



renew

CAPITAL IMPROVEMENT PROGRAM



renew

{to make like new : restore to freshness, vigor, or perfection}



from the director of engineering

In the past year, the Orange County Sanitation District (OCSD) has continued to improve our collection system and treatment works. Our project planning and delivery systems continue a long history of continuous improvement. It has been my honor to assume leadership of this program during this year. The Engineering Department remains committed to delivering resilient facilities with the necessary capacity to meet the challenges facing OCSD.

As we dive deeper into the rehabilitation of our infrastructure, our program continues to evolve. Using advanced asset management principles, we plan, prioritize, and prepare projects for execution. As we identify facilities that are nearing the end of their useful lives in the planning process, we are able to effectively research and choose technologies that will make our infrastructure more resilient and more cost effective to own and operate. The Engineering Department is also committed to identifying and mitigating risk in the planning and design process to speed construction and limit unnecessary change orders and their associated delays in construction. We will also continue our rigorous inspection and commissioning efforts to assure our delivered system works as designed.

As a long term OCSD employee, it's rewarding to see the agency overcome challenges and improve our work and treatment processes. We are creative planners and designers and disciplined builders who are wisely investing in OCSD's systems. It is our hope and expectation that as our Capital Improvement Program (CIP) progresses it will showcase new, innovative ways to meet our mission of protecting public health and the environment.

On behalf of the Engineering Department, I would like to extend our gratitude to the Board of Directors and our ratepayers for their continued support of our CIP.

Respectfully submitted,



Rob Thompson, P.E.
Director of Engineering
Orange County Sanitation District



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recreate

{to give new life or freshness to}

introduction and background

AGENCY INFORMATION

The Orange County Sanitation District is the third largest wastewater treatment plant west of the Mississippi River and fifth largest in the nation. Our two plants, 15 pump stations and 580 miles of sewers serve the 2.5 million people in central and northern Orange County.

Our staff works diligently 365 days of the year to ensure all of our facilities are operating efficiently and effectively. We are committed to providing the people we serve with quality service.

We treat about 200 million gallons of wastewater every single day and contribute approximately half of that to the Groundwater Replenishment System to do our part in reusing the most valuable resource we have, WATER!

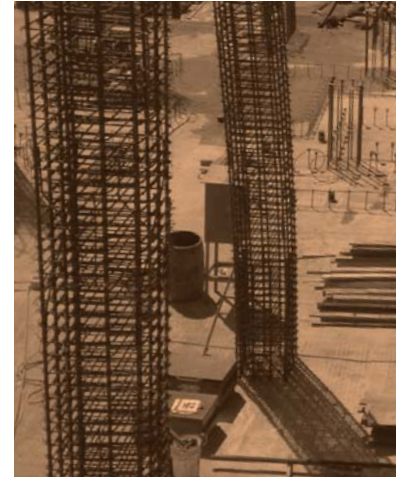
CAPITAL IMPROVEMENT PROGRAM OVERVIEW

OCSD's service area covers 479 square miles, that's 21 cities, 3 special districts, and the unincorporated County of Orange. We have maintenance crews that monitor and maintain the sewer lines to keep them operational. Day in and day out the crews oversee the various sewer lines, pump stations, siphons, manholes, etc. to make sure the sewage reaches our plants and is treated. However, there comes a point where a 50, 60, or even 70-year old sewer line or pump station can no longer provide the required level of service with just routine maintenance. The lines become corroded, deteriorated, and require rehabilitation or even replacement. That is where the CIP kicks in.

The CIP is an extensive program that incorporates sophisticated asset management principles to identify the condition, capacity, and lifespan of a facility and determine the timeframe for replacement and/or rehabilitation. Our Planning Division utilizes this data to identify and create projects that will maintain the level of service we have committed to for our rate payers.

Last year we invested millions into our plants and the collection system. We completed eight projects, awarded eight construction contracts, and seven design contracts. As we move more projects into design and construction, we will continue to work closely with the community to keep them informed of our efforts. We have an extensive Community Outreach Program dedicated to working with the various cities we touch with our sewer improvements. Our outreach team understands the needs and concerns of our residents, business owners, schools, commuters, and anyone else who comes in contact with our projects. Building positive relationships with our stakeholders is of primary concern, which is why we have a great team in place to make sure that happens.

Information regarding our CIP and the Community Outreach Program can be found on our website at www.ocsewers.com or by contacting our Construction Hotline at (714) 378-2965 or constructionhotline@ocsd.com. For information on the Newport Beach Program, please contact the Community Liaison at (714) 679-2088.



introduction and background

ENGINEERING HIGHLIGHTS 2013-14

Newport Beach Program

Last year we kicked off the Newport Beach Program which consisted of a coordinated effort to construct five projects within the City. The program was developed to work closely with the City, residents, business owners, schools, and any other impacted group keeping them informed of our activities. Thus far, we have completed two of the five projects and are well underway on the third project which is the Newport Force Main Rehabilitation running down Pacific Coast Highway.

Rehabilitation of the Balboa Trunk Sewer in the Balboa Peninsula started last fall and was completed this past spring. The project rehabilitated the 70-year old sewer increasing the lifespan of the line by another 50 years. By relining the pipeline instead of replacing it, the construction period was reduced, thus minimizing the impact to the residents and businesses in the area.

Replacement of the Dover Drive Sewer line also began in 2013. The sewer that runs between Pacific Coast Highway and Irvine Blvd. was old, too small to handle the flow, and in bad shape. The entire line was removed to install a new pipe that will be in service for another 50-60 years. OCS D also replaced a water line for the City of Newport Beach to minimize disturbance to the residents by only impacting the area once. The project is now complete.

We are very appreciative of the community for understanding that construction comes with surprises and helping us work through those unexpected issues. The continued support enables us to complete our projects in a safe and effective manner.



SARI Line Relocation

Earlier this year, the relocation of the Santa Ana River Interceptor was completed. After many years of planning the project with the various regulatory agencies involved, we can now proudly report that the line is in service. The joint effort between the County of Orange, the Santa Ana Watershed Project Authority, and OCSD consisted of relocating the pipeline from within the Santa Ana River to a safer location outside of the riverbed. The existing pipe extends from the San Bernardino/Riverside/Orange county line to Weir Canyon in Yorba Linda. The high stormwater releases from Prado Dam during major flood events put the pipe in risk of failure. To avoid the risk and increase reliability, the pipe was relocated to the south side of the river just north of the Riverside (91) freeway. Now that the pipeline is in service, the old line must be abandoned, and protection barriers in the river bank must be installed to provide added security for the line.

Facilities Engineering Projects

As imagined, the CIP includes projects with varying degrees of complexity, cost, and duration. The Facilities Engineering (FE) projects are what we consider our small budget projects; yet they are very necessary projects that must get done. They consist of design services for under \$100,000 with a shorter duration than our traditional large scale jobs. During the year, there were 19 FE projects in either design or construction and two of those were completed. These projects cover collection system improvements and abandonments, safety modifications and improvements, relocation of hazardous waste storage, landscaping along Ellis Avenue, pump modifications to improve process performance, and odor control changes for Plant No. 2.

Project Awards

OCSD was the proud recipient of various awards for the Plant No. 2 Headworks Replacement Project (Project No. P2-66). The project and its very talented and hard-working team were recognized by various well-known organizations. The awards received are:

- American Society of Civil Engineers (ASCE) Orange County Branch Award – Wastewater Treatment Project of the Year
- Construction Management Association of America (CMAA) Southern California Chapter – Public Works / More than \$100 Million
- Orange County Engineering Council (OCEC) – Engineering Project of the Year



revive

{become active or flourishing again}

The Planning Division provides comprehensive CIP planning for OCSD to meet anticipated capacity needs, manage risks associated with asset or system failure, take advantage of technology advancements, comply with regulatory changes, and meet strategic goals. One of the Planning Division's current objectives is to prepare and maintain a 20-year District-wide capital plan to ensure effective and efficient operations in the future. Our asset engineers are constantly reviewing the assets in their responsible areas, utilizing condition and critical information and engineering judgment to identify projects needed to cost effectively extend the life of key assets. Our goal is to develop more comprehensive projects covering entire processes with greater delivery efficiency, rather than fewer narrowly focused projects to solve individual problems, that will provide better cash flow estimation.

The Board of Directors recently adopted a new Five-Year Strategic Plan for 2014 through 2019 which included eight strategic goals. Two of the eight strategic goals will be addressed by the following Planning projects:

Odor Control Master Plan (Project No. SP-166):

OCSD strives for a good neighbor policy in all aspects of wastewater management. One area that we continue to improve upon is odor control. Controlling nuisance odors represents a significant operational and capital expense to our agency. The last comprehensive odor control study was performed in the early 2000s. Since then, a significant number of projects have been completed, which included new odor control technologies. OCSD is embarking on a new Odor Control Master Plan project to build upon these recent efforts. Completion of the Odor Control Master Plan is necessary to make sure OCSD's investment is current and, if needed, future process systems will meet the Level of Service intended.

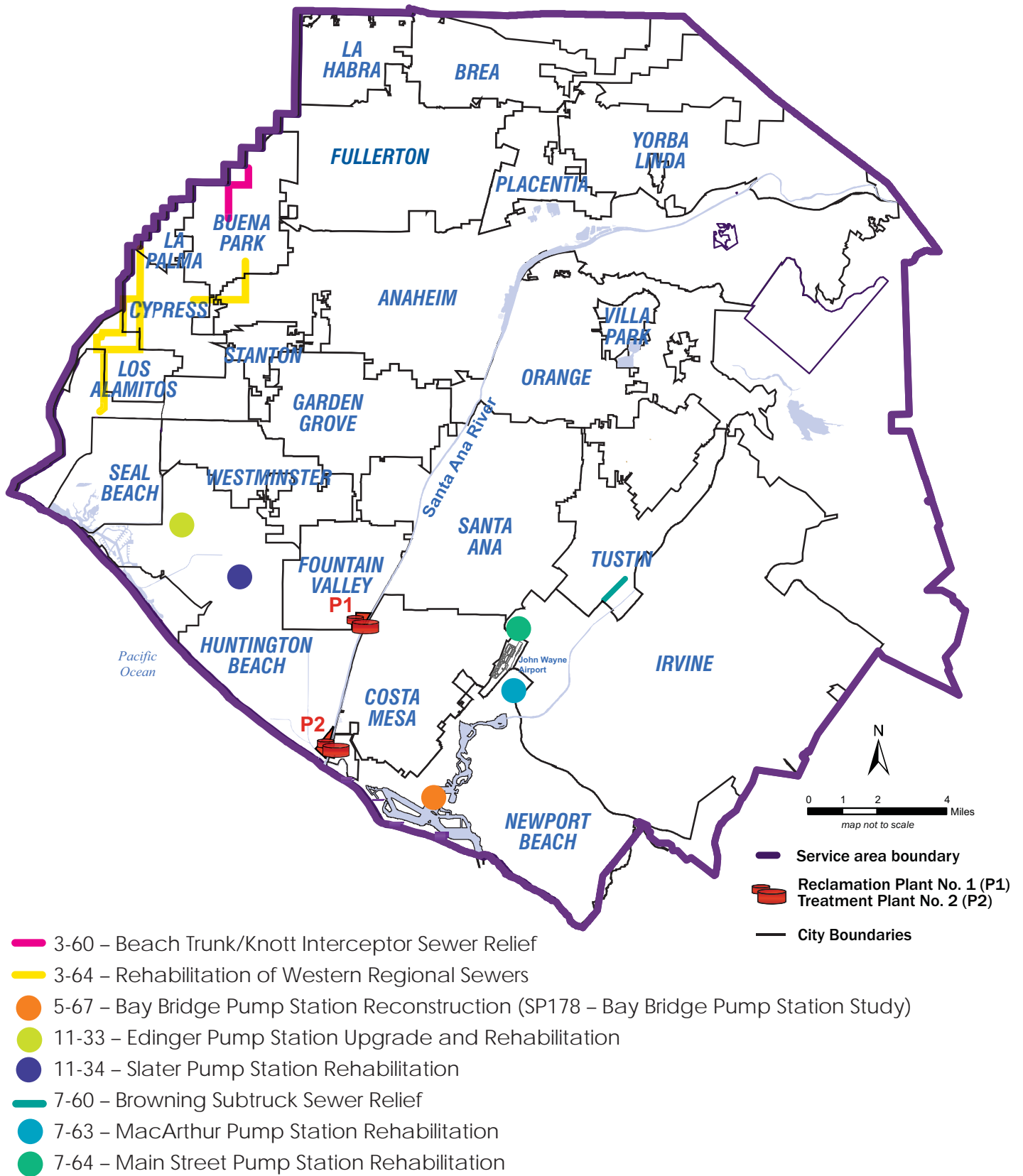
Effluent Reuse Study (Project No. SP-173):

As environmental stewards we recognize the value of enhancing water supply reliability in a time of persistent drought. Reusing this local resource will support California's efforts to provide a safe, sustainable water supply. OCSD and the Orange County Water District (OCWD) have jointly sponsored renowned water recycling projects such as the Groundwater Replenishment System (GWRS) and the Green Acres Project. Currently, about one-half of our treated wastewater is lost to ocean disposal. The OCSD 5-Year Strategic Plan identifies the need to develop a plan for the best utilization of Plant No. 2 effluent water currently discharged out to the ocean. The Effluent Reuse Study will look at treatment plant improvements needed to support OCWD's GWRS Final Expansion. These improvements include investigating Plant No. 2 as a water source for GWRS and the conveyance system needed to deliver the water to OCWD. The study will also identify any outfall impacts and permit modifications attributed to the GWRS Final Expansion.

The following pages show some of the upcoming Planning studies at Plant No. 1, Plant No. 2 and the Collections System. These studies will evaluate specific asset areas and provide recommendations for future CIP projects.






COLLECTION SYSTEM



RECLAMATION PLANT NO. 1



-  SP-137 – Primary Treatment Area Rehabilitation Study
-  SP-183 – Secondary Asset Management Plan
-  SP-141 – Digester Gas Facilities Assessment

TREATMENT PLANT NO. 2



SP-193 – Administrative Building Master Plan

SP-137 – Primary Treatment Area Rehabilitation Study

SP-186 – Digesters/Boilers Plant Asset Management Plan and
SP-141 – Digester Gas Facilities Assessment

SP-185 – Secondary Oxygen Plant Asset Management Plan

revitalize

{to give new life or vigor to}

design and construction

COLLECTION SYSTEM PROJECTS

Our collection system is the critical yet unseen component of our process. Our plants are large, visible, and essentially hard to hide. We have huge structures towering above walls to treat the millions of gallons of wastewater that enter our system on a daily basis. Yet, the hundreds of miles of pipe that are buried under the busiest streets in our service area remain hidden to the naked eye. Those pipes with support from our 15 pump stations convey sewage from the furthest points in the county to our facilities in Huntington Beach and Fountain Valley. Those valuable assets are the hardest to inspect, to maintain, and to care for because they are often not easy to access and cause the greatest impact to the public. Collection projects undergo an intense planning and design process to ensure all the elements of the project are thought through. We work closely with the cities to coordinate efforts and minimize impacts to their residents, businesses, and visitors.

The Community Outreach Program team works closely with the communities to keep them informed of our activities. We strive to be good neighbors so building a strong, lasting relationship with our ratepayers is imperative. We reach out early, communicate constantly, and are always available to help with any issue that may come up.

Information regarding the Capital Improvement Program and our outreach efforts is available on our website at www.ocsewers.com. You may also reach us via e-mail at constructionhotline@ocsd.com or at (714) 378-2965. For information regarding the Newport Beach projects please contact (714) 679-2088. Below are a few of the projects we are currently working on throughout our service area.

NEWPORT BEACH

Newport Force Main Rehabilitation Project No. 5-60

The Newport Force Main Rehabilitation Project is one our largest and most complex in the Collection System. The majority of Newport Beach's sewage flows through these dual parallel force mains running beneath West Coast Highway through the heart of the city. The 50-year old system captures the flow from the various pump stations in the city carrying it from Dover Drive to just west of Superior Avenue to make its way to our Treatment Plant in Huntington Beach.

The project will include rehabilitation, replacement, and relocation of various portions of the pipes. Due to the location of the project, extensive efforts were made during the planning and design of the project to ensure the best options for construction were selected. The project will be constructed over two phases, September 2014 to May 2015 and September 2015 to May 2016 to avoid the busy summer months and minimize the impacts to local homeowners, businesses, and commuters. Preliminary work started earlier this summer to prepare for the heavy work scheduled for later in the year. Our community outreach team is working diligently with the neighbors to keep them informed and involved as the project moves forward.

SEAL BEACH

Seal Beach Pump Station Upgrade and Rehabilitation Project No. 3-62

The Seal Beach Pump Station was construction in 1972. In the last 42 years, the electrical and safety codes have changed significantly requiring upgrades for the station. The aging system is also causing the pumps to regularly clog which requires significant maintenance. Due to its age, many electrical, mechanical, and control system components are becoming obsolete; as such replacement parts are not readily available making maintenance that much more complex. In order to address the deficiencies of the facility, most of it will be reconstructed and new equipment installed. The force mains connecting the pump station to

design and construction

the OCSD system also need attention. There are two parallel force mains on Westminster Boulevard, the northern force main will need to be replaced with larger diameter pipes to properly match the new pumps installed at the station, while the southern force main will simply need to be rehabilitated to protect it against corrosion. The project is in the project development phase with construction anticipated for 2018.

ANAHEIM/FULLERTON

The Newhope-Placentia Trunk Replacement Project No. 2-72

As we continue to evaluate the collection system, we are identifying trunk lines throughout our service area that need updating. The Newhope-Placentia trunk, constructed in 1961, is one of those lines that we must now turn our attention to. The new project will focus on upsizing five miles of sewer along State College Blvd. from Yorba Linda Boulevard in Fullerton to Orangewood Avenue in Anaheim. The extensive project is needed to provide adequate capacity for future developments and to handle the flow necessary to allow for the abandonment of Yorba Linda Pump Station. Our coordination efforts with the corresponding cities and agencies are well underway; we will ensure that the needs of the stakeholders are addressed as we move into design of this complex project. Construction is scheduled to start in 2016.

COSTA MESA/NEWPORT BEACH

District 6 Trunk Sewer Relief Project No. 6-17

Our improvement efforts continue as we move into the final design stage for the three-quarter mile long sewer that runs along Newport Blvd. in Costa Mesa and Newport Beach. The sewer will be upsized from Pacific Coast Highway to Pomona Street to address the capacity and condition deficiencies it currently faces. The project is scheduled for construction in summer 2015, and while we are still a year away from hitting the streets, we are busy coordinating efforts with the cities, and Caltrans. Coordination with the community will soon begin to ensure they are aware of the planned activities and can properly prepare before construction begins.

Southwest Costa Mesa Trunk Sewer Project Project No. 6-19

Over the last two years, we've been working with the Costa Mesa Sanitary District and the City of Newport Beach on a new regional sewer that would allow the two agencies to abandon eight pump stations. The new sewer will extend from West 19th Street, across the Talbert Nature Preserve, under the Santa Ana River and end at our Huntington Beach treatment plant. By working together, we'll be able to increase the reliability of the system and reduce the risk of failure.

Various alignment options were analyzed to determine the best possible way to get across the river and minimize the impacts to the environment. After an intense evaluation process followed by the development and certification of the Environmental Impact Report, the project is now moving into design. The project will be ready for construction in early 2016.



design and construction

RECLAMATION PLANT NO. 1 PROJECTS

Plant No.1 is located in Fountain Valley between the Santa Ana River and the Orange County Water District. We treat more than 100 million gallons of wastewater each day which are then sent over to the Water District for the Groundwater Replenishment System. Our facility is operated 365 days a year, never halting our operations.

Below are a few of the projects we are currently working on at Plant No. 1.

Sludge Dewatering and Odor Control Project No. P1-101

The five-year project to construct additional facilities for solids handling is nearing halfway done. This project is needed in order to handle the additional solids produced by the New Secondary Treatment System at Plant No. 1 which was built as part of the Secondary Expansion Consent Decree. In addition to increasing handling capacity, the project will replace equipment nearing the end of its useful life, and reduce handling and disposal cost of biosolids. Once completed, the facility is expected to provide greater solids management capacity and reduced odors. The project is scheduled for completion in 2017.

CenGen Emission Control Project Project No J-111

Earlier this year, construction began on the Central Generation System to be in compliance with the new South Coast Air Quality Management District rule. The new rule requires a lower emission threshold for the engines which in turn requires us to install new equipment. As environmental leaders, we are always looking for ways to improve our system so we look at this new rule as an opportunity to enhance our existing system by improving the air quality around our plants. The Central Generation System (CGS) engines provide both electricity and heat to our treatment plants. We will automate the operation of the two steam absorption chillers and provide a steam converter at Plant No. 2 to reduce natural gas consumption required for digester heating. The project is scheduled for completion in 2016.

Headworks Rehabilitation and Expansion at Plant No. 1 Project No. P1-105

Last year we completed the Headworks Replacement at Plant No. 2, one of the largest projects we've done. This year we are shifting the focus to Plant No. 1. The system at Plant No.1 is only 27 years old so a complete overhaul is not needed. However, we do need to rehabilitate and enhance the headworks area to increase the life of the asset and improve the service of other areas in the plant.

The project will improve resiliency of the electrical system including expanding the diversity and back up power system. Once completed, the system will have fewer power disruptions, better safeguards, and will eliminate the domino effect during system faults.

We are currently in the project development phase with design scheduled to begin next fiscal year.



TREATMENT PLANT NO. 2

Plant No. 2 is located in Huntington Beach, one step away from the Pacific Ocean and the Santa Ana River. Our treatment plant treats slightly over 100 million gallons of wastewater on a daily basis. The plant has facilities that allow us to release high quality effluent out the ocean outfall.

Below are a few of the projects we are currently working on at Plant No. 2.

Solids Thickening and Processing Upgrades

Project No. P2-89

Dissolved Air Flotation Thickeners (DAFT) concentrate the organic solids before being fed to the digester. Without this process digester capacity is lost to excess water. With the recent addition of the trickling filters, there are more dilute solids to process, which means more treatment and thickening capacity is needed. This project is rehabilitating four existing DAF'Ts and converting two holding digesters into working digesters to accommodate the increased production of solids. The project is currently in construction with estimated completion scheduled for 2016.

Sludge Dewatering and Odor Control at Plant No. 2

Project No. P2-92

To continue on the same solids path, once the digestion process is complete, biosolids move into dewatering. The existing belt press dewatering system is being replaced with a centrifuge dewatering facility that will remove a greater amount of water from the sludge resulting in reduced disposal cost. In addition, the new system will also include new updated odor control facilities. Once fully constructed, the worn out belt press system will be demolished. The project is scheduled to initiate construction in the next year, with a completion date set for 2018.

Ocean Outfall System Rehabilitation

Project No. J-117

The elaborate ocean outfall system has been updated section by section in the last few years. With the completion of the pipeline section of the system, it is time we turn our attention towards the Ocean Outfall Booster Station. This project will rehabilitate the mechanical, electrical, and civil systems of the station at Plant No. 2, which is the primary pumping station for discharging out the ocean outfall. Related facilities between the two plants are also part of this project, including rehabilitation of the interplant line and fiber optic cable. Replacing portions of the pumping system will also help increase the efficiency of the system. The project is currently in the project development phase.

recharge

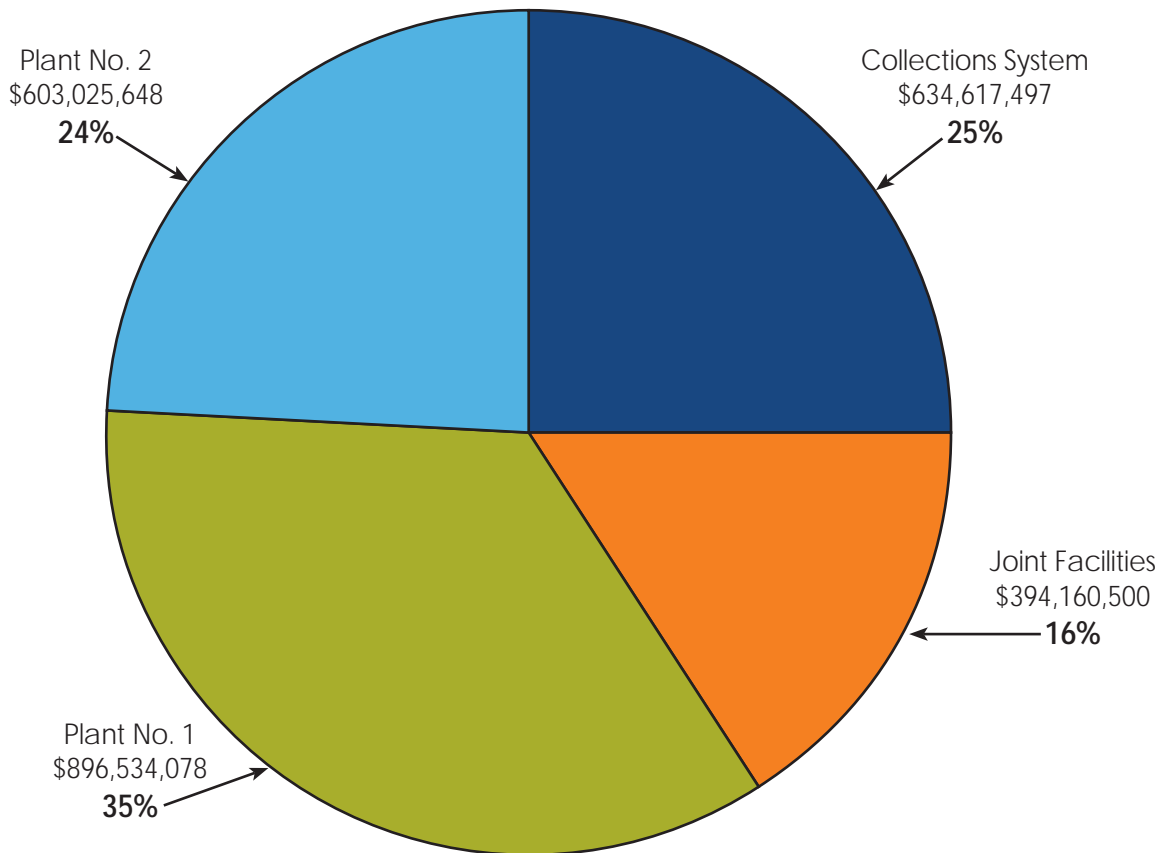
{to regain energy or spirit}

financial data and contract activity

Developing the budget estimates for the CIP is an intricate process that takes several months to complete. Our fiduciary responsibility is taken seriously when developing cash flow requirements. Staff takes every precaution necessary to define the project as best as possible so the appropriate project budget is identified and allocated for the job. The anticipated labor and costs are projected for the various phases of the project so the right budget is in place when the time comes to initiate the project.

The financial information provided below and in the following pages pertains only to the Engineering Department's Capital improvement Program. The agency's CIP also includes projects by other OCSD departments which are not included in this report.

FISCAL YEAR 2013-14 APPROVED ENGINEERING CIP BUDGET

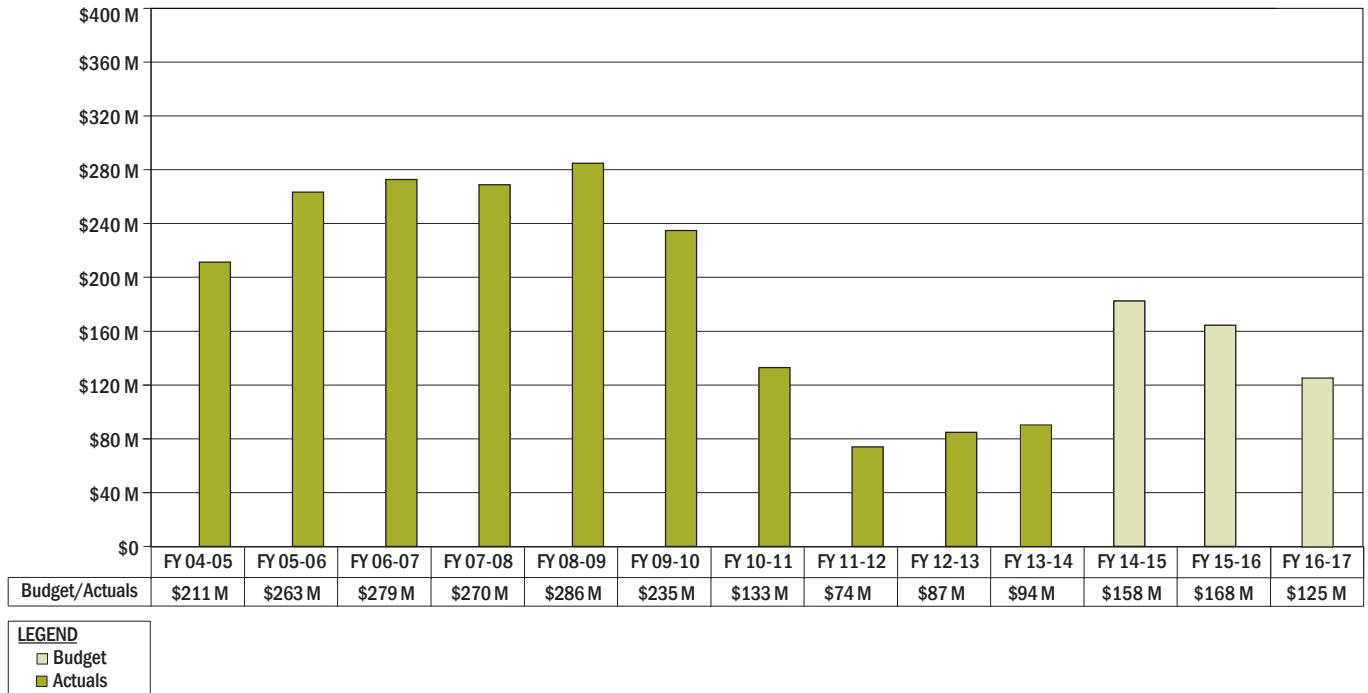


GRAND TOTAL \$2,528,337,723

PROGRAM CASH FLOWS

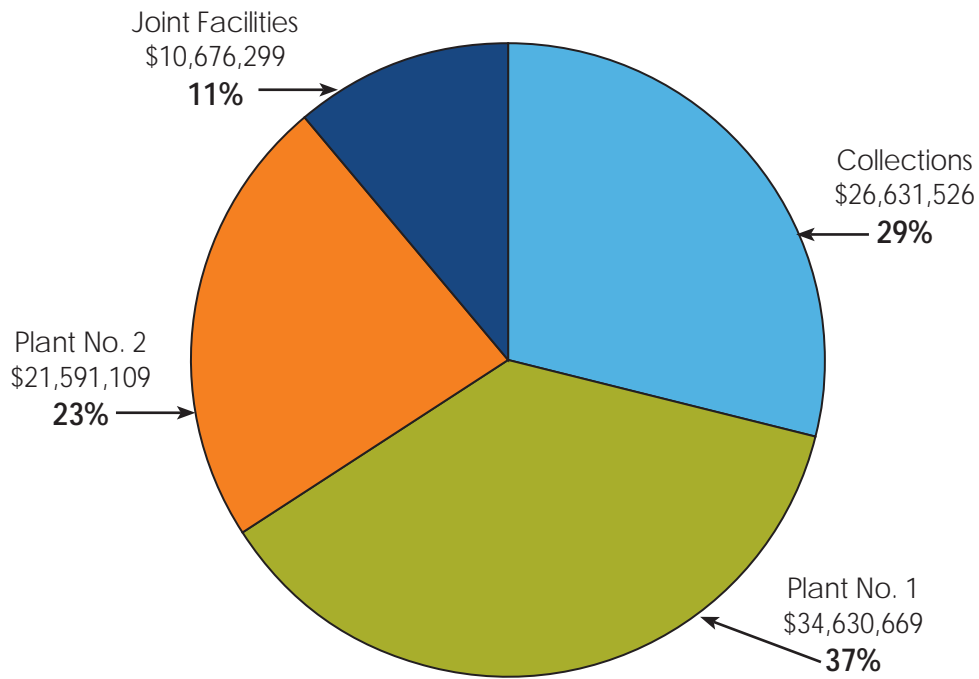
The program cash flow documents the actual expenditures for the CIP versus what was budgeted. The table below showcases the actual expenditures for the past ten years of the program and the projected or budgeted amount for the next few years.

CASH FLOW BUDGET AND ACTUAL TOTALS BY FISCAL YEAR

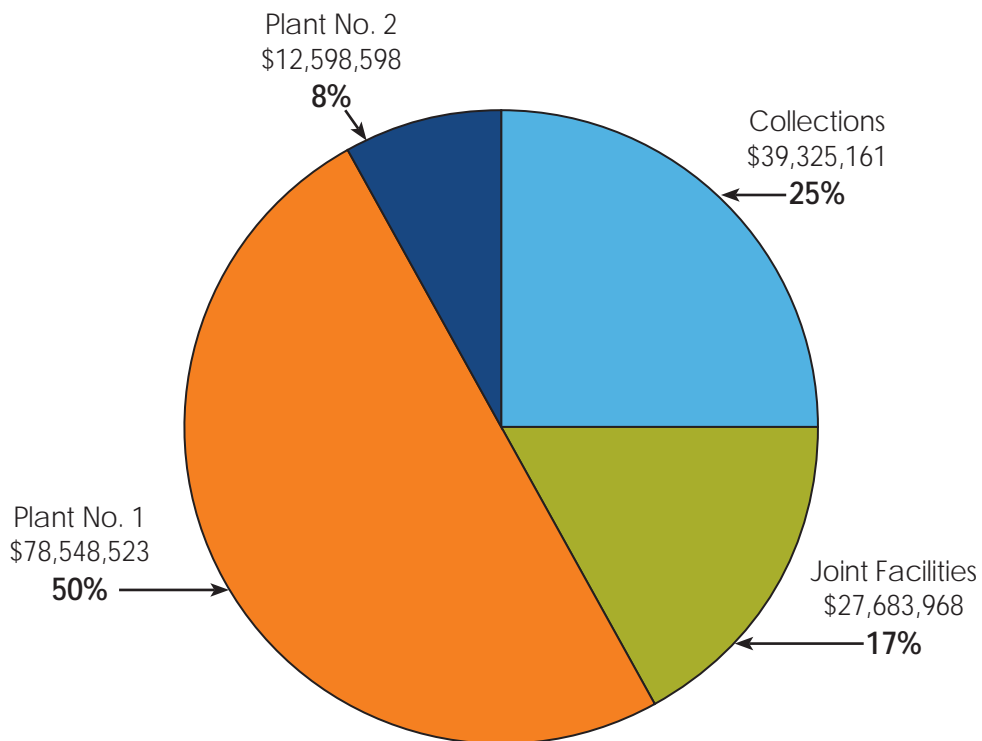


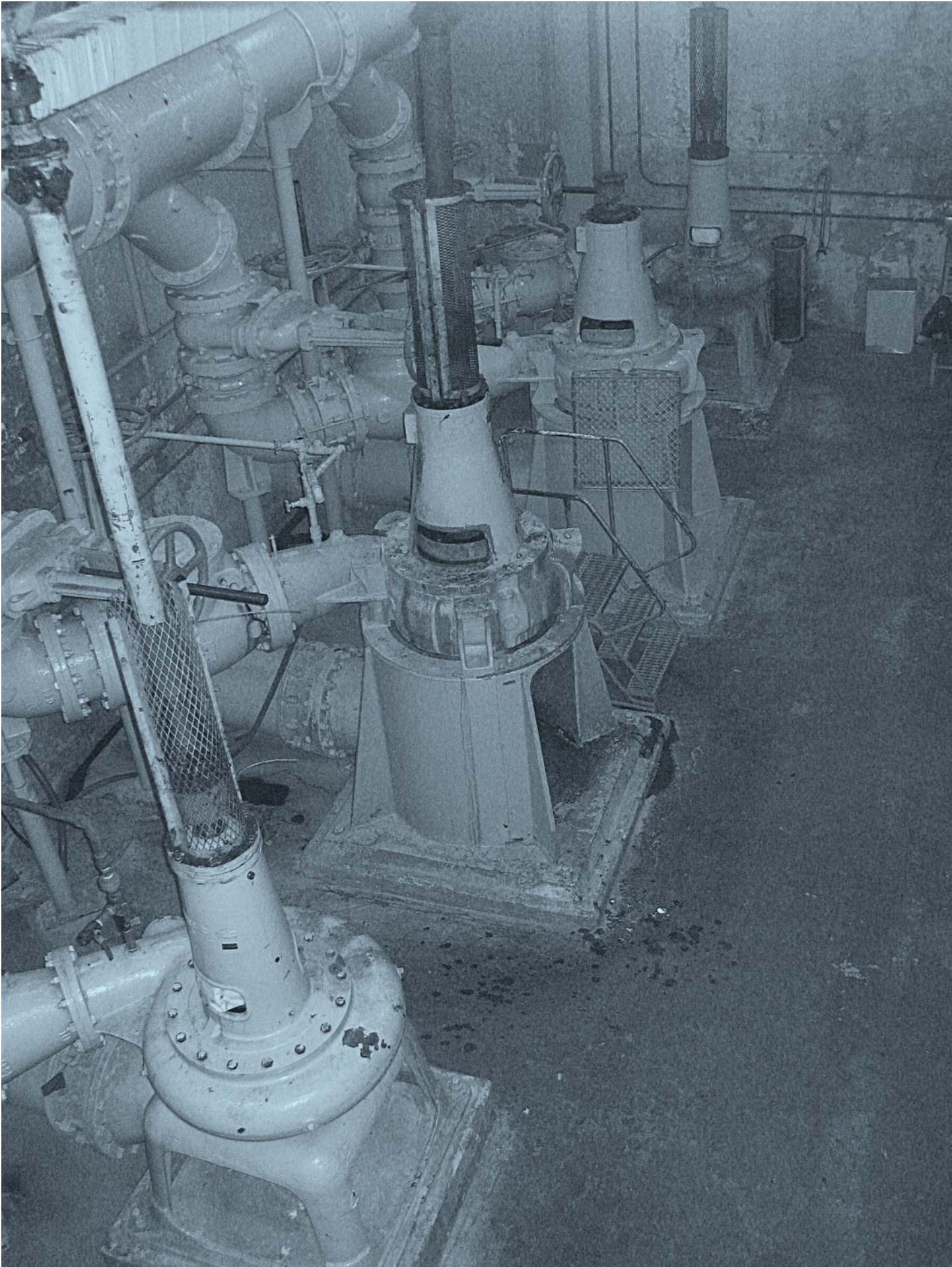
financial data and contract activity

FISCAL YEAR 2013-14 ACTUAL EXPENDITURES



FISCAL YEAR 2014-15 PROJECTED CASH FLOW BUDGET





financial data and contract activity

CONTRACT ACTIVITY

The Engineering Department works closely with the Contracts Division to award multiple construction and design contracts each year. This past fiscal year, over \$70 million in construction contracts were awarded and close to \$4 million in design contracts were awarded. The tables below highlights the projects that had contracts awarded.

DESIGN CONTRACTS AWARDED THIS FISCAL YEAR					
City	Project No.	Project Name	Consultant	Amount of Award	Date of Award
HB	P2-101	Plant Water System Rehabilitation at Plant No. 2	Carollo Engineers	\$ 225,108	9/25/2013
HB	P2-106	Boiler System Rehabilitation and Scrubbers H & I Demolition at Plant No. 2	Dudek & Associates, Inc.	\$ 222,503	10/23/2013
FV	P1-115	Title 24 Access Compliance and Building Rehabilitation Project	The Austin Company	\$ 606,622	11/20/2013
NB	5-60	Newport Force Main Rehabilitation	Brown and Caldwell	\$1,120,418	4/23/2014
HB	J-111	Cengen Emissions Control Project	Black & Veatch	\$1,097,212	4/23/2014
FV	P1-124	Plant No. 1 Primary Treatment Upgrades	Carollo Engineers	\$ 451,910	6/24/2014
FV, CM, SA	1-17	Santa Ana Trunk Sewer Rehab	Brown and Caldwell	\$ 188,724	6/25/2014

CONSTRUCTION CONTRACTS AWARDED THIS FISCAL YEAR					
City	Project No.	Project Name	Contractor	Amount of Award	Date of Award
NB	5-47	Rehabilitation of Balboa Trunk Sewer	Charles King Company, Inc.	\$ 3,313,100	7/23/2013
FV	P1-112	Plant Water System Rehabilitation at Plant No.1	W. M. Lyles Company	\$ 3,743,000	9/25/2013
HB	P2-101	Plant Water System Rehabilitation at Plant No. 2	W. M. Lyles Company	\$ 2,295,000	9/25/2013
HB	P2-106	Boiler System Rehabilitation and Scrubbers H & I Demolition at Plant No. 2	Irwin Industries	\$ 1,472,993	10/23/2013
NB	5-60	Newport Force Main Rehabilitation	Kiewit	\$36,715,000	3/26/2014
HB	J-111	Cengen Emissions Control Project	Shimmick Construction Co., Inc.	\$14,895,000	4/23/2014
FV, CM, SA	1-17	Santa Ana Trunk Sewer Rehab	Charles King Company, Inc.	\$ 2,619,188	6/25/2014
FV	P1-124	Plant No. 1 Primary Treatment Upgrades	Archer Western Construction, Inc.	\$ 5,513,891	6/25/2014

CONTRACTS COMPLETED THIS FISCAL YEAR

City	Project No.	Project Name	Contractor/Consultant	Amount of Award
YL	2-41-7	SARI Inspection & Mitigation	RBF Consulting Inc.	\$1,217,000
NB	5-47	Rehabilitation of Balboa Trunk Sewer	Charles King Company	\$3,313,100
NB	5-58D	Bitter Point Force Main Rehabilitation - Santa Ana River Levee and In-Plant Repair	Magnus Pacific Corporation	\$9,641,650
FV, HB	J-106	Interplant Gas Line Rehabilitation	J. Fletcher Creamer	\$2,048,060
HB, NB	J-109	Cengen Cooling Water System Replacement Project	Stanek Constructors, Inc.	\$5,954,192
HB, NB	J-112B	Outfall Land Section and OOBS Piping Rehabilitation	J.F. Shea Construction, Inc.	\$5,922,197
FV, HB	J-123	Fall Protection Improvements at Plant Nos. 1 and 2	W. M. Lyles Company	\$1,957,961
FV	J-33-3	Power Monitoring and Control Systems	Morrow Meadows Corp.	\$3,984,600
HB, NB	P2-108	15 kV Upgrades at Plant No. 2	Helix Electric, Inc.	\$2,745,000
HB	SP-187	Plant No. 2 Outfall Systems Asset Management Plan	Black & Veatch	\$ 300,000



remodel

{to alter the structure of}

engineering capitol improvement program projects

Below is a list of all the projects that were active during the 2013-2014 Fiscal Year as well as future projects the Planning Division will focus on in the upcoming year.

COLLECTION SYSTEM PROJECTS					
City	Project Number	Project Description	OCSD Project Manager	Schedule Status	Estimate at Completion
YL	2-41-8	SARI Rock Stabilizers Removal	Hardat Khublall	In Project Development	\$ 3,092,000
Anaheim, Fullerton	2-72	Newhope-Placentia Trunk Replacement	Raul Cuellar	In Project Development	\$104,890,000
SB	3-62	Seal Beach Pumping Station Upgrade and Rehabilitation	Martin Dix	In Project Development	\$ 62,041,000
CM, NB	6-19	Southwest Costa Mesa Trunk	Victoria Pilko	In Project Development	\$ 14,993,000
CM, NB	6-17	District 6 Trunk Sewer Relief	Adam Nazaroff	In Design	\$ 7,047,000
Irvine, SA, Tustin	7-37	Gisler - Red Hill Trunk Improvements - Reach B	Hardat Khublall	In Design	\$ 23,073,000
CM, FV, SA	1-17	Santa Ana Trunk Sewer Rehab	Martin Dix	In Construction	\$ 7,676,000
YL	2-41	SARI Re-Alignment	Hardat Khublall	In Construction	\$ 11,404,000
Fullerton	2-65	Newhope - Placentia Truck Grade Separation Replacement	Adam Nazaroff	In Construction	\$ 5,966,000
Anaheim, Placentia	2-75	Lakeview Grade Separation Project	Wendy Smith	In Construction	\$ 330,000
Anaheim, Placentia	2-76	Tustin Rose OCTA Grade Separation	Wendy Smith	In Construction	\$ 586,000
Anaheim, Placentia	2-77	Orangethorpe OCTA Grade Separation	Wendy Smith	In Construction	\$ 3,900,000
NB	5-60	Newport Force Main Rehabilitation	Martin Dix	In Construction	\$ 52,216,000
NB	5-63	Dover Drive Trunk Sewer Relief	Martin Dix	In Construction	\$ 14,327,000
NB	5-47	Rehabilitation of Balboa Trunk Sewer	Adam Nazaroff	Construction Complete	\$ 8,122,000
YL	2-41-7	Santa Ana River Interceptor (SARI) Inspection & Mitigation	Hardat Khublall	Complete	\$ 1,217,000
CM, FV, SA	1-101	Raitt and Bristol Street Sewer Extension	Wendy Smith	Future	\$ 10,722,000
HB	11-25	Edinger Bolsa Chica Trunk Improvements	Wendy Smith	Future	\$ 6,030,000
HB	11-33	Edinger Pumping Station Upgrade and Rehabilitation	Wendy Smith	Future	\$ 13,629,000
Orange	2-49	Taft Branch Improvements	Wendy Smith	Future	\$ 3,143,000
Fullerton	2-73	Yorba Linda Pumping Station Abandonment	Wendy Smith	Future	\$ 4,694,000
Fullerton	2-74	Coyote Hills Golf Course Odor Control Station	Wendy Smith	Future	\$ 8,365,000
BP, Fullerton, LH	3-59	Miller-Holder Trunk Sewer Relief	Wendy Smith	Future	\$ 17,324,000
BP	3-60	Beach Trunk/Knott Interceptor Sewer Relief	Wendy Smith	Future	\$ 27,599,000
Anaheim, BP, Cyp, Los Al	3-64	Rehabilitation of Western Regional Sewers	Wendy Smith	Future	\$112,222,200
NB	5-66	Crystal Cove Pumping Station Upgrade and Rehabilitation	Wendy Smith	Future	\$ 7,817,000
NB	5-67	Bay Bridge Pumping Station Upgrade and Rehabilitation	Cindy Murra	Future	\$ 74,431,000
Tustin	7-60	Browning Subtrunk Sewer Relief	Wendy Smith	Future	\$ 13,439,000
Irvine, NB, Tustin	7-62	Von Karman Trunk Sewer Relief	Wendy Smith	Future	\$ 433,000
NB	7-63	MacArthur Pumping Station Upgrade and Rehabilitation	Wendy Smith	Future	\$ 7,445,000

engineering capitol improvement program projects

RECLAMATION PLANT NO. 1					
City	Project Number	Project Description	OCSD Project Manager	Schedule Status	Estimate at Completion
FV	-105	Headworks Rehabilitation and Expansion at Plant No.1	Jeffrey Mohr	In Project Development	\$ 76,476,000
FV	P1-125	South Perimeter Security and Stormwater Improvements	Adam Nazaroff	In Project Development	\$ 3,005,000
CM, FV	P1-123	Trunk Line Odor Control Improvements	Jeffrey Mohr	In Design	\$ 10,826,000
FV	P1-100	Digester Rehabilitation at Plant No. 1	Raul Cuellar	In Construction	\$ 60,547,000
FV	P1-101	Sludge Dewatering and Odor Control at Plant No.1	Raul Cuellar	In Construction	\$171,978,000
FV	P1-112	Plant Water System Rehabilitation at Plant No.1	Victoria Pilko	In Construction	\$ 8,000,000
FV	P1-115	Title 24 Access Compliance and Building Rehabilitation Project	Wendy Sevenandt	In Construction	\$ 17,437,000
FV	P1-124	Plant 1 Primary Treatment Upgrades	Hardat Khublall	In Construction	\$ 11,535,000
FV	P1-114	Primary Scrubber Rehabilitation Project	Ted Vitko P1	Future	\$ 50,708,300
FV	P1-118	Primary Effluent Pipeline Joint Repairs	Gary Conklin	Future	\$ 3,246,000
FV	P1-120	Headworks Expansion	Ted Vitko	Future	\$222,804,000

TREATMENT PLANT NO. 2					
City	Project Number	Project Description	OCSD Project Manager	Schedule Status	Estimate at Completion
HB	P2-110	Consolidated Demolition and Utility Improvements at Plant No. 2	Victoria Pilko	In Project Development	\$ 43,974,000
HB	P2-92	Sludge Dewatering and Odor Control	Jeffrey Mohr	In Design	\$ 87,000,000
HB	P2-96	Site and Security Improvements	Kevin Hadden	In Design	\$ 1,455,000
HB	P2-101	Plant Water System Rehabilitation	Victoria Pilko	In Construction	\$ 5,070,000
HB	P2-105	Digester Ferric Chloride System Rehabilitation	Victoria Pilko	In Construction	\$ 4,449,000
HB	P2-106	Boiler System Rehabilitation and Scrubbers H & I Demolition	Wendy Sevenandt	In Construction	\$ 3,095,000
HB	P2-89	Solids Thickening and Processing Upgrades	Jeffrey Mohr	In Construction	\$ 48,346,000
HB	P2-107	SCADA System and Network Upgrades	Un-Assigned	Future	\$ 27,839,000
HB	P2-111	SCE Feed Reliability Improvements	Un-Assigned	Future	\$ 22,490,000
HB	P2-114	Solids Storage Silo Rehabilitation	Mike Lahlou	Future	\$ 37,604,000
HB	P2-116	Secondary Area Cable Tray Upgrades	Gary Conklin	Future	\$ 2,154,000
HB	P2-117	Headworks Cable Tray Upgrades	Ted Vitko	Future	\$ 3,015,000
HB	P2-91-1	Digester Rehabilitation	Mike Lahlou	Future	\$47,600,000
HB	P2-98	Primary Treatment Odor Control Replacement	Ted Vitko	Future	\$43,210,000

SPECIAL PROJECTS

City	Project Number	Project Description	OCSD Project Manager	Schedule Status	Estimate at Completion
FV	SP-137	Primary Treatment Area Rehabilitation Study	Gary Conklin	In Project Development	\$ 848,000
FV, HB	SP-141	Digester Gas Facilities Assessment	Mike Lahlou	In Project Development	\$ 750,000
FV, HB	SP-145-1	Facility-Wide Safety Assessment	Gary Conklin	In Project Development	\$ 930,000
FV, HB	SP-146	Utility Water Systems Study	Gary Conklin	In Project Development	\$ 800,000
FV, HB	SP-148	Plant Air System Master Plan	Doug Kanis	In Project Development	\$ 340,000
FV, HB	SP-166	Odor Control Master Plan	Ted Vitko	In Project Development	\$1,600,000
FV, HB	SP-168	Treatment Plant Hydraulic Assessment	Doug Kanis	In Project Development	\$ 300,000
FV, HB	SP-173	Effluent Reuse Study	Cindy Murra	In Project Development	\$2,800,000
NB	SP-178	Bay Bridge PS and Force Mains Rehabilitation Study	Cindy Murra	In Project Development	\$ 400,000
BP, Cyp, GG, HB, LH, LP, Los Al, SB, Stanton	SP-180	Revenue Area 3 Service Area Asset Management Plan	Wendy Smith	In Project Development	\$1,000,000
HB	SP-186	Plant No. 2 Digesters/Boilers Plant Asset Management Plan	Mike Lahlou	In Project Development	\$ 800,000
HB	SP-191	Plant No. 2 Tunnels Systems Asset Management Plan	Doug Kanis	In Project Development	\$ 200,000
HB	SP-193	Plant No. 2 Administrative Building Master Plan	Kevin Hadden	In Project Development	\$ 300,000
FV	SP-194	Administrative Facilities Implementation Planning	Wendy Sevenandt	In Project Development	\$ 800,000
FV, HB	SP-129	Oxygen Plant Demolition at Plant No. 2	Jeffrey Mohr	In Design	\$4,051,000
HB	SP-187	Plant No. 2 Outfall Systems Asset Management Plan	Ted Vitko	Complete	\$ 266,865
FV, HB	SP-145-4	Landscape Master Plan	Cindy Murra	Future	\$ 150,000
FV, HB	SP-149	Electrical System Base Map	Un-Assigned	Future	\$ 250,000
FV, HB	SP-152	Climate Change Impact Study	Cindy Murra	Future	\$ 100,000
FV, HB	SP-155	Sidestream Pumping System and Water Characterization Study	Un-Assigned	Future	\$ 246,000
FV, HB	SP-167	Stormwater Master Plan	Un-Assigned	Future	\$ 300,000
HB	SP-177	Settlement and Liquefaction Study	Un-Assigned	Future	\$ 700,000
FV	SP-183	Plant No. 1 Secondary Plant No. 1 Asset Management Plan	Gary Conklin	Future	\$ 400,000
HB	SP-185	Plant No. 2 Secondary Oxygen Plant Asset Management Plan	Gary Conklin	Future	\$ 400,000
FV, HB	SP-188	Public Address System Study	Mike Lahlou	Future	\$ 100,000
FV	SP-189	Collection System Odor Control Systems Study	Wendy Smith	Future	\$ 700,000
FV, HB	SP-192	Information Technology Master Plan	Kevin Hadden	Future	\$ 500,000

engineering capitol improvement program projects

JOINT AND FACILITIES ENGINEERING					
City	Project Number	Project Description	OCSD Project Manager	Schedule Status	Estimate at Completion
HB	J-117	Ocean Outfall System Rehabilitation	Victoria Pilko	In Project Development	\$48,194,000
HB	J-110	Final Effluent Sampler and Building Area Upgrades	Wendy Sevenandt	In Design	\$14,064,000
All Cities	FE-C	Facilities Engineering Projects - Plant No. 2	Mike Puccio	In Construction	\$ 8,250,000
FV, HB	FE-J	Facilities Engineering Projects - Joint Works	Mike Puccio	In Construction	\$23,910,000
FV	FE-P1	Facilities Engineering Projects - Plant No. 1	Mike Puccio	In Construction	\$20,910,000
HB	FE-P2	Facilities Engineering Projects - Plant No. 2	Mike Puccio	In Construction	\$20,910,000
FV, HB	J-111	Cengen Emissions Control Project	Jeffrey Mohr	In Construction	\$24,950,000
FV, HB	J-125	Programmable Control Panel Upgrades	Wendy Sevenandt	In Construction	\$ 3,477,000
FV	J-33-3	Power Monitoring and Control Systems	Wendy Sevenandt	Construction Complete	\$10,918,000
FV	J-36-1	Joint GWRS Microfiltration Backwash Redirection	Wendy Sevenandt	Construction Complete	\$ 387,000
FV, HB	J-106	Interplant Gas Line Rehabilitation	Martin Dix	Construction Complete	\$ 4,937,000
FV, HB	J-109	Cengen Cooling Water System Replacement Project	Victoria Pilko	Construction Complete	\$11,337,000
FV, HB	J-112	Outfall Land Section and OOBS Piping Rehabilitation	Victoria Pilko	Construction Complete	\$20,466,000
FV, HB	J-123	Fall Protection Improvements at Plant No. 1 and 2	Eros Yong	Construction Complete	\$ 2,687,000
FV, HB	J-116	66-inch Interplant Effluent Pipeline Rehabilitation	Ted Vitko	Future	\$72,517,000
HB	J-120	Process SCADA Replacement	Un-Assigned	Future	\$24,680,000
FV, HB	J-121	UPS System Upgrades	Gary Conklin	Future	\$ 3,817,000
FV, HB	J-124	Digester Gas Compressor Improvements	Mike Lahlou	Future	\$58,755,000
FV, HB	J-98	Electrical Power Distribution System Improvements	Un-Assigned	Future	\$12,791,000

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The CIP Annual Report is created to provide a snapshot of OCSD's Engineering Department's capital projects.

Thank you to management and staff who participated in the production of this report.



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