

DATE: January 24, 2022

TO: Orange County Sanitation District  
Board of Directors

FROM: James D. Herberg, General Manager  
Through: Kathy Millea, Director of Engineering

This report summarizes the status, activities, and performance of construction contracts and consultant agreements. This report also identifies the names and status of projects being performed under master budgets for planning studies, research, small construction projects, O&M capital projects, and information technology projects.

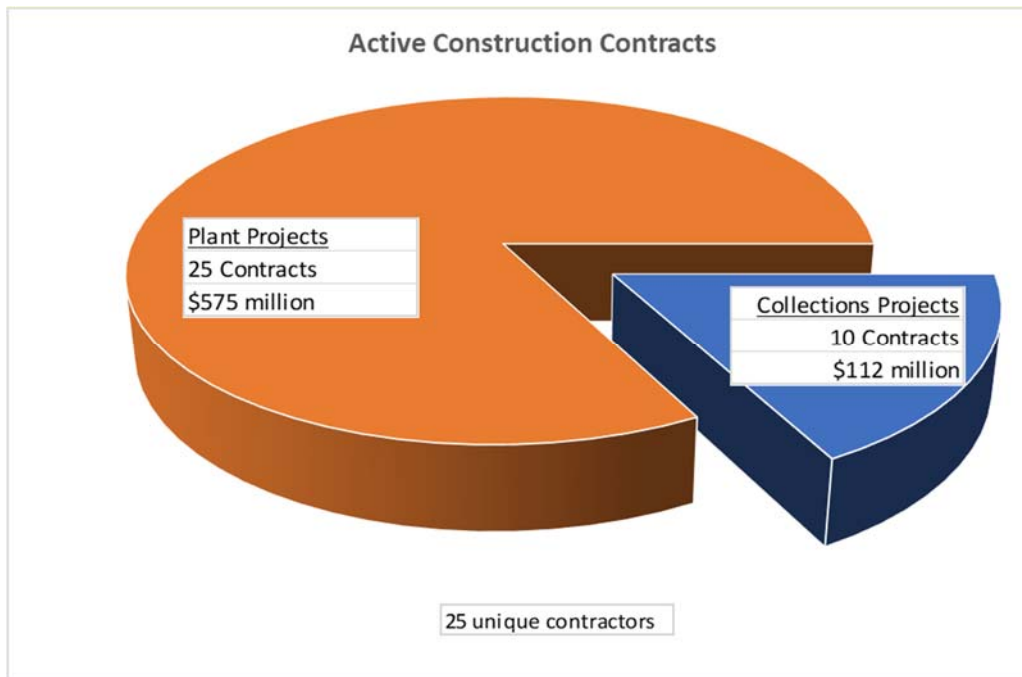
## **Table of Contents**

<u>Part 1 – Construction Contracts</u>	page 2
Active Construction Contracts	
Construction Contracts Closed in Last Quarter	
Cumulative Change Order Rates – Closed Construction Contracts	
<u>Part 2 – Engineering Services Agreements</u>	page 9
Active Engineering Services Agreements	
Active Task Orders by Master Agreement	
<u>Part 3 - Master Budget Projects</u>	page 14
Planning Studies Status Report	
Research Program Status Report	
Small Construction Projects Program Status Report	
Information Technology Capital Program Status Report	
Operations and Maintenance Capital Program Status Report	
<u>Part 4 - Supplemental Engineering Services Contract</u>	page 20
Supplemental Engineering Services Contract Status	
Supplemental Engineering Services Contract Labor Summary	

**PART 1 - CONSTRUCTION CONTRACTS**

Table 1 lists the Board-awarded construction contracts active as of December 31, 2021, while Table 2 lists the General Manager-awarded construction contracts. The General Manager may award contracts up to \$100,000 and task orders up to \$300,000. The graph below shows the number and total value of projects broken down plant and collections.

OLD ONE



One Board-awarded construction contracts was closed in this quarter, as listed in Table 3. One construction contract awarded by the General Manager was closed in this quarter, as listed in Table 4.

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 1 - Active Board-Awarded Construction Contracts as of 12/31/2021**

Project / Contract	Contractor	Award Date	% Spent	Board Award Amount	Change Orders	Current Contract Amount	Original Contingency	Current Contingency	Contingency Used	Contingency Remaining
<b>2-72</b> Newhope-Placentia Trunk Replacement 2-72B Newhope-Placentia Trunk Replacement, Segment B	OHL USA, INC.	06/15/2018	99%	\$58,242,000	\$5,844,854	\$64,086,854	6.5%	12.0%	10.0%	2.0%
<b>3-62</b> Westminster Blvd Force Main Replacement 3-62 Westminster Blvd Force Main Replacement	Teichert Energy & Utilities Group, Inc.	12/18/2019	71%	\$27,743,000	\$759,976	\$28,502,976	10.0%	10.0%	2.7%	7.3%
<b>3-64</b> Rehabilitation of Western Regional Sewers 3-64B Los Alamitos Trunk Sewer Rehabilitation Sunflower and Red Hill Interceptor Repairs	Steve P. Rados, Inc.	05/26/2021	6%	\$17,775,000	\$0	\$17,775,000	10.0%	10.0%	0.0%	10.0%
7-66 Sunflower and Red Hill Interceptor Repairs	Charles King Company, Inc.	07/28/2021	1%	\$4,777,000	\$0	\$4,777,000	10.0%	10.0%	0.0%	10.0%
<b>J-117</b> Ocean Outfall System Rehabilitation J-117B Outfall Low Flow Pump Station	Shimmick Construction Co., Inc.	12/19/2018	61%	\$90,200,000	\$515,273	\$90,715,273	8.0%	8.0%	0.6%	7.4%
<b>J-120</b> Process Control Systems Upgrades J-120 Process Control Systems Upgrades	ABB Inc.	07/20/2021	0%	\$11,818,480	\$0	\$11,818,480	10.0%	10.0%	0.0%	10.0%
<b>J-127</b> Natural Gas Pipelines Replacement at Plant Nos. 1 and 2 J-127 Natural Gas Pipelines Replacement at Plant Nos. 1 and 2	Innovative Construction Solutions	07/22/2020	66%	\$745,500	\$0	\$745,500	10.0%	10.0%	0.0%	10.0%
<b>J-135</b> Central Generation Engine Overhauls at Plant No. 1 and 2 J-135A Central Generation Engine Overhaul at Plant No. 1	Cooper Machinery Services LLC	03/24/2021	14%	\$3,705,932	\$187,330	\$3,893,262	20.0%	20.0%	5.1%	14.9%
<b>M-FE</b> Small Construction Projects Program FE10-21 Area 02 Craig Regional Park Manhole Improvements	Deark E&C, Inc.	07/28/2021	0%	\$427,400	\$0	\$427,400	9.9%	9.9%	0.0%	9.9%
FE18-11 Headworks Explosive Gas Monitoring Systems at Plant No. 1 and No. 2	Baker Electric, Inc.	3/25/2020	80%	\$223,984	\$0	\$223,984	10.0%	10.0%	0.0%	10.0%
FE18-12 Erosion Control at Santa Ana River and Hamilton Ave	Engineering & Environmental Construction	09/01/2021	0%	\$162,281	\$0	\$162,281	15.0%	15.0%	0.0%	15.0%
FE18-14 Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2	MMC, Inc.	12/16/2020	0%	\$1,134,000	\$0	\$1,134,000	15.0%	15.0%	0.0%	15.0%
FE18-15 Plant Boiler System Relief at Plant No. 2	MMC, Inc.	04/21/2021	0%	\$230,000	\$0	\$230,000	15.0%	15.0%	0.0%	15.0%
FE18-16 Truck Loading Basement Drain Modifications at Plant No. 1	Mehta Mechanical Company, Inc.	10/27/2021	0%	\$162,500	\$0	\$162,500	10.0%	10.0%	0.0%	10.0%
FE18-19 12KV Distribution B and East RAS Pump Station Roofing Replacement	O'Connell Engineering & Construction, Inc.	05/27/2020	100%	\$674,800	\$16,664	\$691,464	10.0%	10.0%	2.5%	7.5%
FE19-01 Pump Station Portable Generator Connectors	Pacific Industrial Electric	09/22/2021	0%	\$1,207,479	\$0	\$1,207,479	10.0%	10.0%	0.0%	10.0%
FE19-04 Sunflower Pump Replacement at Plant No. 1	GSE Construction Company, Inc.	10/27/2021	0%	\$2,123,200	\$0	\$2,123,200	10.0%	10.0%	0.0%	10.0%
FE19-06 EPSA Motor Cooling Improvements at Plant No. 2	Mehta Mechanical Company, Inc.	09/01/2021	0%	\$854,000	\$0	\$854,000	10.0%	10.0%	0.0%	10.0%
<b>Operationally-Funded Projects</b> FR1-0007 Control Center Offices and Day Training Room Remodeling at Plant No. 1	Thomas Solar Energy	05/26/2021	9%	\$256,790	\$0	\$256,790	10.0%	10.0%	0.0%	10.0%
FR1-0008 Trickling Filter 480 Volt Cable Replacement at Plant No. 1	Baker Electric, Inc.	12/22/2021	0%	\$251,586	\$0	\$251,586	20.0%	20.0%	0.0%	20.0%
FR2-0013 P2 Trickling Filter Sludge Pump Room Exhaust Fan Relocation at Plant No.2	MMC, Inc.	04/21/2021	0%	\$184,000	\$0	\$184,000	20.0%	20.0%	0.0%	20.0%
FR2-0021 Boilers Retubing at Plant 2	RF MacDonald	02/08/2021	0%	\$51,250	\$0	\$51,250	0.0%	0.0%	0.0%	0.0%
FRC-0002 Bay Bridge Pump Station Valve Replacement	Innovative Construction Solutions	11/18/2020	47%	\$598,000	\$33,647	\$631,647	10.0%	55.0%	5.6%	49.4%
FRC-0004 Seal Beach Pump Station Isolation Valve Replacement	J.R. Filanc Construction Company, Inc.	12/16/2020	64%	\$466,830	\$0	\$466,830	20.0%	20.0%	0.0%	20.0%
FRC-0013 Bay Bridge Pump Station Forcemain Isolation Valve Replacement	Charles King Company, Inc.	08/25/2021	95%	\$289,585	\$0	\$289,585	50.0%	68.0%	0.0%	68.0%
MP-305 Cengen Supply Air Fan Support Replacement at Plant No. 2	J.R. Filanc Construction Company, Inc.	12/16/2020	65%	\$297,000	\$27,878	\$324,878	15.0%	15.0%	9.4%	5.6%

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 1 - Active Board-Awarded Construction Contracts as of 12/31/2021**

Project / Contract	Contractor	Award Date	% Spent	Board Award Amount	Change Orders	Current Contract Amount	Original Contingency	Current Contingency	Contingency Used	Contingency Remaining
<b>IV-5M-CAP Operations &amp; Maintenance Capital Program</b>										
SC19-03 Return Activated Sludge Pump Station Elevator Rehabilitation at Plant No. 2	OTIS	12/16/2020	5%	\$432,400	\$0	\$432,400	20.0%	20.0%	0.0%	20.0%
<b>P1-105 Headworks Rehabilitation at Plant 1</b>										
P1-105 Headworks Rehabilitation at Plant 1	Kiewit Infrastructure West Co.	02/24/2021	7%	\$222,330,000	\$0	\$222,330,000	4.0%	4.0%	0.0%	4.0%
<b>P1-128 Headquarters Complex</b>										
P1-128A Headquarters Complex at Plant No. 1	Swinerton Builders	05/26/2021	5%	\$102,544,973	\$0	\$102,544,973	5.0%	5.0%	0.0%	5.0%
<b>P1-134 South Perimeter Security and Utility Improvements at Plant No. 1</b>										
P1-134 South Perimeter Security and Utility Improvements at Plant No. 1	Tovey/Shultz Construction, Inc.	07/28/2021	0%	\$4,396,779	\$0	\$4,396,779	10.0%	10.0%	0.0%	10.0%
<b>P1-135 Digester Ferric Chloride Piping Replacement at Plant No. 1</b>										
P1-135 Digester Ferric Chloride Piping Replacement at Plant No. 1	PPM Contracting (PPM)	02/02/2021	0%	\$515,000	\$0	\$515,000	10.0%	10.0%	0.0%	10.0%
<b>P2-122 Headworks Modifications at Plant No. 2 for GWRS Final Expansion</b>										
P2-122 Headworks Modifications at Plant No. 2 for GWRS Final Expansion	Shimmick Construction Co., Inc.	01/22/2020	74%	\$14,487,735	\$276,841	\$14,764,576	10.0%	10.0%	1.9%	8.1%
<b>P2-123 Return Activated Sludge Piping Replacement at Plant 2</b>										
P2-123 Return Activated Sludge Piping Replacement at Plant 2	Shimmick Construction Co., Inc.	09/25/2019	70%	\$6,042,110	\$228,873	\$6,270,983	10.0%	10.0%	3.8%	6.2%
<b>P2-98 Primary Treatment Rehabilitation at Plant No. 2</b>										
P2-98A A-Side Primary Clarifiers Replacement at Plant 2	PCL CONSTRUCTION, INC.	05/26/2021	0%	\$111,405,880	\$0	\$111,405,880	6.0%	6.0%	0.0%	6.0%
<b>Total</b>				<b>\$686,756,474</b>	<b>\$7,891,336</b>	<b>\$694,647,810</b>				

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021  
Table 2 - Active GM-Awarded Construction Contracts and Task Orders as of 12/31/2021**

Project / Contract	Contractor	Award Date	% Spent	Original Award Amount	Change Orders	Current Contract Amount	Change Order Rate
Operationally-Funded Projects FR2-0024 Headworks 480V Cable Replacement at Plant No. 2	J.R. Filanc Construction Company, Inc.	6/3/21	0%	\$259,150	\$0	\$259,150	0.0%
<b>Total</b>				<b>\$259,150</b>	<b>\$0</b>	<b>\$259,150</b>	

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 3 - Board-Awarded Construction Contracts Closed in Last Quarter**

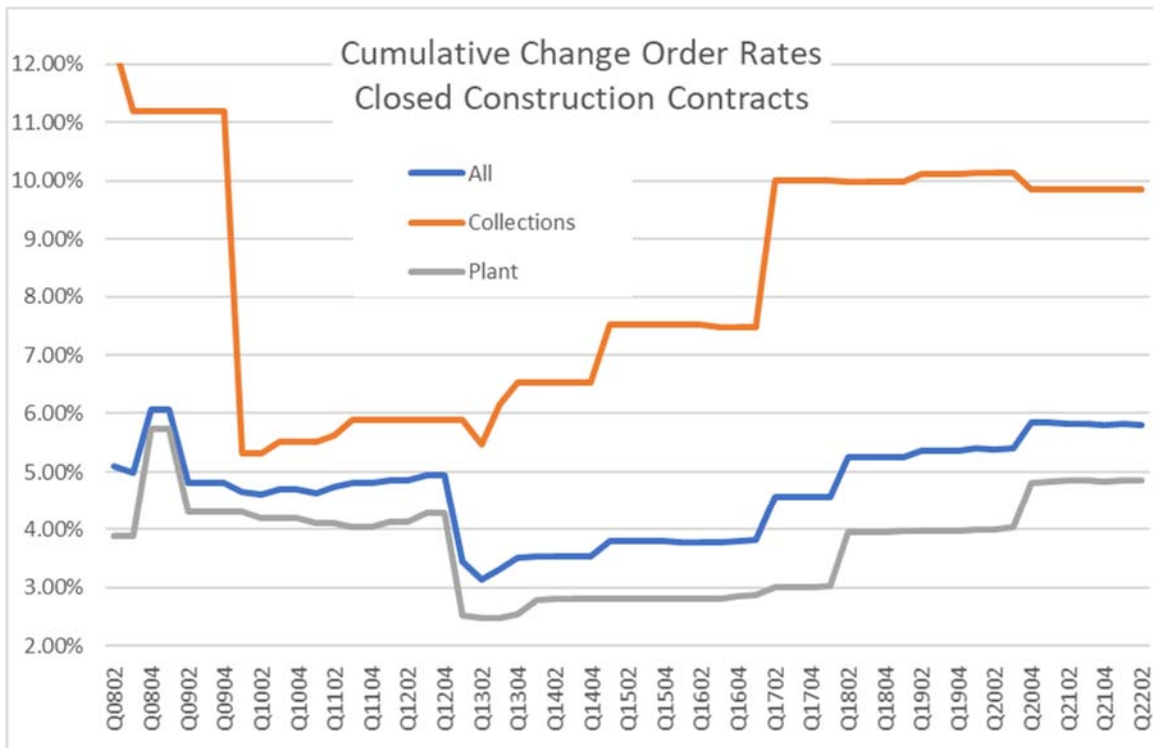
Project / Contract	Contractor	Award Date	Date Closed	Board Award Amount	Change Orders	Final Contract Amount	Original Contingency	Final Contingency	Final Change Order Rate	Unused Contingency
P1-128 Headquarters Complex P1-128C Headquarters Complex Site Preparation	Resource Environmental, Inc.	07/01/2020	10/19/21	\$1,555,000	\$39,557	\$1,594,557	10.0%	10.0%	2.5%	7.5%
<b>Total</b>				<b>\$1,555,000</b>	<b>\$39,557</b>	<b>\$1,594,557</b>				

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 4 - GM-Awarded Construction Contracts and Task Order Closed in Last Quarter**

Project / Contract	Contractor	Award Date	Date Closed	Original Award Amount	Change Orders	Final Contract Amount	Final Change Order Rate
M-FE Small Construction Projects Program FE19-09 Newhope - Placentia Trunk Grade Separation Replacement Repairs	Charles King Company, Inc.	09/21/2020	9/2/21	\$298,850	\$0	\$298,850	0.0%
<b>Total</b>				<b>\$298,850</b>	<b>\$0</b>	<b>\$298,850</b>	

When the Orange County Sanitation District (OC San) Board awards a construction contract, they also approve a contingency which allows the General Manager to approve contract change orders up to the amount of the contingency. One purpose of this report is to document how much of the contingency is utilized. A contract's change order rate is only meaningful when the work is completed. As such, the change order performance charts in this report are based only on contracts closed since the Board began approving contingencies in 2008. The following chart shows how cumulative change order rates have changed for plant, collections, and all contracts since the contingency system was implemented.





## **PART 2 – ENGINEERING SERVICES AGREEMENTS**

OC San engages engineering consultants through Professional Service Agreements (PSAs), Professional Design Services Agreements (PDSAs), Professional Construction Services Agreements (PCSAs), and Master Professional Services Agreements (Master Agreements). PDSAs are used to obtain design engineering services, and PCSAs are a subsequent agreement with the design consultant to provide support services during construction. PSAs are used for planning studies and other consultant assignments. There are currently 18 firms with active engineering services agreements, not including firms with Master Agreements.

Master Agreements are issued to a pool of pre-qualified consultants for smaller projects. On those smaller projects, OC San solicits task order proposals from three or four of the firms and awards a task order to the most qualified consultant. There are currently four sets of Master Agreements.

- 2012 Master Design Agreements (expired)
- 2017 Master Agreements for Wastewater Treatment Planning Studies (expired)
- 2018 Master Design Agreements (expired)
- 2020 Master Agreements for On-Call Planning Studies
- 2021 Master Design Agreements

The two Master Design Agreement from 2012 and 2018, and the 2018 Master Agreements for Wastewater Planning Studies have expired, meaning no new task orders can be issued under them, but previously-issued task orders remain active until completed. Task Orders are limited by OC San Ordinance No. OCSD-56 to \$300,000 per task order.

A status table for all Active Engineering Services Agreements (PDSAs and PCSAs) is attached under Table 5, and a status table for all Active Task Orders by Master Agreement is attached under Table 6 (Master Agreements).

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 5 - Active Engineering Services Agreements as of 12/31/2021**

Project / Contract	Type	Consultant	Award Date	% Spent	Board Award Amount	Amendments	Current Contract Amount	Original Contingency	Current Contingency	Contingency Used	Contingency Remaining
<b>2-49 Taft Branch Improvements</b>											
2-49 Taft Branch Improvements	PDSA	Woodward and Curran	02/03/2021	7%	\$2,200,000	\$26,000	\$2,226,000	10.0%	10.0%	1.2%	8.8%
<b>2-72 Newhope-Placentia Trunk Replacement</b>											
2-72 Newhope-Placentia Trunk Replacement	PCSA	Lee & Ro	03/23/2016	90%	\$3,253,946	\$0	\$3,253,946	10.0%	10.0%	0.0%	10.0%
<b>3-62 Westminster Blvd Force Main Replacement</b>											
3-62 Westminster Blvd Force Main Replacement	PCSA	Stantec Consulting Services, Inc.	12/18/2019	36%	\$1,183,000	\$0	\$1,183,000	10.0%	10.0%	0.0%	10.0%
<b>3-64 Rehabilitation of Western Regional Sewers</b>											
3-64 Rehabilitation of Western Regional Sewers	PDSA	AECOM Technical Services, Inc.	01/27/2016	83%	\$17,639,250	\$195,850	\$17,835,100	10.0%	10.0%	1.1%	8.9%
3-64B Los Alamitos Trunk Sewer Rehabilitation	PCSA	AECOM Technical Services, Inc.	05/26/2021	12%	\$610,000	\$0	\$610,000	10.0%	10.0%	0.0%	10.0%
<b>3-67 Seal Beach Pump Station Replacement</b>											
3-67 Seal Beach Pump Station Replacement	PDSA	Lee & Ro	12/18/2019	81%	\$5,947,850	\$317,032	\$6,264,882	10.0%	10.0%	5.3%	4.7%
<b>5-67 Bay Bridge Pump Station Replacement</b>											
5-67 Bay Bridge Pump Station Replacement	PDSA	Arcadis US Inc.	10/25/2017	30%	\$7,137,000	\$1,750,315	\$8,887,315	10.0%	35.0%	24.5%	10.5%
<b>5-68 Newport Beach Pump Station Pressurization Improvements</b>											
5-68 Newport Beach Pump Station Pressurization Improvements	PDSA	Dudek	05/06/2020	54%	\$542,988	\$0	\$542,988	10.0%	10.0%	0.0%	10.0%
<b>7-65 Gisler - Red Hill Interceptor Rehabilitation</b>											
7-65 Gisler - Red Hill Interceptor Rehabilitation	PDSA	CDM Smith Inc.	09/23/2020	59%	\$1,754,000	\$61,303	\$1,815,303	10.0%	10.0%	3.5%	6.5%
<b>7-66 Sunflower and Red Hill Interceptor Repairs</b>											
7-66 Sunflower and Red Hill Interceptor Repairs	PCSA	GHD	07/28/2021	7%	\$166,000	\$0	\$166,000	10.0%	10.0%	0.0%	10.0%
<b>7-68 MacArthur Force Main Improvements</b>											
7-68 MacArthur Force Main Improvements	PDSA	Michael Baker International, Inc.	05/26/2021	0%	\$500,000	\$0	\$500,000	10.0%	10.0%	0.0%	10.0%
<b>J-117 Ocean Outfall System Rehabilitation</b>											
J-117B Outfall Low Flow Pump Station	PCSA	Brown and Caldwell	12/19/2018	45%	\$8,563,913	\$692,120	\$9,256,033	10.0%	10.0%	8.1%	1.9%
<b>J-124 Digester Gas Facilities Replacement</b>											
J-124 Digester Gas Facilities Replacement	PDSA	Brown and Caldwell	11/15/2017	95%	\$11,770,000	\$903,117	\$12,673,117	10.0%	10.0%	7.7%	2.3%
<b>J-98 Electrical Power Distribution System Improvements</b>											
J-98 Electrical Power Distribution System Improvements	PDSA	Brown and Caldwell	01/29/2020	54%	\$2,240,000	\$92,078	\$2,332,078	10.0%	10.0%	4.1%	5.9%
J-98 Electrical Power Distribution System Improvements	PSA	SEL Engineering Services, Inc.	02/26/2020	8%	\$1,296,878	\$0	\$1,296,878	10.0%	10.0%	0.0%	10.0%
<b>M-FR-830 Master Operationally Funded</b>											
FR1-0007 Control Center Offices and Day Training Room Remodeling at Plant No. 1	PSA	AECOM Technical Services, Inc.	01/15/2020	8%	\$81,351	\$0	\$81,351	0.0%	0.0%	0.0%	0.0%
<b>M-STUDIES Planning Studies Program</b>											
PS17-03 Active Fault Location Study at Plant No. 2	PSA	Lettis Consultants International, Inc.	03/06/2019	0%	\$868,286	\$12,500	\$880,786	10.0%	10.0%	1.4%	8.6%
PS18-09 Ocean Outfall Condition Assessment and Scoping Study	PSA	Carollo Engineers, Inc.	03/25/2020	0%	\$2,744,000	\$0	\$2,744,000	10.0%	40.0%	0.0%	40.0%
PS20-02 Collection System Flow Level Monitoring Study	PSA	Woodward and Curran	7/28/21	0%	\$616,562	\$0	\$616,562	10.0%	10.0%	0.0%	10.0%
<b>P1-105 Headworks Rehabilitation at Plant 1</b>											
P1-105 Headworks Rehabilitation at Plant 1	PCSA	Carollo Engineers, Inc.	03/02/2021	7%	\$16,500,000	\$0	\$16,500,000	10.0%	10.0%	0.0%	10.0%
P1-105 Headworks Rehabilitation at Plant 1	PDSA	Carollo Engineers, Inc.	05/27/2015	96%	\$17,528,957	\$8,059,598	\$25,588,555	10.0%	51.0%	46.0%	5.0%
<b>P1-128 Headquarters Complex</b>											
P1-128B Headworks Complex	PDSA	HDR Engineering, Inc.	06/22/2016	94%	\$11,785,709	\$1,148,553	\$12,934,262	10.0%	10.0%	9.7%	0.3%
P1-128C Headworks Complex site Preparation	PCSA	HDR Engineering, Inc.	07/01/2020	20%	\$0	\$0	\$0	10.0%	10.0%	0.0%	10.0%
P1-128A Headworks Complex at Plant No. 1	PCSA	HDR Engineering, Inc.	05/26/2021	5%	\$4,900,000	\$0	\$4,900,000	10.0%	10.0%	0.0%	10.0%
P1-128A Headworks Complex at Plant No. 1	PSA	AECOM Technical Services, Inc.	04/28/2021	5%	\$6,750,000	\$0	\$6,750,000	10.0%	10.0%	0.0%	10.0%
<b>P1-129 Return Activated Sludge Piping Replacement at Activated Sludge Plant No. 1</b>											
P1-129 Return Activated Sludge Piping Replacement at Activated Sludge Plant No. 1	PCSA	AECOM Technical Services, Inc.	07/24/2019	89%	\$140,000	\$0	\$140,000	10.0%	10.0%	0.0%	10.0%
<b>P1-132 Uninterruptable Power Supply Improvements at Plant 1</b>											
P1-132 Uninterruptable Power Supply Improvements at Plant 1	PDSA	Tetra Tech, Inc.	10/23/2019	89%	\$784,680	\$62,755	\$847,435	10.0%	10.0%	8.0%	2.0%
<b>P1-133 Primary Sedimentation Basins No. 6-31 Reliability Improvements at Plant No. 1</b>											
P1-133 Primary Sedimentation Basins No. 6-31 Reliability Improvements at Plant No. 1	PDSA	Carollo Engineers, Inc.	09/25/2019	98%	\$1,219,667	\$0	\$1,219,667	10.0%	10.0%	0.0%	10.0%
<b>P1-134 South Perimeter Security and Utility Improvements at Plant No.1</b>											

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 5 - Active Engineering Services Agreements as of 12/31/2021**

Project / Contract	Type	Consultant	Award Date	% Spent	Board Award Amount	Amendments	Current Contract Amount	Original Contingency	Current Contingency	Contingency Used	Contingency Remaining
P1-134 South Perimeter Security and Utility Improvements at Plant No.1	PCSA	HDR Engineering, Inc.	07/28/2021	6%	\$235,000	\$0	\$235,000	10.0%	10.0%	0.0%	10.0%
<b>P2-122 Headworks Modifications at Plant No. 2 for GWRS Final Expansion</b>	PCSA	CDM Smith Inc.	01/15/2020	50%	\$2,200,000	\$0	\$2,200,000	10.0%	10.0%	0.0%	10.0%
<b>P2-123 Return Activated Sludge Piping Replacement at Plant 2</b>	PCSA	SPEC Services, Inc.	09/25/2019	98%	\$252,329	\$0	\$252,329	10.0%	10.0%	0.0%	10.0%
<b>P2-124 Interim Food Waste Receiving Facility</b>											
P2-124 Interim Food Waste Receiving Facility	PDSA	Kennedy/Jenks Consultants	09/05/2018	100%	\$695,000	\$31,168	\$726,168	10.0%	10.0%	4.5%	5.5%
<b>P2-128 TPAD Digester Facility at Plant 2</b>	PDSA	Brown and Caldwell	06/23/2020	17%	\$39,300,000	\$93,380	\$39,393,380	10.0%	10.0%	0.2%	9.8%
<b>P2-98 Primary Treatment Rehabilitation at Plant No. 2</b>	PDSA	Black & Veatch	07/27/2016	100%	\$18,141,423	\$1,593,582	\$19,735,005	10.0%	10.0%	8.8%	1.2%
P2-98B Primary Treatment Rehabilitation at Plant 2	PCSA	Black & Veatch	01/23/2019	55%	\$549,534	\$0	\$549,534	10.0%	10.0%	0.0%	10.0%
P2-98A A-Side Primary Clarifiers Replacement at Plant 2	PCSA	Black & Veatch	05/26/2021	3%	\$8,400,000	\$0	\$8,400,000	10.0%	10.0%	0.0%	10.0%
<b>SP-196 Process Control Systems Upgrades Study</b>	PSA	Stantec Consulting Services, Inc.	03/01/2018	81%	\$1,389,866	\$108,966	\$1,498,832	10.0%	10.0%	7.8%	2.2%
			<b>Total</b>		<b>\$200,065,189</b>	<b>\$15,148,317</b>	<b>\$215,213,506</b>				

\*\* This PSA was awarded by the General Manager because it is less than \$100,000.

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 6 - Active Task Orders by Master Agreement as of 12/31/2021**

Master Agreement / Project	Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value
<b>2012 Master Professional Design Service Agreements (Expired)</b>					
FE10-21 Area 02 Craig Regional Park Manhole Improvements	GHD	10/8/2012	\$58,440	\$41,560	\$100,000
<b>2017 Master Agreements for Wastewater Treatment Planning Studies</b>					
PS18-11 ETAP Model Updates for Plant Nos 1 and 2	Brown and Caldwell	3/17/2020	\$227,412	\$0	\$227,412
PS19-03 Laboratory Rehabilitation Feasibility Study	HDR Engineering, Inc.	10/20/2020	\$274,888	\$0	\$274,888
<b>2018 Master Professional Design Service Agreements</b>					
FR2-0013 Trickling Filter Sludge Pump Room Exhaust Fan Relocation at Plant No. 2	AECOM	11/6/2019	\$75,120	\$0	\$75,120
FE19-02 Cengen Plant Water Pipe Replacement at Plant No. 1	AECOM	04/30/2020	\$156,498	\$0	\$156,498
FE19-11 Primary Clarifiers Nos. 6-31 Lighting and Alarm Improvements at Plant No. 1	AECOM	9/15/2020	\$226,685	\$6,137	\$232,822
FE19-13 VFD Replacements at Seal Beach Pump Station	AECOM	3/12/2021	\$78,033	\$0	\$78,033
FE20-01 Wastehauler Station Safety and Security Improvements	AECOM	3/12/2021	\$161,012	\$0	\$161,012
FR2-0022 Digester O Structural Repairs at Plant No. 2	AECOM	4/6/2021	\$46,115	\$0	\$46,115
J-127 Natural Gas Pipelines Replacement at Plant Nos. 1 and 2	Black & Veatch	1/21/2019	\$271,964	\$28,036	\$300,000
FE19-03 Trickling Filter Sludge and Scum Pumps Replacement at Plant No. 1	Black & Veatch	9/1/2020	\$244,728	\$55,272	\$300,000
FR1-0011 VFD Replacements at Plant No. 1	Black & Veatch	3/30/2021	\$283,000	\$17,000	\$300,000
FE18-14 Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2	Dudek	11/6/2019	\$108,308	\$0	\$108,308
P1-135 Digester Ferric Chloride Piping Replacement at Plant No. 1	Dudek	2/19/2020	\$127,174	\$0	\$127,174
FE20-04 Cengen Cooling Water Pipe Replacement at Plant No. 2	Dudek	5/18/2021	\$240,000	\$0	\$240,000
FE20-08 Olive Sub-Trunk Siphon Rehabilitation at Santa Ana River	Dudek	6/15/2021	\$240,000	\$0	\$240,000
FE18-16 Truck Loading Basement Drain Modifications at Plant No. 1	GHD, Inc.	12/4/2019	\$70,130	\$18,365	\$88,495
FE18-13 Redhill Relief Sewer Relocation at State Route 55	GHD, Inc.	3/27/2020	\$168,612	\$54,883	\$223,495
FE19-10 Digesters C, D, F, G, and I Gas Balance Lines Replacement at Plant No. 2	GHD, Inc.	1/19/2021	\$25,000	\$58,000	\$83,000
FE20-07 Santa Ana Trunk Rehabilitation at Plant No. 1	GHD, Inc.	5/4/2021	\$100,625	\$0	\$100,625

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 6 - Active Task Orders by Master Agreement as of 12/31/2021**

Master Agreement / Project	Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value
FE20-03 Return Activated Sludge Discharge Piping Replacement at Activated Sludge Plant No. 1	GHD, Inc.	6/15/2021	\$249,000	\$0	\$249,000
FRC-0009 Bitter Point Trunk Sewer Repair at Bitter Point Pump Station	GHD, Inc.	6/15/2021	\$159,451	\$0	\$159,451
FE18-19 12KV Distribution Center B and East RAS Pump Station Roof Replacement	HDR Engineering, Inc.	09/16/2019	\$74,771	\$8,672	\$83,443
FE18-20 Blower Building No. 1 Air Compressors at Plant No. 1	HDR Engineering, Inc.	8/18/2020	\$243,954	\$11,982	\$255,936
FE20-02 Digester C, D, F, and G Mechanical Rehabilitation at Plant No. 2	HDR Engineering, Inc.	3/2/2021	\$188,212	\$22,396	\$210,608
FE18-15 Plant Boiler System Relief at Plant No. 2	IDS Group, Inc.	10/22/2019	\$23,299	\$0	\$23,299
FE18-06 CenGen Instrument Air Compressors Replacement at Plant No. 1 and No. 2	IDS Group, Inc.	04/28/2020	\$89,876	\$0	\$89,876
FE19-06 EPSA Motor Cooling Improvements at Plant No. 2	IDS Group, Inc.	05/05/2020	\$88,206	\$0	\$88,206
FE20-09 CenGen Smoke Detection Improvements at Plant No. 1 and No. 2	IDS Group, Inc.	6/15/2021	\$63,275	\$0	\$63,275
FE20-05 Plant Water Piping Replacement at Secondary Clarifiers 1-26 at Plant No. 1	IDS Group, Inc.	6/15/2021	\$186,626	\$0	\$186,626
FRC-0010 Warner Avenue Vault Cover Improvements	Kleinfelder, Inc.	11/10/2021	\$205,000	\$0	\$205,000
<b>2020 Master Agreements for On-Call Planning Studies</b>					
PS20-01 Collections Yard Relocation Feasibility Study	AECOM	4/30/2020	\$147,181	\$0	\$147,181
PS20-04 Power Generation Overhaul Feasibility Study	Brown and Caldwell	4/6/2021	\$122,748	\$101,518	\$224,266
RE20-02 Chemical Resilience Study	Hazen and Sawyer	6/1/2021	\$278,784	\$0	\$278,784
PS20-03 Truck Loading Bay Odor Control Improvements Study at Plant No. 2	Hazen and Sawyer	7/20/2021	\$226,021	\$0	\$226,021
<b>2021 Master Professional Design Service Agreements</b>					
FRC-0010 Warner Avenue Vault Cover Improvements	Kleinfelder, Inc.	11/10/2021	\$205,000	\$0	\$205,000
SC19-06 EPSA Standby Power Generator Control Upgrades at Plant No. 2	SPEC Services, Inc.	11/2/2021	\$241,153	\$0	\$241,153
<b>Total</b>			<b>\$5,976,301</b>	<b>\$423,821</b>	<b>\$6,400,122</b>

**PART 3 – MASTER BUDGET PROJECTS**

The Board-adopted budget for Fiscal Years 2020-21 and 2021-22 includes master program budgets that allow staff to more quickly initiate, execute, and manage smaller projects that fit within the scope of a particular program. The projects chartered under these program budgets are referred to as sub-projects and are managed to the same standards as projects specifically listed in the adopted budget. A status table for each of these programs listing the sub-projects is attached.

<b>Master Program Title</b>	<b>Status Table</b>
Planning Studies Program	Table 7
Research Program	Table 8
Small Construction Projects Program	Table 9
Information Technology Capital Program	Table 10
Operations & Maintenance Capital Program	Table 11

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021  
Table 7 - Planning Studies Status Report**

Project Number	Project Name	Status	Allocated Budget
PS15-02	Edinger Pump Station Rehabilitation Study	Closed	\$ 782,840
PS16-02	SCE Feed Reliability Improvements Study	Closed	\$ 215,605
PS17-03	Active Fault Location Study at Plant No. 2	Active	\$ 1,300,000
PS17-08	CEQA - Facilities Master Plan	Closed	\$ 999,966
PS18-06	Go/No-Go Lights and Signage	Active	\$ 495,000
PS18-09	Ocean Outfall Condition Assessment and Scoping Study	Active	\$ 4,205,117
PS18-11	ETAP Model Updates for Plant No. 2	Closed	\$ 360,022
PS19-03	Laboratory Rehabilitation Feasibility Study	Active	\$ 450,000
PS20-01	Collections Yard Relocation Feasibility Study	Active	\$ 375,000
PS20-02	Collection System Flow Level Monitoring Study	Active	\$ 743,218
PS20-03	Truck Loading Bay Odor Control Improvements Study at Plant No. 2	Active	\$ 383,682
PS20-04	Power Generation Overhaul Feasibility Study	Active	\$ 320,000
PS20-05	Gen Gen Pressure Vessel Integrity Assessment at Plant Nos. 1 and 2	Active	\$ 400,000
PS20-07	College Pump Station Wet Well Condition Assessment Study	Active	\$ 200,000
PS20-08	Euclid Trunk Sewer Hydraulic Modeling and Odor Control Analyses	Active	\$ 500,000
PS20-09	Thickening & Dewatering Plant Water Study at Plant No. 1	Active	\$ 400,000
PS21-01	Exterior Lighting Study at Plant Nos. 1 and 2	Active	\$ 550,000
PS21-02	Public Announcement and Fire System at Plant Nos. 1 and 2	Active	\$ 500,000
PS21-03	Process Model for Denitrification Alternatives at Activated Sludge 1	Active	\$ 50,000
PS21-04	Energy and Digester Gas Master Plan	Active	\$ 1,102,000
<b>Grand Total</b>			<b>\$ 14,332,450</b>
Number of Chartered Projects			20
Board Approved Program Budget		\$	28,652,000
Remaining Unallocated Budget		\$	14,319,550

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021  
Table 8 - Research Program Status Report**

<b>Project Number</b>	<b>Project Name</b>	<b>Status</b>	<b>Allocated Budget</b>
RE17-02	Biogas Scrubber Evaluation	Closed	\$ 767,362
RE19-01	Primary Scum Equipment Evaluation at Plant No. 1	Active	\$ 69,853
RE20-01	Co-Thickened Sludge Density Meter Trial atl Plant No. 1	Active	\$ 121,000
RE20-02	Chemical Resilience Study at Plant No.1 and 2	Active	\$ 329,996
RE20-04	Holding Digester 6 Solids Shredder Study at Plant No. 1	Active	\$ 95,000
RE20-06	Co-Thickened Sludge Pump Trial at Plant No. 1	Active	\$ 160,000
RE21-01	Supercritical Water Oxidation Demonstration at Plant No. 1	Active	\$ 6,890,000
<b>Grand Total</b>			<b>\$ 8,433,211</b>
Number of Chartered Projects			7
Board Approved Program Budget			\$ 8,500,000
Remaining Unallocated Budget			\$ 66,789



**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021**

**Table 9 - Small Construction Projects Program Status Report**

<b>Project Number</b>	<b>Project Name</b>	<b>Status</b>	<b>Allocated Budget</b>
FE10-21	Area 02 Craig Regional Park Manhole Improvements	Active	\$ 1,359,000
FE14-05	Plant No. 1 Fleet Services UST Leak Remediation	Closed	\$ 1,202,568
FE15-07	Secondary Treatment and Plant Water VFD Replacement at Plant 1	Closed	\$ 2,800,988
FE17-01	Carbon Canyon Pipeline Sag Repairs	Closed	\$ 833,949
FE17-03	Battery Storage System at Plant No. 1	Active	\$ 650,000
FE17-05	Plant 1 ICS Network Extension	Active	\$ 1,050,000
FE18-06	CenGen Instrument Air Compressors Replacement at Plant No. 1	Active	\$ 1,450,000
FE18-08	West Trunk Bypass Sewer Realignment	Active	\$ 158,000
FE18-11	Headworks Explosive Gas Monitoring Systems at Plant No. 1 and No. 2	Active	\$ 605,000
FE18-12	Erosion Control at Santa Ana River and Hamilton Ave	Active	\$ 445,000
FE18-13	Redhill Relief Sewer Relocation at State Route 55	Active	\$ 2,840,000
FE18-14	Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2	Active	\$ 1,895,000
FE18-15	Plant Boiler System Relief at Plant No. 2	Active	\$ 560,000
FE18-16	Truck Loading Basement Drain Modifications at Plant No. 1	Active	\$ 592,000
FE18-17	Trunkline Sampler Power Feed at Plant No 2	Closed	\$ 248,993
FE18-19	12KV Distribution B and East RAS Pump Station Roofing Replacement	Active	\$ 1,188,000
FE18-20	DAFT Air Compressors Replacement at Plant No. 1	Active	\$ 1,200,000
FE19-01	Pump Station Portable Generator Connectors	Active	\$ 2,570,000
FE19-02	Cengen Plant Water Pipe Replacement at Plant No. 1	Active	\$ 2,250,000
FE19-03	Trickling Filter Sludge and Scum Pumps Replacement at Plant No. 1	Active	\$ 3,200,000
FE19-04	Sunflower Pump Replacement at Plant No. 1	Active	\$ 6,300,000
FE19-06	EPSA Motor Cooling Improvements at Plant No. 2	Active	\$ 1,475,000
FE19-08	Secondary Treatment VFD Replacements at Plant No. 2	Active	\$ 3,337,000
FE19-09	Newhope - Placentia Trunk Grade Separation Replacement Repairs	Active	\$ 500,000
FE19-10	Digesters C, D, F, G and I Gas Balance Lines Replacement at Plant No. 2	Active	\$ 1,200,000
FE19-11	Primary Clarifiers Nos. 6-31 Lighting and Alarm Improvements at Plant No. 1	Active	\$ 1,250,000
FE19-12	Rebuild Shop Fume Extractor Installation at Plant No 1	Active	\$ 365,000
FE19-13	VFD Replacements at Seal Beach Pump Station	Active	\$ 690,000
FE20-01	Wastehauler Station Safety and Security Improvements	Active	\$ 830,000
FE20-02	Digester C, D, F, and G Mechanical Rehabilitation at Plant No. 2	Active	\$ 2,800,000
FE20-03	Return Activated Sludge Discharge Piping Replacement at Activated Sludge Plant No. 1	Active	\$ 4,250,000
FE20-04	Cengen Cooling Water Pipe Replacement at Plant No. 2	Active	\$ 3,500,000
FE20-05	Plant Water Piping Replacement at Secondary Clarifiers 1-26 at Plant No. 1	Active	\$ 1,545,000
FE20-06	Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1	Active	\$ 1,500,000
FE20-07	Santa Ana Trunk Rehabilitation at Plant No. 1	Active	\$ 1,240,000
FE20-08	Olive Sub-Trunk Siphon Rehabilitation at Santa Ana River	Active	\$ 1,850,000
FE20-09	CenGen Smoke Detection Improvements at Plant No. 1 and No. 2	Active	\$ 600,000
FE20-10	Adolfo Lopez Chemical Dosing Station Installation	Active	\$ 1,000,000
FE21-01	Plasma Cutting Fume Extractor installation at Plant No. 1 Rebuild Shop	Active	\$ 277,000
FE21-02	Lighting Improvements Boiler and Sludge Dewatering Areas at Plant No. 1	Active	\$ 320,000
FE21-04	Thickening and Dewatering Facility Handrail Installation at Plant No. 1	Active	\$ 230,000
<b>Grand Total</b>			<b>\$ 62,157,498</b>
Number of Chartered Projects			41
Board Approved Program Budget		\$	90,000,000
Remaining Unallocated Budget		\$	27,842,502

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021  
Table 10 - Information Technology Capital Program Status Report**

Project Number	Project Name	Status	Allocated Budget
IT16-11	Business Continuity Plan	Closed	\$ 117,600
IT17-06	Printer Obsolescence	Closed	\$ 335,141
IT17-07	Safety Management Suite	Closed	\$ 95,900
IT17-10	Electronic Operator Round Form	Active	\$ 45,000
IT17-12	Sever/Network Power Improvements	Active	\$ 90,000
IT17-14	Specialized Application Programing & Support	Closed	\$ 114,296
IT18-03	Timecard Systems Upgrade	Closed	\$ 78,696
IT18-09	Records Management Information System	Active	\$ 323,591
IT18-10	Board Services Management System	Closed	\$ 50,596
IT19-01	IT Safety VPP Systems (IT19-01)	Active	\$ 210,000
IT19-05	IT P1 & P2 Data Refresh (IT19-05)	Active	\$ 1,200,000
IT20-04	Cyber Security Program (IT20-04) 6520004	Active	\$ 150,000
IT20-05	Client Management Modernization (ICE-69_IT20-05) 6520005	Active	\$ 99,000
IT20-06	Nintex Workflow Cloud Implementation (ICE-75_IT20-06) 6520006	Active	\$ 350,000
IT20-07	Professional Services for Valo/SharePoint (ICE-74_IT20-07) 6520007	Active	\$ 100,000
IT20-08	Field Computer for Nerissa and Interface with LIMS(ICE-68_IT20-07) 6520008	Active	\$ 121,000
IT20-09	ITSM Migration (ICE-70_IT20-09) 6520009	Active	\$ 275,000
IT20-10	Digitize Quality Assurance Tracking Processes /TNI/ELAP Standards(ICE-76_IT20-10) 6520010	Active	\$ 145,700
IT20-11	Sewer Agency Fee System 2 (SAFS 2) Upgrade (ICE-77 IT20-11) 6520011	Active	\$ 42,042
IT20-12	Web-based Cloud Proxy Security with an Isolation Platform (ICE-78_6520012)	Active	\$ 50,000
IT21-01	Access Network Equipment Obsolescence Replacement (ICE-79_IT21-01) 6521001	Active	\$ 1,249,500
IT21-02	Hyper Converged Infrastructure for Plant 1 ICS network (ICE-80 IT21-02) 6521002	Active	\$ 492,800
IT21-03	Door Access Control System for P2 Construction Management Trailers (ICE-83_IT21-03) 6521003	Active	\$ 79,706
IT21-04	Databridge Scale Management Software (ICE - 84_IT21-04)	Active	\$ 39,263
<b>Grand Total</b>			<b>\$ 5,854,831</b>
Number of Chartered Projects			24
Board Approved Program Budget			\$ 10,000,000
Remaining Unallocated Budget			\$ 4,145,169

**Engineering Program Contract Performance Report  
for Quarter Ending 12/31/2021  
Table 11 - Operations & Maintenance Capital Program Status Report**

Project Number	Project Name	Status	Allocated Budget
MP-276-1	Central Generation Engine Overhauls at Plant No. 1 and Plant No. 2	Active	\$ 5,900,000
SC17-01	CENGEN #1 Elevator Rehab	Closed	\$ 110,020
SC17-03	CenGen Oil Filter Platform	Closed	\$ 277,753
SC18-01	P1 Primary Clarifier Fall Protection Improvements	Closed	\$ 50,000
SC18-05	P1 Laboratory HVAC Boiler Burner Replacement At Plant No.1	Active	\$ 455,000
SC18-08	MacArthur Pump Station - FM Valve Replacement	Closed	\$ 71,068
SC18-09	Admin Bldg UPS System Replacement	Closed	\$ 81,332
SC19-02	Truck Loading-Conveyors 3&6 (SC19-02)	Closed	\$ 205,300
SC19-03	Return Activated Sludge Pump Station Elevator Rehabilitation at Plant No. 2	Active	\$ 890,000
SC19-05	as the Lido PS UPS Replacement	Closed	\$ 79,317
SC19-06	EPSA Standby Power Generator Control Upgrades at Plant No. 2	Active	\$ 1,600,000
SC19-07	Sunflower Pump Station Gearbox Swing Unit Purchase	Closed	\$ 215,988
SC20-02	Ocean Outfall Booster Station Elevator Rehabilitator	Active	\$ 410,000
SC21-01	P1 Blower Bldg Turbine Gen Con	Closed	\$ -
<b>Grand Total</b>			<b>\$ 10,345,778</b>
Number of Chartered Projects			14
Board Approved Program Budget			\$ 15,622,000
Remaining Unallocated Budget			\$ 5,276,222

**PART 4 – SUPPLEMENTAL ENGINEERING SERVICES CONTRACT**

In May 2016, OC San Board of Directors approved a \$41 million professional services agreement with Jacobs Project Management Co. to provide supplemental engineering and support staff services for a four-year term with the option of three one-year renewals. The benefits of using a supplemental engineering services contract, as opposed to hiring full-time staff or limited-term employees, include rapid mobilization of highly skilled/technical staff, flexibility to change the mix of staff positions on an immediate and as-needed basis, the ability to reduce staff as workloads decrease, access to technical experts to support special tasks, and access to staff with wastewater project experience.

A status table for the supplemental engineering services contract summary is attached under Table 12, and the supplemental engineering services labor summary can be found under Table 13.

**Table 12 – Supplemental Engineering Services Contract Status**

	<b>Total Fees</b>	<b>Time</b>
Contract	\$41,000,000	86 months <sup>(1)</sup>
Actuals to Date	\$28,862,907 70%	68 months 79%
Remaining	\$12,137,093 30%	18 months 21%

<sup>(1)</sup> Assuming one more 1-year extension

**Table 13 - Supplemental Engineering Services Labor Summary**

	<b>This Quarter</b>	<b>Inception to Date</b>
Labor Hours	9,621	210,607
Full Time Equivalent	21.4	20.6
Labor Costs (no expenses)	\$1,535,350	\$28,181,186
Average Hourly Rate	\$160	\$134