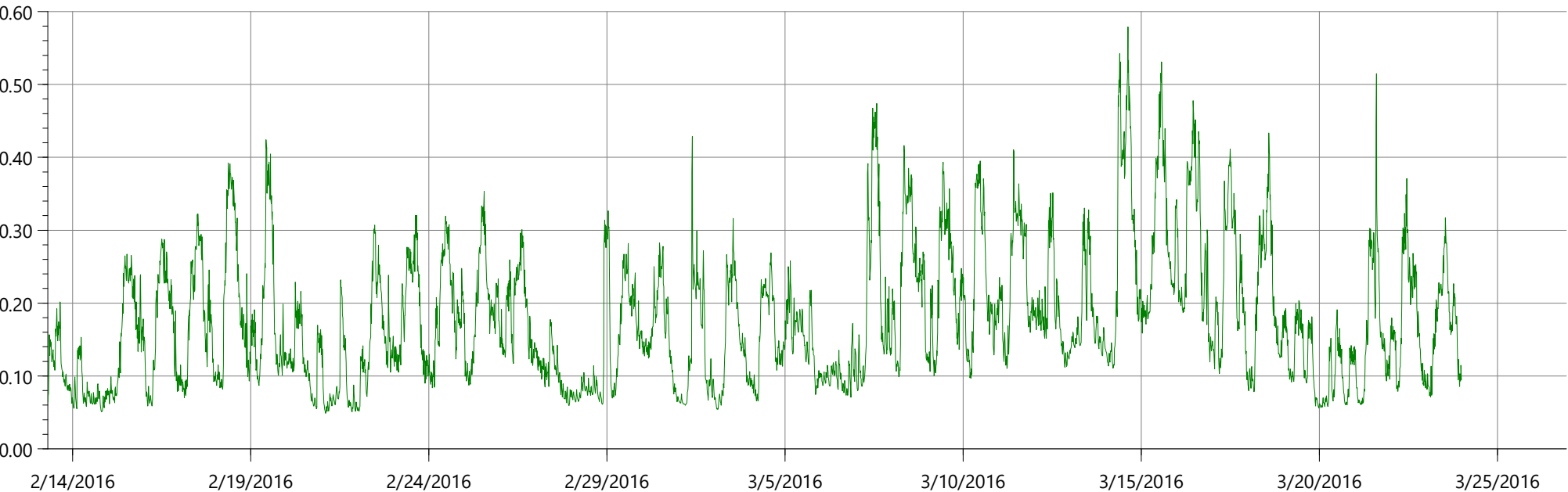


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.461	0.521	0.008			
Observed				0.000	10.738	14884868.215
...ta20160215_20160315				2.010	12.195	20206568.688

Rainfall intensity (in/hr)

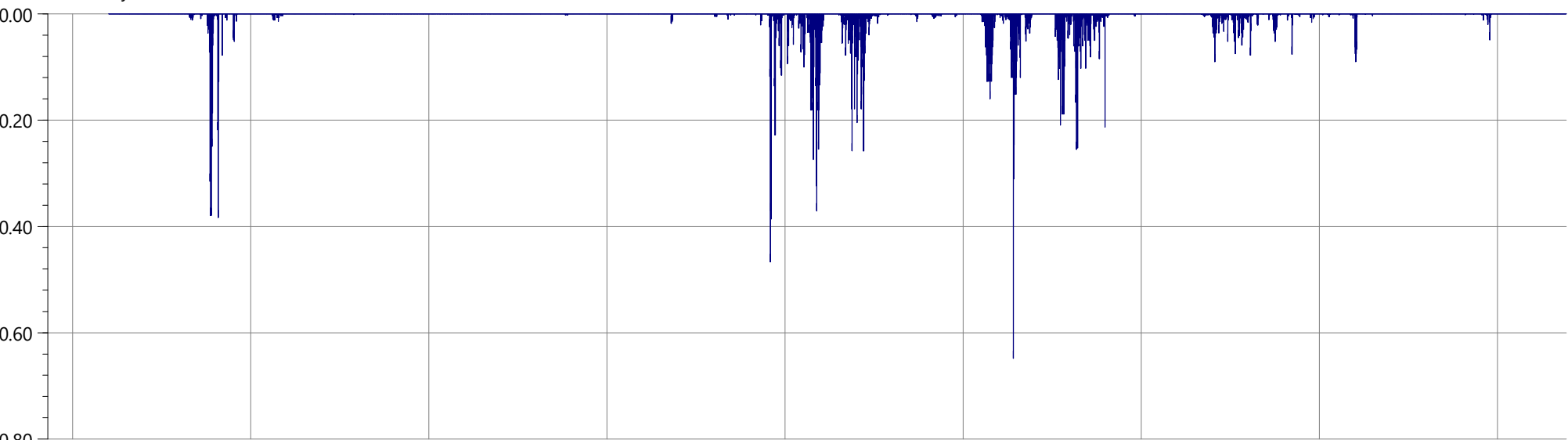


Flow (MGD)

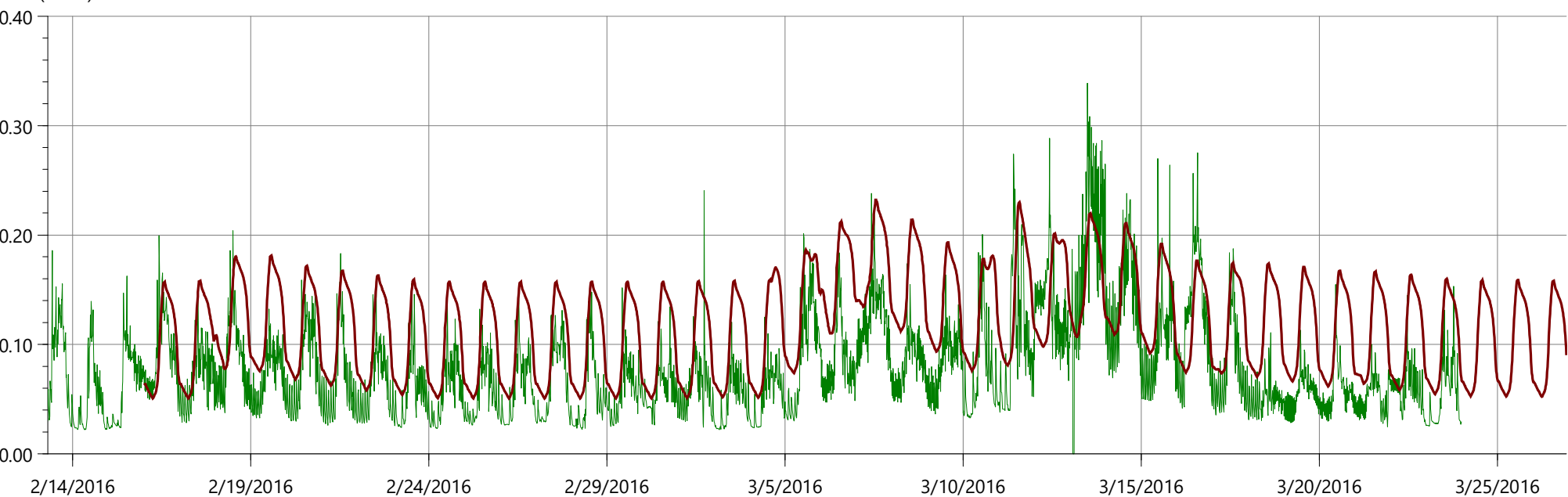


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	7.365	0.618	0.007			
...ta20160215_20160315				0.049	0.579	607274.558

Rainfall intensity (in/hr)



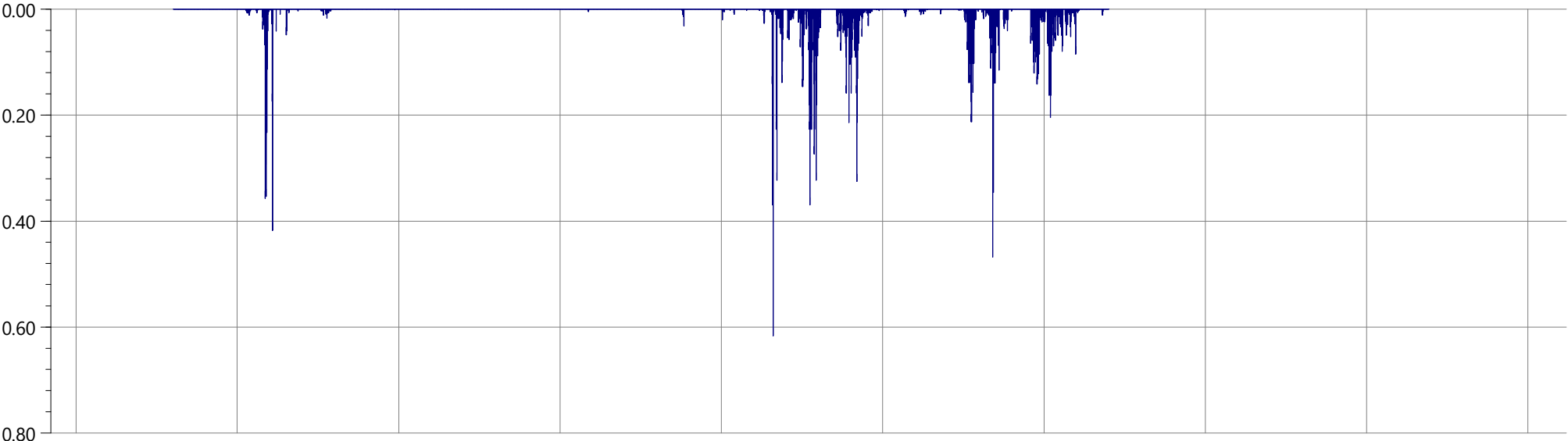
Flow (MGD)



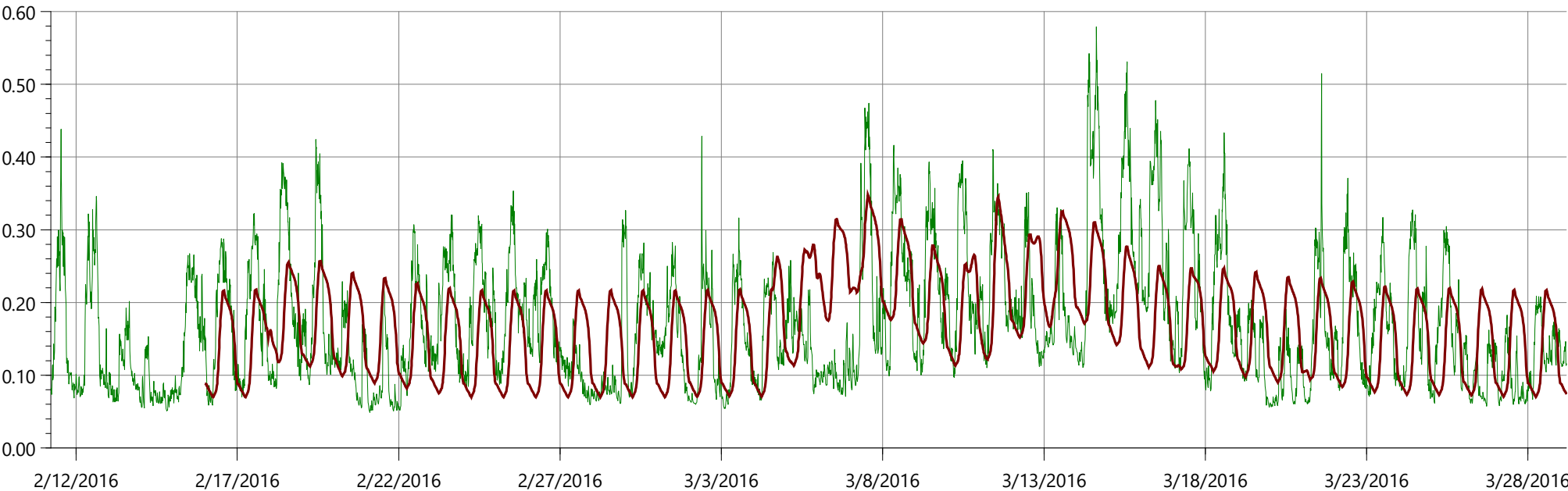
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	7.576	0.648	0.008			
Observed				0.000	0.339	266882.195
...ta20160215_20160315				0.051	0.232	407592.659

Flow Survey Location (Obs.) Cincinnati, Model Location (Pred.) D/S CA4-RSVL28.1, Rainfall Profile: 408

Rainfall intensity (in/hr)



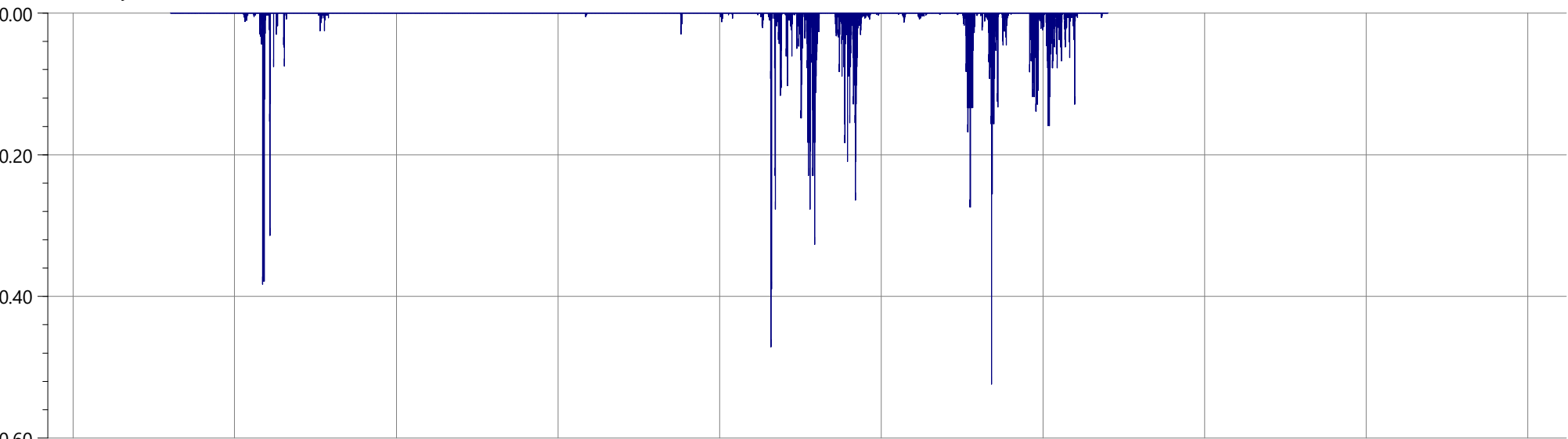
Flow (MGD)



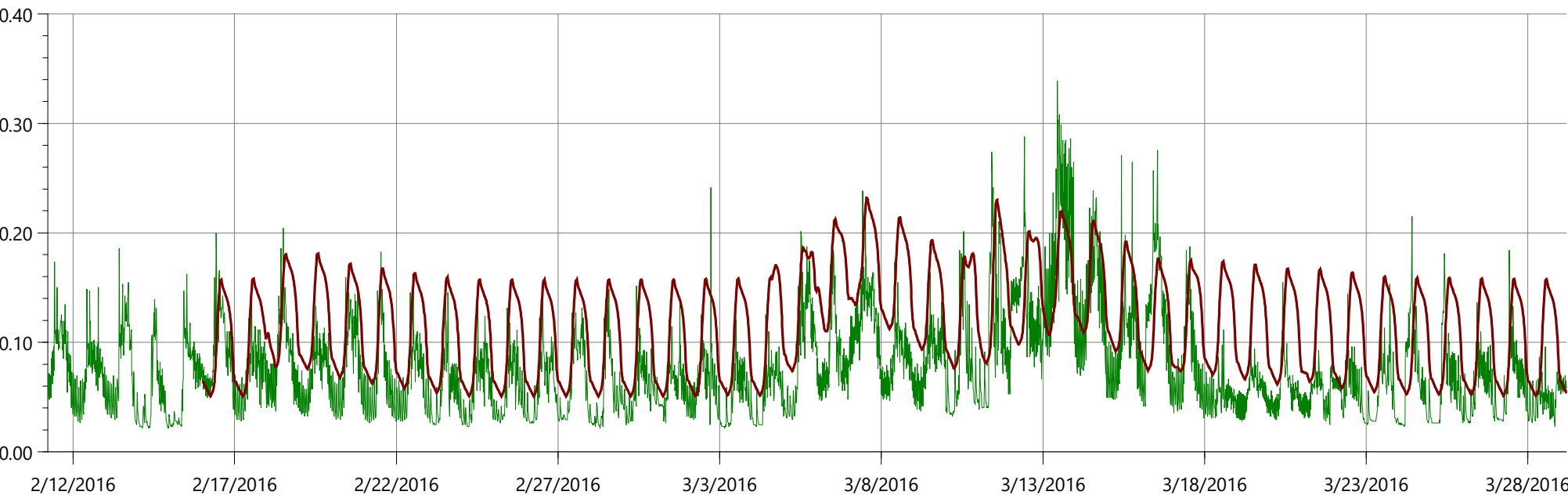
2/12/2016 2/17/2016 2/22/2016 2/27/2016 3/3/2016 3/8/2016 3/13/2016 3/18/2016 3/23/2016 3/28/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.438	0.617	0.009			
Observed				0.049	0.579	695745.611
...160315_RGBoundaries				0.069	0.348	611280.586

Rainfall intensity (in/hr)



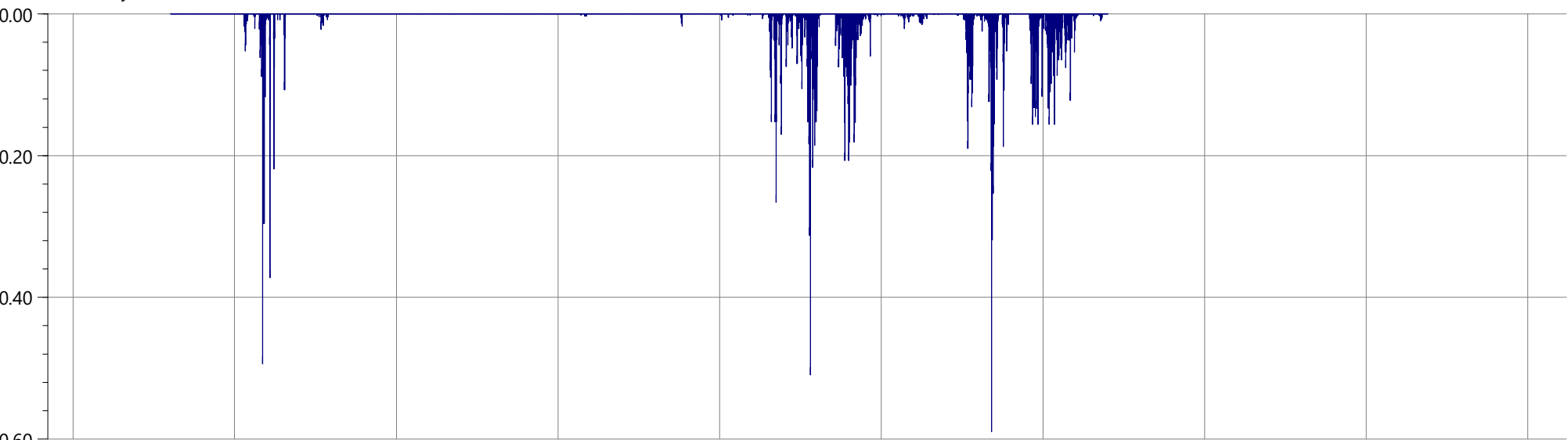
Flow (MGD)



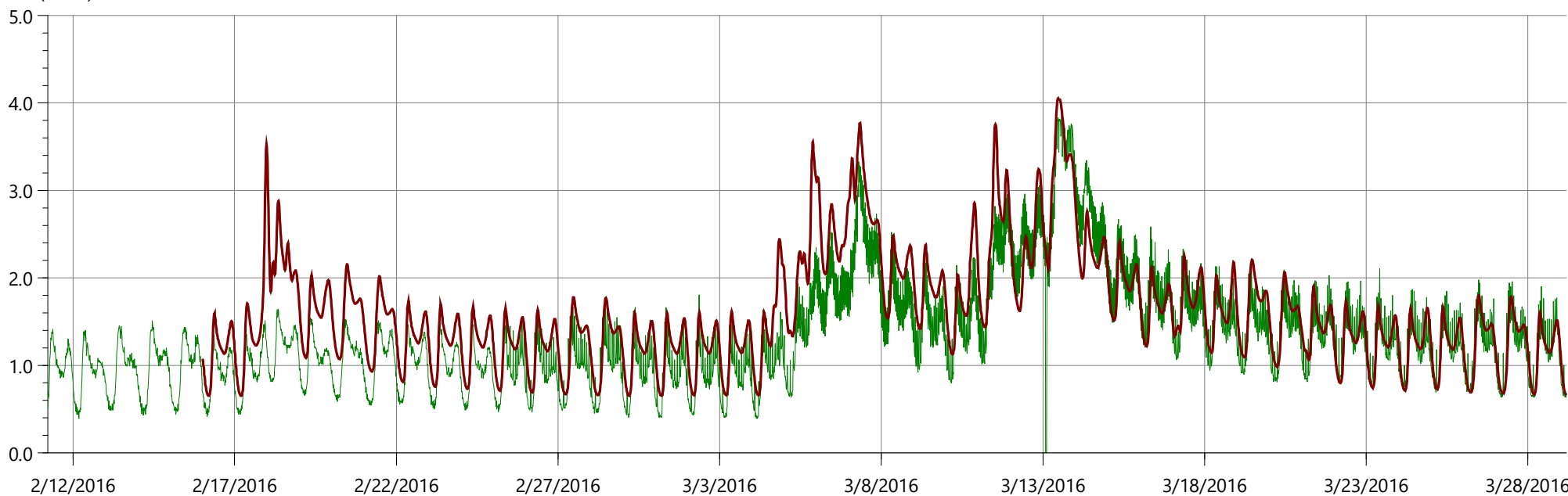
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.635	0.524	0.010			
Observed				0.022	0.339	307302.659
...160315_RGBoundaries				0.051	0.232	426162.383

Flow Survey Location (Obs.) SMD2, Model Location (Pred.) D/S A10-03.1, Rainfall Profile: 121

Rainfall intensity (in/hr)

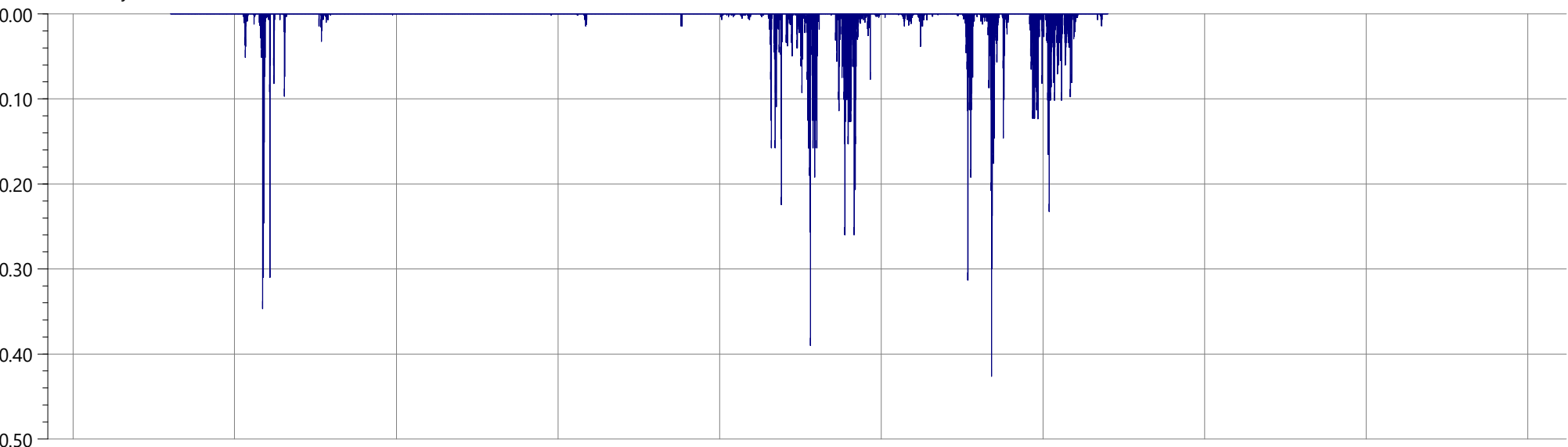


Flow (MGD)

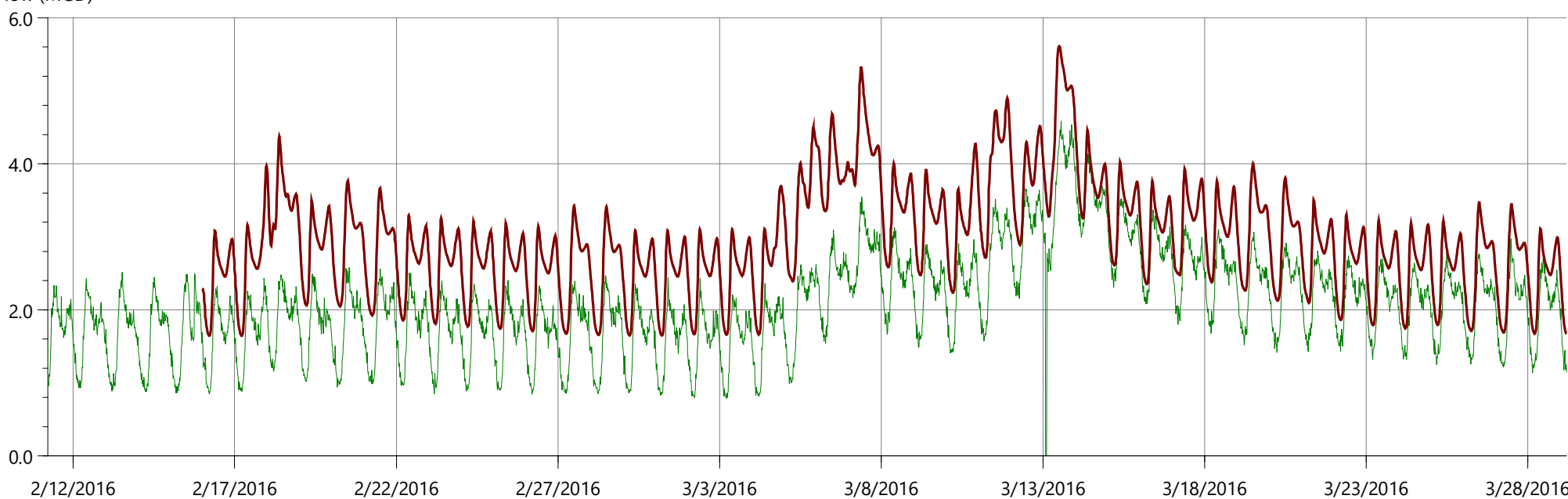


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	6.898	0.590	0.010	0.000	3.843	5383819.870
...160315_RGBoundaries				0.651	4.053	5913576.081

Rainfall intensity (in/hr)



Flow (MGD)

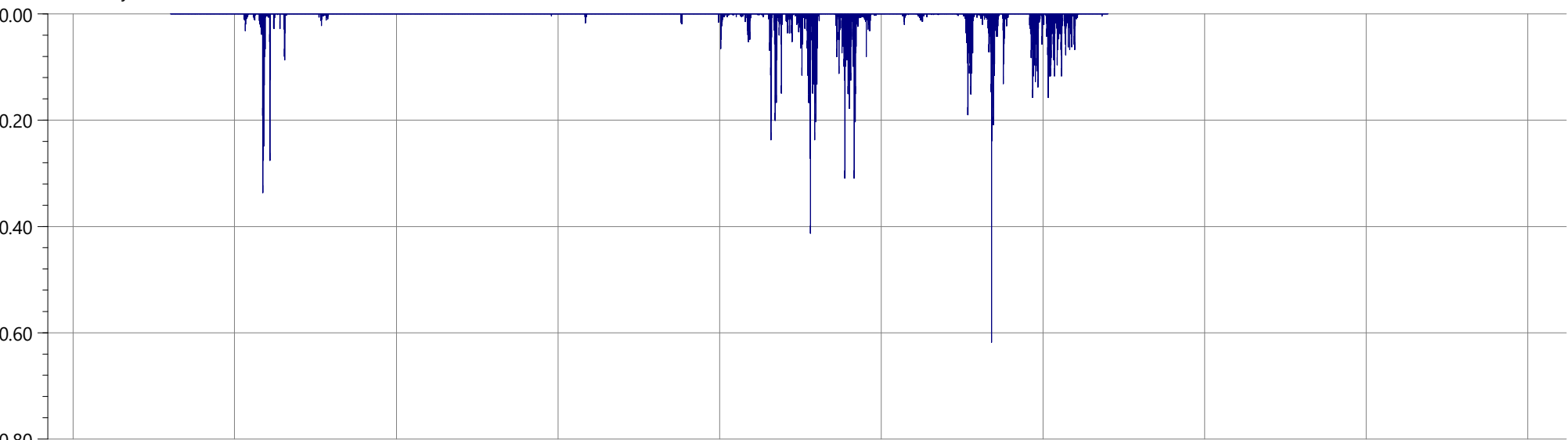


2/12/2016 2/17/2016 2/22/2016 2/27/2016 3/3/2016 3/8/2016 3/13/2016 3/18/2016 3/23/2016 3/28/2016

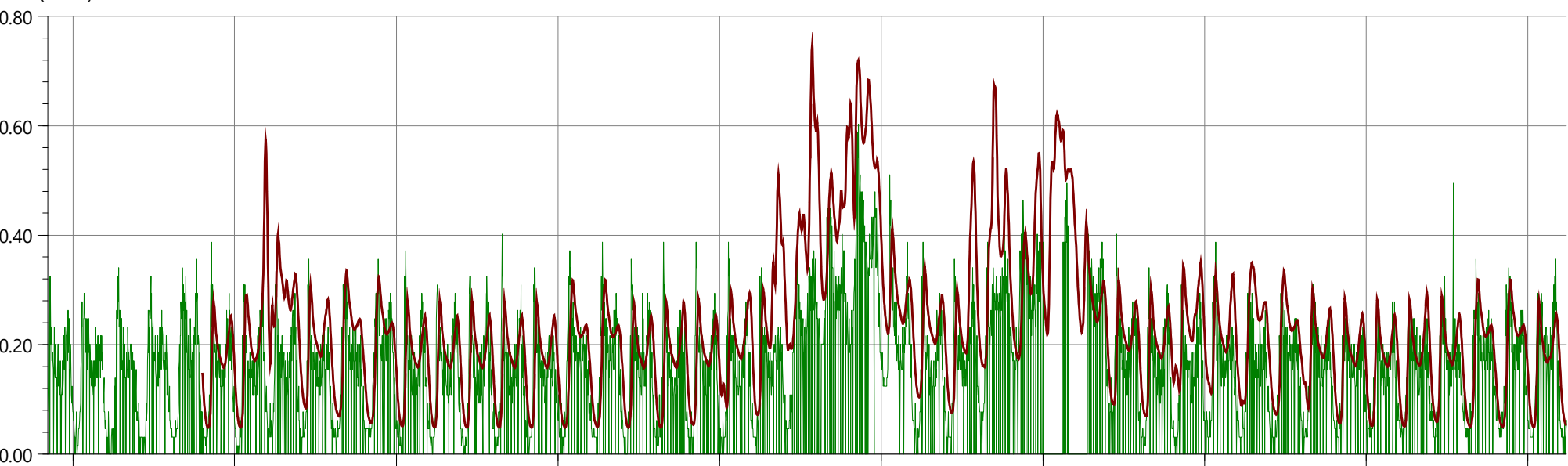
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.450	0.426	0.009			
Observed				0.000	4.589	8440619.727
...160315_RGBoundaries				1.646	5.613	10844812.901

Flow Survey Location (Obs.) Highlands, Model Location (Pred.) D/S SMH D08-006.1, Rainfall Profile: 285

Rainfall intensity (in/hr)



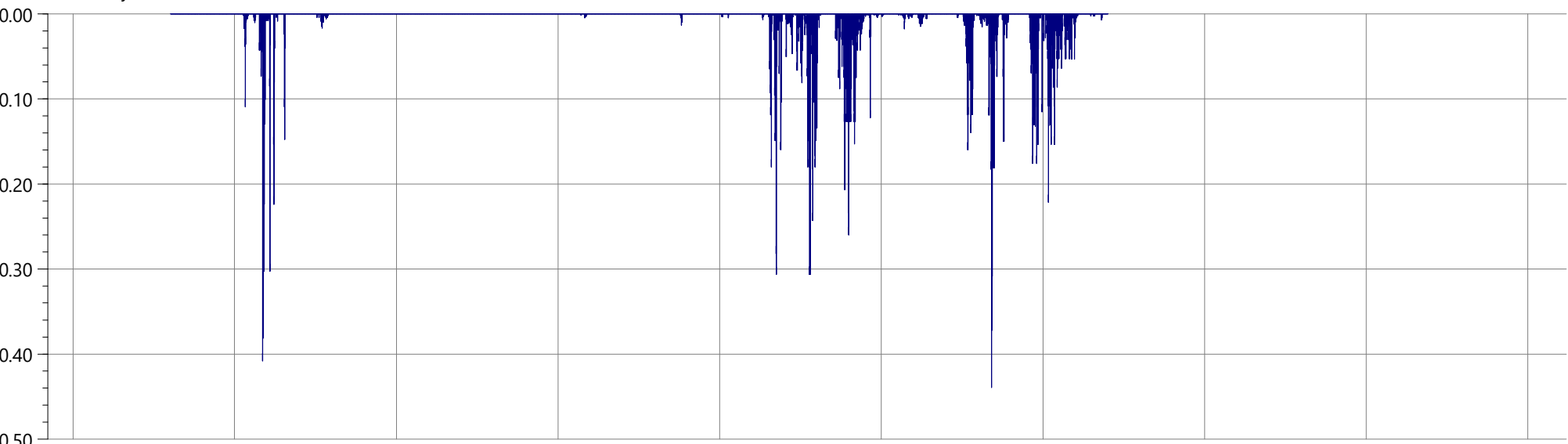
Flow (MGD)



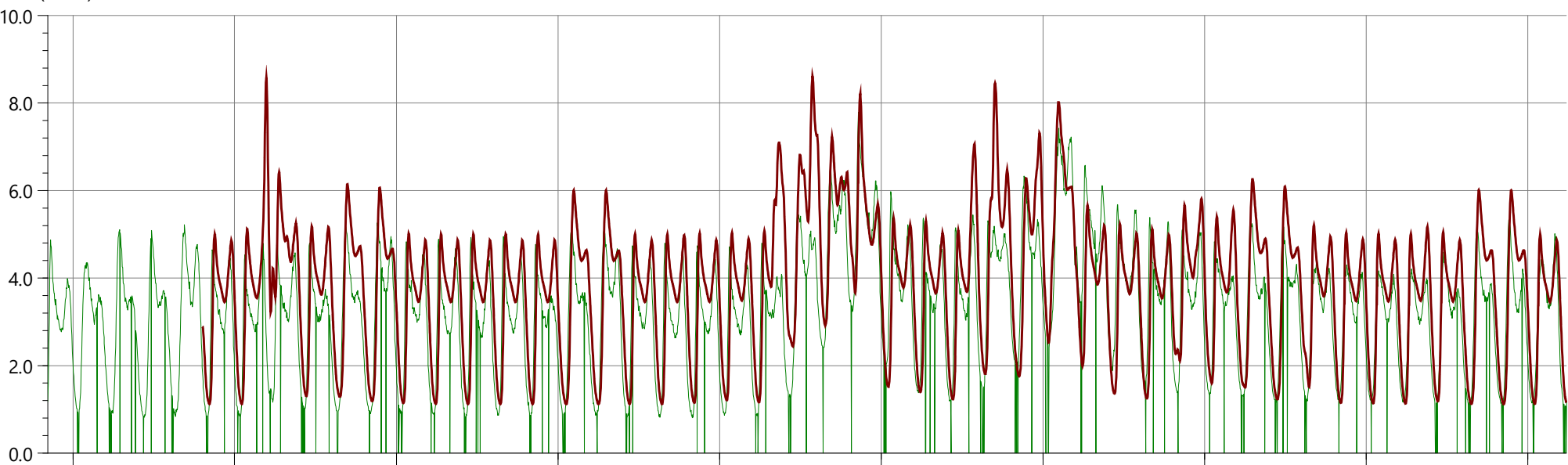
2/12/2016 2/17/2016 2/22/2016 2/27/2016 3/3/2016 3/8/2016 3/13/2016 3/18/2016 3/23/2016 3/28/2016

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.502	0.618	0.009			
Observed				0.000	0.603	582182.933
...160315_RGBoundaries				0.048	0.748	847296.033

Rainfall intensity (in/hr)



Flow (MGD)

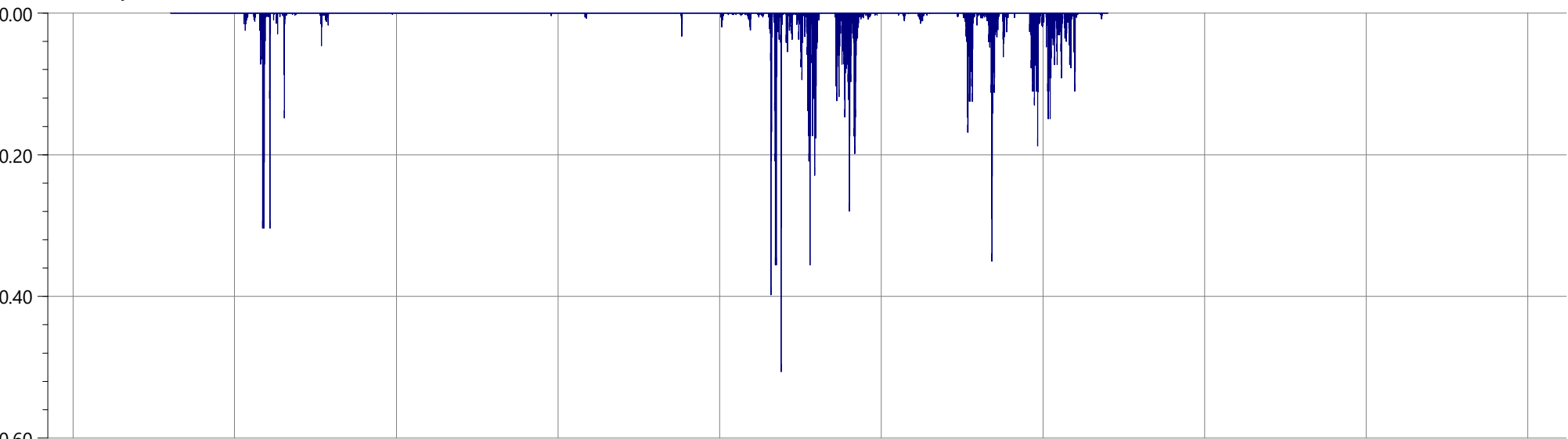


2/12/2016 2/17/2016 2/22/2016 2/27/2016 3/3/2016 3/8/2016 3/13/2016 3/18/2016 3/23/2016 3/28/2016

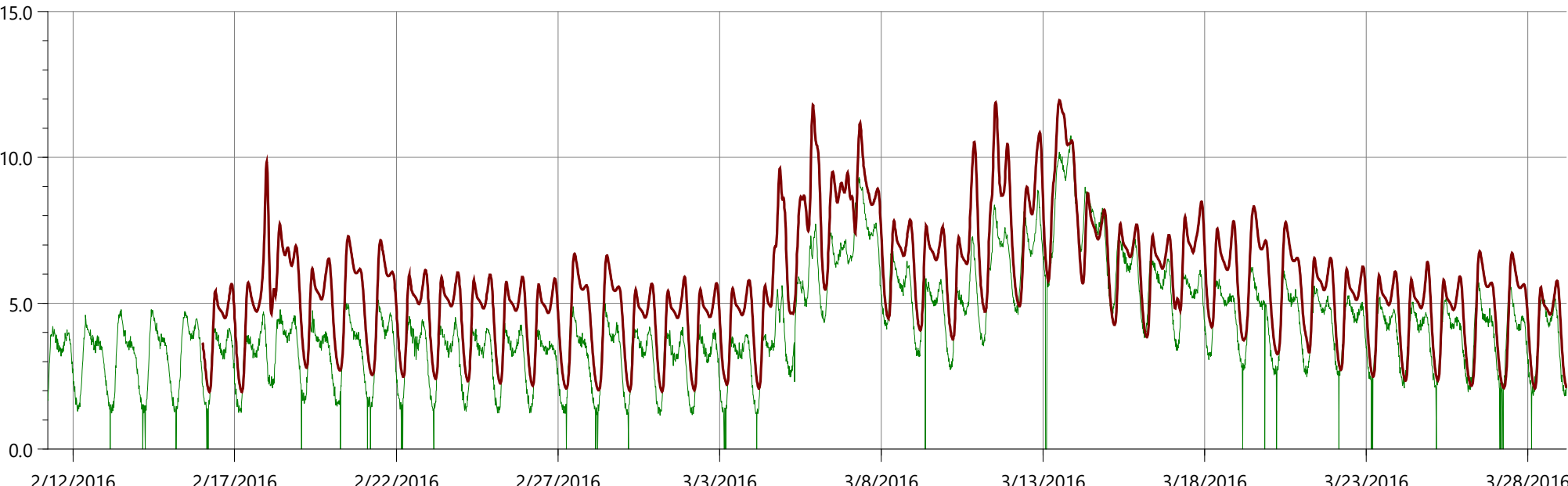
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	6.973	0.439	0.010			
Observed				0.000	7.798	13146868.221
...160315_RGBoundaries				1.119	8.612	14109574.857

Flow Survey Location (Obs.) Springview/DC, Model Location (Pred.) D/S H07-168.1, Rainfall Profile: 315

Rainfall intensity (in/hr)



Flow (MGD)

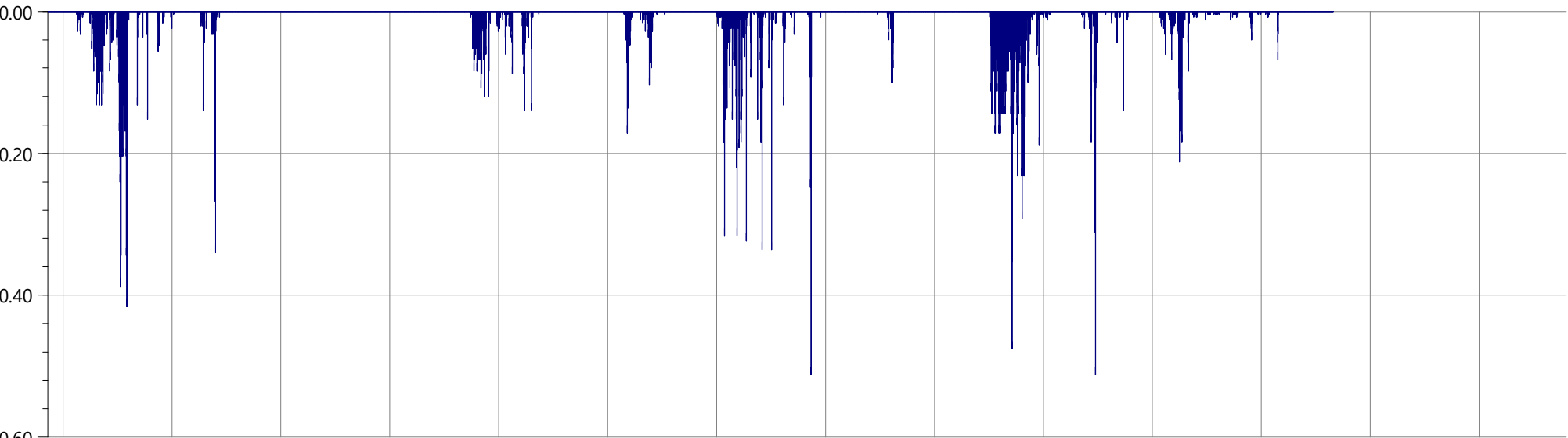


2/12/2016 2/17/2016 2/22/2016 2/27/2016 3/3/2016 3/8/2016 3/13/2016 3/18/2016 3/23/2016 3/28/2016

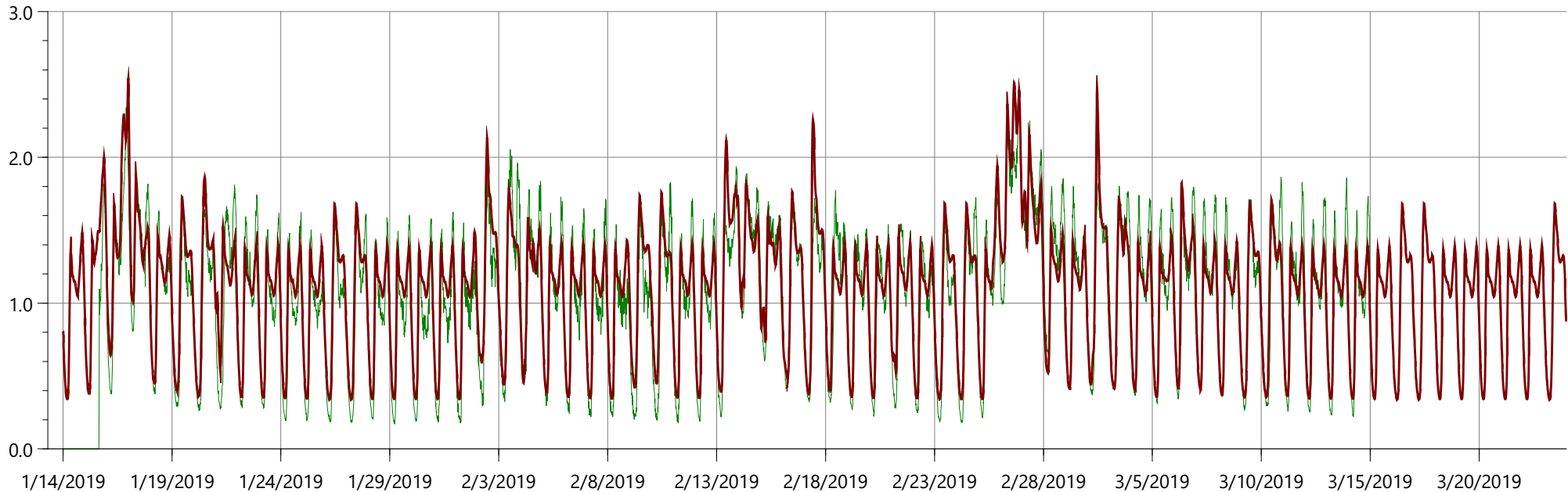
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	6.280	0.506	0.009	0.000	10.738	17143559.755
...160315_RGBoundaries				1.960	11.958	20629240.945

Flow Survey Location (Obs.) Site 151, Model Location (Pred.) D/S L02-001.1, Rainfall Profile: 443

Rainfall intensity (in/hr)

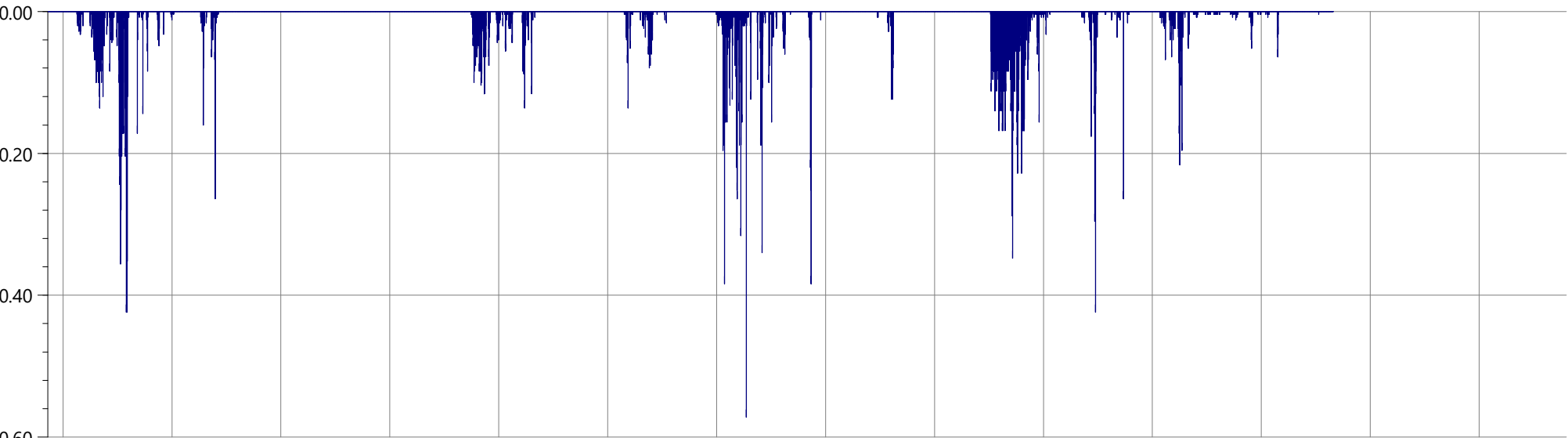


Flow (MGD)

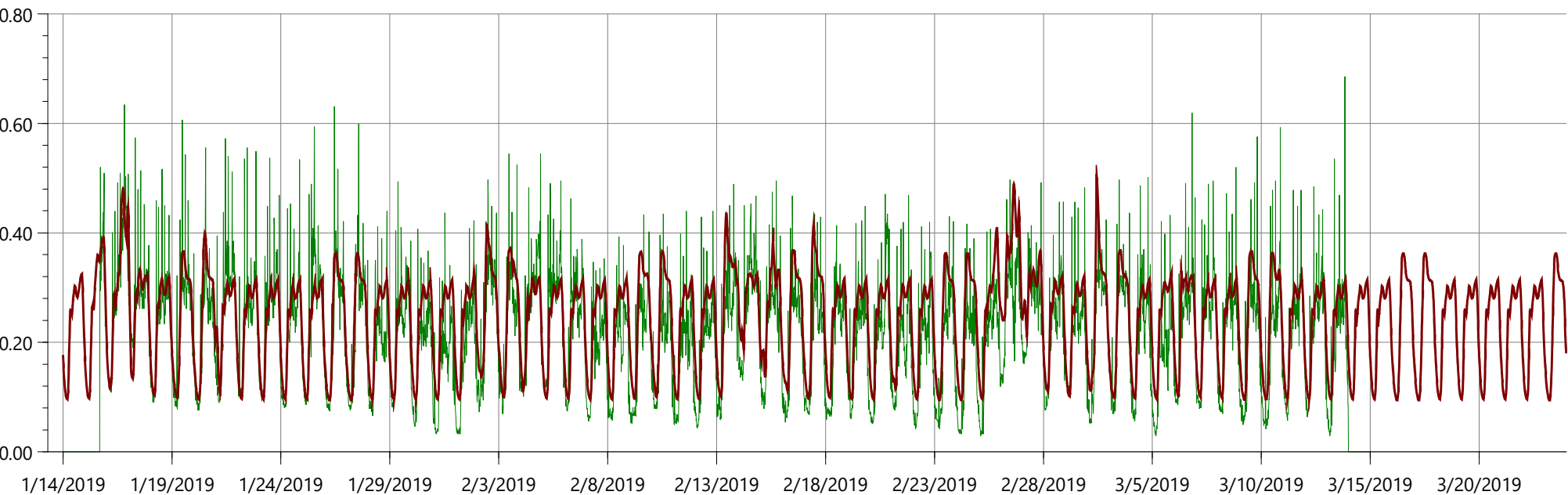


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.630	0.512	0.010			
Observed				0.000	2.474	5395503.465
...ta20190113_20190313				0.337	2.542	6508637.228

Rainfall intensity (in/hr)

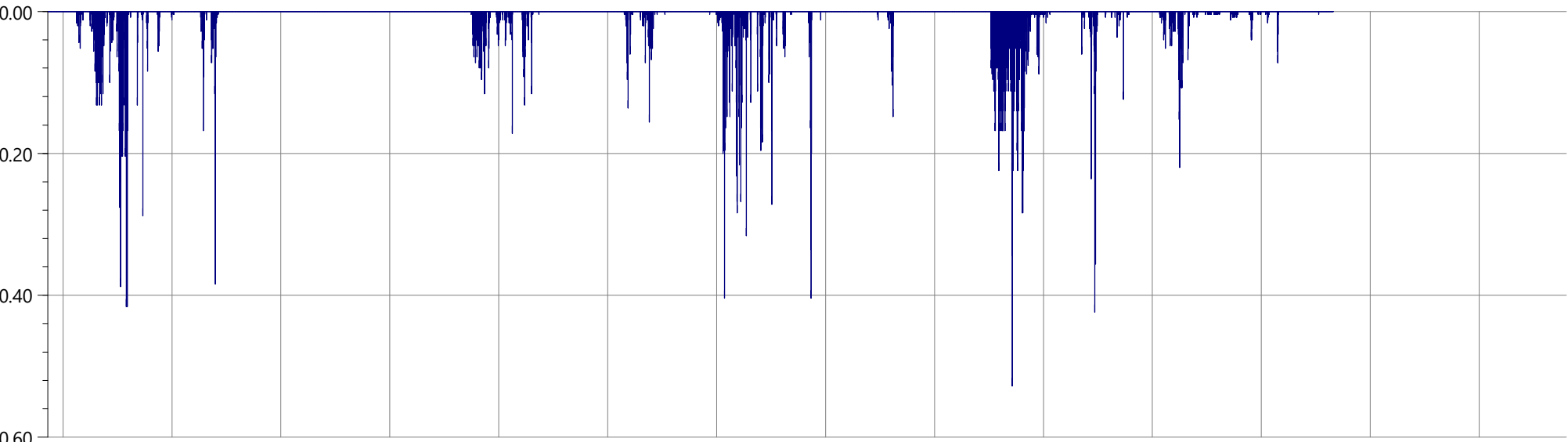


Flow (MGD)

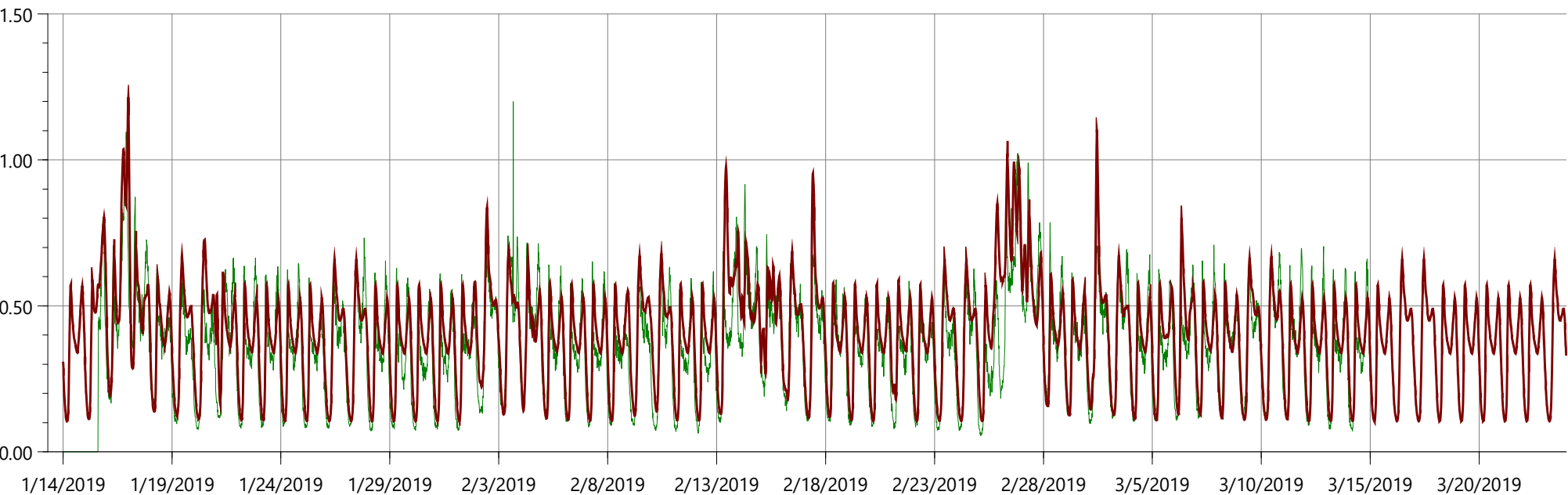


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	13.411	0.572	0.009	0.000	0.685	1076804.266
...ta20190113_20190313				0.094	0.501	1458697.862

Rainfall intensity (in/hr)

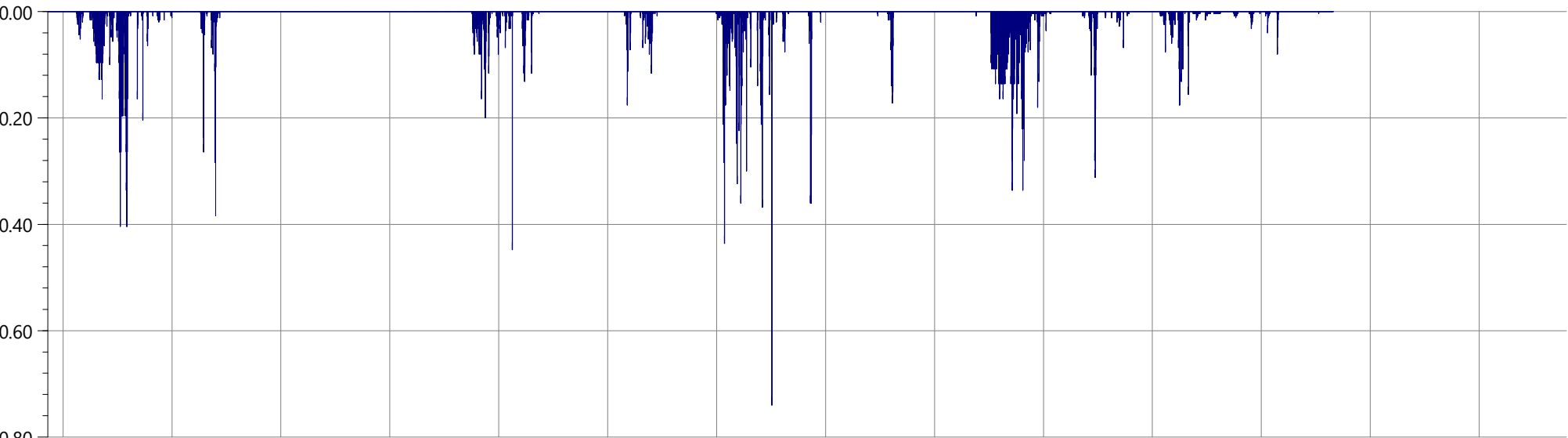


Flow (MGD)

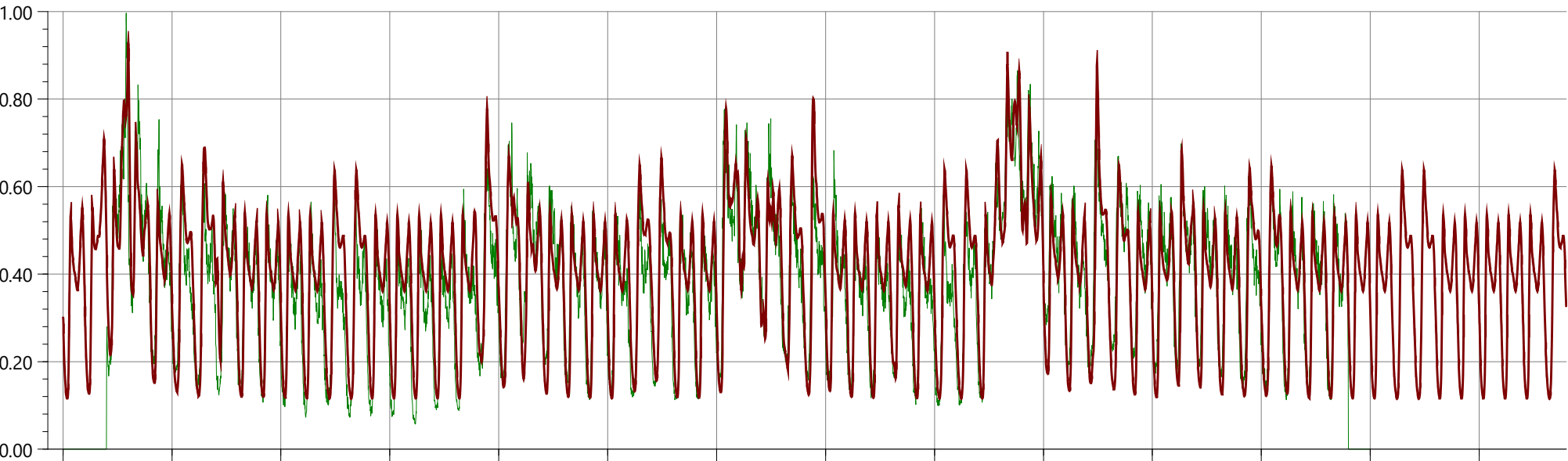


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	13.898	0.528	0.010	0.000	1.199	1862998.190
...ta20190113_20190313				0.105	1.214	2386062.923

Rainfall intensity (in/hr)



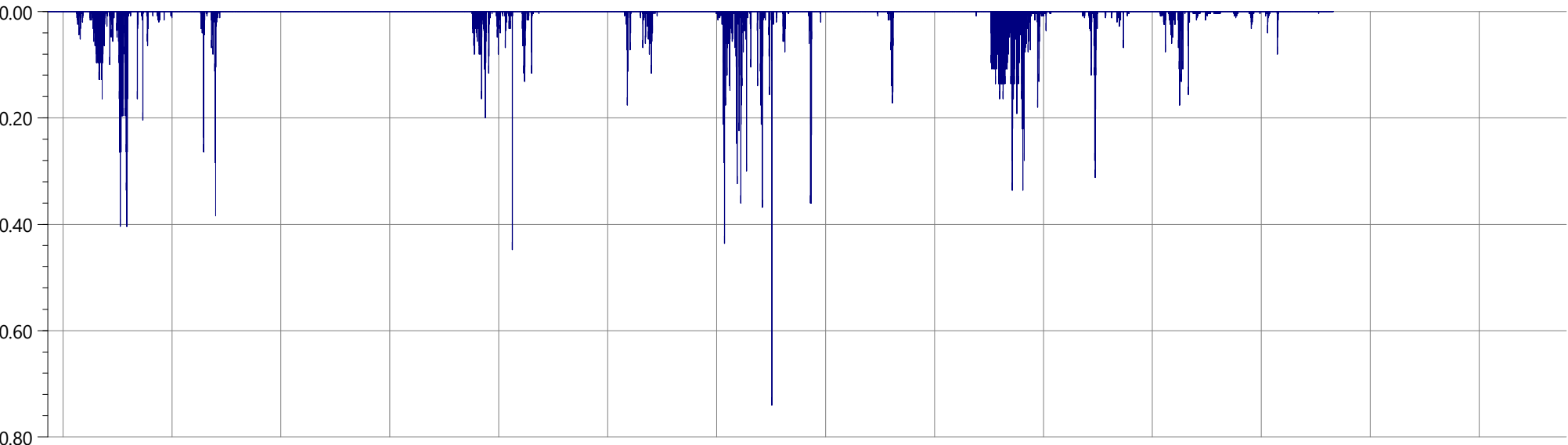
Flow (MGD)



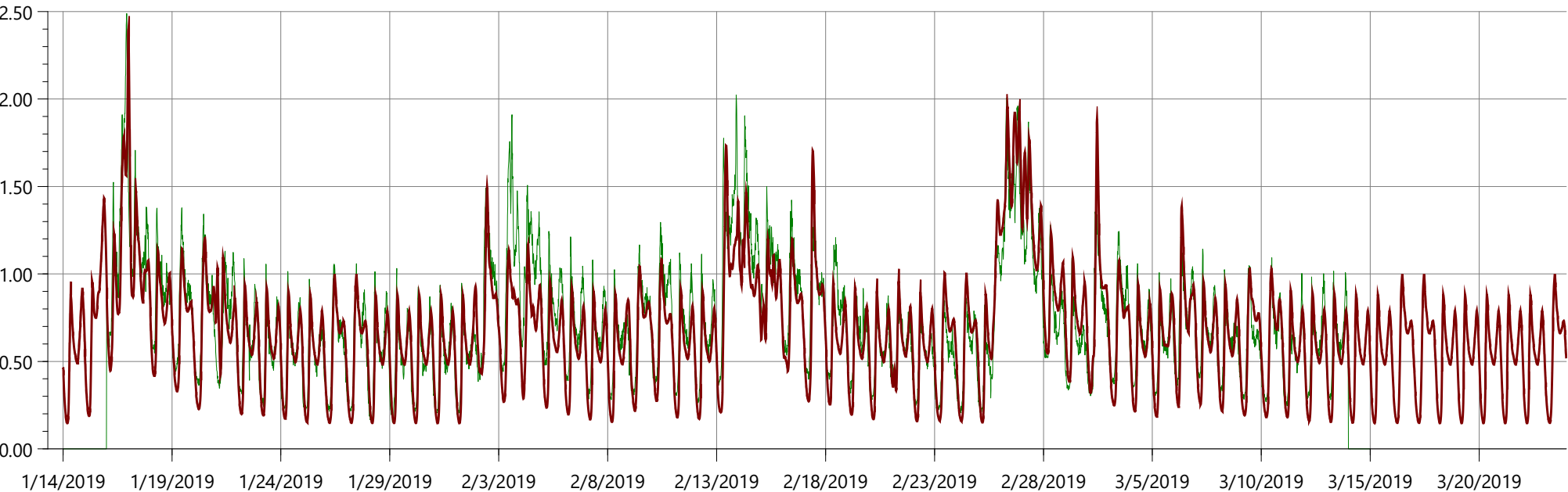
1/14/2019 1/19/2019 1/24/2019 1/29/2019 2/3/2019 2/8/2019 2/13/2019 2/18/2019 2/23/2019 2/28/2019 3/5/2019 3/10/2019 3/15/2019 3/20/2019

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	14.389	0.740	0.010			
Observed				0.000	0.996	1886813.424
...ta20190113_20190313				0.115	0.927	2363415.830

Rainfall intensity (in/hr)

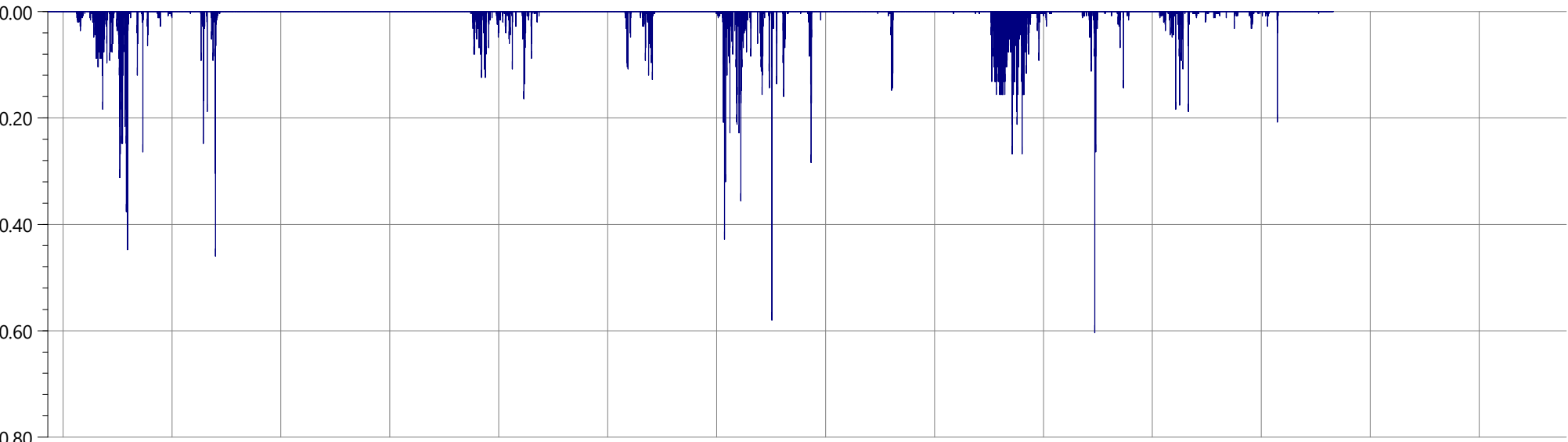


Flow (MGD)

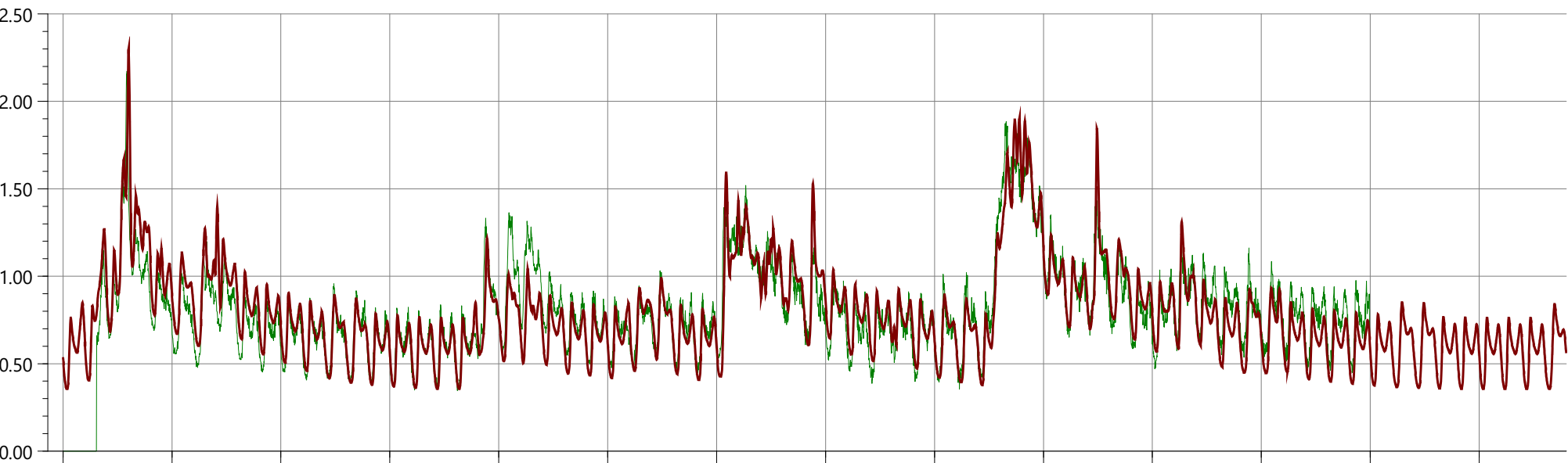


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	14.389	0.740	0.010			
Observed				0.000	2.488	3621783.843
...ta20190113_20190313				0.148	2.402	3981049.716

Rainfall intensity (in/hr)



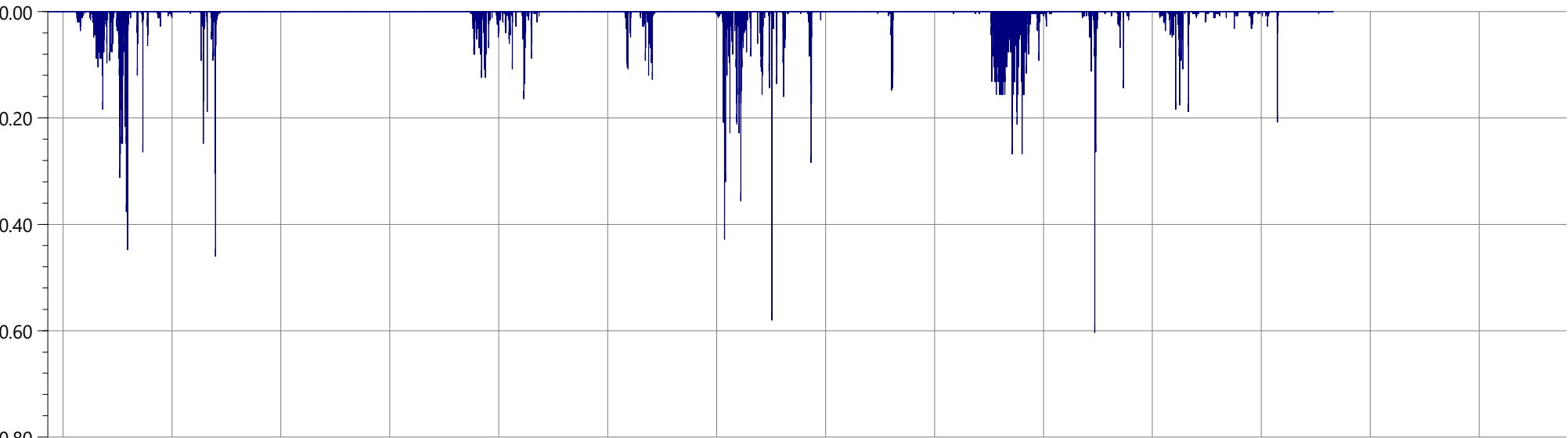
Flow (MGD)



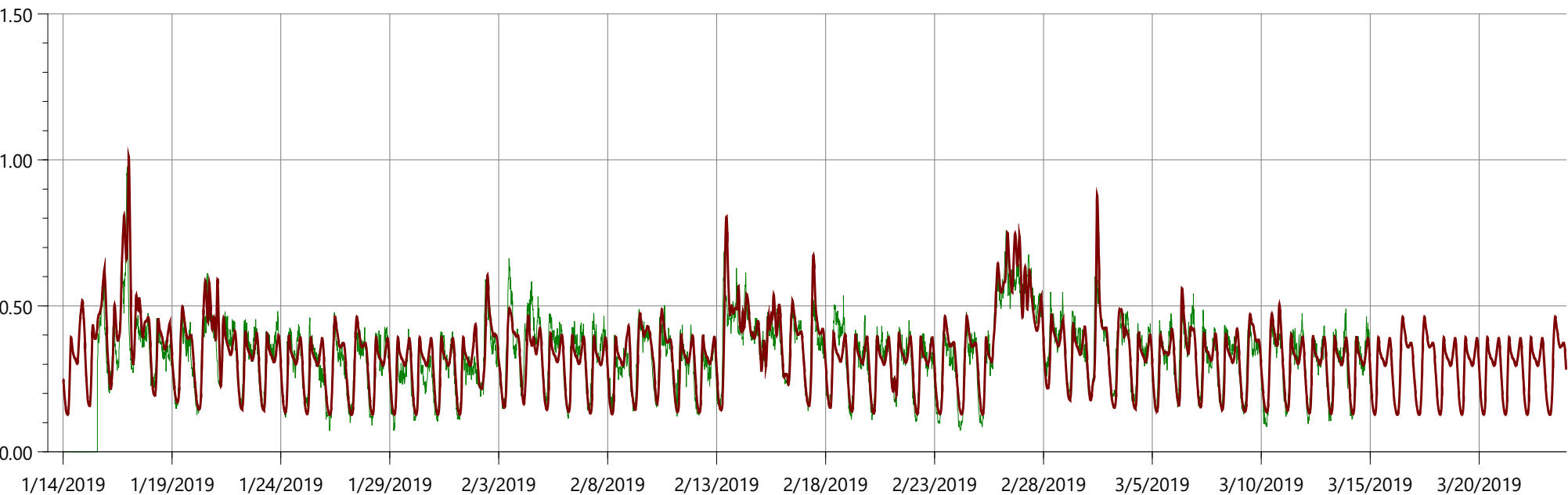
1/14/2019 1/19/2019 1/24/2019 1/29/2019 2/3/2019 2/8/2019 2/13/2019 2/18/2019 2/23/2019 2/28/2019 3/5/2019 3/10/2019 3/15/2019 3/20/2019

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.556	0.604	0.010			
Observed				0.000	2.172	4141187.489
...ta20190113_20190313				0.354	2.300	4657328.067

Rainfall intensity (in/hr)

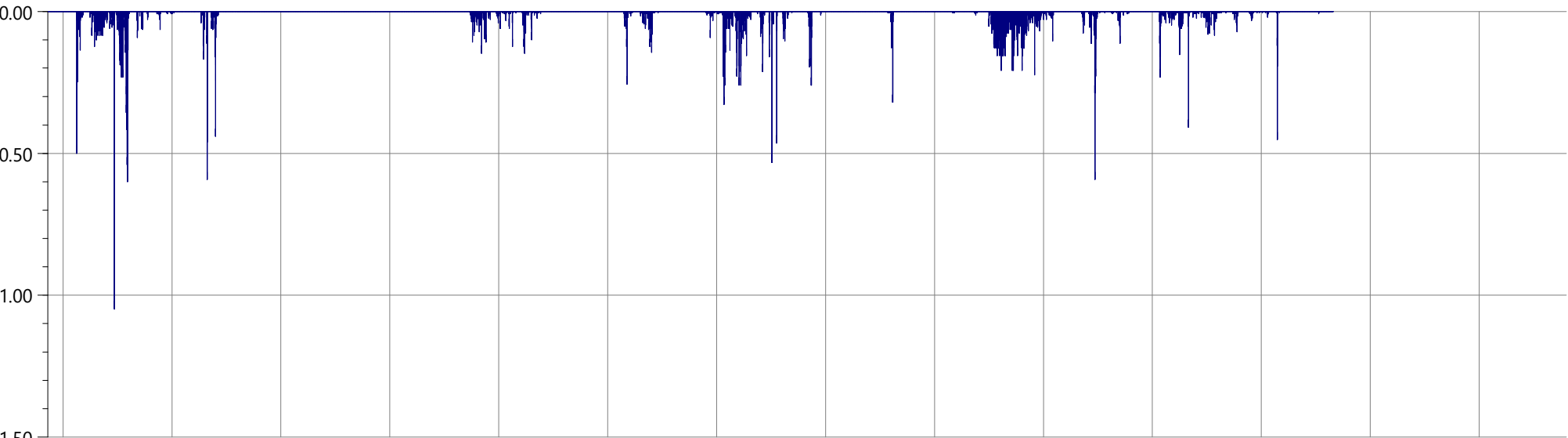


Flow (MGD)

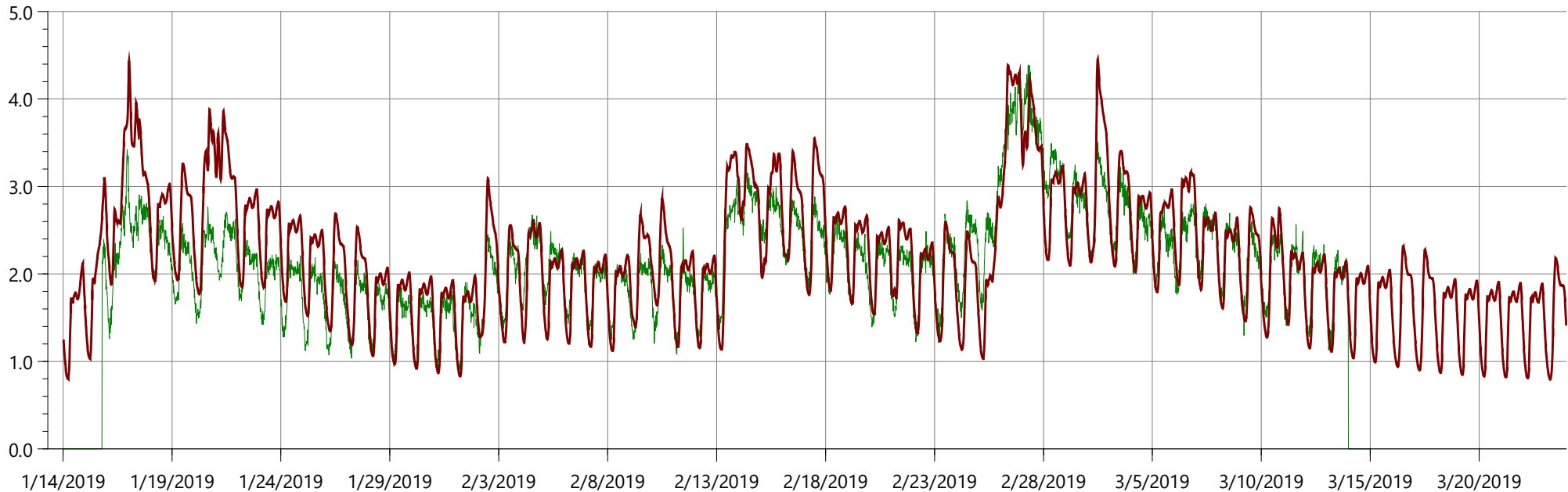


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.556	0.604	0.010			
Observed				0.000	0.976	1682585.005
...ta20190113_20190313				0.127	1.012	1976167.131

Rainfall intensity (in/hr)

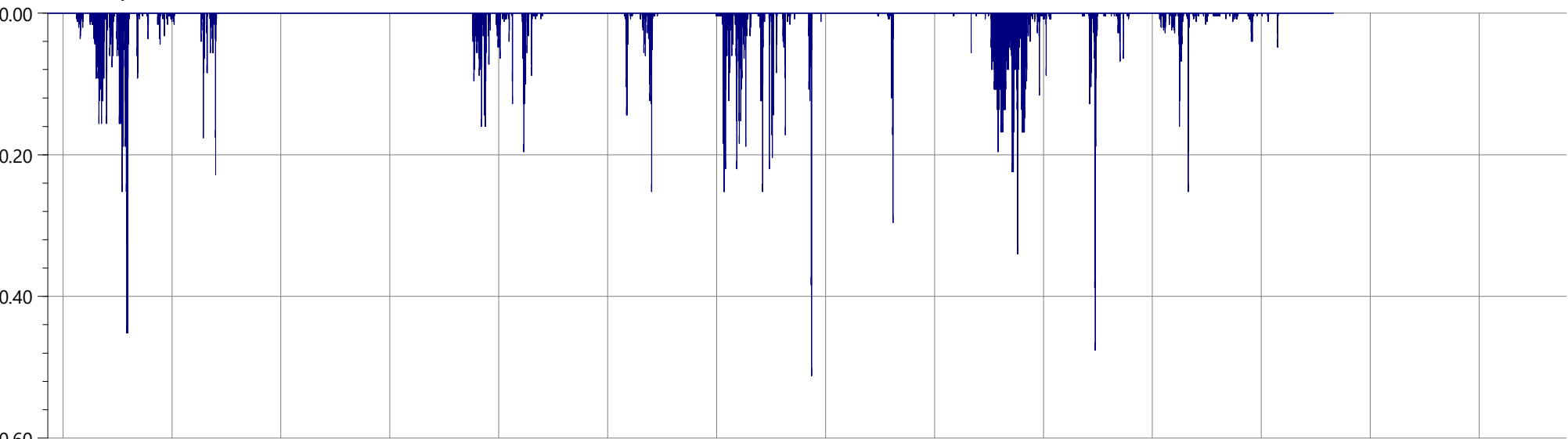


Flow (MGD)



	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	14.813	1.048	0.010			
Observed				0.000	4.389	10714291.384
...ta20190113_20190313				0.794	4.452	13146876.273

Rainfall intensity (in/hr)



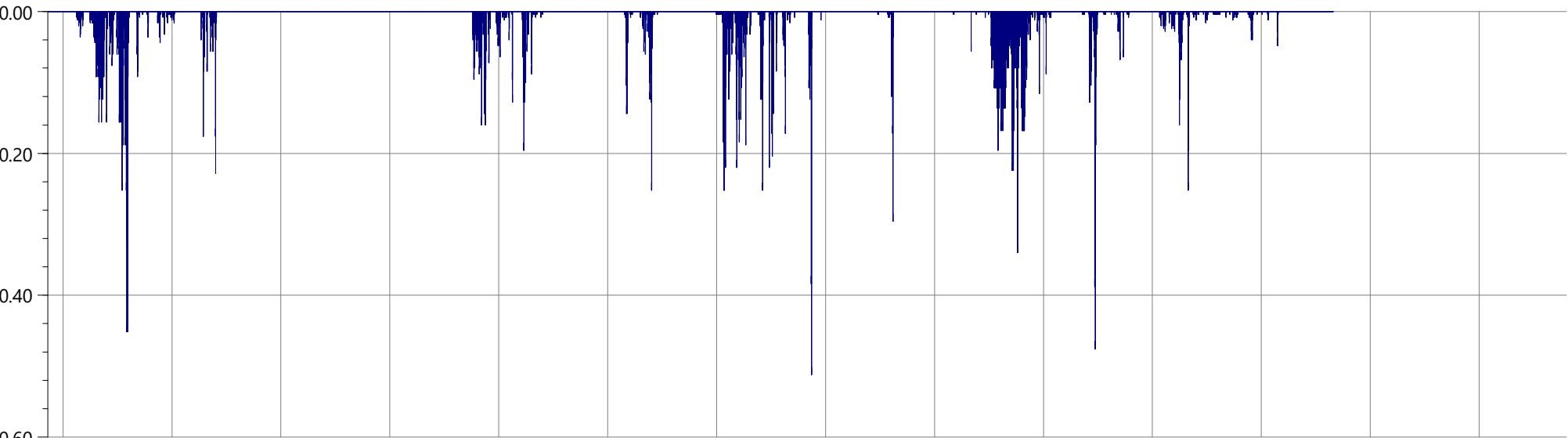
Flow (MGD)



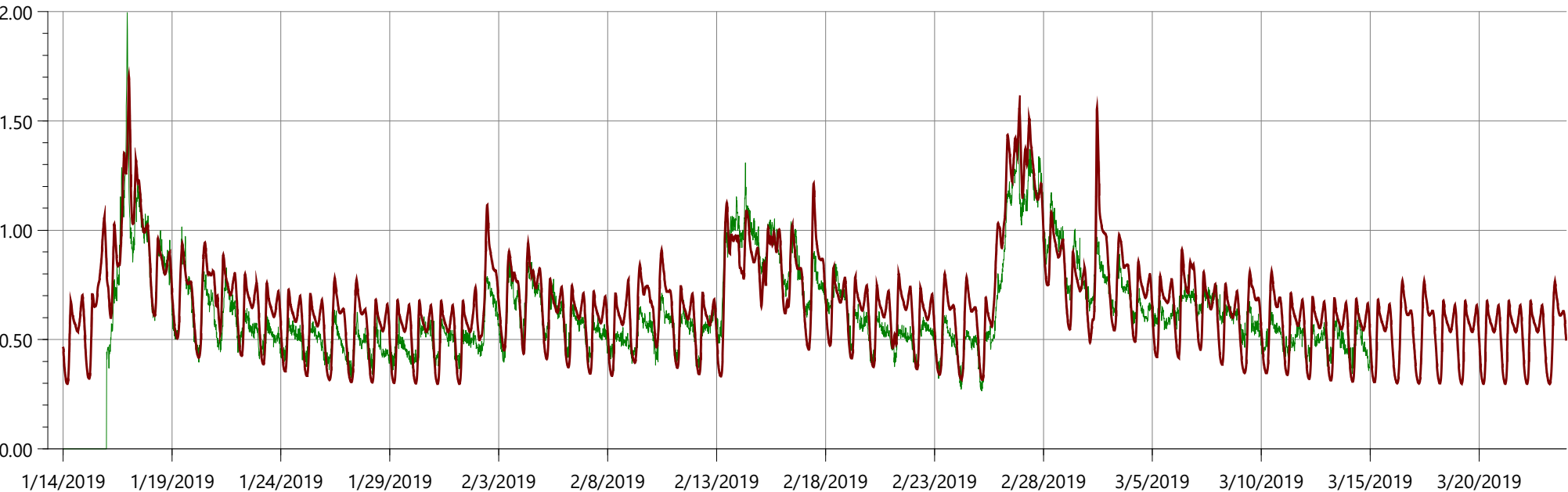
1/14/2019 1/19/2019 1/24/2019 1/29/2019 2/3/2019 2/8/2019 2/13/2019 2/18/2019 2/23/2019 2/28/2019 3/5/2019 3/10/2019 3/15/2019 3/20/2019

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.176	0.512	0.009			
Observed				0.000	4.702	11317470.919
...ta20190113_20190313				1.335	4.375	13934551.632

Rainfall intensity (in/hr)

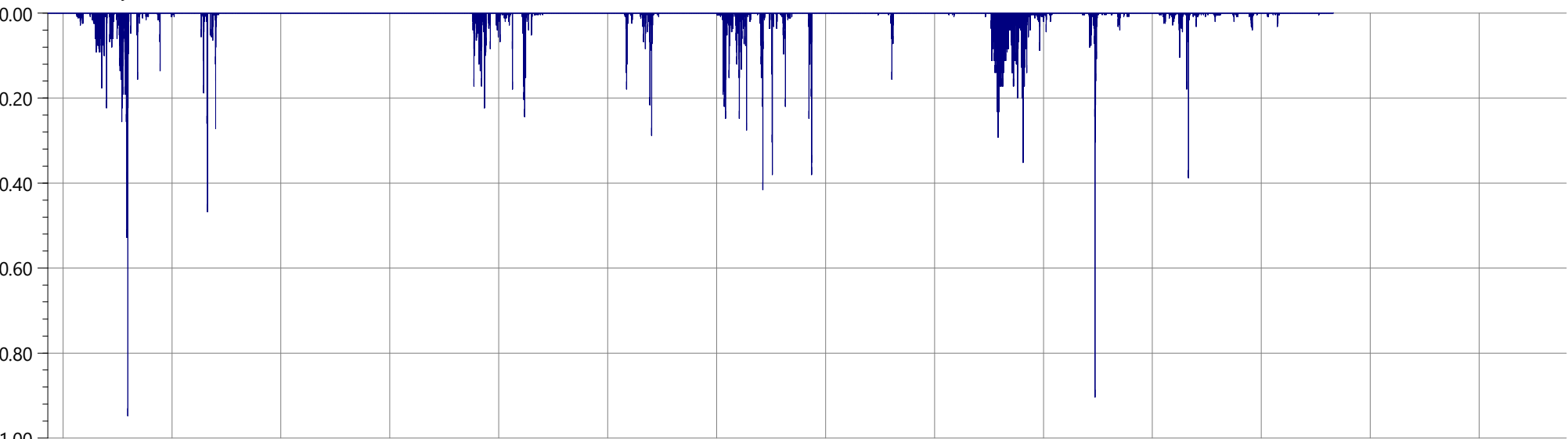


Flow (MGD)

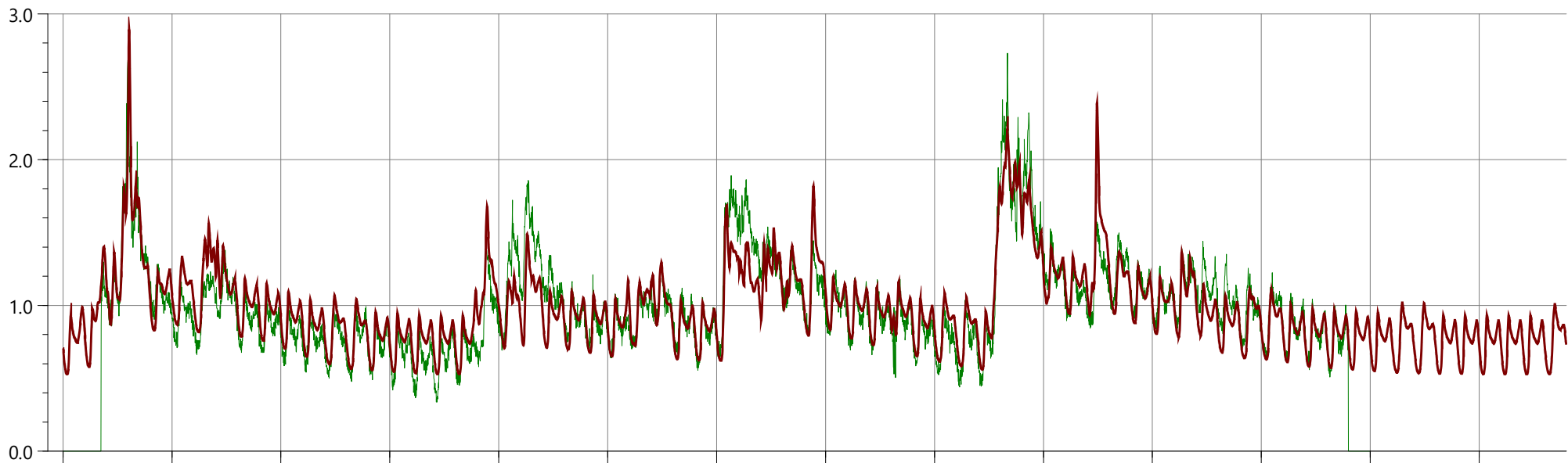


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.176	0.512	0.009			
Observed				0.000	1.996	3174137.958
...ta20190113_20190313				0.297	1.702	3927509.288

Rainfall intensity (in/hr)



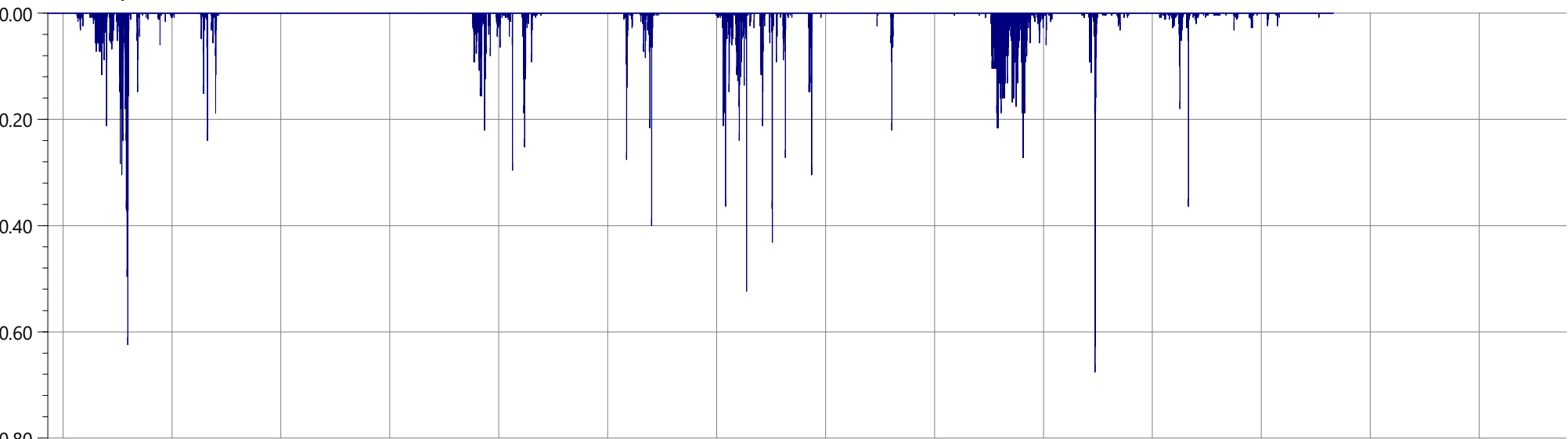
Flow (MGD)



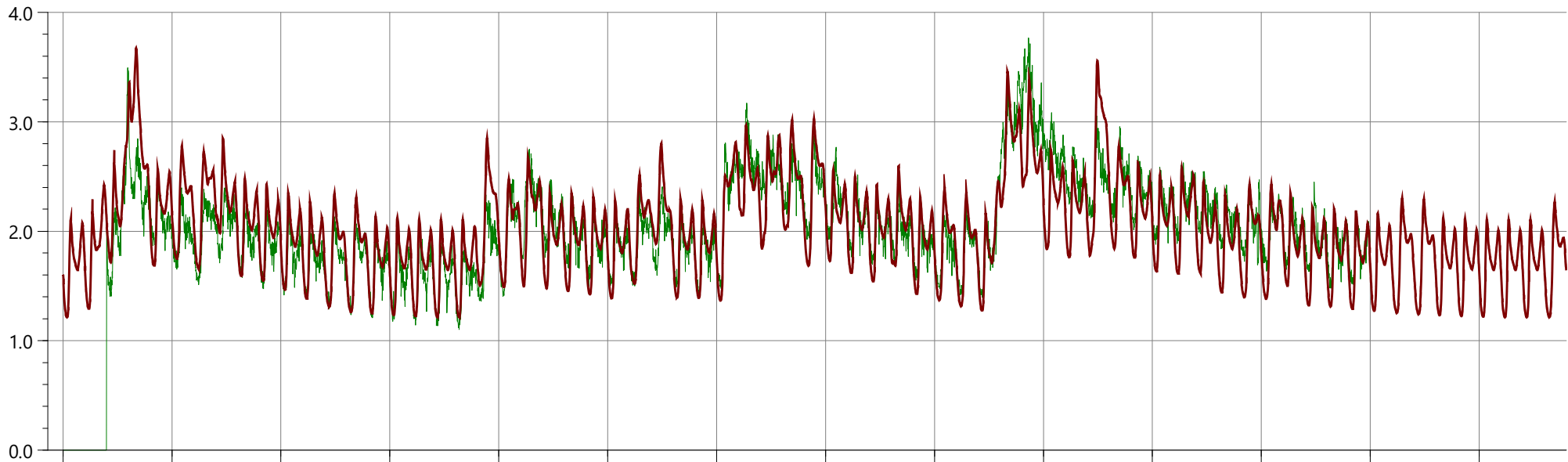
1/14/2019 1/19/2019 1/24/2019 1/29/2019 2/3/2019 2/8/2019 2/13/2019 2/18/2019 2/23/2019 2/28/2019 3/5/2019 3/10/2019 3/15/2019 3/20/2019

	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain						
Observed	13.733	0.948	0.010	0.000	2.731	4995129.055
...ta20190113_20190313				0.528	2.894	5828937.326

Rainfall intensity (in/hr)



Flow (MGD)

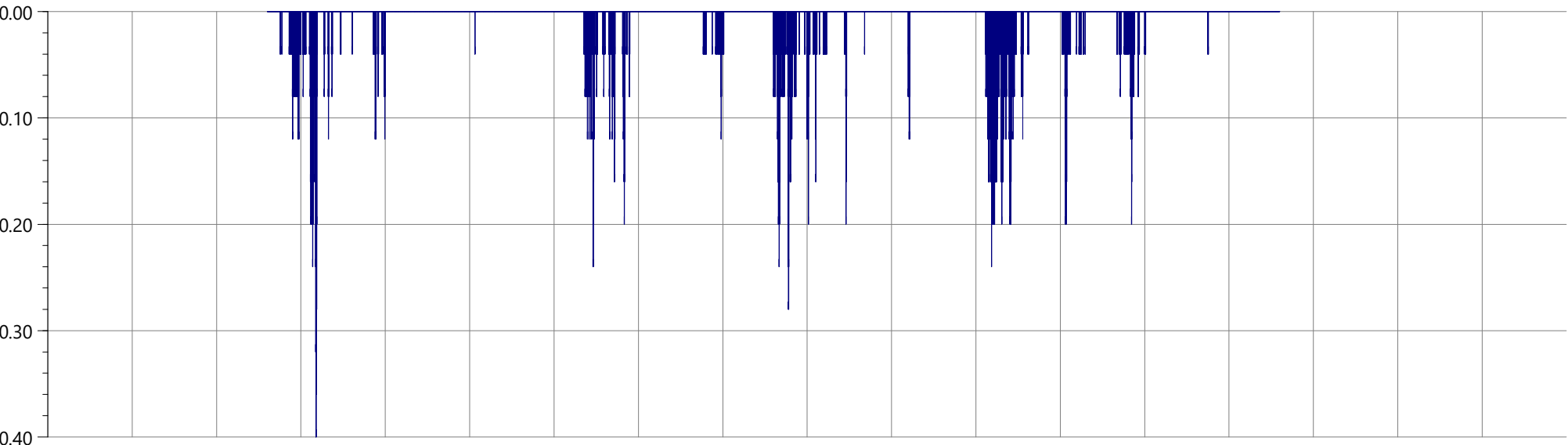


1/14/2019 1/19/2019 1/24/2019 1/29/2019 2/3/2019 2/8/2019 2/13/2019 2/18/2019 2/23/2019 2/28/2019 3/5/2019 3/10/2019 3/15/2019 3/20/2019

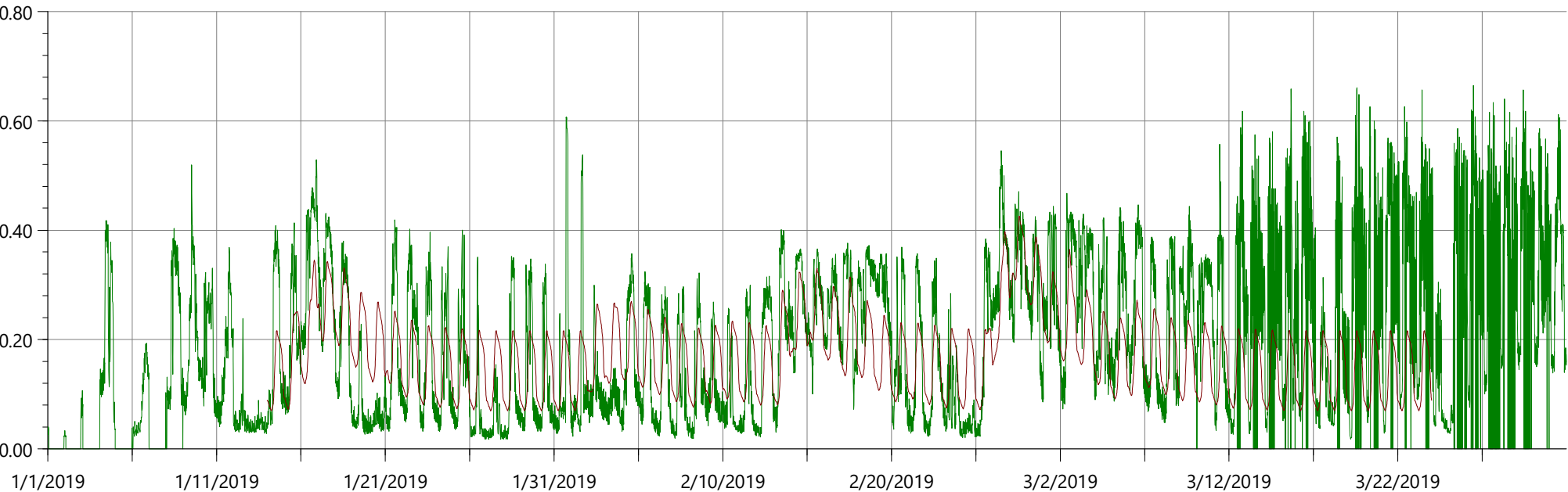
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	12.949	0.676	0.009			
Observed				0.000	3.767	10312984.650
...ta20190113_20190313				1.214	3.671	12012636.316

Flow Survey Location (Obs.) Cincinnati, Model Location (Pred.) D/S CA4-RSVL28.1, Rainfall Profile: 408

Rainfall intensity (in/hr)

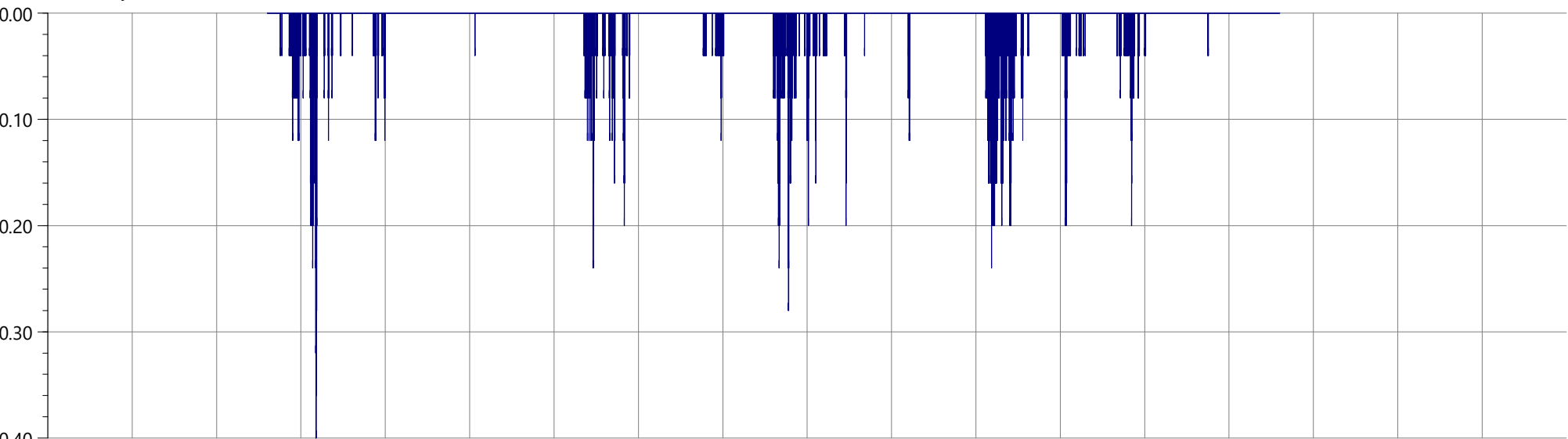


Flow (MGD)

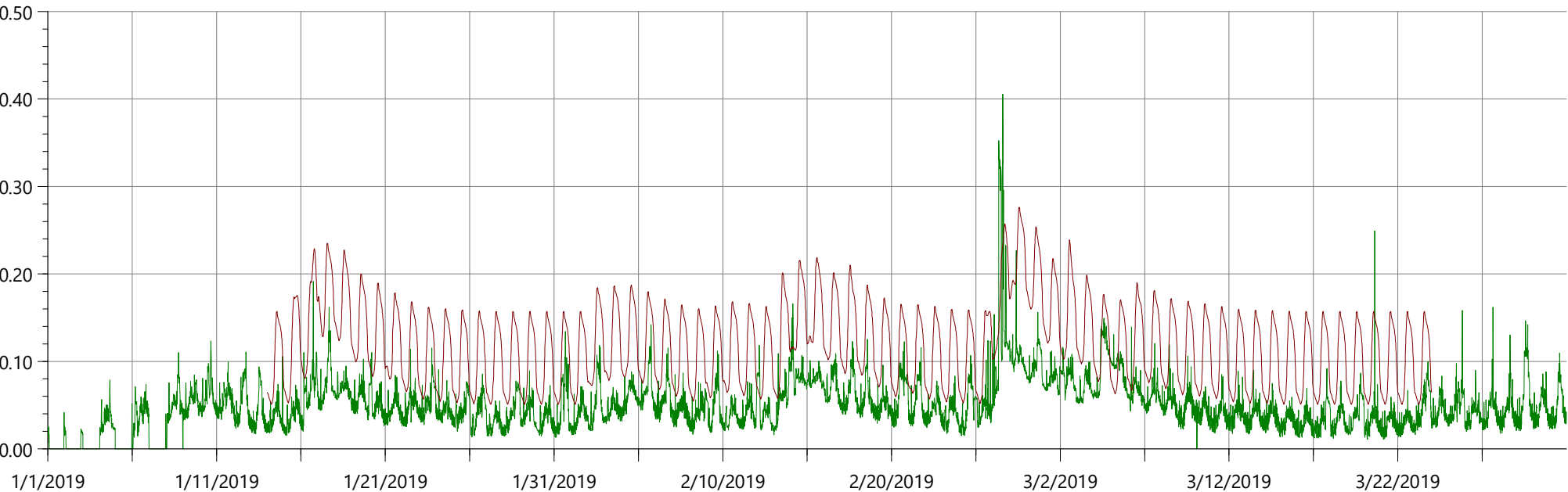


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	0.665	1464913.927
..0313_*4_RGBoundaries				0.069	0.425	1025101.467

Rainfall intensity (in/hr)



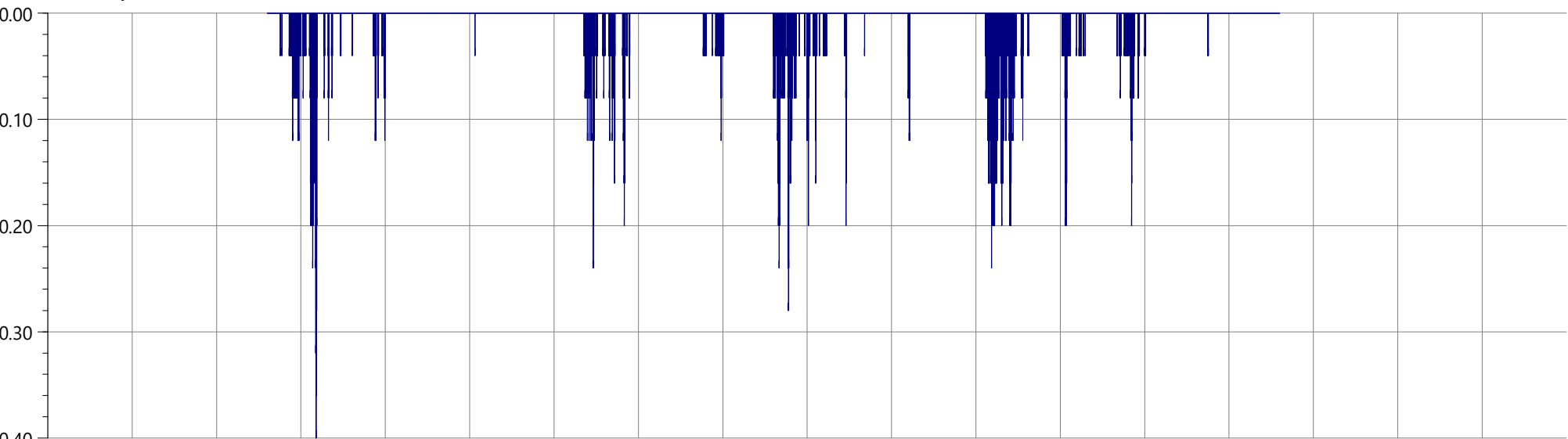
Flow (MGD)



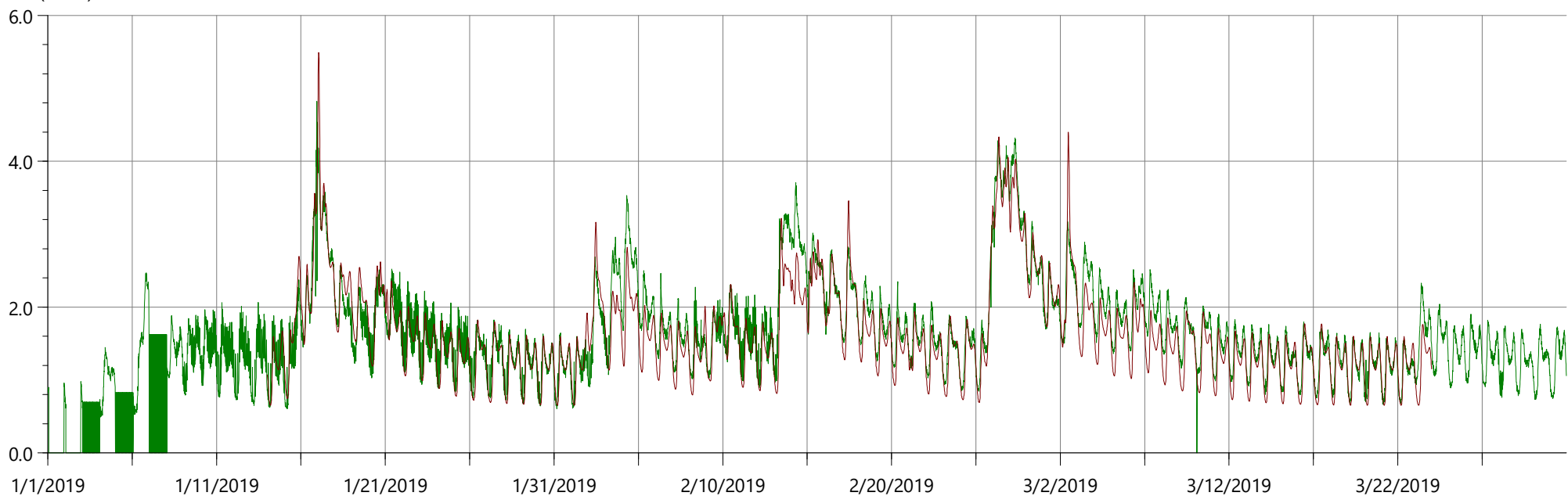
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	0.405	388057.020
...0313_*4_RGBoundaries				0.051	0.276	712709.520

Flow Survey Location (Obs.) SMD2, Model Location (Pred.) D/S A10-03.1, Rainfall Profile: 121

Rainfall intensity (in/hr)

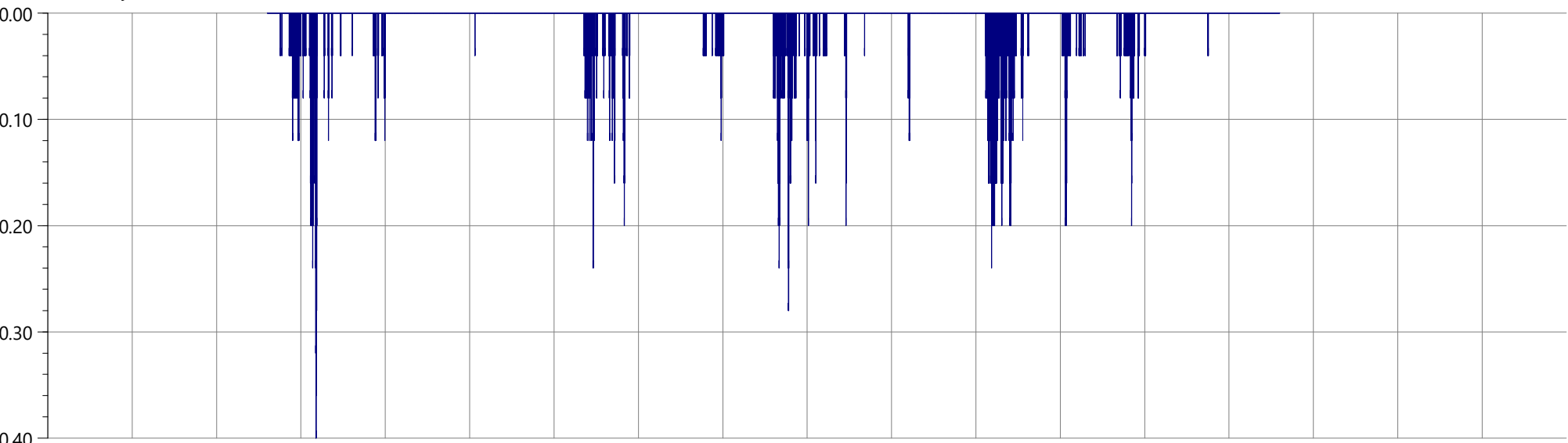


Flow (MGD)

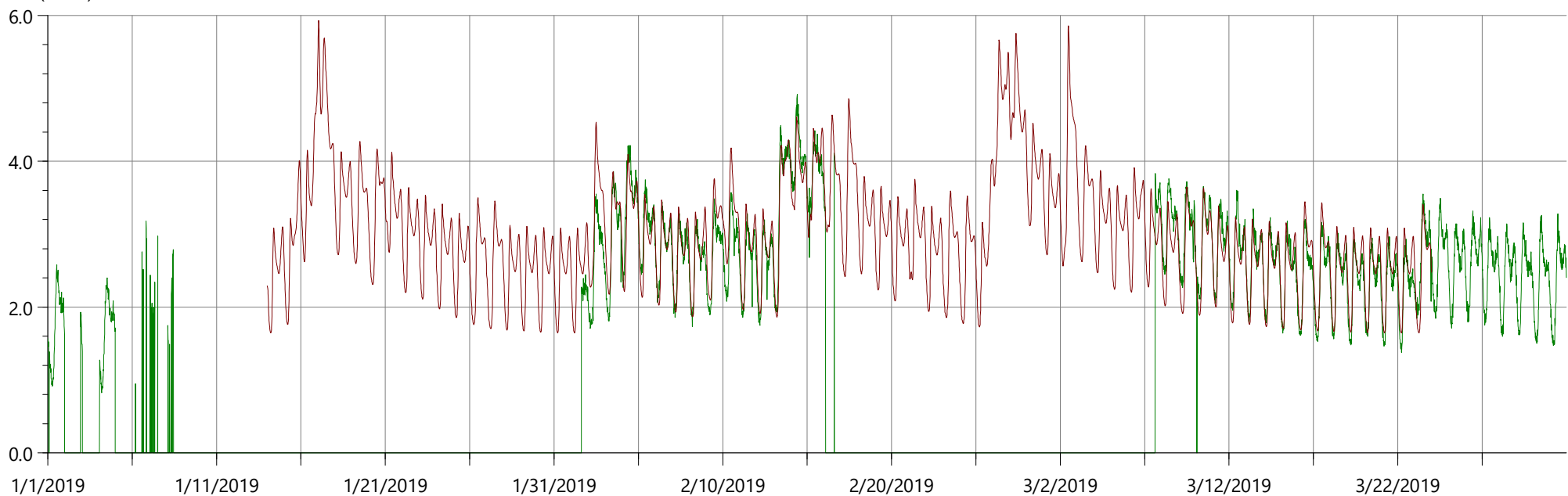


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	4.823	12344642.590
..0313_*4_RGBoundaries				0.651	5.493	9792069.402

Rainfall intensity (in/hr)

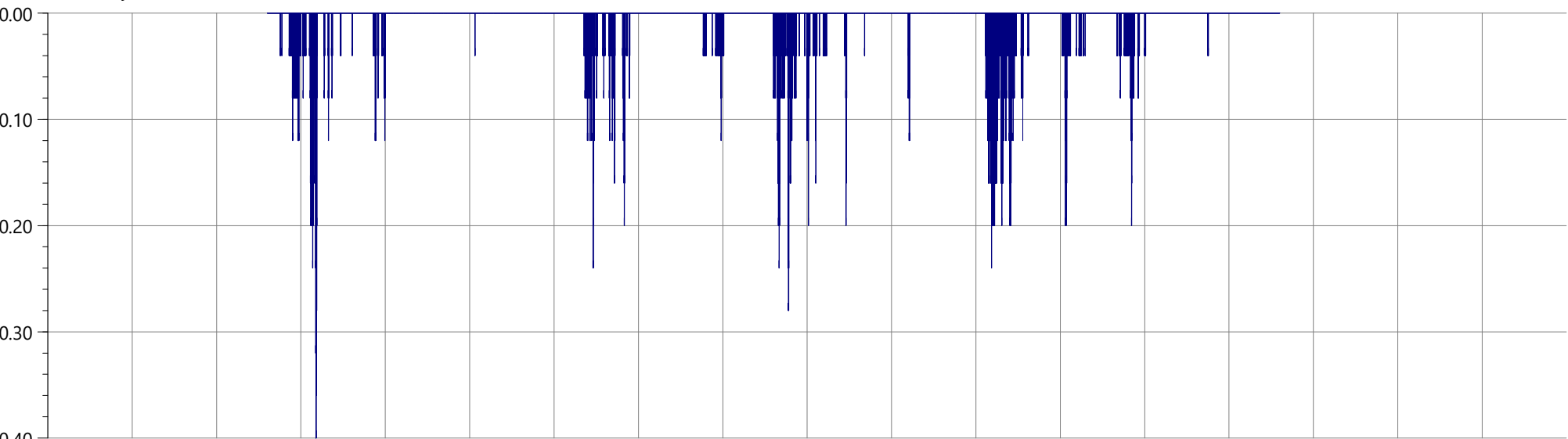


Flow (MGD)

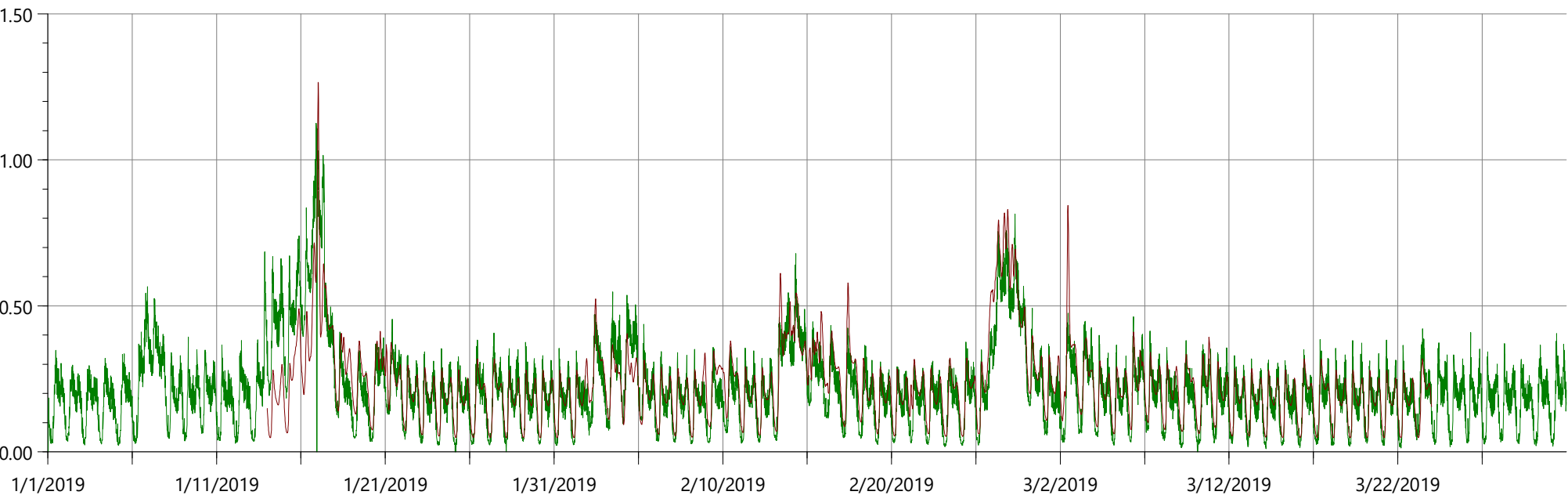


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	4.921	9530740.132
...0313_*4_RGBoundaries				1.644	5.931	18004207.945

Rainfall intensity (in/hr)

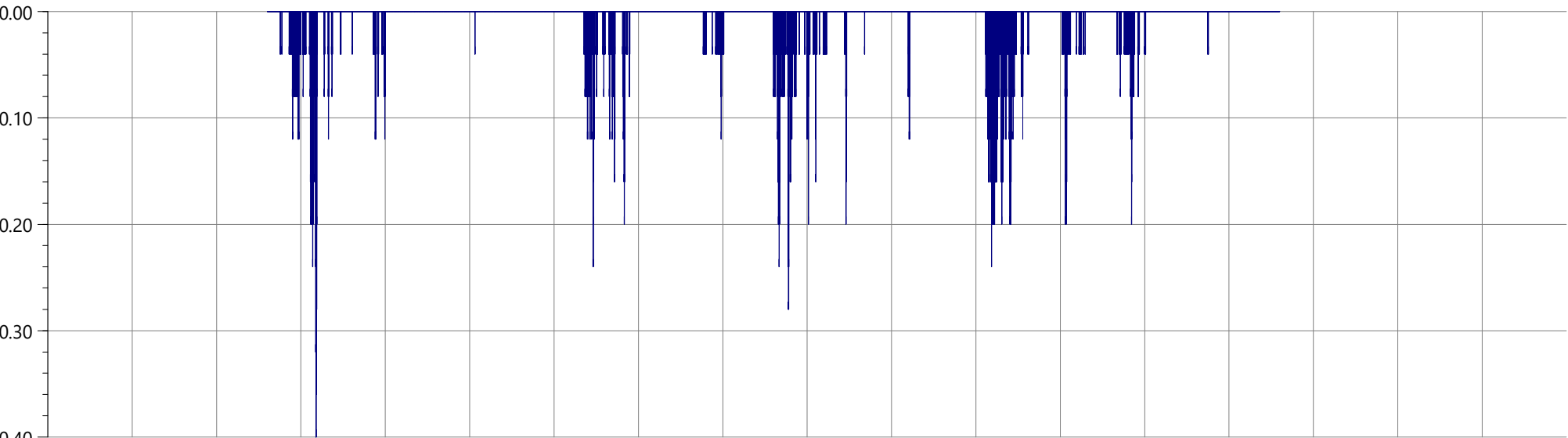


Flow (MGD)

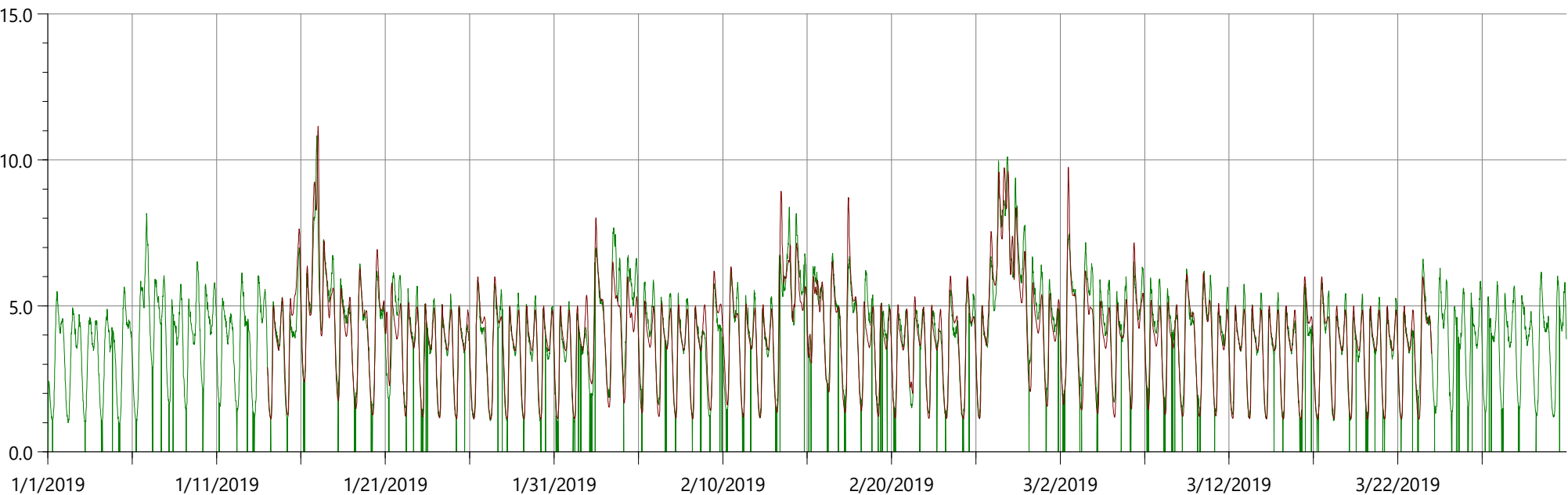


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	1.126	1614243.848
...0313_*4_RGBoundaries				0.048	1.266	1387804.155

Rainfall intensity (in/hr)

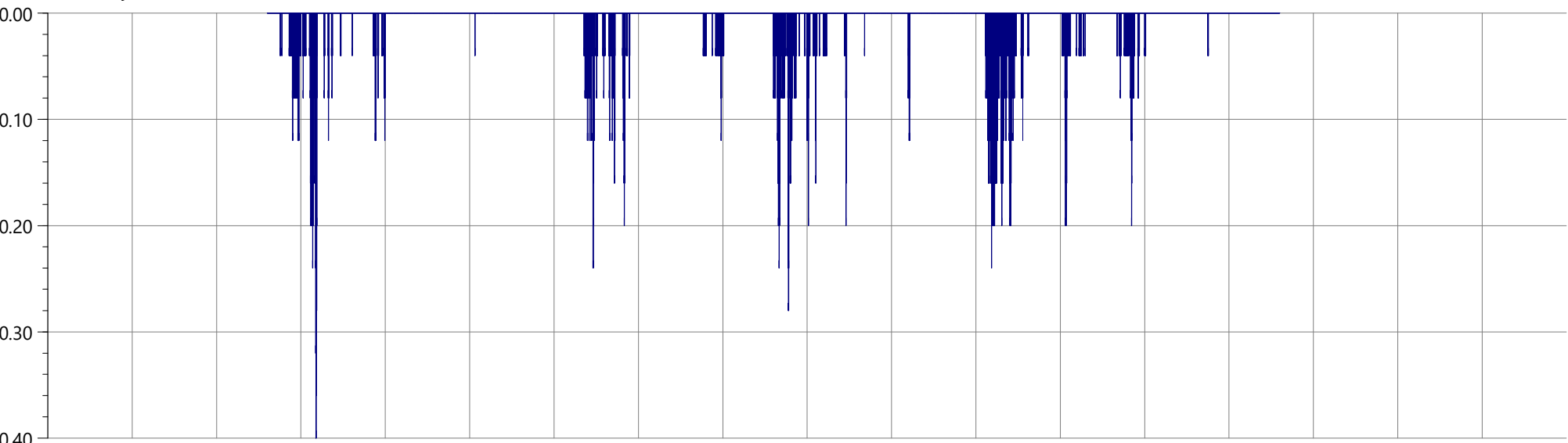


Flow (MGD)

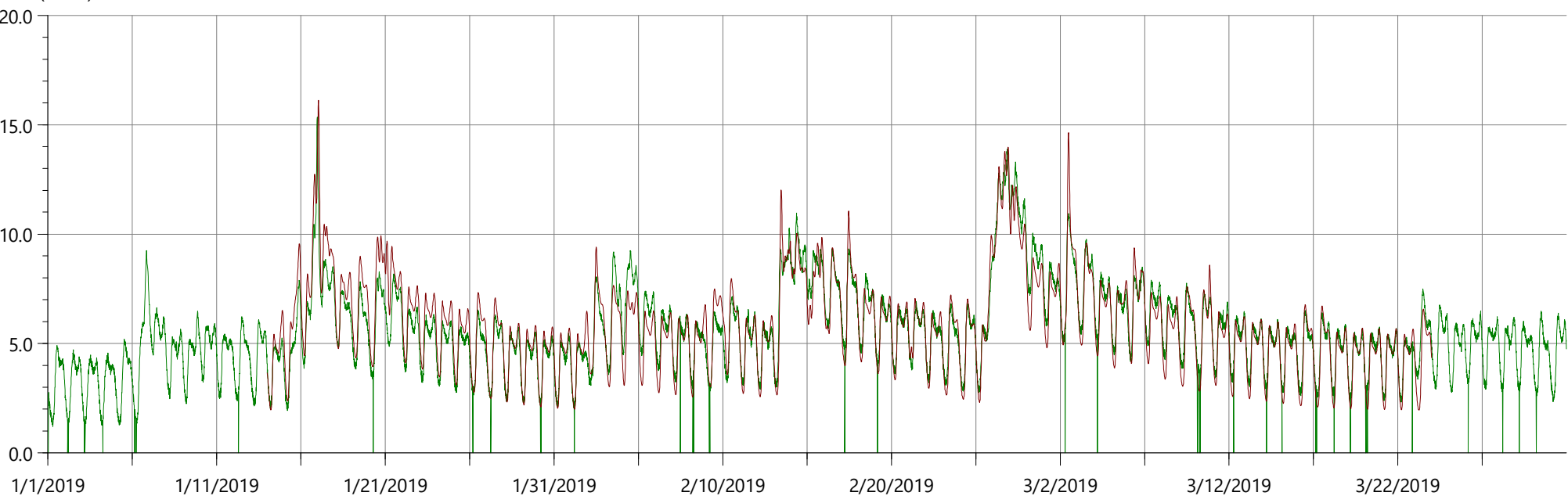


	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	10.836	30336214.148
..0313_*4_RGBoundaries				1.119	11.157	23452688.731

Rainfall intensity (in/hr)



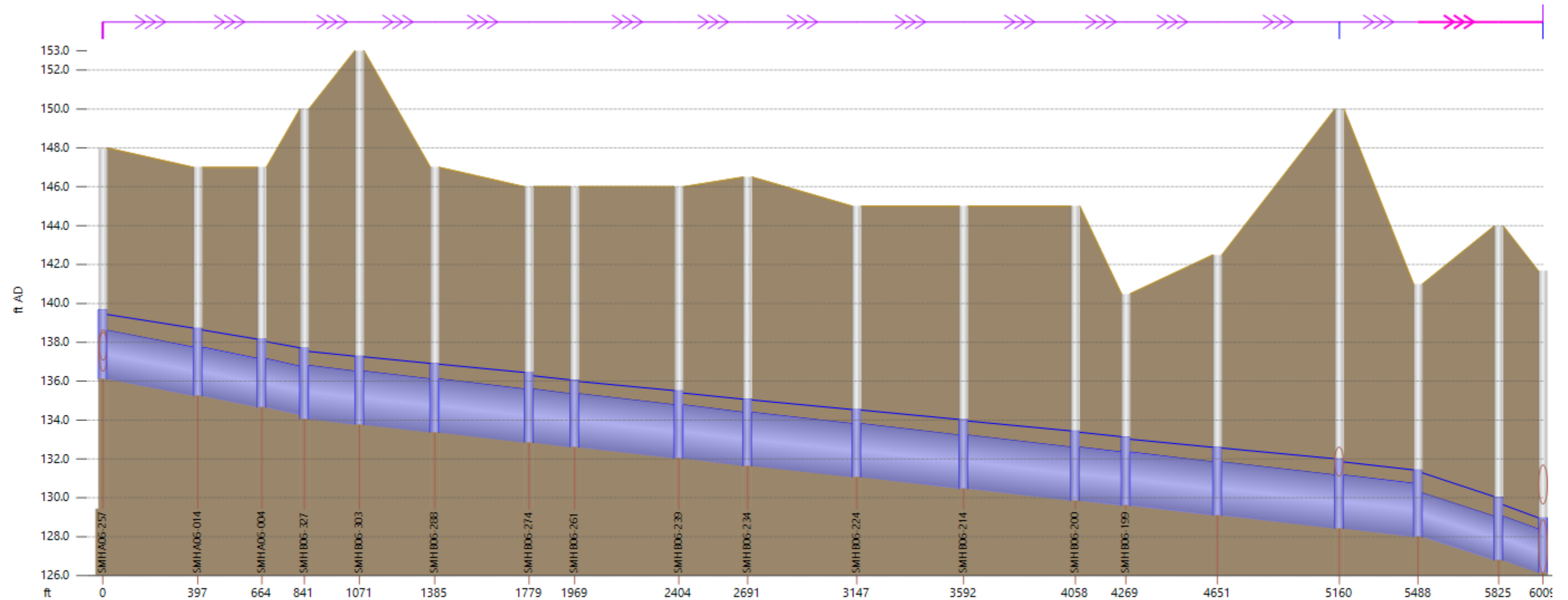
Flow (MGD)



	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	15.530	0.400	0.011			
Observed				0.000	15.348	42982669.853
...0313_*4_RGBoundaries				1.944	16.123	35431318.112

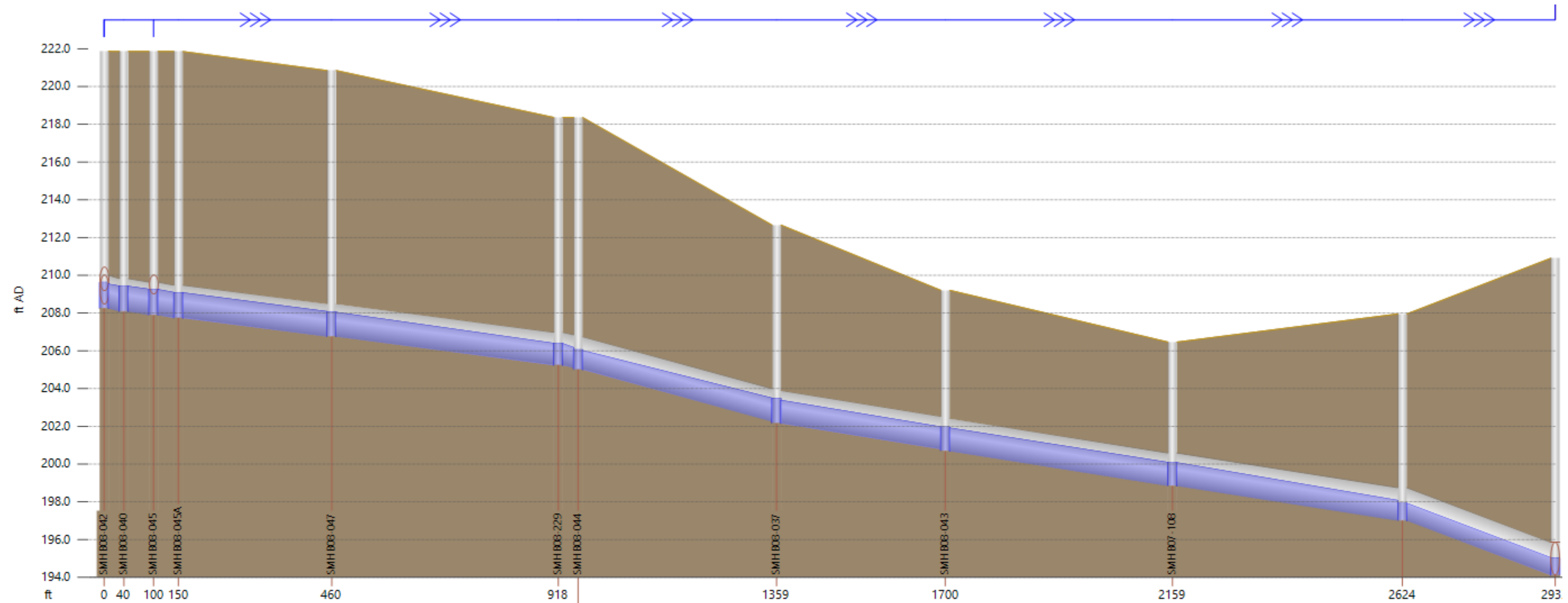
APPENDIX E – MODELED HYDRAULIC PROFILES

EXISTING LAND USE – AREA C



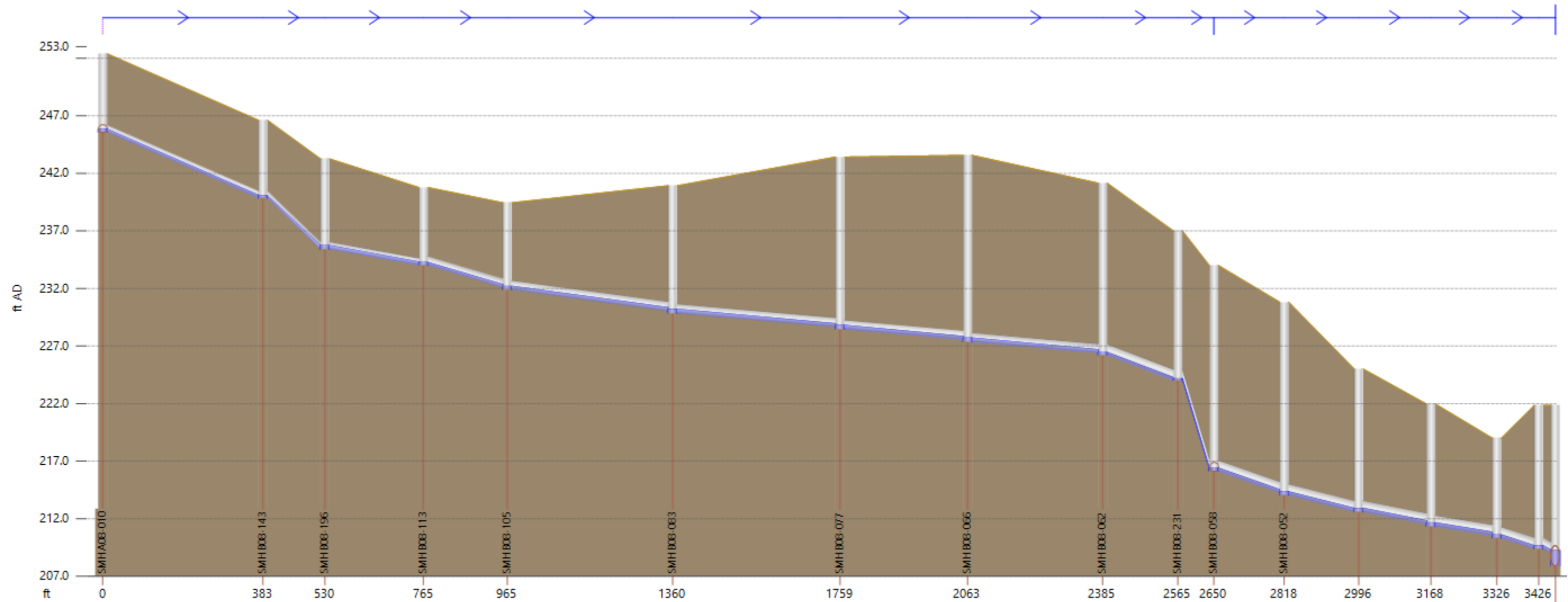
Link	SMH A06-257.1	-	-	-	-	SMH B06-288.1	-	SMH B06-261.1	-	SMH B06-234.1	SMH B06-224.1	SMH B06-214.1	-	SMH B06-199.1	SMH B06-186.1	-	-	-
length (ft)	396.7	267.4	177.3	229.3	314.6	393.4	190.1	435.0	287.1	455.6	445.4	466.4	210.4	382.2	509.2	327.5	337.3	184.4
width (in)	30.0	30.0	30.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	27.0	27.0
us inv (ft AD)	136.110	135.240	-	134.050	133.760	133.360	-	132.600	132.030	131.640	131.060	130.470	129.850	129.600	129.090	128.420	127.990	-
ds inv (ft AD)	135.240	134.660	-	133.760	133.360	132.840	-	132.030	131.640	131.060	130.470	129.850	129.600	129.090	128.420	127.990	126.792	-
grad (%)	0.219	0.217	0.220	0.126	0.127	0.132	0.126	0.131	0.136	0.127	0.132	0.133	0.119	0.133	0.132	0.131	0.355	0.358
surc	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
r.pfc (MGD)	12.42	12.35	12.43	12.16	12.19	12.43	12.15	12.37	12.60	12.20	12.44	12.46	11.78	12.49	12.40	12.39	11.93	11.98
DS flow (MGD)	11.4670	11.4562	-	11.4373	11.5043	11.4871	-	11.4617	11.4509	11.4344	11.4189	11.4033	11.3963	11.3836	11.3678	12.1626	12.1555	-
Node	-	-	-	-	-	-	-	-	-	SMH B06-224	SMH B06-214	-	-	SMH B06-186	SMH B06-163	-	-	-
ground (ft AD)	-	147.000	-	-	153.000	147.000	146.000	146.000	146.000	146.500	145.000	145.000	145.000	140.500	142.500	150.000	141.000	143.984
level (ft AD)	-	138.722	-	-	137.284	136.911	136.434	136.062	135.504	135.073	134.537	134.024	133.439	133.133	132.597	131.997	131.432	130.022
flood dep (ft)	-8.332	-8.278	-8.851	-	-15.716	-10.089	-9.566	-9.938	-10.496	-11.427	-10.463	-10.976	-11.561	-7.367	-9.903	-18.003	-9.568	-13.962

EXISTING LAND USE – AREA E



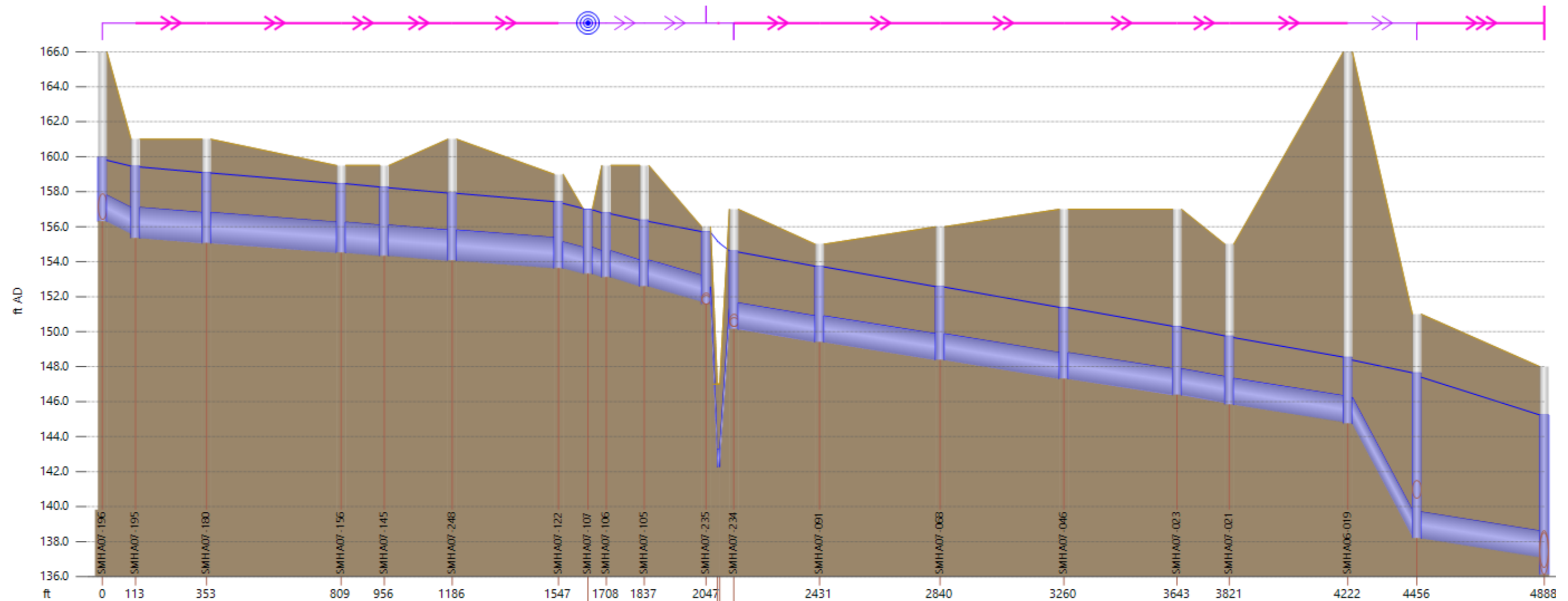
Link	-	-	-	SMH B08-045A.1	SMH B08-047.1	-	SMH B08-044.1	SMH B08-037.1	SMH B08-043.1	SMH B07-108.1	SMH B07-107.1
length (ft)	-	60.0	-	310.0	458.0	-	401.0	341.0	459.2	464.7	308.9
width (in)	-	21.0	-	21.0	21.0	-	21.0	21.0	21.0	21.0	21.0
us inv (ft AD)	-	-	-	207.732	206.750	-	205.000	202.150	200.680	198.840	197.000
ds inv (ft AD)	-	-	-	206.750	205.233	-	202.250	200.780	198.840	197.000	194.107
grad (%)	-	-	-	0.317	0.331	-	0.686	0.402	0.401	0.396	0.937
surc	-	0.78	-	0.76	0.73	-	0.71	0.70	0.71	0.70	0.53
r.pfc (MGD)	-	5.76	-	5.76	5.89	-	8.48	6.49	6.48	6.45	9.91
DS flow (MGD)	-	-	-	5.2707	5.2707	-	5.3000	5.3032	5.3031	5.3031	5.3031
Node	-	-	-	SMH B08-047	SMH B08-229	SMH B08-044	SMH B08-037	SMH B08-043	SMH B07-108	SMH B07-107	-
ground (ft AD)	-	-	221.854	220.847	218.361	218.361	212.662	209.204	206.463	207.955	210.904
level (ft AD)	-	-	209.080	208.068	206.386	206.059	203.479	201.956	200.078	197.921	195.031
flood dep (ft)	-	-	-12.774	-12.779	-11.975	-12.302	-9.183	-7.248	-6.385	-10.034	-15.873

EXISTING LAND USE – AREA G



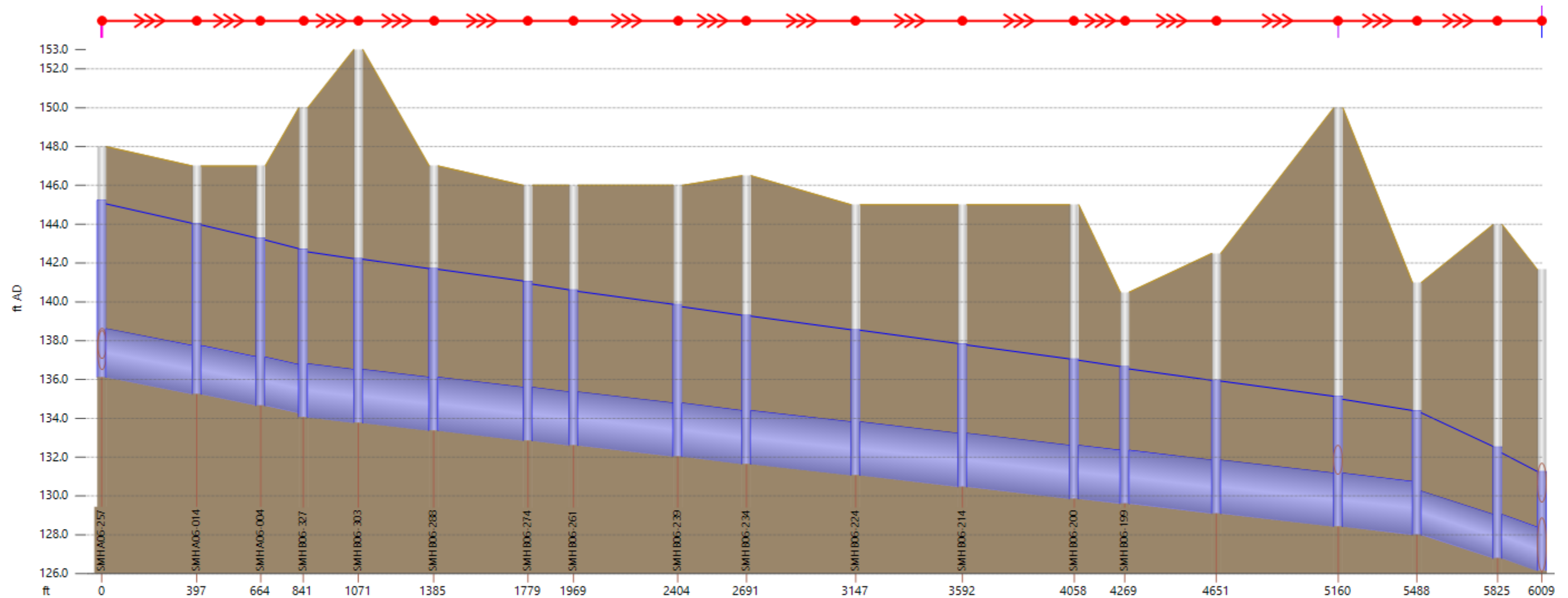
Link	SMH A08-010.1	-	SMH B08-196.1	-	SMH B08-105.1	SMH B08-083.1	SMH B08-077.1	SMH B08-066.1	-	-	-	-	-	-	-	-
length (ft)	382.5	147.9	234.6	200.3	394.4	399.4	304.0	322.1	179.5	85.6	168.0	178.0	172.0	157.2	100.0	-
width (in)	8.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	-
us inv (ft AD)	245.580	239.840	235.400	233.990	231.880	229.840	228.440	227.340	226.180	-	216.100	214.030	212.580	211.300	-	-
ds inv (ft AD)	239.840	235.400	233.990	232.080	230.040	228.640	227.530	226.380	223.990	-	214.230	212.580	211.500	210.500	-	-
grad (%)	1.501	3.002	0.601	0.954	0.467	0.300	0.299	0.298	1.220	9.100	1.113	0.815	0.628	0.509	0.929	-
surc	0.38	0.49	0.49	0.31	0.37	0.43	0.43	0.43	0.25	0.19	0.29	0.32	0.32	0.34	0.29	-
r.pfc (MGD)	0.96	1.35	0.61	1.38	0.97	0.78	0.77	0.77	2.54	6.95	2.43	2.08	1.83	1.64	2.22	-
DS flow (MGD)	0.2779	0.2779	0.2779	0.2779	0.2779	0.2900	0.2900	0.2900	0.2900	-	0.3819	0.3819	0.3819	0.3819	0.3819	-
Node	-	SMH B08-143	-	SMH B08-113	SMH B08-105	SMH B08-083	SMH B08-077	SMH B08-066	SMH B08-062	-	-	-	-	-	-	-
ground (ft AD)	252.381	246.609	243.258	240.770	239.440	240.920	243.415	243.560	241.150	-	-	230.810	225.000	221.960	-	-
level (ft AD)	245.835	240.057	235.727	234.252	232.191	230.199	228.799	227.700	226.429	-	-	214.326	212.897	211.637	-	-
flood dep (ft)	-6.546	-6.552	-7.531	-6.518	-7.249	-10.721	-14.616	-15.860	-14.721	-12.840	-	-16.484	-12.103	-10.323	-8.412	-

BUILDOUT LAND USE – AREA B



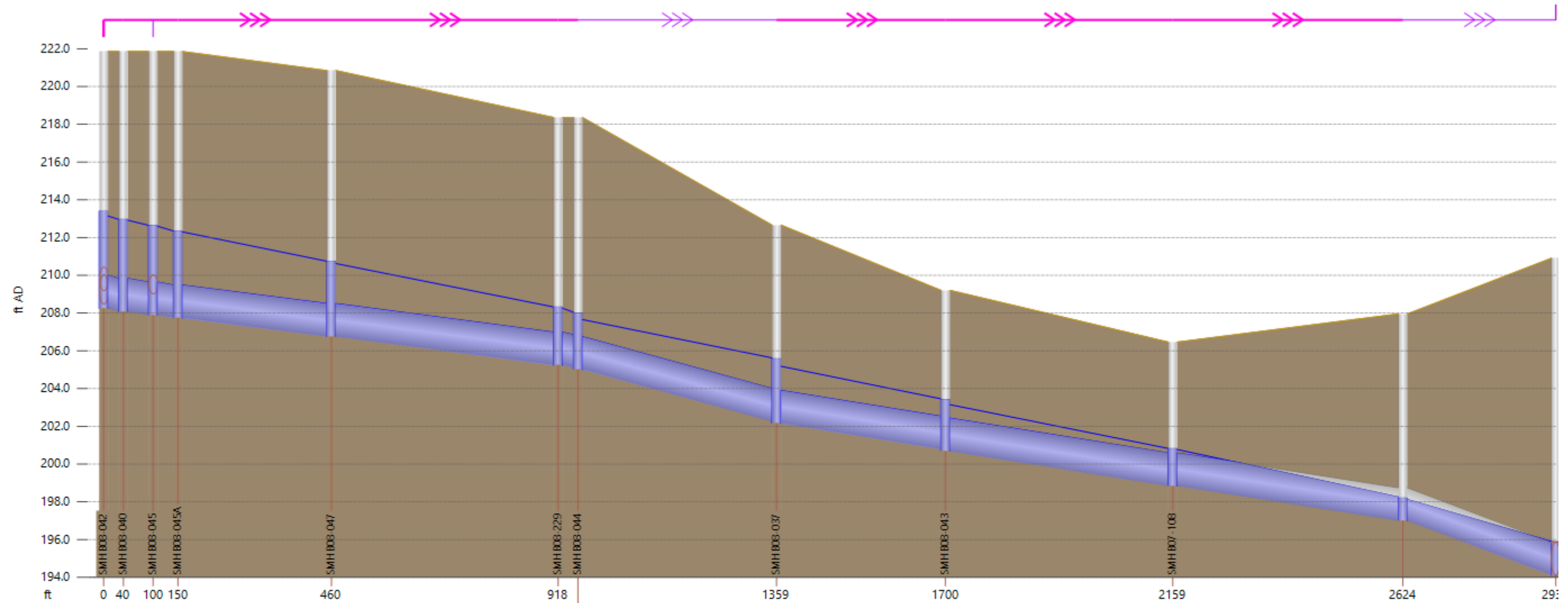
Link	-	-	SMH A07-180.1	-	-	SMH A07-248.1	-	-	-	-	-	SMH A07-091.1	SMH A07-068.1	SMH A07-046.1	-	SMH A07-021.1	-	SMH B06-329.1	
length (ft)	112.5	240.7	456.0	146.8	230.3	360.3	99.4	128.8	209.5	-	290.6	408.7	419.5	383.8	177.3	401.8	233.8	431.9	
width (in)	18.0	21.0	21.0	21.0	21.0	21.0	18.0	18.0	18.0	-	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	
us inv (ft AD)	-	155.350	155.060	-	154.340	154.060	-	-	152.590	-	150.140	149.400	148.380	147.300	146.380	145.830	144.740	138.190	
ds inv (ft AD)	-	155.060	154.510	-	154.060	153.630	-	-	151.720	-	149.400	148.380	147.300	146.380	145.930	144.840	138.290	137.110	
grad (%)	0.622	0.120	0.121	0.116	0.122	0.119	-	0.411	0.415	-	0.255	0.250	0.257	0.240	0.254	0.246	2.759	0.250	
surc	1.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	-	2.00	2.00	2.00	2.00	2.00	2.00	1.00	2.00	
r.pfc (MGD)	5.36	3.56	3.56	3.49	3.57	3.54	3.79	4.36	4.38	-	3.43	3.39	3.45	3.32	3.42	3.37	11.28	3.40	
DS flow (MGD)	-	3.6922	3.6921	3.6921	3.6921	3.6920	-	-	3.6350	-	3.6331	3.6319	3.6309	3.6307	3.6316	3.6328	3.6340	4.8525	
Node	-	SMH A07-180	-	-	-	-	-	-	-	-	SMH A07-091	SMH A07-068	SMH A07-046	-	-	SMH A06-019	SMH B06-329	-	
ground (ft AD)	-	161.000	159.500	-	161.000	159.000	-	-	-	-	155.000	156.000	157.000	157.000	155.000	166.000	151.000	148.000	
level (ft AD)	-	159.098	158.474	-	157.925	157.432	-	-	-	-	153.744	152.576	151.392	150.307	149.750	148.534	147.638	145.233	
flood dep (ft)	-1.543	-1.902	-1.026	-1.234	-3.075	-1.568	-	-	-3.128	-	-2.386	-1.256	-3.424	-5.608	-6.693	-5.250	-17.466	-3.362	-2.767

BUILDOUT LAND USE – AREA C



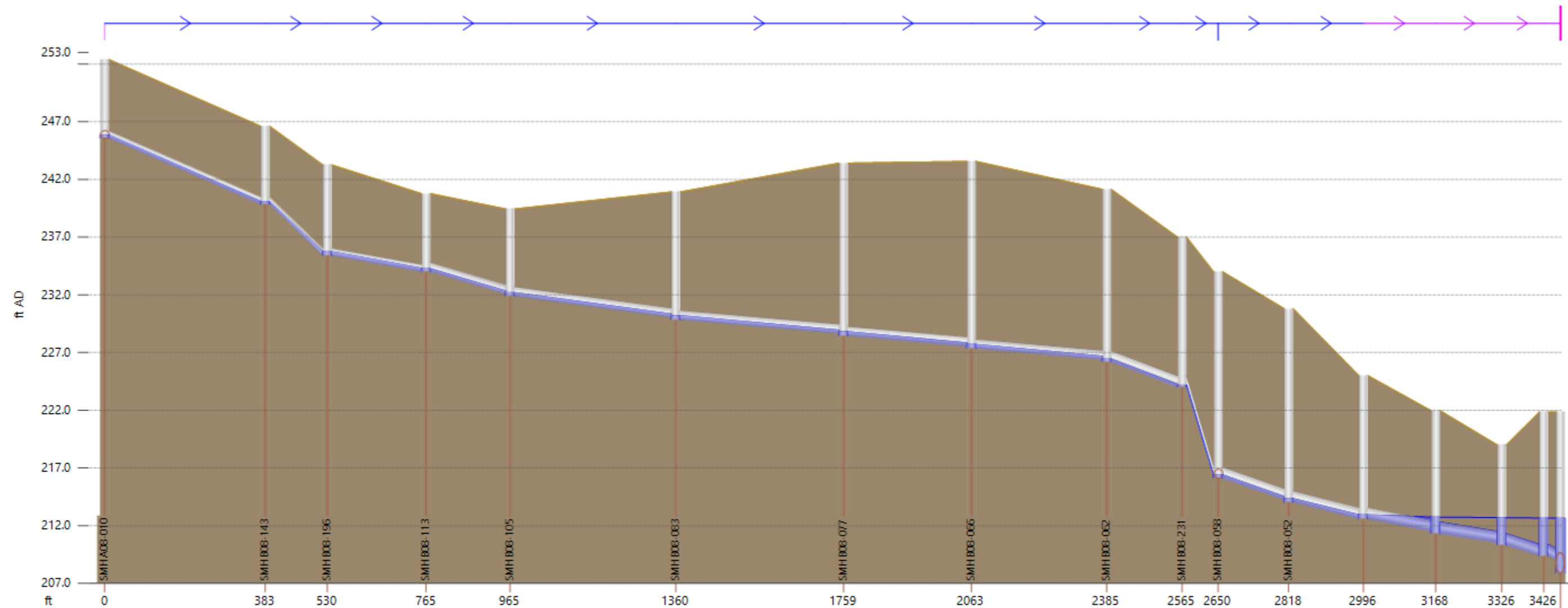
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length (ft)	396.7	267.4	177.3	229.3	314.6	393.4	190.1	435.0	287.1	455.6	445.4	466.4	210.4	382.2	509.2	327.5	337.3	184.4
width (in)	30.0	30.0	30.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	27.0	27.0
us inv (ft AD)	136.110	135.240	-	134.050	133.760	133.360	-	132.600	132.030	131.640	131.060	130.470	129.850	129.600	129.090	128.420	127.990	-
ds inv (ft AD)	135.240	134.660	-	133.760	133.360	132.840	-	132.030	131.640	131.060	130.470	129.850	129.600	129.090	128.420	127.990	126.792	-
grad (%)	0.219	0.217	0.220	0.126	0.127	0.132	0.126	0.131	0.136	0.127	0.132	0.133	0.119	0.133	0.132	0.131	0.355	0.358
surc	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
r.pfc (MGD)	12.42	12.35	12.43	12.16	12.19	12.43	12.15	12.37	12.60	12.20	12.44	12.46	11.78	12.49	12.40	12.39	11.93	11.98
DS flow (MGD)	13.2598	13.2587	-	13.2570	13.3380	13.3370	-	13.3354	13.3348	13.3340	13.3333	13.3327	13.3323	13.3318	13.3313	14.2827	14.2828	-
Node	-	-	-	-	-	-	-	-	-	SMH B06-224	SMH B06-214	-	-	SMH B06-186	SMH B06-163	-	-	-
ground (ft AD)	-	147.000	-	-	153.000	147.000	146.000	146.000	146.000	146.500	145.000	145.000	145.000	140.500	142.500	150.000	141.000	143.984
level (ft AD)	-	144.039	-	-	142.225	141.711	141.059	140.614	139.861	139.304	138.562	137.847	137.055	136.658	135.954	135.125	134.398	132.519
flood dep (ft)	-2.767	-2.961	-3.716	-7.281	-10.775	-5.289	-4.941	-5.386	-6.139	-7.196	-6.438	-7.153	-7.945	-3.842	-6.546	-14.875	-6.602	-11.465

BUILDOUT LAND USE – AREA E



Link	-	-	-	SMH B08-045A.1	SMH B08-047.1	-	SMH B08-044.1	SMH B08-037.1	SMH B08-043.1	SMH B07-108.1	SMH B07-107.1
length (ft)	-	60.0	-	310.0	458.0	-	401.0	341.0	459.2	464.7	308.9
width (in)	-	21.0	-	21.0	21.0	-	21.0	21.0	21.0	21.0	21.0
us inv (ft AD)	-	-	-	207.732	206.750	-	205.000	202.150	200.680	198.840	197.000
ds inv (ft AD)	-	-	-	206.750	205.233	-	202.250	200.780	198.840	197.000	194.107
grad (%)	-	-	-	0.317	0.331	-	0.686	0.402	0.401	0.396	0.937
surc	-	2.00	-	2.00	2.00	-	1.00	2.00	2.00	2.00	1.00
r.pfc (MGD)	-	5.76	-	5.76	5.89	-	8.48	6.49	6.48	6.45	9.91
DS flow (MGD)	-	-	-	7.2196	7.2195	-	7.2509	7.2534	7.2534	7.2534	7.2522
Node	-	-	-	SMH B08-047	SMH B08-229	SMH B08-044	SMH B08-037	SMH B08-043	SMH B07-108	SMH B07-107	-
ground (ft AD)	-	-	221.854	220.847	218.361	218.361	212.662	209.204	206.463	207.955	210.904
level (ft AD)	-	-	212.343	210.734	208.318	208.010	205.584	203.427	200.820	198.192	195.893
flood dep (ft)	-	-	-9.511	-10.113	-10.043	-10.351	-7.078	-5.777	-5.643	-9.763	-15.011

BUILDOUT LAND USE – AREA G



Link length (ft)	SMH A08-010.1	-	SMH B08-196.1	-	SMH B08-105.1	SMH B08-083.1	SMH B08-077.1	SMH B08-066.1	-	-	-	-	-	-	-	-	-	
width (in)	382.5	147.9	234.6	200.3	394.4	399.4	304.0	322.1	179.5	85.6	168.0	178.0	172.0	157.2	100.0	-	-	
us inv (ft AD)	8.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	-	-	
ds inv (ft AD)	245.580	239.840	235.400	233.990	231.880	229.840	228.440	227.340	226.180	-	216.100	214.030	212.580	211.300	-	-	-	
grad (%)	239.840	235.400	233.990	232.080	230.040	228.640	227.530	226.380	223.990	-	214.230	212.580	211.500	210.500	-	-	-	
surc	1.501	3.002	0.601	0.954	0.467	0.300	0.299	0.298	1.220	9.100	1.113	0.815	0.628	0.509	0.929	-	-	
r.pfc (MGD)	0.38	0.49	0.49	0.31	0.37	0.43	0.43	0.43	0.25	0.19	0.29	0.36	1.00	1.00	1.00	-	-	
DS flow (MGD)	0.96	1.35	0.61	1.38	0.97	0.78	0.77	0.77	2.54	6.95	2.43	2.08	1.83	1.64	2.22	-	-	
Node	0.2779	0.2779	0.2779	0.2779	0.2779	0.2900	0.2900	0.2900	0.2900	-	-	0.3825	0.3827	0.3871	0.3878	0.3885	-	-
ground (ft AD)	-	SMH B08-143	-	SMH B08-113	SMH B08-105	SMH B08-083	SMH B08-077	SMH B08-066	SMH B08-062	-	-	-	-	-	-	-	-	
level (ft AD)	252.381	246.609	243.258	240.770	239.440	240.920	243.415	243.560	241.150	-	-	230.810	225.000	221.960	-	-	-	
flood dep (ft)	245.835	240.057	235.727	234.252	232.191	230.199	228.799	227.700	226.429	-	-	214.326	212.939	212.742	-	-	-	
	-6.546	-6.552	-7.531	-6.518	-7.249	-10.721	-14.616	-15.860	-14.721	-12.840	-	-16.484	-12.061	-9.218	-6.307	-	-	

APPENDIX F – PROPOSED CAPACITY IMPROVEMENT PROJECT DETAILS

Project 1: Pump Station 26 Capacity Improvement and Sierra College Blvd. Improvement

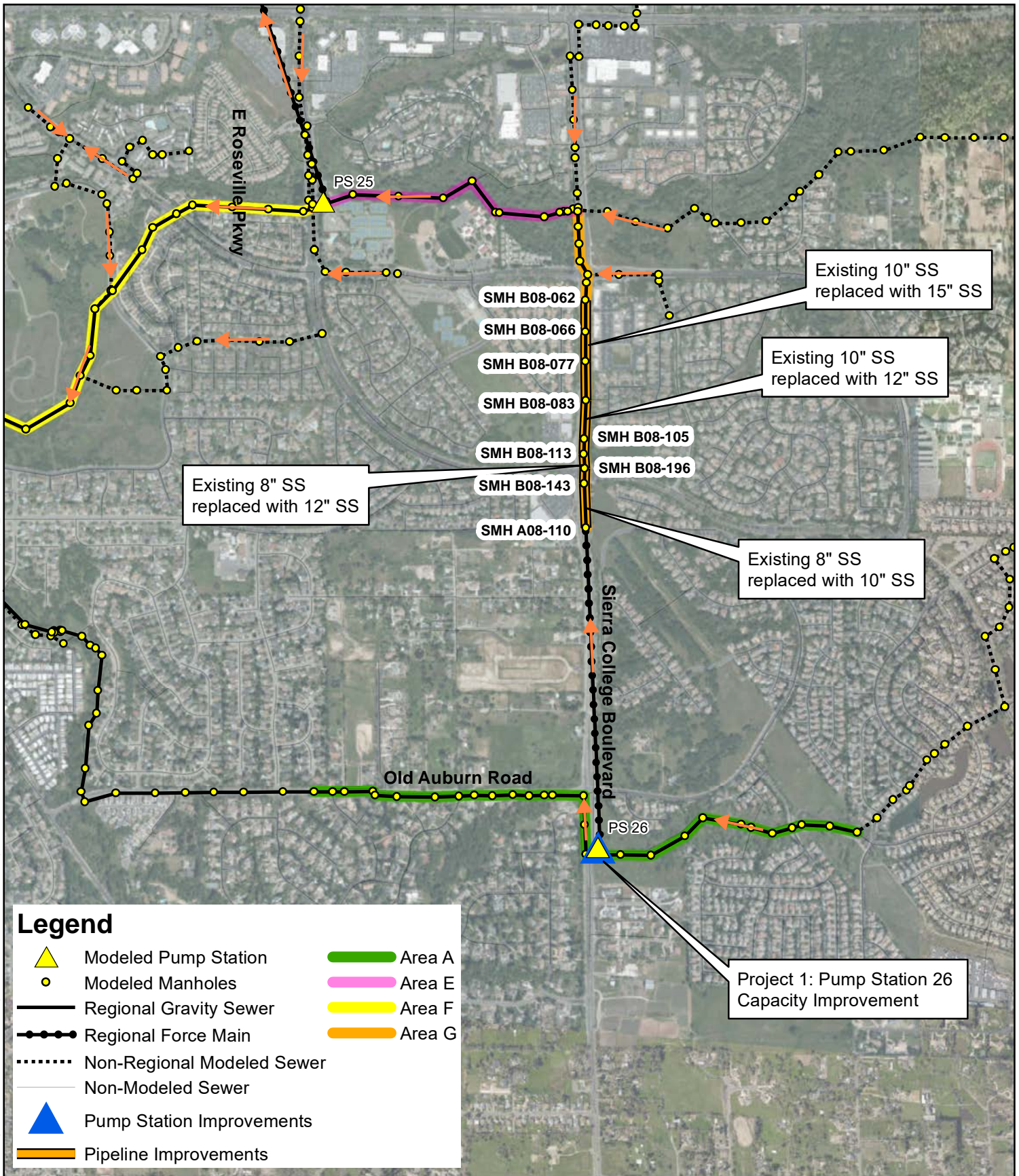
PROJECT DESCRIPTION

Project ID 1
 Project Name Pump Station 26 Capacity Improvement and Sierra College Blvd. Improvement
 Project Location PS 26 and Sierra College Boulevard
 Description Increased Capacity of PS 26 and sewers on Sierra College Blvd (from 0.43 to 1.6 mgd)
 Estimated Capital Imp. Cost \$1,606,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Pipe cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method

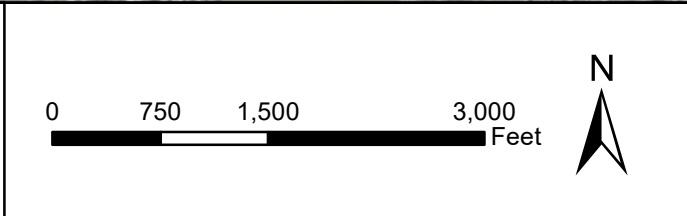
PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH A08-010	SMH B08-143	8	10	383	1.50	7	Open Cut	\$171	\$ 65,363
SMH B08-143	SMH B08-196	8	10	148	3.00	7	Open Cut	\$171	\$ 25,274
SMH B08-196	SMH B08-113	8	12	235	0.60	7	Open Cut	\$189	\$ 44,236
SMH B08-113	SMH B08-105	10	12	200	0.95	7	Open Cut	\$189	\$ 37,769
SMH B08-105	SMH B08-083	10	12	394	0.47	9	Open Cut	\$189	\$ 74,368
SMH B08-083	SMH B08-077	10	15	399	0.30	13	Open Cut	\$242	\$ 96,492
SMH B08-077	SMH B08-066	10	15	304	0.30	16	Open Cut	\$259	\$ 78,818
SMH B08-066	SMH B08-062	10	15	322	0.30	15	Open Cut	\$259	\$ 83,511
Baseline Pipeline Construction Cost:									\$ 505,831
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of pipe construction cost)									\$ 50,583
Remove & Replace Factor (5% of pipe construction cost)									\$ 25,292
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 581,705
Pumps (including 8.25% sales tax)									\$ 164,540
Allowance for new PG&E Service									\$ 20,000
Electrical improvements (new service, new MCC, new cables, soft starts)									\$ 35,000
Installation (25% of raw cost)									\$ 54,885
Piping & Structural Modifications Allowance									\$ 25,000
Contractor Overhead & Profit (20%)									\$ 59,885
Pump Station Construction Cost Subtotal:									\$ 359,310
Construction Subtotal:									\$ 941,015
Mobilization/Demobilization (5% of subtotal)									\$ 47,051
Construction Total:									\$ 988,066
Contingencies (30% of construction subtotal)									\$ 296,420
Total Estimated Construction Cost:									\$ 1,284,486
Engineering, Administration, Legal (25% of construction cost)									\$ 321,121
Estimated Capital Improvement Cost:									\$ 1,606,000

Figure Exported: 6/15/2020, By: apdavis, Using: \\woodandcurran\shared\Projects\RM\WC\0091\Roseville_City\0011183.00_SPWA_Systems_Evaluation\GIS3_MXD\Improvement Project_1_cvl.mxd



Improvement Project 1
 South Placer Wastewater Authority
 2020 Systems Evaluation



WOODARD & CURRAN
 Project #: 0011183.00
 Map Created: June 2020

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Project 2: Eureka Road, E Roseville Parkway Improvement

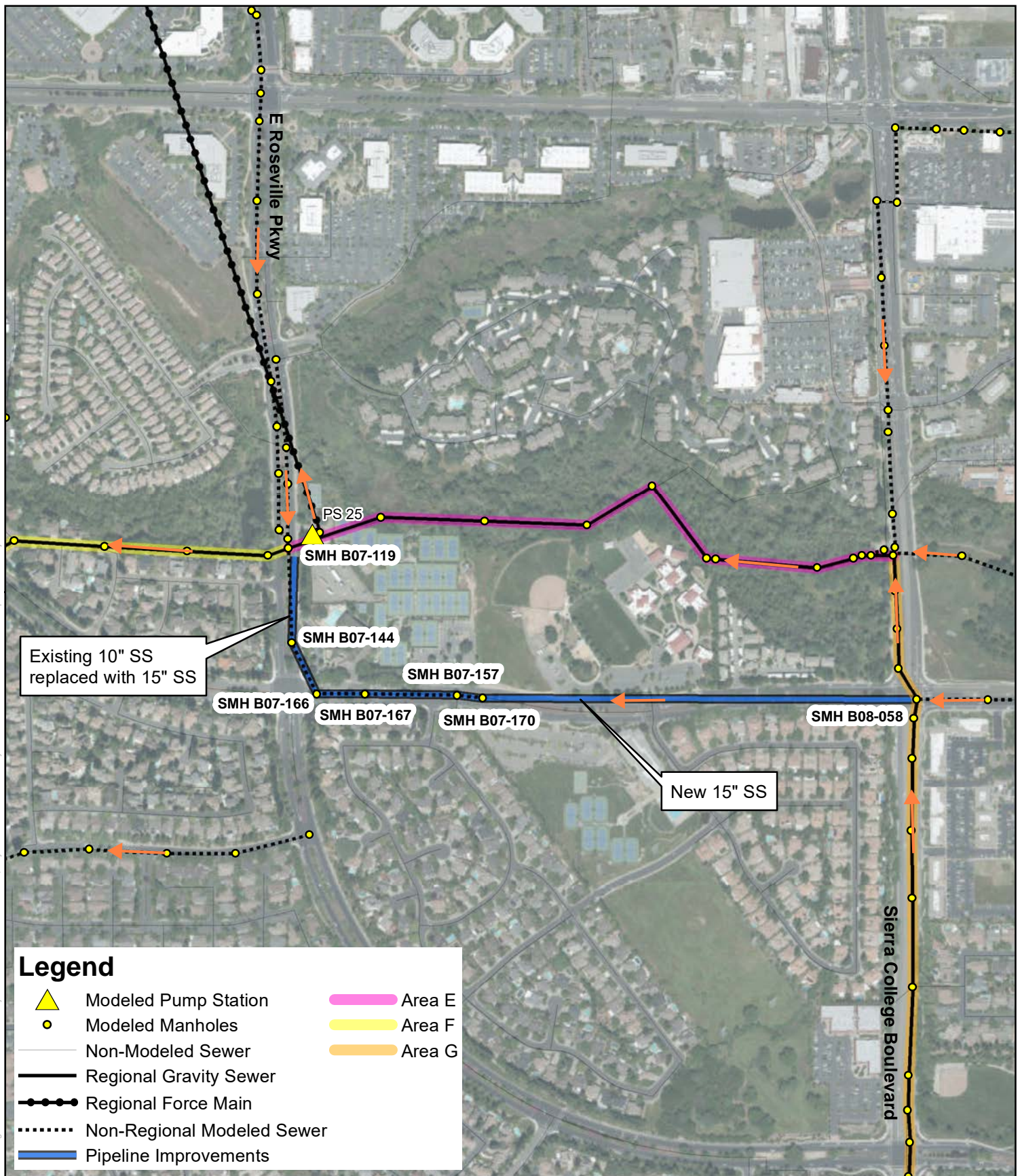
PROJECT DESCRIPTION

Project ID 2
 Project Name Eureka Road, E Roseville Parkway Improvement
 Project Location Eureka Road and E. Roseville Parkway
 Description Redirect flows from PS 26 and Sierra College Blvd. down Eureka Rd via upsizing of approximately 1,310ft, installing approximately 2,740 ft of new 15in pipe and 4 new manholes.
 Estimated Capital Imp. Cost \$1,831,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method











PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH B08-058	SMH B07-170	new pipe	15	697	0.22	15	Open Cut	\$259	\$ 180,608
SMH B07-170	SMH B07-157	new pipe	15	1942	0.25	13	Open Cut	\$242	\$ 469,198
SMH B07-157	SMH B07-167	10	15	413	0.97	12	Open Cut	\$242	\$ 99,730
SMH B07-167	SMH B07-166	10	15	216	0.50	12	Open Cut	\$242	\$ 52,112
SMH B07-166	SMH B07-144	10	15	255	0.53	11	Open Cut	\$242	\$ 61,630
SMH B07-144	SMH B07-119	10	15	424	0.48	14	Open Cut	\$242	\$ 102,435
Baseline Pipeline Construction Cost:									\$ 965,712
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of upsized pipe construction cost)									\$ 31,591
Remove & Replace Factor (5% of upsized pipe construction cost)									\$ 15,795
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 1,013,098
Installation of 4 new manholes									\$ 60,000
Manhole Construction Cost Subtotal:									\$ 60,000
Construction Subtotal:									\$ 1,073,098
Mobilization/Demobilization (5% of subtotal)									\$ 53,655
Construction Total									\$ 1,126,753
Contingencies (30% of construction subtotal)									\$ 338,026
Total Estimated Construction Cost:									\$ 1,464,779
Engineering, Administration, Legal (25% of construction cost)									\$ 366,195
Estimated Capital Improvement Cost:									\$ 1,831,000

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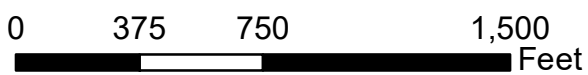


Legend

-  Modeled Pump Station
-  Modeled Manholes
-  Non-Modeled Sewer
-  Regional Gravity Sewer
-  Regional Force Main
-  Non-Regional Modeled Sewer
-  Pipeline Improvements
-  Area E
-  Area F
-  Area G

Improvement Project 2

South Placer Wastewater Authority
2020 Systems Evaluation



Project #: 0011183.00
Map Created: June 2020

Project 3 Alternative A: Pump Station 25 Improvements

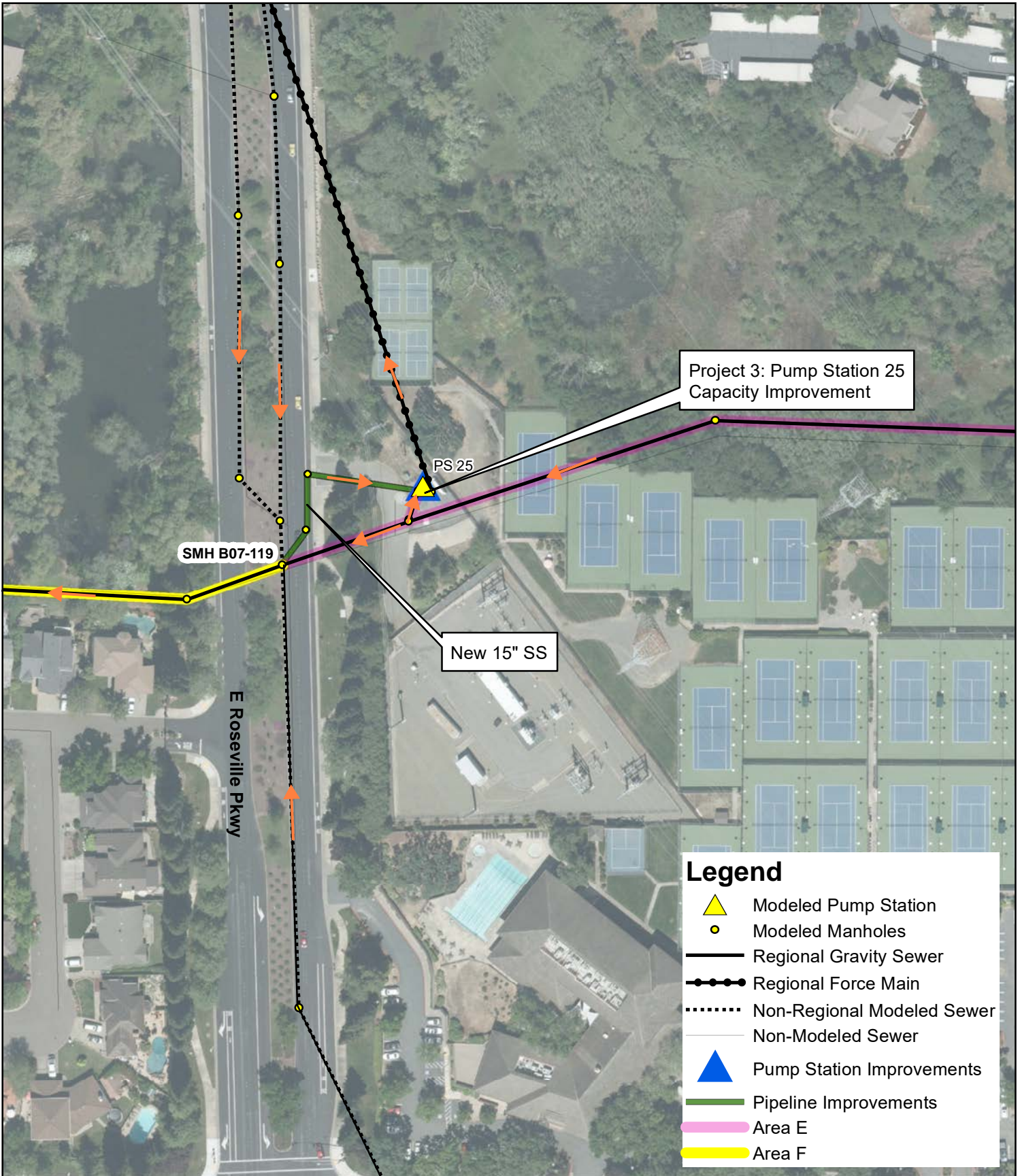
PROJECT DESCRIPTION

Project ID 3 Alternative A
 Project Name Pump Station 25 Improvements
 Project Location PS 25 (pumps)
 Description New weir structure or adjustments to existing structure at PS 25
 Estimated Capital Imp. Cost \$758,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method

PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH B07-119	SMH B07-119_DU2	new pipe	18	10	2%	17	Open Cut	\$298	\$ 2,982
SMH B07-119_DU2	PS 25 Wetwell	new pipe	15	215	2%	14	Open Cut	\$242	\$ 51,942
Baseline Pipeline Construction Cost:									\$ 54,924
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of pipe construction cost)									\$ -
Remove & Replace Factor (5% of pipe construction cost)									\$ -
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 54,924
Installation of 2 new manhole									\$ 30,000
Manhole Construction Cost Subtotal:									\$ 30,000
Pumps (including 8.25% sales tax)									\$ 164,540
Allowance for new PG&E Service									\$ 20,000
Electrical improvements (new service, new MCC, new cables)									\$ 35,000
Installation (25% of raw cost)									\$ 54,885
Piping & Structural Modifications Allowance									\$ 25,000
Contractor Overhead & Profit (20%)									\$ 59,885
Pump Station Construction Cost Subtotal:									\$ 359,310
Construction Subtotal:									\$ 444,234
Mobilization/Demobilization (5% of subtotal)									\$ 22,212
Estimated Construction Cost Subtotal:									\$ 466,446
Contingencies (30% of construction subtotal)									\$ 139,934
Total Estimated Construction Cost:									\$ 606,380
Engineering, Administration, Legal (25% of construction cost)									\$ 151,595
Estimated Capital Improvement Cost:									\$ 758,000

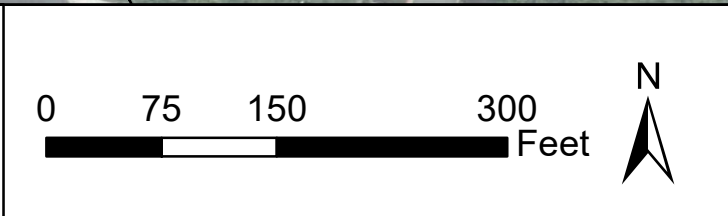
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Legend

- Modeled Pump Station
- Modeled Manholes
- Regional Gravity Sewer
- Regional Force Main
- Non-Regional Modeled Sewer
- Non-Modeled Sewer
- Pump Station Improvements
- Pipeline Improvements
- Area E
- Area F

Improvement Project 3
 South Placer Wastewater Authority
 2020 Systems Evaluation



Project #: 0011183.00
 Map Created: June 2020

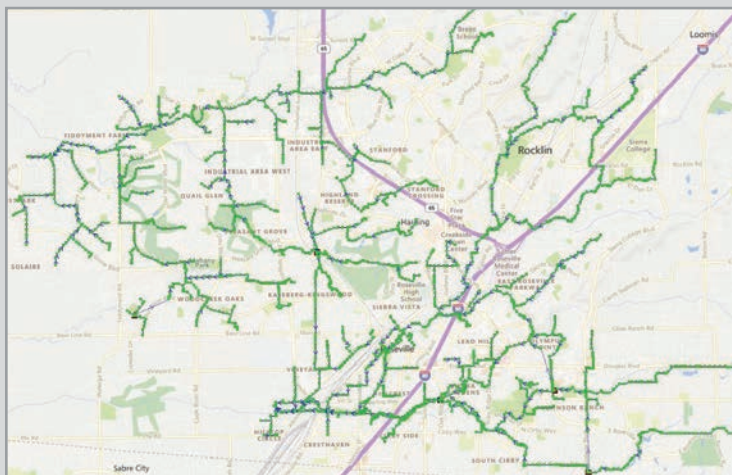
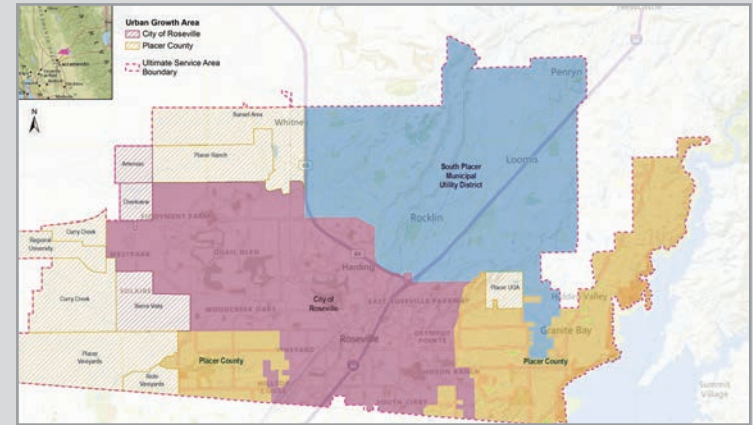
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