WATER RESOURCES

EXECUTIVE SUMMARY

The Department of Water Resources constructs drainage improvement projects intended to mitigate or prevent flood damage in developed areas. The typical annual Capital Improvement Plan (CIP) budget for the drainage program is approximately \$2.0 million to \$4.8 million. 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.

Most of the constructed 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 forty 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.

Some of the planned projects entail providing upgrades to existing drainage pump stations. Many of the existing pump stations in the County require additional pumping capacity to increase the level of protection of low-lying residences. Additionally, many of the pump stations lack a back-up power source in the event that power is lost during a storm event. Further, the performance of pump stations may also be hindered by blockages caused by the build-up of debris carried in the storm runoff. As a result, several projects are planned which will provide for additional pumping capacity where possible, the installation of back-up generators, and also the installation of automated debris removal systems to prevent pump intake and outfall pipes from becoming plugged during major storms.

The estimated capital cost for projects identified in the Five-Year CIP is \$15.3 million. Projects proposed to be completed in the Fiscal Year 2010-11 Capital Budget include an "Operating Budget Impact" statement.

There are twelve projects identified in the Fiscal Year 2010-11 CIP that are planned or underway by Water Resources. The following brief descriptions highlight several projects that demonstrate the magnitude and range of construction undertaken by the County.

- Crestview Drive Storm Drain Improvement -- This project will alleviate structure, garage, yard and street flooding along Clairidge Way. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements will need to be made along Clairidge Way and Robertson Avenue. Some of these improvements will involve the use of existing drainage easements. Estimated Total Cost: \$352,582
- Glenwood Road/Chelsea Road Storm Drain Improvement -- This project will alleviate garage, yard and street flooding along Glenwood Road, Rushden Drive and other surrounding streets. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainline, laterals and drainage inlets) will need to be made along Glenwood Road, Hurley Way, Gladstone Drive, Sebastian Way, Rushden Drive and Chelsea Road. Some of these improvements will involve the use of existing drainage easements. Estimated Total Cost: \$1,050,541

EXECUTIVE SUMMARY (CONT.)

• Wilhaggin Drive Storm Drainage Pump Station (D43) Trash Rake, Discharge Lines and Pump Improvement -- The existing pumping capacity will not protect all structures during a 100-year rainfall concurrent with high flows in the American River. The improvement increases flow capacity from the pumps and through gravity and automates the removal of debris. Estimated Total Cost: \$3,762,523

WATER RESOURCES

PROJECT SUMMARY

PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2010-11	FISCAL YEAR 2011-12	FISCAL YEAR 2012-13	FISCAL YEAR 2013-14	FISCAL YEAR 2014-15	TOTAL
1	Black Duck Way/Harlequin Way Storm Drain		407 500	\$205,000	A O 040 000	* 0	* 0	* 0 404 047
2	Improvement Crestview Drive Storm Drain Improvement	\$455,817 319,582	\$37,500 33,000	\$325,000	\$2,646,000 0	\$0 0	\$0 0	\$3,464,317 352,582
3	El Nido Way/La Playa Way Storm Drain Improvement	30,726	297,500	200,000			0	
4	El Sur Way/Las Cruces Way Storm Drain Improvement	69,787	304,000	500,000	0	0	0	873,787
5	Glenwood Road/Chelsea Road Storm Drain Improvement	985,541	65,000	0	0	0	0	1,050,541
6	Hagginbottom Pump Station Generator	0	0	0	350,000	1,694,700	0	2,044,700
7	Lloyd Lane Storm Drain Improvement	503,032	43,000	0	0	0	0	546,032
8	Miramar Storm Drain Improvement	5,130	338,628	0	0	0	0	343,758
9	Ravenwood Avenue Storm Drain Improvement	38,515	35,000	697,500	50,000	0	0	821,015
10	Silver Legends Pump Station Improvements	4,958	105,925	0	0	0	0	110,883
11	Somersby/Wixford Storm Drain	44,327	1,342,000	80,000	0	0		1,466,327
12	Wilhaggin Drive Storm Drainage Pump Station (D43) Trash Rake, Discharge Lines and Pump Improvement	278,523	0	0		291,000	0	3,762,523
		-	-	-	\$6,239,000		-	\$15,364,691

PRIOR-YEAR COMPLETED/CANCELLED PROJECTS SUMMARY

PROJ #	PROJECT	PRIOR YEARS	FISCAL YEAR 2010-11	FISCAL YEAR 2011-12	FISCAL YEAR 2012-13	FISCAL YEAR 2013-14	FISCAL YEAR 2014-15	TOTAL	REASON DROPPED
2	Clairidge Way Storm Drain Improvement	\$1,247,474							Construction Complete
8	Kinross Road/Root Avenue Storm Drain Improvement	979,248							Construction Complete
9	Large Oak Court Srorm Drain Improvement	105,320							Construction Complete
10	Leedy Lane Storm Drain Improvement	1,523		128,813					Cancelled
13	Old Ranch Road Storm Drain Improvement	806,104							Construction Complete
	TOTAL	\$3,139,669	\$0	\$128,813	\$0	\$0	\$0	\$0	

Black Duck Way/Harlequin Way Storm Drain Improvement

Sacramento, CA 95842

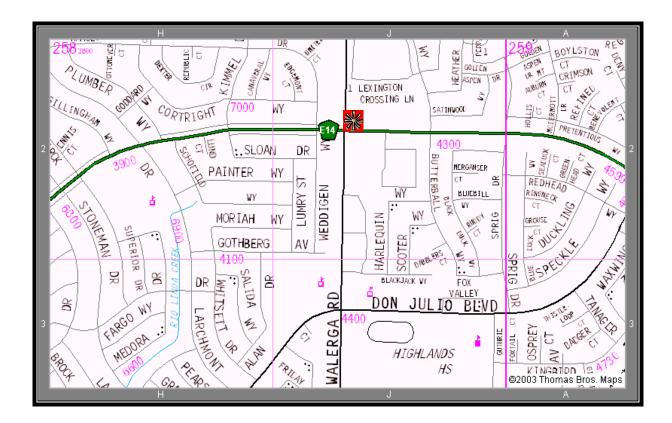
Project #1

Department: Water Resources

Estimated Project Cost: \$3,464,317

Expected Completion Date: 2012

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



Project Description:

This project will alleviate house, garage, yard and street flooding along Black Duck Way, Harlequin Way, Lumry Street, Sea Duck Court, Weddigen Way and other surrounding streets. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, a new storm drain trunk line will be installed in Elkhorn Boulevard from McDermott Drive to Schofield Way. The channel culvert on Larchmont Drive will be improved and storm drain system improvements (mainline, laterals and drainage inlets) will be made along Black Duck Way, Butterball Way, Harlequin Way and Weddigen Way. The storm drain project was coordinated with the Sacramento County Department of Transportation project – Elkhorn Boulevard Widening Project (Watt Avenue to Don Julio Boulevard) but that project has been indefinitely postponed.

	Prior	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	0	250,000	2,450,000	0	0	2,700,000
Project Management/Design	452,730	35,000	35,000	36,000	0	0	558,730
Construction Inspection	0	0	35,000	155,000	0	0	190,000
Misc. Project Costs	3,087	2,500	5,000	5,000	0	0	15,587
TOTAL	455,817	37,500	325,000	2,646,000	0	0	3,464,317
	Prior	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total

Black Duck Way/Harlequin Way Storm Drain Improvement

Crestview Drive Storm Drain Improvement

Carmichael, CA 95608

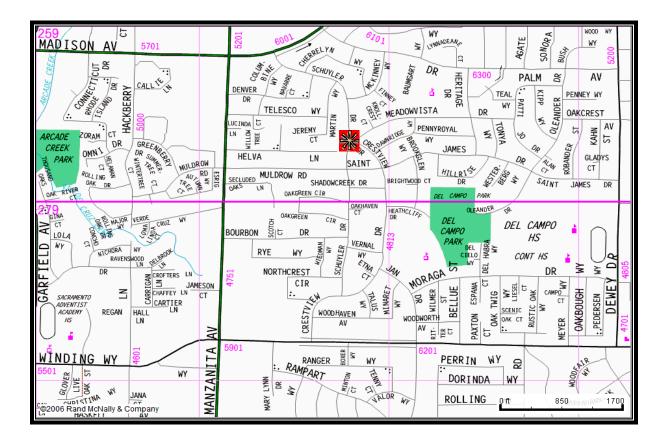
Project #2

Department: Water Resources

Estimated Project Cost: \$352,582

Expected Completion Date: 2010

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



Project Description:

This project will alleviate structure, yard and street flooding along Crestview Drive. The existing channel system is undersized compared to current storm runoff design standards. The culvert capacities are less than the channel capacities. Therefore, to alleviate the flooding, culvert improvements are necessary on Crestview Drive and Schuyler Drive at Verde Cruz Creek.

Operating Budget Impact:

The completion of this project has no measurable impact on the operating budget.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	128,791	0	0	0	0	0	128,791
Project Management/Design	146,098	5,000	0	0	0	0	151,098
Construction Inspection	0	24,000	0	0	0	0	24,000
Misc. Project Costs	44,693	4,000	0	0	0	0	48,693
TOTAL	319,582	33,000	0	0	0	0	352,582
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	319,582	33,000	0	0	0	0	352,582

Crestview Drive Storm Drain Improvement

El Nido Way/La Playa Way Storm Drain Improvement

Sacramento, CA 95864

Project #3

Department: Water Resources

Estimated Project Cost: \$528,226

Expected Completion Date: 2011

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



Project Description:

This project will alleviate structure and street flooding along El Nido Way and La Playa Way. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainlines, laterals and drainage inlets) will need to be made on El Nido Way and La Playa Way.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	250,000	175,000	0	0	0	425,000
Project Management/Design	30,726	35,000	15,000	0	0	0	80,726
Construction Inspection	0	7,500	10,000	0	0	0	17,500
Misc. Project Costs	0	5,000	0	0	0	0	5,000
TOTAL	30,726	297,500	200,000	0	0	0	528,226
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	30,726	297,500	200,000	0	0	0	528,226

El Nido Way/Las Playa Way Storm Drain Improvement

El Sur Way/Las Cruces Way Storm Drain Improvement

Sacramento, CA 95864

Project #4

Department: Water Resources

Estimated Project Cost: \$873,787

Expected Completion Date: 2011

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



Project Description:

This project will alleviate structure and street flooding along Fitch Way, El Sur Way, and Las Pasas Way. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainlines, laterals and drainage inlets) will need to be made on El Sur Way, Fitch Way, Eastern Avenue, Las Pasas Way, and Las Cruces Way.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	250,000	450,000	0	0	0	700,000
Project Management/Design	69,787	35,000	15,000	0	0	0	119,787
Construction Inspection	0	14,000	35,000	0	0	0	49,000
Misc. Project Costs	0	5,000	0	0	0	0	5,000
TOTAL	69,787	304,000	500,000	0	0	0	873,787
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	69,787	304,000	500,000	0	0	0	873,787

El Sur Way/Las Cruces Way Storm Drain Improvement

Glenwood Road/Chelsea Road Storm Drain Improvement

Sacramento, CA 95864

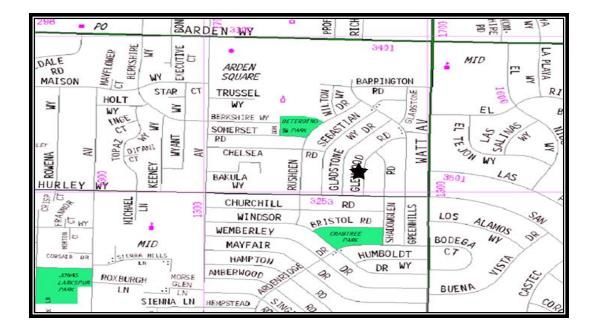
Project #5

Department: Water Resources

Estimated Project Cost: \$1,050,541

Expected Completion Date: 2010

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



Project Description:

This project will alleviate garage, yard and street flooding along Glenwood Road, Rushden Drive and other surrounding streets. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainline, laterals and drainage inlets) will need to be made along Glenwood Road, Hurley Way, Gladstone Drive, Sebastian Way, Rushden Drive and Chelsea Road. Some of these improvements will involve the use of existing drainage easements.

Operating Budget Impact:

The completion of this project has no measurable impact on the operating budget.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	726,850	0	0	0	0	0	726,850
Project Management/Design	232,626	15,000	0	0	0	0	247,626
Construction Inspection	0	50,000	0	0	0	0	50,000
Misc. Project Costs	26,065	0	0	0	0	0	26,065
TOTAL	985,541	65,000	0	0	0	0	1,050,541
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	985,541	65,000	0	0	0	0	1,050,541

Glenwood Road/Chelsea Road Storm Drain Improvement

Hagginbottom Pump Station Generator

Sacramento, CA 95608

Project #6

Department: Water Resources

Estimated Project Cost: \$2,044,700

Expected Completion Date: 2014

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



Project Description:

This project will alleviate structure and street flooding along Marlborough Way adjacent to the pump station during SMUD power outages. The existing pump station currently does not have an emergency generator and the County maintenance crews do not have a mobile generator large enough to run this station at full power during power outages, which subjects the surrounding area to flooding. In addition, during major storm events street flooding limits access to the pump station. Therefore, to alleviate flooding during power outages, an on-site emergency generator and electrical connections that turn the generator "on" automatically need to be installed.

	Prior	F	Fiscal Year					
Project Costs	Years		2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs		0	0	0	0	1,500,000	0	1,500,000
Project Management/Design		0	0	0	50,000	25,000	0	75,000
Consultant Services	(0	0	0	300,000	75,000	0	375,000
Construction Inspection	(0	0	0	0	89,700	0	89,700
Misc. Project Costs		0	0	0	0	5,000	0	5,000
TOTAL		0	0	0	350,000	1,694,700	0	2,044,700
	Prior	I	Fiscal Year					
Funding Sources	Years		2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund		0	0	0	350,000	1,694,700	0	2,044,700

Hagginbottom Pump Station Generator

Lloyd Lane Storm Drain Improvement

Sacramento, CA 95825

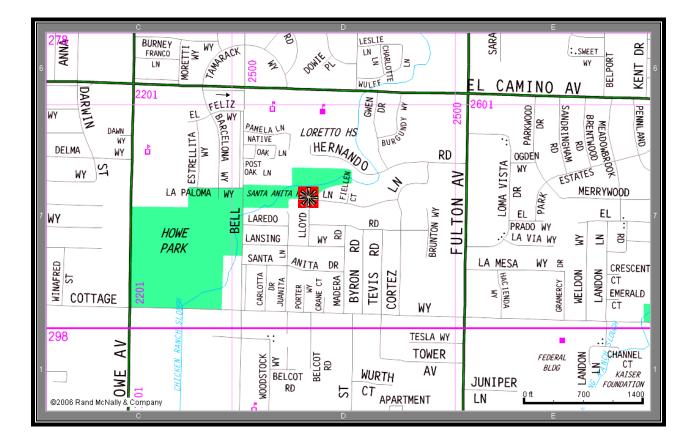
Project #7

Department: Water Resources

Estimated Project Cost: \$546,032

Expected Completion Date: 2010

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



Project Description:

This project will alleviate street flooding along Lloyd Lane and Barcelona Way. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainlines, laterals and drainage inlets) will need to be made on Lloyd Lane, Barcelona Way and La Paloma Way.

Operating Budget Impact:

The completion of this project has no measurable impact on the operating budget.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	298,871	0	0	0	0	0	298,871
Project Management/Design	155,421	15,000	0	0	0	0	170,421
Construction Inspection	0	28,000	0	0	0	0	28,000
Misc. Project Costs	48,740	0	0	0	0	0	48,740
TOTAL	503,032	43,000	0	0	0	0	546,032
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	503,032	43,000	0	0	0	0	546,032

Lloyd Lane Storm Drain Improvement

Miramar Storm Drain Improvement

Sacramento, CA 95821

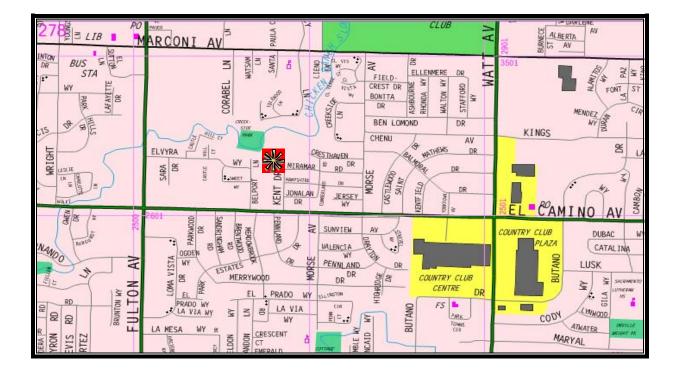
Project #8

Department: Water Resources

Estimated Project Cost: \$343,758

Expected Completion Date: 2010-11

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 14x14, type D, and type E drain inlets. There has been history of street and yard flooding as well as cracking in the pipe. The project would require installation of 1235 lateral feet of twelve inch pipe, 223 lateral feet of eighteen inch pipe, four type B drain inlets, four type C drain inlets, and six storm drain manholes.

Operating Budget Impact:

The completion of this project has no measurable impact on the operating budget.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	328,628	0	0	0	0	328,628
Project Management/Design	5,130	2,000	0	0	0	0	7,130
Construction Inspection	0	8,000	0	0	0	0	8,000
TOTAL	5,130	338,628	0	0	0	0	343,758
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	5,130	338,628	0	0	0	0	343,758

Miramar Storm Drain Improvement

Ravenwood Avenue Storm Drain Improvement

Sacramento, CA 95821

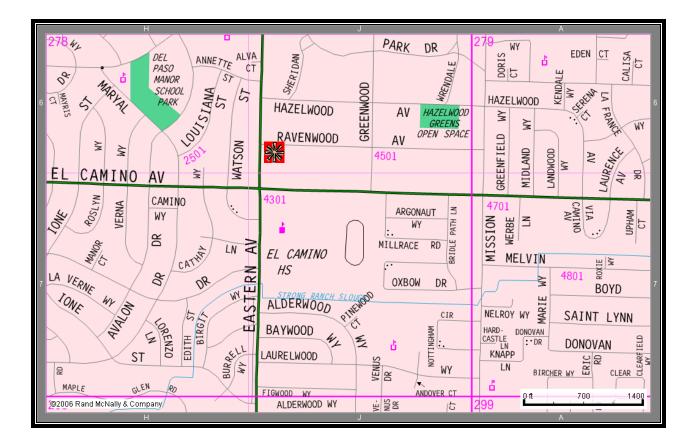
Project #9

Department: Water Resources

Estimated Project Cost: \$821,015

Expected Completion Date: 2012

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



Project Description:

This project will alleviate structure, garage, yard and street flooding along Ravenwood Avenue. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainlines, laterals and drainage inlets) will need to be made along Ravenwood Avenue and Eastern Avenue.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs Management/	0	0	650,000	0	0	0	650,000
Design	36,357	35,000	25,000	15,000	0	0	111,357
Construction Inspection	0	0	15,000	35,000	0	0	50,000
Misc. Project Costs	2,158	0	7,500	0	0	0	9,658
TOTAL	38,515	35,000	697,500	50,000	0	0	821,015
Funding Sources	Prior Years	Fiscal Year 2010-11	Fiscal Year 2011-12	Fiscal Year 2012-13	Fiscal Year 2013-14	Fiscal Year 2014-15	Total
SWU Capital	20 545	25.000	007 500	50.000	0	0	004 045
Construction Fund	38,515	35,000	697,500	50,000	0	0	821,015

Ravenwood Avenue Storm Drain Improvement

Silver Legends Pump Station Improvement

Sacramento, CA 95829

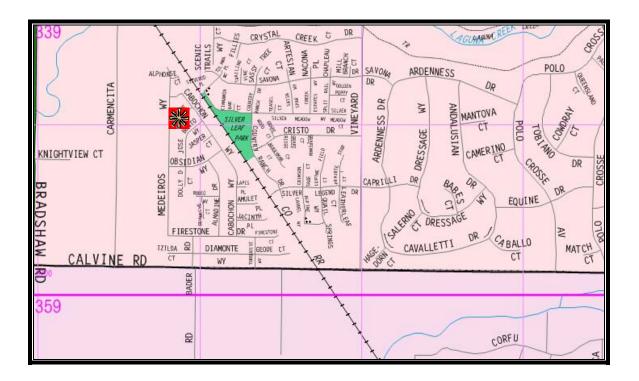
Project #10

Department: Water Resources

Estimated Project Cost: \$110,883

Expected Completion Date: 2010-11

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.

Operating Budget Impact:

The completion of this project has no measurable impact on the operating budget.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	95,925	0	0	0	0	95,925
Project Management/ Design	4,958	2,000	0	0	0	0	6,958
Construction Inspection	0	8,000	0	0	0	0	8,000
TOTAL	4,958	105,925	0	0	0	0	110,883
	Prior	Fiscal Year					
	Mar and						
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total

Silver Legends Pump Station Improvement

Somersby/Wixford Storm Drain Improvement

Sacramento, CA 95864

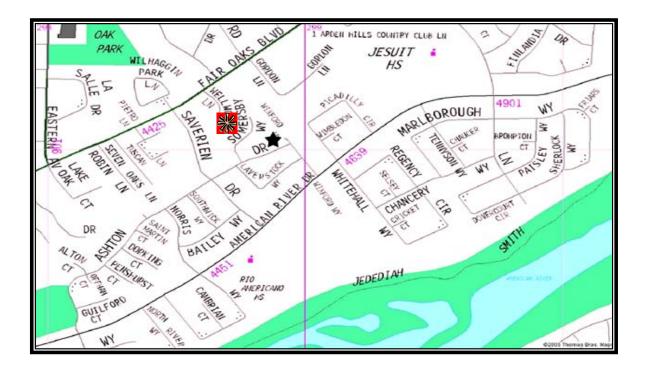
Project #11

Department: Water Resources

Estimated Project Cost: \$1,466,327

Expected Completion Date: 2011

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



Project Description:

This project will alleviate garage, yard and street flooding along Somersby Way, Ashton Drive, Morris Way and Wixford Way. The existing storm drain system is undersized compared to current storm runoff design standards. Therefore, to alleviate the flooding, storm drain system improvements (mainline, laterals and drainage inlets) will need to be made along Somersby Way, Ashton Drive, Wixford Way, and Morris Way. This project will be designed in conjunction with the Ashton-Dorking Storm Drain Improvement Project, since modifications to either project will affect storm drain runoff analysis in each area.

	Prior	Fiscal Year					
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	1,100,000	0	0	0	0	1,100,000
Project Management/ Design	44,327	200,000	30,000	0	0	0	274,327
Construction Inspection	0	27,000	50,000	0	0	0	77,000
Misc. Project Costs	0	15,000	0	0	0	0	15,000
TOTAL	44,327	1,342,000	80,000	0	0	0	1,466,327
	Prior	Fiscal Year					
Funding Sources	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
SWU Capital Construction Fund	44,327	1,342,000	80,000	0	0	0	1,466,327

Somersby/Wixford Storm Drain Improvement

Wilhaggin Drive Storm Drainage Pump Station (D43) Trash Rake, Discharge Lines and Pump Improvement

Sacramento, CA 95864

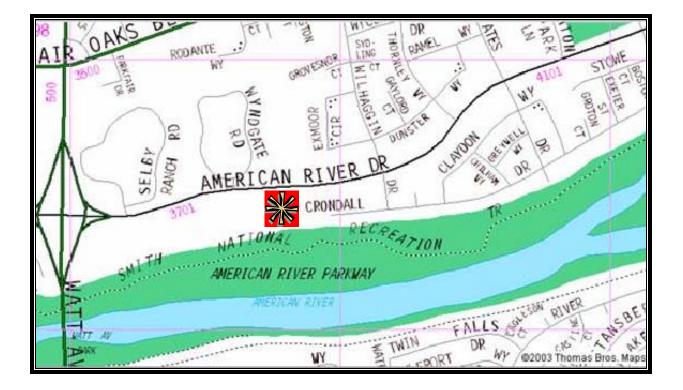
Project #12

Department: Water Resources

Estimated Project Cost: \$3,762,523

Expected Completion Date: 2013

Funding Sources: Storm Water Utility (SWU) Capital Construction Fund, Sacramento County Water Agency Zone 11



Project Description:

This project will alleviate structure and street flooding along American River Drive and adjacent areas upstream of the pump station. The existing station does not have sufficient capacity to handle the current storm runoff design standards. A new diesel powered pump and gravity discharge line will be installed to improve the capacity of the station. Due to the configuration of the station, a new sump structure will be needed to house the new pump and gravity line. In addition, the existing stationary trash rack will be upgraded to an automated trash rake, gate operators will be automated to maximize the use of the gravity discharge lines and the discharge basin/outfall will be upgraded with improved erosion control measures.

Wilhaggin Drive Storm Drainage Pump Station (D43) Trash Rack, Discharge Lines and Pump Improvement

	Prior	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	
Project Costs	Years	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Construction Costs	0	0	0	2,500,000	0	0	2,500,000
Project Management/Design	63,473	0	0	75,000	75,000	0	213,473
Consultant Services	215,050	0	0	100,000	50,000	0	365,050
Construction Inspection	0	0	0	10,000	165,000	0	175,000
Misc. Project Costs	0	0	0	8,000	1,000	0	9,000
TOTAL	278,523	0	0	2,693,000	291,000	0	3,262,523
	Prior	Fiscal Year	Fiscal Year		Fiscal Year		
Funding Sources	Prior Years	Fiscal Year 2010-11	Fiscal Year 2011-12	Fiscal Year 2012-13	Fiscal Year 2013-14	Fiscal Year 2014-15	Total
Funding Sources SWU Capital Construction Fund							Total 3,262,523
SWU Capital Construction Fund Sacramento County Water	Years 278,523	2010-11 0	2011-12 0	2012-13 2,693,000	2013-14 291,000	2014-15 0	3,262,523
SWU Capital Construction Fund	Years	2010-11	2011-12 0	2012-13	2013-14	2014-15	