

# WATER RESOURCES - DRAINAGE

## EXECUTIVE SUMMARY

The Department of Water Resources (DWR) constructs drainage improvement projects intended to mitigate or prevent flood damage in developed areas. Projects are intended to minimize flooding during large storm events through upgrading existing portions of the drainage system, adding new facilities to the existing system, and by ensuring the reliability of existing drainage facilities through back-up facilities. This report summarizes those construction projects identified in the Five-Year Capital Improvement Plan (CIP) for the period from Fiscal Year 2016-17 through Fiscal Year 2020-21.

Most of the drainage projects consist of upgrades (either by upsizing in place or by construction of parallel systems) to underground piped drainage systems in existing residential neighborhoods which have experienced flooding in the past. The existing systems that are upgraded are typically 40-years old or more and do not meet the current design standards for drainage capacity and flood protection. The goal of such projects is to bring the existing system as close as possible to meeting current standards and to minimize potential flood damage in a 100-year event.

DWR also constructs projects providing upgrades to existing drainage pump stations and creeks and channels. Pump station projects have included adding pumping capacity, upgrading old electrical systems, and installing back-up power sources and automated trash rakes. Creeks and channel projects have included improvements to existing linings and naturalization restorations.

The estimated capital cost for the 26 projects identified in the Five-Year CIP is \$41.6 million. There are four projects identified in the Five-Year CIP that either are under construction or will be substantially completed by DWR in Fiscal 2016-17. The following brief descriptions highlight three projects that demonstrate the magnitude and range of construction undertaken by DWR.

- **Keeney Way Storm Drain Improvement Project** -- This project includes the installation of new mainlines and drain inlets with Sacramento County Department of Transportation's (SacDOT) project to improve accessibility on Hurley Way and improvements to the Hurley Way/Morse Avenue intersection. This project will improve drainage on Hurley Way and Keeney Way. The storm drain system is comprised of backyard mainlines, roadside ditches, and grate-style drain inlets that easily clog with debris or get overwhelmed due to limited inlet capacity. The project will install larger pipes and inlets to replace the existing smaller drainage facilities. By teaming with SacDOT, DWR can share in the general project costs and help to eliminate the public nuisance of constructing under two separate contracts. **Estimated Total Cost: \$168,494**

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- **Cordova Creek Naturalization Project** -- This project will convert a section of Cordova Creek from a concrete lined channel into a natural meandering stream in the open space of the American River Parkway. The new creek section will include native wetland and riparian vegetation plantings and a walking trail with interpretive signs connecting the residential neighborhood to the south to the Jedediah Smith Memorial Trail (American River Bike Trail) to the north. The project will complement restored areas to the west and the native plant nursery and demonstration organic farm to the east. The project is encouraged by the 2008 American River Parkway Plan. The project is the result of a partnership between Sacramento County Departments of Water Resources & Regional Parks, Sacramento Area Flood Control Agency, Water Forum, City of Rancho Cordova, Soil Born Farms, and California Native Plant Society. The State of California's River Parkways Grant Program funds a significant portion of the project design and construction. Following the completion of construction, there will be monitoring of vegetation for an additional three years. **Estimated Total Cost: \$3,302,375**
- **D05 Howe Avenue Storm Drain Pump Station Rehabilitation** -- This project will increase pumping capacity, upgrade electrical systems, and make minor site improvements to the storm drain pump station. The pumping capacity increase will come from replacing four and rehabilitating three of the 56-year old pump/motor units. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues. **Estimated Total Cost: \$7,268,496**

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## PROJECT SUMMARY

Projects Not Appearing on Previous 5-Year CIP are Highlighted								
PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2016-17	FISCAL YEAR 2017-18	FISCAL YEAR 2018-19	FISCAL YEAR 2019-20	FISCAL YEAR 2020-21	TOTAL
1	Channel Lining Rehabilitation - Chicken Ranch Slough	66,739	279,981	503,750	0	0	0	\$850,470
2	Cordova Creek Naturalization Project	2,542,171	689,690	50,514	10,000	10,000	0	\$3,302,375
3	D01 Hagginbottom Storm Drain Pump Station Rehabilitation	0	422,176	870,800	0	0	0	\$1,292,976
4	D05 Howe Avenue Storm Drain Pump Station Rehabilitation	3,182,920	4,085,576	0	0	0	0	\$7,268,496
5	D06 North Mayhew Storm Drain Pump Station Rehabilitation	5,000	141,988	146,300	341,900	0	0	\$635,188
6	D10 Manlove Storm Drain Pump Station Generator Improvement	0	0	0	700,500	1,069,500	0	\$1,770,000
7	D24 North Lindale Storm Drain Pump Station Rehabilitation	0	0	293,200	407,000	0	0	\$700,200
8	D45 Franklin/Morrison Storm Drain Pump Station Rehabilitation	38,000	286,988	505,000	0	0	0	\$829,988
9	El Camino Transportation Project - Phase 1	43,549	400,498	0	0	0	0	\$444,047
10	Foster Way Storm Drain Improvement	10,000	121,487	211,100	432,650	0	0	\$775,237
11	I Street/32nd Street Storm Drain Improvement	15,000	181,000	70,400	0	0	0	\$266,400
12	Keeney Way Storm Drain Improvement	15,000	153,494	0	0	0	0	\$168,494
13	Kings Way/Verna Way Storm Drain Improvement	170,962	68,999	285,000	601,750	0	0	\$1,126,711
14	Mather Dam Improvement	657,578	1,007,700	4,455,500	0	0	0	\$6,120,778
15	Miramar Storm Drain Improvement	40,000	217,987	280,000	0	0	0	\$537,987
16	Ravenwood Avenue/Eastern Avenue Storm Drain Improvement	1,390,096	41,420	0	0	0	0	\$1,431,516
17	Rich Hill Drive Storm Drain Improvement	129,269	0	0	433,640	906,660	0	\$1,469,569
18	Silver Legends Storm Drain Improvement	4,958	0	52,300	91,200	0	0	\$148,458
19	Storm Drain Improvements - 2020	0	0	0	89,000	500,000	2,100,000	\$2,689,000
20	Storm Drain Improvements - 2021	0	0	0	0	89,000	500,000	\$589,000
21	Storm Drain Maintenance & Operations Equipment	0	174,000	25,000	65,000	0	94,000	\$358,000
22	Storm Drain Maintenance & Operations Projects - Various Locations	0	591,000	25,000	0	0	0	\$616,000
23	Storm Drain Pump Stations Rehabilitation - Phase 5	7,169	0	50,000	425,000	790,000	0	\$1,272,169

# WATER RESOURCES - DRAINAGE

## PROJECT SUMMARY

PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2016-17	FISCAL YEAR 2017-18	FISCAL YEAR 2018-19	FISCAL YEAR 2019-20	FISCAL YEAR 2020-21	TOTAL
24	Storm Drain Pump Stations Rehabilitation - Phase 6	7,169	0	0	50,000	425,000	790,000	\$1,272,169
25	Storm Drain Rehabilitation - Job Order Contracts (JOCs)	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	\$5,000,000
26	Upper Gerber Creek Improvements	25,000	318,999	370,000	0	0	0	\$713,999
	<b>TOTAL</b>	<b>\$8,350,580</b>	<b>\$10,182,983</b>	<b>\$9,193,864</b>	<b>\$4,647,640</b>	<b>\$4,790,160</b>	<b>\$4,484,000</b>	<b>\$41,649,227</b>

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## PRIOR-YEAR COMPLETED/CANCELLED PROJECTS SUMMARY

PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2016-17	FISCAL YEAR 2017-18	FISCAL YEAR 2018-19	FISCAL YEAR 2019-20	FISCAL YEAR 2020-21	TOTAL	REASON DROPPED
1	ALERT System Rehabilitation	388,157	0	0	0	0	0	<b>\$388,157</b>	Project completed
3	D02 Kadema Storm Drain Pump Station Rehabilitation	938,361	0	0	0	0	0	<b>\$938,361</b>	Project completed
5	D09 Mayhew Storm Drain Pump Station Rehabilitation	1,778,708	0	0	0	0	0	<b>\$1,778,708</b>	Project completed
10	Florin Road/Frasinetti Road Storm Drain Improvement	101,843	0	0	0	0	0	<b>\$101,843</b>	Project is no longer needed due to improvements by others
11	Kentfield Drive/Watt Avenue Storm Drain Improvement	705,231	0	0	0	0	0	<b>\$705,231</b>	Project completed
18	Storm Drain Pump Stations Rehabilitation - Phase 4	7,169	425,000	790,000	0	0	0	<b>\$1,222,169</b>	Project scope revised to create D06 North Mayhew & D24 North Lindale Storm Drain Pump Station Rehabilitation projects.
21	Walerga Road/Holworthy Way Storm Drain Improvement	14,540	0	0	0	0	0	<b>\$14,540</b>	Project transferred to maintenance section for minor improvements
	<b>TOTAL</b>	<b>\$3,934,009</b>	<b>\$425,000</b>	<b>\$790,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,149,009</b>	

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## Channel Lining Rehabilitation – Chicken Ranch Slough

Sacramento, CA 95828

Project #1

**Department:** Water Resources

**Estimated Project Cost:** \$850,470

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will upgrade the channel lining by replacing damaged or missing sections of lining. The upgrades will vary depending upon site-specific issues and will range from isolated repairs to the complete removal and replacement of lining sections. The improvements will correct long-standing maintenance issues.

# WATER RESOURCES - DRAINAGE

## Channel Lining Rehabilitation - Chicken Ranch Slough

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	100,000	425,000	0	0	0	525,000
Project Management/ Design (In-House)	51,539	134,981	15,000	0	0	0	201,520
Project Management/ Design (Consultant)	15,200	20,000	0	0	0	0	35,200
Construction Fees and Services	0	25,000	63,750	0	0	0	88,750
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>66,739</b>	<b>279,981</b>	<b>503,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,470</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	66,739	279,981	503,750	0	0	0	850,470
<b>TOTAL</b>	<b>66,739</b>	<b>279,981</b>	<b>503,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,470</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## Cordova Creek Naturalization Project

Rancho Cordova, CA 95670

Project #2

**Department:** Water Resources

**Estimated Project Cost:** \$3,302,375

**Expected Completion Date:** 2016

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund, State of CA River Parkways Grant, Sacramento Area Flood Control Agency (SAFCA), Regional Parks & Other Funding Sources



**Project Description:**

This project will convert a section of Cordova Creek from a concrete lined channel into a natural meandering stream in the open space of the American River Parkway. The new creek section will include native wetland and riparian vegetation plantings and a walking trail with interpretive signs connecting the residential neighborhood to the south to the Jedediah Smith Memorial Trail (American River Bike Trail) to the north. The project will complement restored areas to the west and the native plant nursery and demonstration organic farm to the east. The project is encouraged by the 2008 American River Parkway Plan. The project is the result of a partnership between Sacramento County Departments of Water Resources & Regional Parks, Sacramento Area Flood Control Agency, Water Forum, City of Rancho Cordova, Soil Born Farms, and California Native Plant Society. The State of California’s River Parkways Grant Program funds a significant portion of the project design and construction. Following the completion of construction, there will be monitoring of vegetation for an additional three years.



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## Cordova Creek Naturalization Project

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	1,595,000	533,362	0	0	0	0	2,128,362
Project Management/ Design (In-House)	584,998	52,980	10,000	10,000	10,000	0	667,978
Project Management/ Design (Consultant)	195,533	10,000	0	0	0	0	205,533
Construction Fees and Services	122,579	30,000	0	0	0	0	152,579
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	44,061	63,348	40,514	0	0	0	147,923
<b>TOTAL</b>	<b>2,542,171</b>	<b>689,690</b>	<b>50,514</b>	<b>10,000</b>	<b>10,000</b>	<b>0</b>	<b>3,302,375</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	1,501,421	-902,981	10,000	10,000	10,000	0	628,440
State of CA River Parkways Grant	640,000	1,092,407	0	0	0	0	1,732,407
Sacramento Area Flood Control Agency (SAFCA)	320,000	320,000	0	0	0	0	640,000
Sacramento County Regional Parks	33,271	131,916	6,000	0	0	0	171,187
Water Forum	20,997	13,835	0	0	0	0	34,832
City of Rancho Cordova	14,296	0	0	0	0	0	14,296
Soil Born Farms	0	34,513	34,514	0	0	0	69,027
CA Native Plant Society	12,186	0	0	0	0	0	12,186
<b>TOTAL</b>	<b>2,542,171</b>	<b>689,690</b>	<b>50,514</b>	<b>10,000</b>	<b>10,000</b>	<b>0</b>	<b>3,302,375</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D01 Hagginbottom Storm Drain Pump Station Rehabilitation

Sacramento, CA 95828

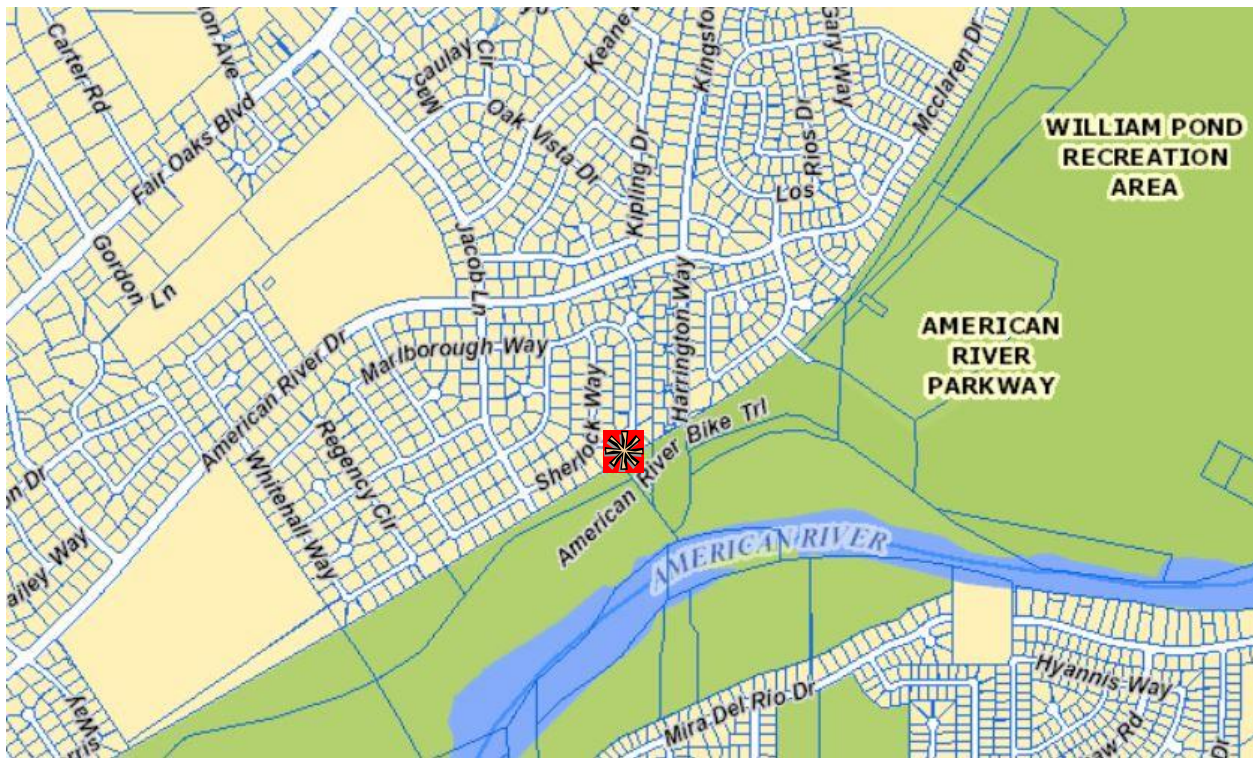
Project #3

**Department:** Water Resources

**Estimated Project Cost:** \$1,292,976

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project is one of the two projects developed from the Storm Drain Pump Stations Rehabilitation – Phase 3 project. This project will upgrade electrical systems and make minor site improvements to the storm drain pump station. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues.

# WATER RESOURCES - DRAINAGE

## D01 Hagginbottom Storm Drain Pump Station Rehabilitation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	182,700	730,800	0	0	0	913,500
Project Management/ Design (In-House)	0	79,476	20,000	0	0	0	99,476
Project Management/ Design (Consultant)	0	110,000	20,000	0	0	0	130,000
Construction Fees and Services	0	50,000	100,000	0	0	0	150,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>422,176</b>	<b>870,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,292,976</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	422,176	870,800	0	0	0	1,292,976
<b>TOTAL</b>	<b>0</b>	<b>422,176</b>	<b>870,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,292,976</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D05 Howe Avenue Storm Drain Pump Station Rehabilitation

Sacramento, CA 95825

Project #4

**Department:** Water Resources

**Estimated Project Cost:** \$7,268,496

**Expected Completion Date:** 2016

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund & SCWA Zone 11B Fund



### Project Description:

This project is the lone project developed from the Storm Drain Pump Stations Rehabilitation – Phase 1 project. This project will increase pumping capacity, upgrade electrical systems, and make minor site improvements to the storm drain pump station. The pumping capacity increase will come from replacing four and rehabilitating three of the 56-year old pump/motor units. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues.

# WATER RESOURCES - DRAINAGE

## D05 Howe Avenue Storm Drain Pump Station Rehabilitation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	1,625,000	3,650,600	0	0	0	0	5,275,600
Project Management/ Design (In-House)	646,918	61,976	0	0	0	0	708,894
Project Management/ Design (Consultant)	644,002	103,500	0	0	0	0	747,502
Construction Fees and Services	267,000	269,500	0	0	0	0	536,500
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>3,182,920</b>	<b>4,085,576</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,268,496</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	2,046,920	2,065,576	0	0	0	0	4,112,496
SCWA Zone 11B Fund	1,136,000	2,020,000	0	0	0	0	3,156,000
<b>TOTAL</b>	<b>3,182,920</b>	<b>4,085,576</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,268,496</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D06 North Mayhew Storm Drain Pump Station Rehabilitation

Sacramento, CA 95828

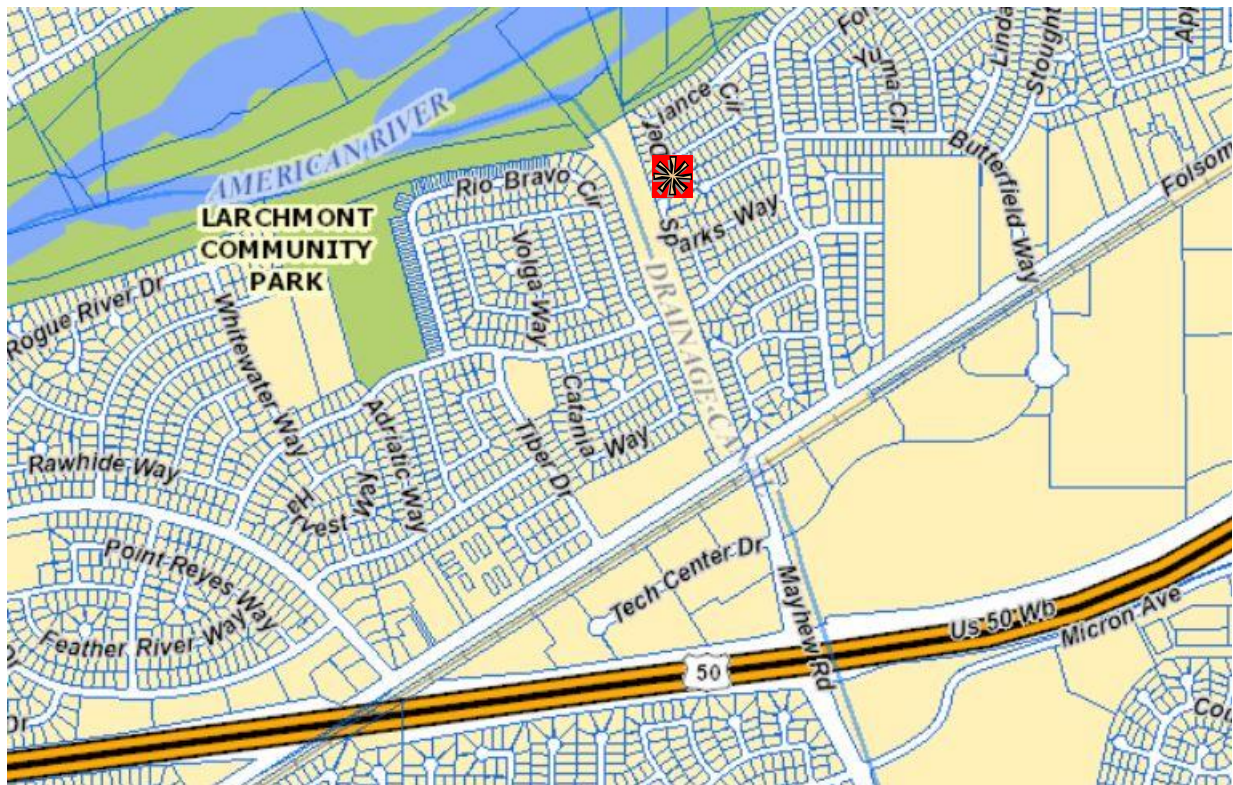
Project #5

**Department:** Water Resources

**Estimated Project Cost:** \$635,188

**Expected Completion Date:** 2018

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project is one of the two projects developed from the Storm Drain Pump Stations Rehabilitation – Phase 4 project. This project will upgrade electrical systems and make minor site improvements to the storm drain pump station. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues.

# WATER RESOURCES - DRAINAGE

## D06 North Mayhew Storm Drain Pump Station Rehabilitation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	66,300	265,400	0	0	331,700
Project Management/ Design (In-House)	5,000	71,988	15,000	10,000	0	0	101,988
Project Management/ Design (Consultant)	0	60,000	45,000	20,000	0	0	125,000
Construction Fees and Services	0	10,000	20,000	46,500	0	0	76,500
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>5,000</b>	<b>141,988</b>	<b>146,300</b>	<b>341,900</b>	<b>0</b>	<b>0</b>	<b>635,188</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	5,000	141,988	146,300	341,900	0	0	635,188
<b>TOTAL</b>	<b>5,000</b>	<b>141,988</b>	<b>146,300</b>	<b>341,900</b>	<b>0</b>	<b>0</b>	<b>635,188</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D10 Manlove Storm Drain Pump Station Generator Improvement

Sacramento, CA 95826

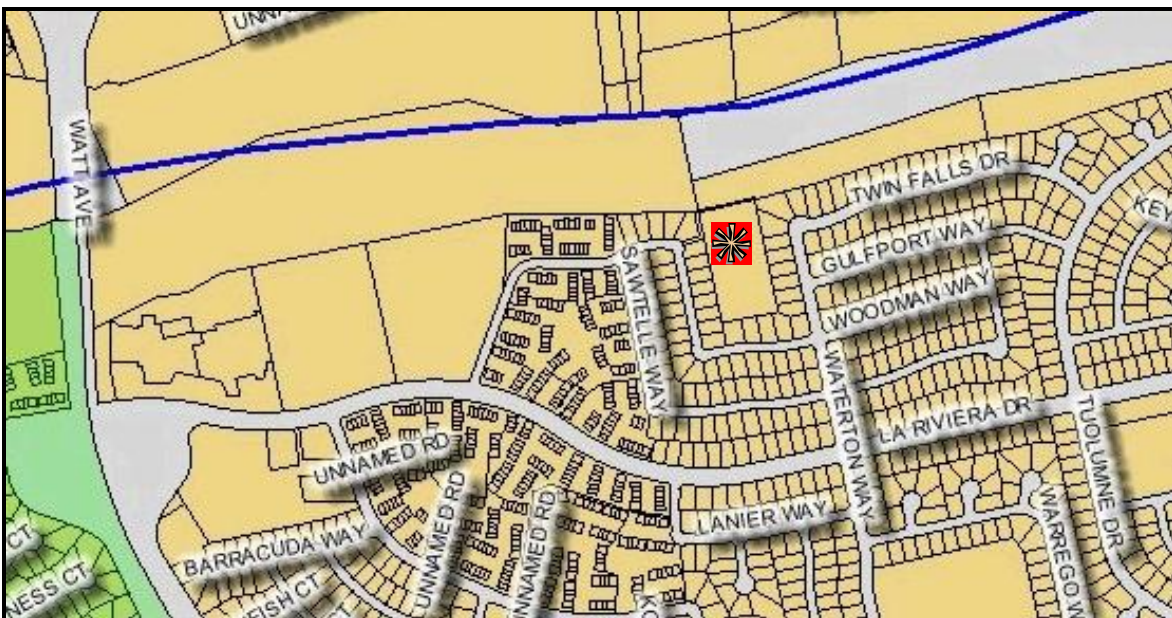
Project #6

**Department:** Water Resources

**Estimated Project Cost:** \$1,770,000

**Expected Completion Date:** 2019

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will alleviate garage, yard, and street flooding within the drainage system served by the pump station during SMUD power outages. The existing pump station does not have an emergency generator causing two of the three pumps to be impacted during a power outage. Therefore, to alleviate the flooding during power outages, an on-site emergency generator and electrical connections that automatically turn the generator "on" will be installed.



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## D10 Manlove Storm Drain Pump Station Generator Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	405,000	945,000	0	1,350,000
Project Management/ Design (In-House)	0	0	0	57,500	10,000	0	67,500
Project Management/ Design (Consultant)	0	0	0	182,500	20,000	0	202,500
Construction Fees and Services	0	0	0	55,500	94,500	0	150,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>700,500</b>	<b>1,069,500</b>	<b>0</b>	<b>1,770,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	0	0	700,500	1,069,500	0	1,770,000
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>700,500</b>	<b>1,069,500</b>	<b>0</b>	<b>1,770,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D24 North Lindale Storm Drain Pump Station Rehabilitation

Sacramento, CA 95828

Project #7

**Department:** Water Resources

**Estimated Project Cost:** \$700,200

**Expected Completion Date:** 2018

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project is one of the two projects developed from the Storm Drain Pump Stations Rehabilitation – Phase 4 project. This project will upgrade electrical systems and make minor site improvements to the storm drain pump station. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues.

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## D24 North Lindale Storm Drain Pump Station Rehabilitation

Estimated Project Costs	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
Construction Costs	0	0	79,200	316,800	0	0	396,000
Project Management/ Design (In-House)	0	0	75,000	15,000	0	0	90,000
Project Management/ Design (Consultant)	0	0	105,000	20,000	0	0	125,000
Construction Fees and Services	0	0	34,000	55,200	0	0	89,200
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>293,200</b>	<b>407,000</b>	<b>0</b>	<b>0</b>	<b>700,200</b>

Funding Sources	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
SWU Capital Construction Fund	0	0	293,200	407,000	0	0	700,200
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>293,200</b>	<b>407,000</b>	<b>0</b>	<b>0</b>	<b>700,200</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## D45 Franklin/Morrison Storm Drain Pump Station Rehabilitation

Sacramento, CA 95823

Project #8

**Department:** Water Resources

**Estimated Project Cost:** \$829,988

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project is one of the two projects developed from the Storm Drain Pump Stations Rehabilitation – Phase 3 project. This project will upgrade electrical systems and make minor site improvements to the storm drain pump station. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance issues. The site improvements will correct long-standing maintenance issues.

# WATER RESOURCES - DRAINAGE

## D45 Franklin/Morrison Storm Drain Pump Station Rehabilitation

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	100,000	400,000	0	0	0	500,000
Project Management/ Design (In-House)	25,000	66,988	15,000	0	0	0	106,988
Project Management/ Design (Consultant)	13,000	80,000	20,000	0	0	0	113,000
Construction Fees and Services	0	40,000	70,000	0	0	0	110,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>38,000</b>	<b>286,988</b>	<b>505,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>829,988</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	38,000	286,988	505,000	0	0	0	829,988
<b>TOTAL</b>	<b>38,000</b>	<b>286,988</b>	<b>505,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>829,988</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## El Camino Avenue Transportation Project – Phase 1

Sacramento, CA 95821

Project #9

**Department:** Water Resources

**Estimated Project Cost:** \$444,047

**Expected Completion Date:** 2016

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund



### **Project Description:**

This project was part of the Kings Way/Verna Way Storm Drain Improvement Project. The project was separated to coordinate storm drain improvements with the County of Sacramento Department of Transportation (SacDOT) El Camino Avenue – Street and Sidewalk Improvements Phase 1-Watt Avenue to Mission Avenue project. This project in conjunction with the Kings Way/Verna Way Storm Drain Improvement Project will alleviate structure, garage, yard, and street flooding in the surrounding streets near the intersection of Kings Way and Maryal Drive. The existing storm drain system is undersized compared to current drainage design standards. The project will install new mainlines and drain inlets on Lone Street, Roslyn Way, and Verna Way. By teaming with SacDOT, DWR can share in the general project costs and help to eliminate the public nuisance of constructing under two separate contracts.

# WATER RESOURCES - DRAINAGE

## El Camino Avenue Transportation Project - Phase 1

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	337,400	0	0	0	0	337,400
Project Management/ Design (In-House)	43,549	12,488	0	0	0	0	56,037
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	50,610	0	0	0	0	50,610
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>43,549</b>	<b>400,498</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>444,047</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	43,549	400,498	0	0	0	0	444,047
<b>TOTAL</b>	<b>43,549</b>	<b>400,498</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>444,047</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## Foster Way Storm Drain Improvement

Carmichael, CA 95608

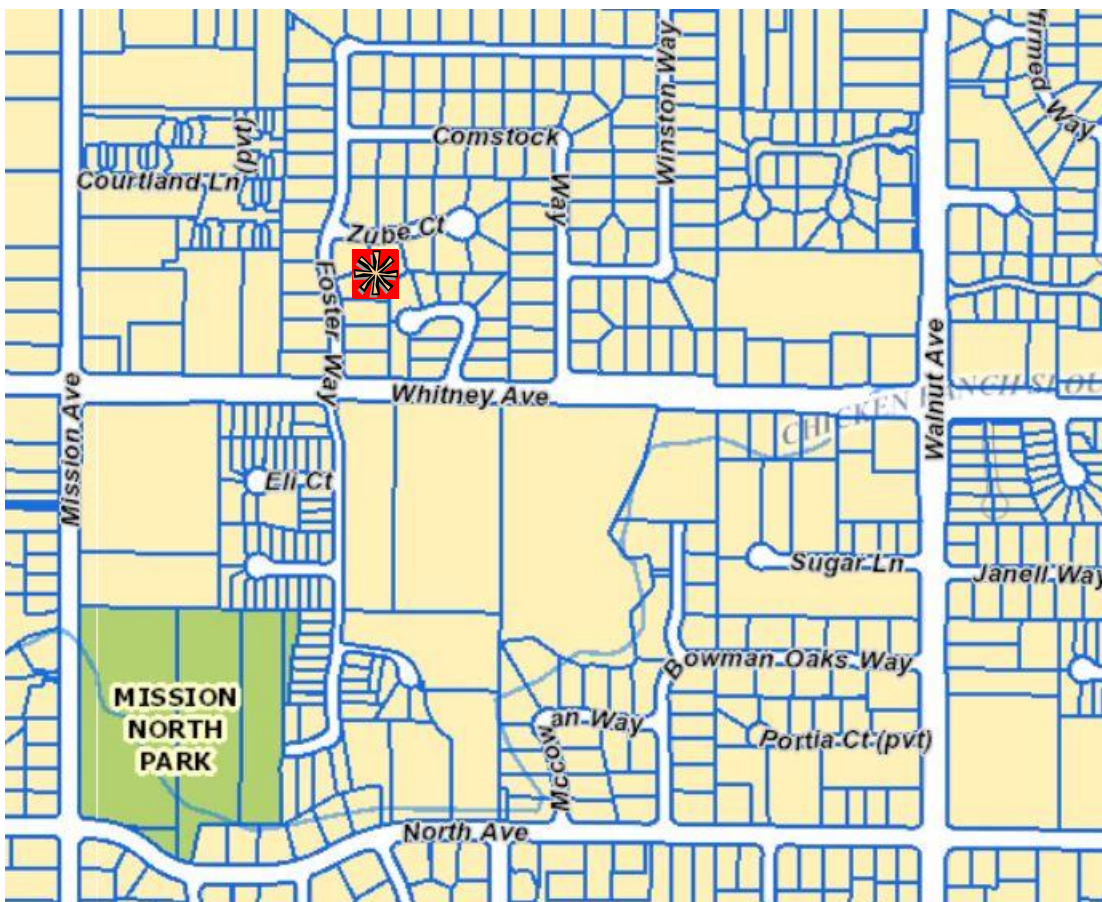
Project #10

**Department:** Water Resources

**Estimated Project Cost:** \$775,237

**Expected Completion Date:** 2018

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will improve drainage on Foster Way, Whitney Avenue, and Zube Court. The storm drain system is comprised of backyard mainlines and gutter drains that easily clog with debris or get overwhelmed due to limited inlet capacity. The project will install larger pipes and inlets to replace the existing smaller drainage facilities.



# WATER RESOURCES - DRAINAGE

## Foster Way Storm Drain Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	157,500	367,500	0	0	525,000
Project Management/ Design (In-House)	10,000	116,487	25,000	10,000	0	0	161,487
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	5,000	28,600	55,150	0	0	88,750
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>10,000</b>	<b>121,487</b>	<b>211,100</b>	<b>432,650</b>	<b>0</b>	<b>0</b>	<b>775,237</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	10,000	121,487	211,100	432,650	0	0	775,237
<b>TOTAL</b>	<b>10,000</b>	<b>121,487</b>	<b>211,100</b>	<b>432,650</b>	<b>0</b>	<b>0</b>	<b>775,237</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## I Street/32<sup>nd</sup> Street Storm Drain Improvement

North Highlands, CA 95660

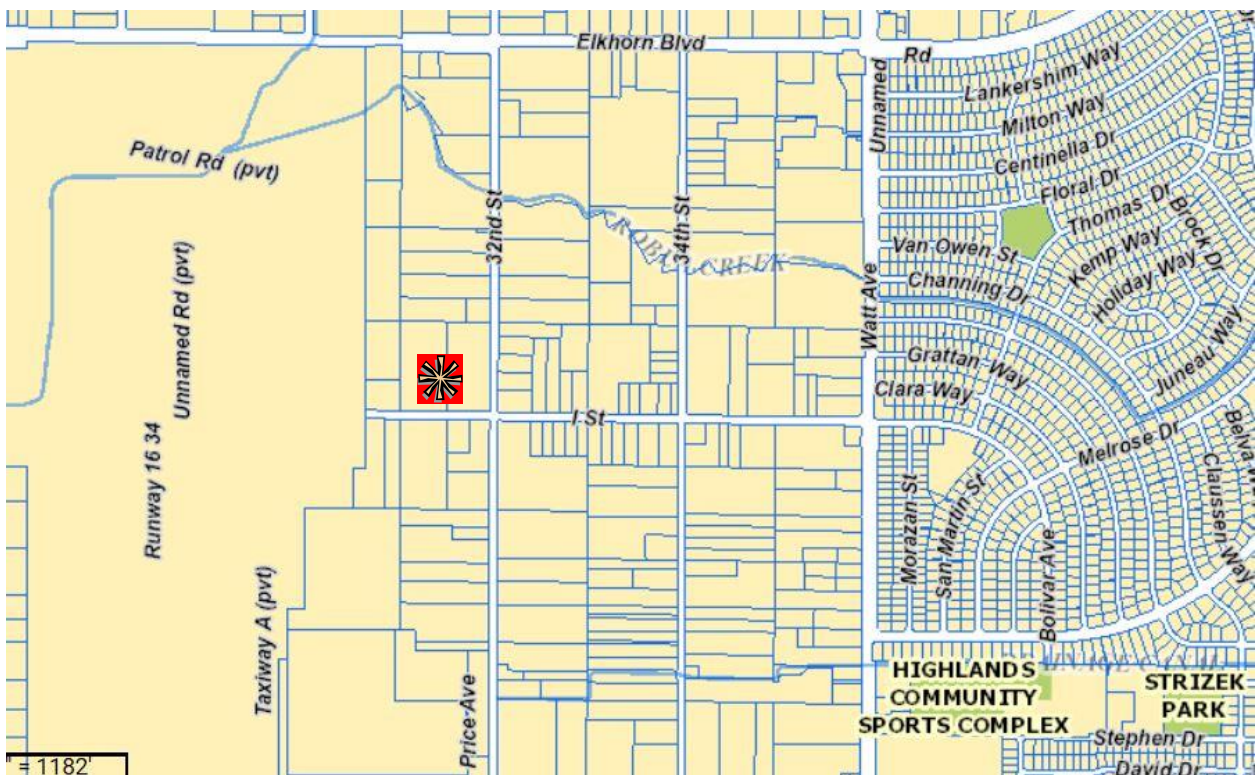
Project #11

**Department:** Water Resources

**Estimated Project Cost:** \$266,400

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will improve drainage on I Street and 32<sup>nd</sup> Street. The storm drain system is comprised of mainlines outside of the street right-of-way and grate-style drain inlets that easily clog with debris or get overwhelmed due to limited inlet capacity. The project will install larger pipes and inlets to replace the existing smaller drainage facilities.

# WATER RESOURCES - DRAINAGE

## I Street/32nd Street Storm Drain Improvement

Estimated Project Costs	Prior Years	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	100,000	42,000	0	0	0	142,000
Project Management/ Design (In-House)	15,000	46,000	15,000	0	0	0	76,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	20,000	13,400	0	0	0	33,400
Right-of-way/Land Acquisition	0	15,000	0	0	0	0	15,000
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>15,000</b>	<b>181,000</b>	<b>70,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>266,400</b>

Funding Sources	Prior Years	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	15,000	181,000	70,400	0	0	0	266,400
<b>TOTAL</b>	<b>15,000</b>	<b>181,000</b>	<b>70,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>266,400</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## Keeney Way Storm Drain Improvement

Sacramento, CA 95864

Project #12

**Department:** Water Resources

**Estimated Project Cost:** \$168,494

**Expected Completion Date:** 2016

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project includes the installation of new mainlines and drain inlets with Sacramento County Department of Transportation's (SacDOT) project to improve accessibility on Hurley Way and improvements to the Hurley Way/Morse Avenue intersection. This project will improve drainage on Hurley Way and Keeney Way. The storm drain system is comprised of backyard mainlines, roadside ditches, and grate-style drain inlets that easily clog with debris or get overwhelmed due to limited inlet capacity. The project will install larger pipes and inlets to replace the existing smaller drainage facilities. By teaming with SacDOT, DWR can share in the general project costs and help to eliminate the public nuisance of constructing under two separate contracts.

# WATER RESOURCES - DRAINAGE

## Keeney Way Storm Drain Improvement

Estimated Project Costs	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
Construction Costs	0	113,350	0	0	0	0	113,350
Project Management/ Design (In-House)	15,000	23,494	0	0	0	0	38,494
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	16,650	0	0	0	0	16,650
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>15,000</b>	<b>153,494</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168,494</b>

Funding Sources	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
SWU Capital Construction Fund	15,000	153,494	0	0	0	0	168,494
<b>TOTAL</b>	<b>15,000</b>	<b>153,494</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168,494</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## Kings Way/Verna Way Storm Drain Improvement

Sacramento, CA 95821

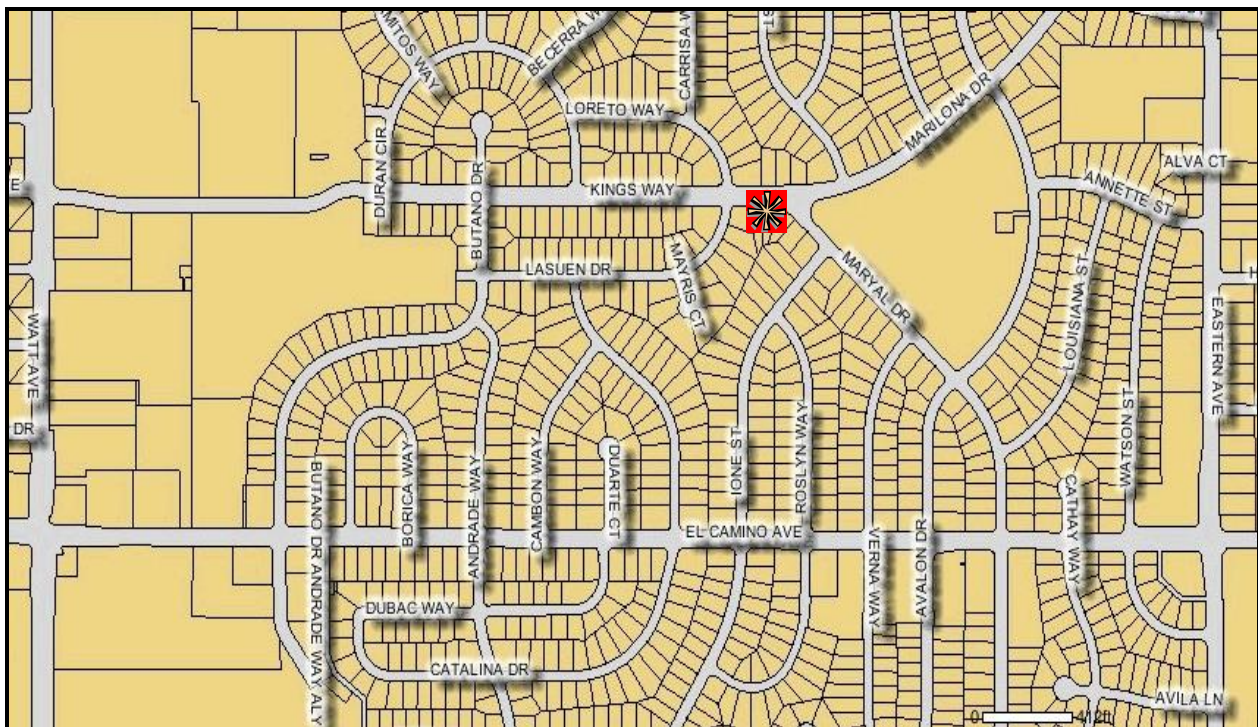
Project #13

**Department:** Water Resources

**Estimated Project Cost:** \$1,126,711

**Expected Completion Date:** 2018

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund



### Project Description:

This project will alleviate structure, garage, yard, and street flooding in the surrounding streets near the intersection of Kings Way and Maryal Drive. The existing storm drain system is undersized compared to current drainage design standards. The project will install new mainlines and drain inlets on Kings Way, Marilona Drive, Maryal Drive, Lasuen Drive, and Verna Way.

# WATER RESOURCES - DRAINAGE

## Kings Way/Verna Way Storm Drain Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	220,500	514,500	0	0	735,000
Project Management/ Design (In-House)	170,962	68,999	26,500	10,000	0	0	276,461
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	38,000	77,250	0	0	115,250
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>170,962</b>	<b>68,999</b>	<b>285,000</b>	<b>601,750</b>	<b>0</b>	<b>0</b>	<b>1,126,711</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	170,962	68,999	285,000	601,750	0	0	1,126,711
<b>TOTAL</b>	<b>170,962</b>	<b>68,999</b>	<b>285,000</b>	<b>601,750</b>	<b>0</b>	<b>0</b>	<b>1,126,711</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

## Mather Dam Improvement

Sacramento, CA 95655

Project #14

**Department:** Water Resources

**Estimated Project Cost:** \$6,120,778

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund & USAF Cooperative Agreement



### Project Description:

This project will construct a new spillway to remove the dam from State of California, Division of Safety of Dams jurisdiction. Additional improvements will include removing existing trees and roots, repairing rodent damage, and improving soil composition and compaction of the earthen dam. The majority of the project is funded by funds from a Cooperative Agreement with the U.S. Air Force that was part of the ownership transfer of the dam from the Air Force to the County.



# WATER RESOURCES - DRAINAGE

## Mather Dam Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	467,000	4,205,500	0	0	0	4,672,500
Project Management/ Design (In-House)	285,078	265,700	50,000	0	0	0	600,778
Project Management/ Design (Consultant)	340,000	100,000	25,000	0	0	0	465,000
Construction Fees and Services	32,500	175,000	175,000	0	0	0	382,500
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>657,578</b>	<b>1,007,700</b>	<b>4,455,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,120,778</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	257,578	507,700	5,500	0	0	0	770,778
US Air Force Cooperative Agreement	400,000	500,000	4,450,000	0	0	0	5,350,000
<b>TOTAL</b>	<b>657,578</b>	<b>1,007,700</b>	<b>4,455,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,120,778</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Miramar Storm Drain Improvement

Sacramento, CA 95821

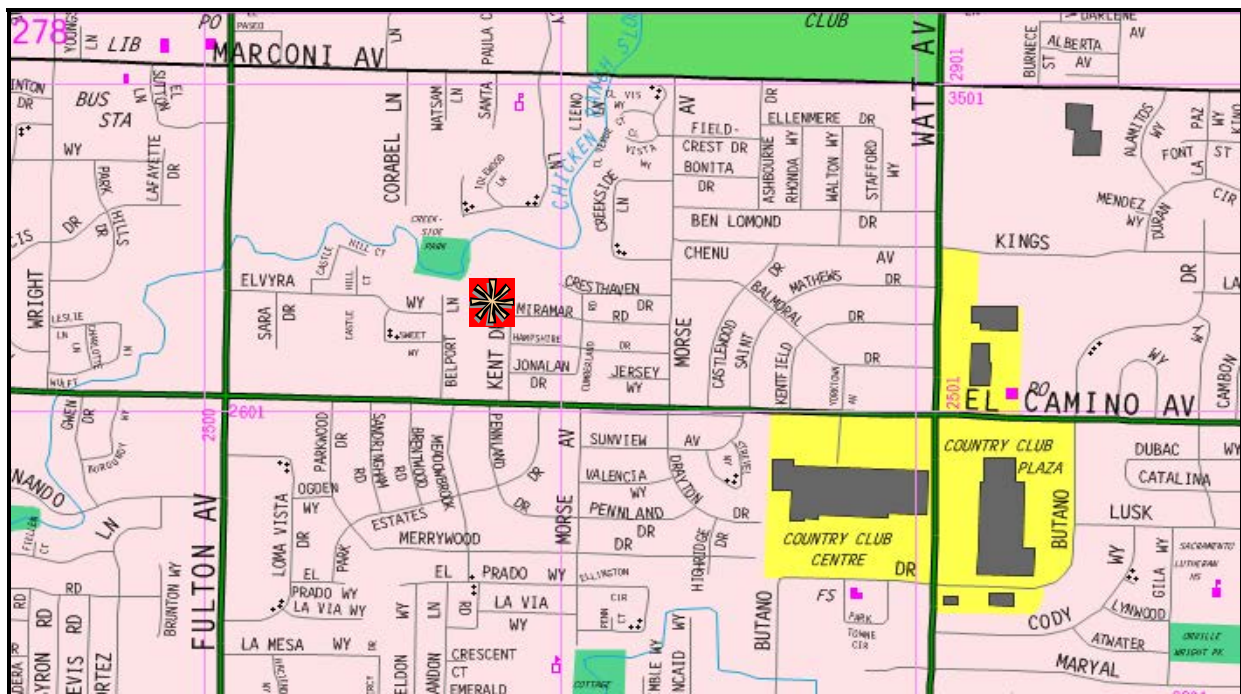
Project #15

Department: Water Resources

Estimated Project Cost: \$537,987

Expected Completion Date: 2017

Funding Sources: Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will improve drainage on Miramar Road, Cumberland Road, Jonalan Drive, and Kent Drive. This storm drain system is comprised of six inch and eight inch diameter pipe with gutter drains and older drain inlets. There has been history of street and yard flooding as well as cracking in the pipe. The project will install larger pipes and inlets to replace the existing smaller drainage facilities.

# WATER RESOURCES - DRAINAGE

## Miramar Storm Drain Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	100,000	230,000	0	0	0	330,000
Project Management/ Design (In-House)	40,000	97,987	15,000	0	0	0	152,987
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	20,000	35,000	0	0	0	55,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>40,000</b>	<b>217,987</b>	<b>280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>537,987</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	40,000	217,987	280,000	0	0	0	537,987
<b>TOTAL</b>	<b>40,000</b>	<b>217,987</b>	<b>280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>537,987</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Ravenwood Avenue/Eastern Avenue Storm Drain Improvement

Sacramento, CA 95821

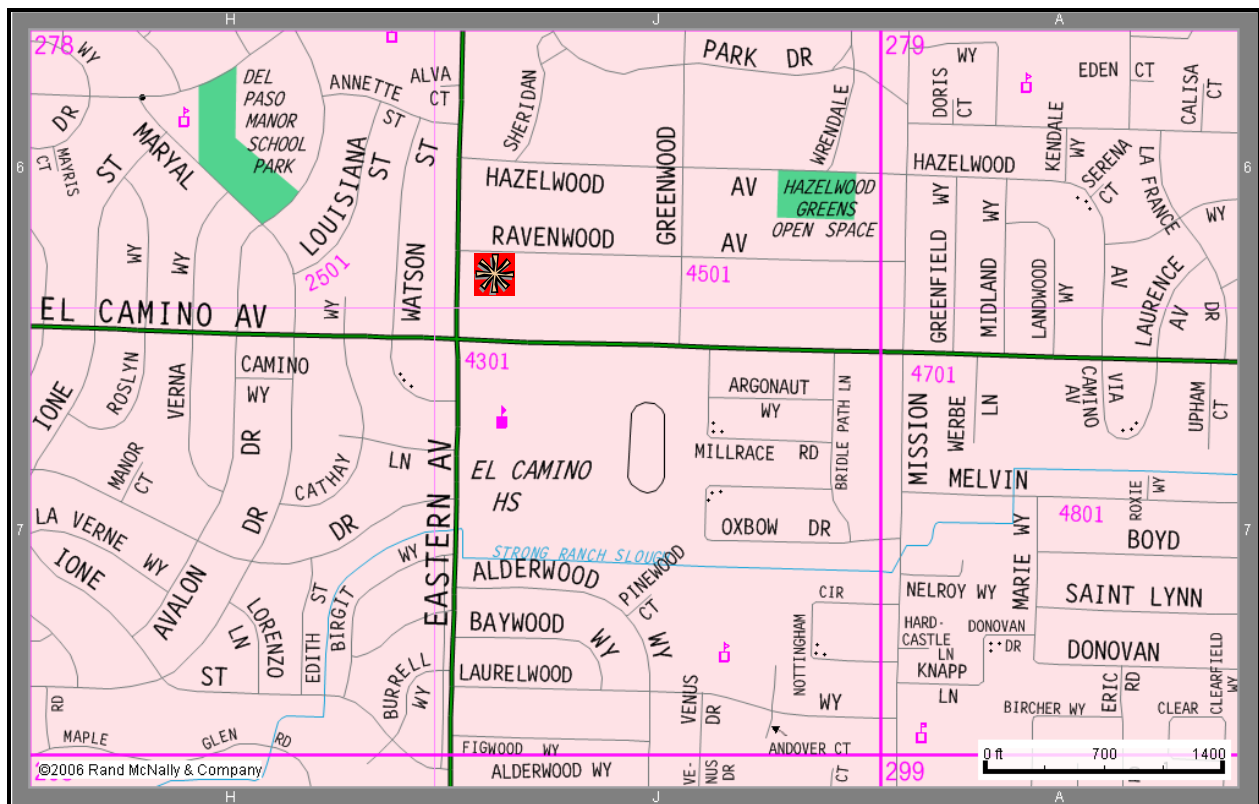
Project #16

**Department:** Water Resources

**Estimated Project Cost:** \$1,431,516

**Expected Completion Date:** 2016

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund



### Project Description:

This project will alleviate structure, garage, yard, and street flooding along Cathay Way, Hazelwood Avenue, and Ravenwood Avenue. The existing storm drain system is undersized compared to current drainage design standards. The project will install new mainlines and drain inlets on Avila Lane, Cathay Way, Eastern Avenue, Hazelwood Avenue, and Ravenwood Avenue.

# WATER RESOURCES - DRAINAGE

## Ravenwood Avenue/Eastern Avenue Storm Drain Improvement

Estimated Project Costs	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
Construction Costs	902,655	34,520	0	0	0	0	937,175
Project Management/ Design (In-House)	332,988	0	0	0	0	0	332,988
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	154,453	6,900	0	0	0	0	161,353
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>1,390,096</b>	<b>41,420</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,431,516</b>

Funding Sources	Prior Years	Fiscal Year 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Total
	Expenses	Budget	Budget	Budget	Budget	Budget	
SWU Capital Construction Fund	1,390,096	41,420	0	0	0	0	1,431,516
<b>TOTAL</b>	<b>1,390,096</b>	<b>41,420</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,431,516</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Rich Hill Drive Storm Drain Improvement

Orangevale, CA 95662

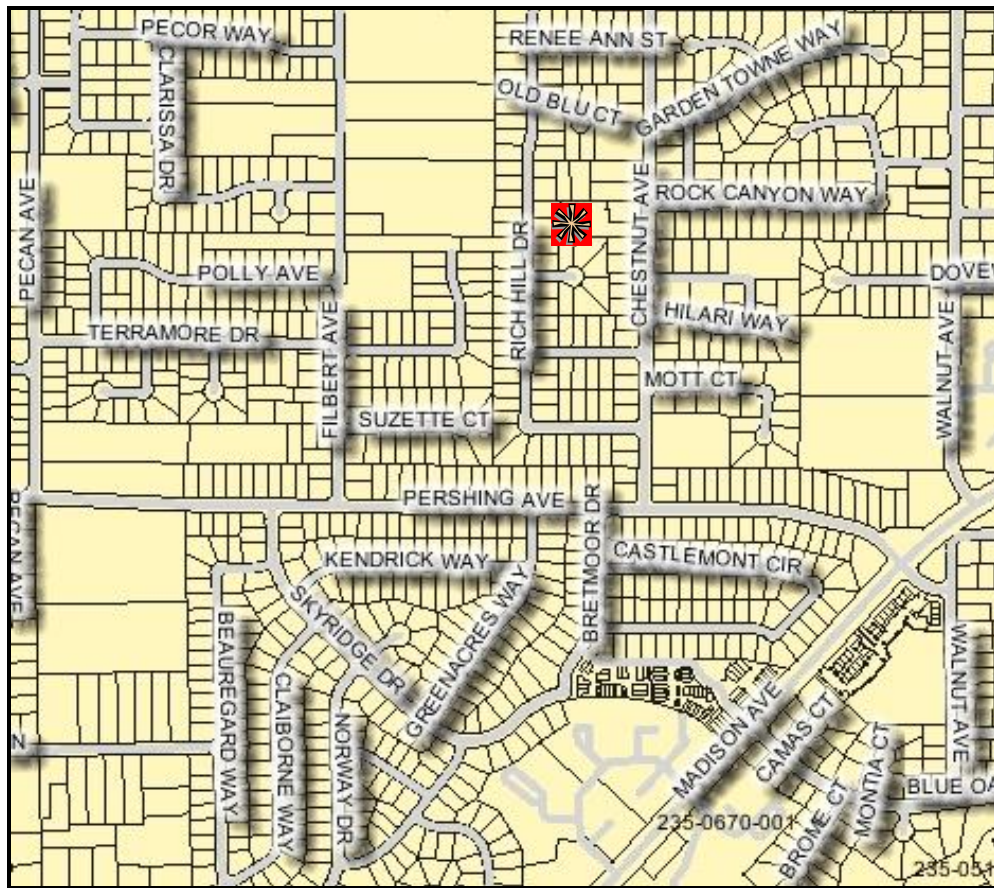
Project #17

**Department:** Water Resources

**Estimated Project Cost:** \$1,469,569

**Expected Completion Date:** 2019

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund



### Project Description:

This project will alleviate structure, garage, yard, and street flooding along Bobbeck Court, Chestnut Avenue, Garden Towne Way, Mott Court, Rich Hill Drive, Rock Canyon Way, Sherilee Way, Suzette Court, and Terramore Drive. The existing storm drain system is undersized compared to current drainage design standards. The project will install mainlines and drain inlets on Bobbeck Court, Chestnut Avenue, Filbert Avenue, Mott Court, Pershing Avenue, Rich Hill Drive, Sherrilee Way, and Suzette Court.

# WATER RESOURCES - DRAINAGE

## Rich Hill Drive Storm Drain Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	347,400	810,600	0	1,158,000
Project Management/ Design (In-House)	129,269	0	0	51,500	15,000	0	195,769
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	34,740	81,060	0	115,800
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>129,269</b>	<b>0</b>	<b>0</b>	<b>433,640</b>	<b>906,660</b>	<b>0</b>	<b>1,469,569</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	129,269	0	0	433,640	906,660	0	1,469,569
<b>TOTAL</b>	<b>129,269</b>	<b>0</b>	<b>0</b>	<b>433,640</b>	<b>906,660</b>	<b>0</b>	<b>1,469,569</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Silver Legends Storm Drain Improvement

Sacramento, CA 95829

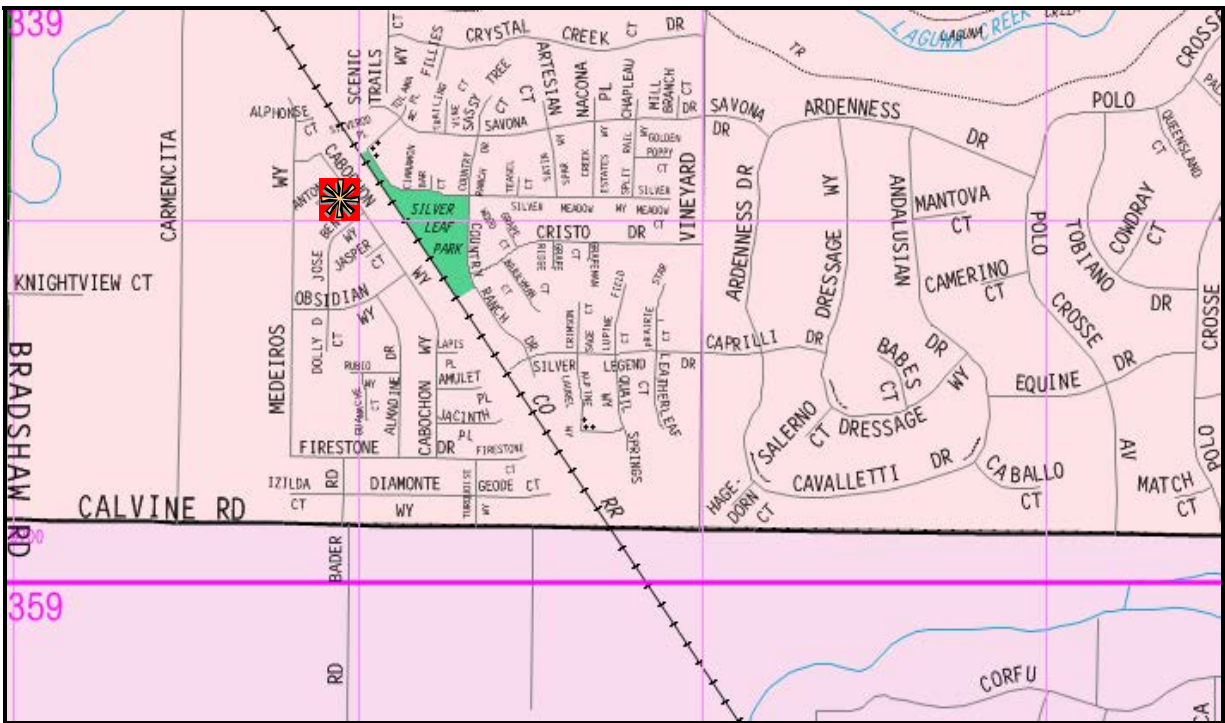
Project #18

Department: Water Resources

Estimated Project Cost: \$148,458

Expected Completion Date: 2018

Funding Sources: Storm Water Utility (SWU) Capital Construction Fund



### Project Description:

This project will improve drainage adjacent to the D22 Silver Legends Pump Station by relocating the discharge to a recently placed drainage system directly south of the existing pump station. This project will include the removal of the existing drainage outlet, installation of 700 linear feet of storm drain pipe and connection and modification to the downstream manhole.



# WATER RESOURCES - DRAINAGE

## Silver Legends Storm Drain Improvement

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	28,800	67,200	0	0	96,000
Project Management/ Design (In-House)	4,958	0	17,500	10,000	0	0	32,458
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	6,000	14,000	0	0	20,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>4,958</b>	<b>0</b>	<b>52,300</b>	<b>91,200</b>	<b>0</b>	<b>0</b>	<b>148,458</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	4,958	0	52,300	91,200	0	0	148,458
<b>TOTAL</b>	<b>4,958</b>	<b>0</b>	<b>52,300</b>	<b>91,200</b>	<b>0</b>	<b>0</b>	<b>148,458</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Improvements – 2020

Sacramento County

Project #19

**Department:** Water Resources

**Estimated Project Cost:** \$2,689,000

**Expected Completion Date:** 2020

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project will upgrade storm drain facilities to alleviate flooding and decrease maintenance issues. This project will upgrade mainlines and drain inlets in one large project or a combination of medium or small projects.

### Storm Drain Improvements - 2020

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	0	220,000	1,800,000	2,020,000
Project Management/ Design (In-House)	0	0	0	89,000	238,000	50,000	377,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	42,000	250,000	292,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89,000</b>	<b>500,000</b>	<b>2,100,000</b>	<b>2,689,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	0	0	89,000	500,000	2,100,000	2,689,000
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89,000</b>	<b>500,000</b>	<b>2,100,000</b>	<b>2,689,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Improvements – 2021

Sacramento County

Project #20

**Department:** Water Resources

**Estimated Project Cost:** \$589,000

**Expected Completion Date:** 2021

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project will upgrade storm drain facilities to alleviate flooding and decrease maintenance issues. This project will upgrade mainlines and drain inlets in one large project or a combination of medium or small projects.

### Storm Drain Improvements - 2021

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	0	0	220,000	220,000
Project Management/ Design (In-House)	0	0	0	0	89,000	238,000	327,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	0	0	0	0	42,000	42,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89,000</b>	<b>500,000</b>	<b>589,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	0	0	0	89,000	500,000	589,000
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89,000</b>	<b>500,000</b>	<b>589,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Maintenance & Operations Equipment

Sacramento County

Project #21

**Department:** Water Resources

**Estimated Project Cost:** \$358,000

**Expected Completion Date:** on-going

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This Maintenance & Operations Section purchases equipment required to maintain and operate the drainage system. The equipment ranges from portable pumps and generators to utility trucks and construction equipment such as backhoes and hauling trailers.

### Storm Drain Maintenance & Operations Equipment

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	0	0	0	0
Project Management/ Design (In-House)	0	11,000	0	0	0	0	11,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	13,000	0	0	0	0	13,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	150,000	25,000	65,000	0	94,000	334,000
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>174,000</b>	<b>25,000</b>	<b>65,000</b>	<b>0</b>	<b>94,000</b>	<b>358,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	174,000	25,000	65,000	0	94,000	358,000
<b>TOTAL</b>	<b>0</b>	<b>174,000</b>	<b>25,000</b>	<b>65,000</b>	<b>0</b>	<b>94,000</b>	<b>358,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Maintenance & Operations Projects – Various Locations

Sacramento County

Project #22

**Department:** Water Resources

**Estimated Project Cost:** \$616,000

**Expected Completion Date:** on-going

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project provides for routine maintenance improvements of deteriorated drainage facilities throughout the system. Specific project locations are determined based on maintenance and engineering section consultations.

### Storm Drain Maintenance & Operations Projects - Various Locations

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	510,000	25,000	0	0	0	535,000
Project Management/ Design (In-House)	0	69,000	0	0	0	0	69,000
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	12,000	0	0	0	0	12,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>591,000</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>616,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	591,000	25,000	0	0	0	616,000
<b>TOTAL</b>	<b>0</b>	<b>591,000</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>616,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Pump Stations Rehabilitation – Phase 5

Sacramento County

Project #23

**Department:** Water Resources

**Estimated Project Cost:** \$1,272,169

**Expected Completion Date:** 2019

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project will upgrade two storm drain pump stations. This project will upgrade electrical systems and make minor site improvements. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance difficulties. The minor site improvements will correct long-standing maintenance issues.

### Storm Drain Pump Stations Rehabilitation - Phase 5

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	300,000	700,000	0	1,000,000
Project Management/ Design (In-House)	7,169	0	20,000	35,000	10,000	0	72,169
Project Management/ Design (Consultant)	0	0	30,000	60,000	10,000	0	100,000
Construction Fees and Services	0	0	0	30,000	70,000	0	100,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>7,169</b>	<b>0</b>	<b>50,000</b>	<b>425,000</b>	<b>790,000</b>	<b>0</b>	<b>1,272,169</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	7,169	0	50,000	425,000	790,000	0	1,272,169
<b>TOTAL</b>	<b>7,169</b>	<b>0</b>	<b>50,000</b>	<b>425,000</b>	<b>790,000</b>	<b>0</b>	<b>1,272,169</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Pump Stations Rehabilitation – Phase 6

Sacramento County

Project #24

**Department:** Water Resources

**Estimated Project Cost:** \$1,272,169

**Expected Completion Date:** 2020

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project will upgrade two storm drain pump stations. This project will upgrade electrical systems and make minor site improvements. The electrical system upgrades will replace outdated equipment to improve station reliability and decrease maintenance difficulties. The minor site improvements will correct long-standing maintenance issues.

### Storm Drain Pump Stations Rehabilitation - Phase 6

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	0	0	0	300,000	700,000	1,000,000
Project Management/ Design (In-House)	7,169	0	0	20,000	35,000	10,000	72,169
Project Management/ Design (Consultant)	0	0	0	30,000	60,000	10,000	100,000
Construction Fees and Services	0	0	0	0	30,000	70,000	100,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>7,169</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>425,000</b>	<b>790,000</b>	<b>1,272,169</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	7,169	0	0	50,000	425,000	790,000	1,272,169
<b>TOTAL</b>	<b>7,169</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>425,000</b>	<b>790,000</b>	<b>1,272,169</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.

# WATER RESOURCES - DRAINAGE

## Storm Drain Rehabilitation – Job Order Contracts (JOCs)

Sacramento County

Project #25

**Department:** Water Resources

**Estimated Project Cost:** \$5,000,000

**Expected Completion Date:** on-going

**Funding Sources:** Storm Water Utility (SWU)  
Capital Construction Fund

**Project Description:**

This project provides for routine rehabilitation of deteriorated drainage facilities throughout the system. Specific project locations are determined based on maintenance and engineering section consultations.

### Storm Drain Rehabilitation - Job Order Contracts (JOCs)

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	760,000	760,000	760,000	760,000	760,000	3,800,000
Project Management/ Design (In-House)	0	60,000	60,000	60,000	60,000	60,000	300,000
Project Management/ Design (Consultant)	0	10,000	10,000	10,000	10,000	10,000	50,000
Construction Fees and Services	0	170,000	170,000	170,000	170,000	170,000	850,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>5,000,000</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
<b>TOTAL</b>	<b>0</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>5,000,000</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.



## Upper Gerber Creek Improvements

Sacramento, CA 95829

Project #26

**Department:** Water Resources

**Estimated Project Cost:** \$713,999

**Expected Completion Date:** 2017

**Funding Sources:** Storm Water Utility (SWU) Capital Construction Fund & SCWA Zone 11A Fund



**Project Description:**

This project will improve the flood protection and natural features of 2,100 linear feet of Upper Gerber Creek south of Gerber Road west of Bradshaw Road.

# WATER RESOURCES - DRAINAGE

## Upper Gerber Creek Improvements

Estimated Project Costs	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
Construction Costs	0	200,000	300,000	0	0	0	500,000
Project Management/ Design (In-House)	25,000	83,999	20,000	0	0	0	128,999
Project Management/ Design (Consultant)	0	0	0	0	0	0	0
Construction Fees and Services	0	35,000	50,000	0	0	0	85,000
Right-of-way/Land Acquisition	0	0	0	0	0	0	0
Purchase Cost (Equip/Vehicle)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>25,000</b>	<b>318,999</b>	<b>370,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>713,999</b>

Funding Sources	Prior Years Expenses	Fiscal Year 2016-17 Budget	Fiscal Year 2017-18 Budget	Fiscal Year 2018-19 Budget	Fiscal Year 2019-20 Budget	Fiscal Year 2020-21 Budget	Total
SWU Capital Construction Fund	25,000	68,999	20,000	0	0	0	113,999
SCWA Zone 11A Fund	0	250,000	350,000	0	0	0	600,000
<b>TOTAL</b>	<b>25,000</b>	<b>318,999</b>	<b>370,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>713,999</b>

**Project Analysis:**

Analysis Done	Analysis Results
Operating budget impact analyzed	Project has no measurable impact on the operating budget.