

**Wastewater CIP - Capital Improvement Program (Revised 10/25/2018 - For Discussion Only)**

	Expansion [X], Replacement [R], Operations [O]	%	%	%	Priority Ranking	Budget Year	Projected										Total
							1st Half FY18/19	2nd Half FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27	
<b>Wastewater Projects</b>																	
<b>Wastewater Treatment Plant Projects</b>																	
1	Influent screen, support platform design, & installation	R/O	20	80	1	\$ 164,509									\$ 164,509		
2	Design & install switch between WWTP's main incoming power transformer supply & existing MCC		20	80	1	\$ 75,000									\$ 75,000		
3	Neutral wire installation from PG&E-provided delta to wye main replacement transformer to main MCC	R	20	80	1	\$ 20,000									\$ 20,000		
4	Replace WWTP main power supply breaker and auto-transfer switch; (or, do project 5B.)	R	20	80	1	\$ 30,000									\$ 30,000		
5	Replace main incoming power Motor Control Center with Y-configuration supply; (or, do project 5A)	R	20	80	1	\$ 300,000									\$ 300,000		
6	WWTP Update BNR Modeling Update & Value Engineering (early half of FY)	X/R/O	20	20	80	1	\$ 40,000								\$ 40,000		
7	Aeration tank baffles, anoxic mixers, & ML recirc system (later half of FY)	R/O	20	80	1	\$ 40,000	\$ 80,000								\$ 120,000		
8	Replace digester catwalk handrailings (painting is not included, & is to be funded from 6032T, WWTP maintenance & repair)	R	20	80	1	\$ 45,000									\$ 45,000		
9	Plant non-potable 3W improvements & non-potable sprays for screw press		20	80	1		\$ 15,000								\$ 15,000		
10	Improve grit tank hydraulic capacity (placeholder, insert approx \$10K cost if needed)	X/R/O	20	20	80	1									\$ -		
11	Replace effluent pump (southern pump)		20	80	1		\$ 25,000								\$ 25,000		
12	Effluent P.S. bypass piping		20	80	1		\$ 20,000								\$ 20,000		
13	Misc WWTP lab upgrades & investment in electronic self-monitoring reporting			20	80	1	\$ 10,000	\$ 10,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 41,000		
14	Incoming power supply monitoring & conditioning system (8/24/2018 ElSpec Quote + 25K estimate to install)	R	20	80	2	\$ 61,105									\$ 61,105		
15	Automate aeration D.O. control system (CVs at air headers, press control @ main air header, new DO probes)	X/R/O	20	20	80	2	\$ 50,000	\$ 100,000							\$ 150,000		
16	Upgrade/replace aeration blowers	X/R/O	20	20	80	2	\$ 30,000	\$ 150,000							\$ 180,000		
17	Blower electrical room air filtration/conditioning for moisture & corrosion control		20	80	2		\$ 10,000								\$ 10,000		
18	Replace main WWTP backup power generator		20	80	2			\$ 200,000							\$ 200,000		
19	Repair or replace protective surge tank for plant effluent pipeline		20	80	2		\$ 25,000								\$ 25,000		
20	Annual electrical & instrumentation improvements	X/R/O	20	20	80	2	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 360,000		
21	SCADA System - WWTP - long-term improvements	X/R/O	20	20	80	2	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 225,000		
22	Cathodic protection replacements at digesters	R	20	80	3		\$ 10,000								\$ 10,000		
23	Long-term plant upgrades - new sludge digester, flow equalization improvements, denite/phosphorous removal		20	80	3			\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,500,000		
24	Demo and remove old flow equalization tanks in SW corner of plant				100	3		\$ 40,000							\$ 40,000		
25	Paint Handrails							\$ 15,000							\$ 15,000		
<b>Collection System Projects</b>																	
26	Manhole raising due to street overlays & roadway work		20	80	1	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 90,000		
27	Lift Station A (Nottingham & Leighton/Park Hill) new control panel at grade el.	X/R/O	20	20	80	1	\$ 10,000	\$ 80,000							\$ 90,000		
28	Lift Station A-1 (Sherwood & Harvey/Marine Terrace) new control panel at grade el.	X/R/O	20	20	80	1	\$ 65,000								\$ 65,000		
29	Lift Sation B improvements (SR Creek/behind Park Hill) new control panel	X/R/O	20	20	80	1									\$ -		
30	Lift Station B - new wet well, submersible pumps, and valve vault (placeholder)	X/R/O	20	20	80	1				\$ 300,000					\$ 300,000		
31	Lift Station B-1 (Village Ln/Tin City) relocate away from Feb 2017 landslide area (potential 50% FEMA 406 funding)	X/R/O	20	20	80	1		\$ 300,000							\$ 300,000		
32	Lift Station B-2 (Wood Dr./E. Lodge Hill) new control panel at grade el.	X/R/O	20	20	80	1		\$ 75,000				\$ 35,000	\$ 315,000		\$ 425,000		
33	Lift station 9 - replace corroded main incoming power breaker			100	1		\$ 5,000								\$ 5,000		
34	SCADA System - Collections System - long-term improvements	X/R/O	20	20	80	2	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 225,000		
35	Collection System smoke testing			100	2		\$ 50,000								\$ 50,000		
36	Annual manhole inspections and report on needed corrections (approx. 20% of system/yr)			100	2		\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000				\$ 200,000		
37	Collection System Phased televising & cleaning	R/O		100	2		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000				\$ 500,000		
38	Collection System Assessment software (E.g. t4 Spatial or other)			100	2		\$ 10,000								\$ 10,000		
39	Collection System Assessment/engineering for repairs			100	2		\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000				\$ 150,000		
40	Collection System Repairs to reduce I/I & damaged pipe sections			100	2		\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 450,000		
41	Lift Station A (Nottingham & Leighton/Park Hill) new submersible pumps, MCC, bypass piping	X/R/O	20	20	80	2				\$ 50,000	\$ 350,000				\$ 400,000		
42	Lift Station A-1 (Sherwood & Harvey/Marine Terrace) submersible pumps, MCC, bypass piping	X/R/O	20	20	80	2				\$ 40,000	\$ 225,000				\$ 265,000		
43	Lift Station B - replace existing generator	X/R/O	20	20	80	2		\$ 60,000							\$ 60,000		
44	Lift Station B-3 (Green St./W. Lodge Hill) new control panel followed by future submserible pumps, MCC, bypass piping	X/R/O	20	20	80	2		\$ 90,000			\$ 160,000				\$ 250,000		
45	Lift Station B-4 (Green & Gleason/W. Lodge Hill) new submserible pumps, bypass piping	X/R/O	20	20	80	2			\$ 20,000	\$ 240,000					\$ 260,000		
46	Replacement and New PCs for operators			20	80	2		\$ 10,000			\$ 10,000				\$ 20,000		
47	Lift Sation 4 (DeVault Pl/Seaclift Estates) VFDs /new elect panel & 3 phase pump motors	R/O	20	80	3			\$ 25,000	\$ 60,000						\$ 85,000		
48	Annual maintenance and upgrading to GIS (moved \$5K from capital program to WW acct 6080M)	R/O	20	80	3			\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 80,000		
49	Manhole cover replacements							\$ 20,000							\$ 20,000		
<b>Vehicles and Trailer-Mounted Equipment</b>																	
50	Vector truck - replace with new \$430K truck that meets emssion requirements (7 yr loan @ 4.5%)		20	80	2		\$ 50,000	\$ 74,000	\$ 74,000	\$ 74,000	\$ 74,000	\$ 74,000	\$ 74,000	\$ 24,000	\$ 518,000		
51	Vehicle Replacement Program			100	3			\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 225,000		
52	Portable equipment replacement program (backhoes, generators and pumps)				4			\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 135,000		
53	F350 or equal service truck with crane & mechanics body (\$56K initial cost; 5 yr loan @ 4.25%)							\$ 6,000	\$ 13,400	\$ 13,400	\$ 13,400	\$ 13,400	\$ 6,800		\$ 55,000		
54	Pearpoint or equal TV inspection camera							\$ 50,000							\$ 50,000		
<b>Overhead CIP Projects</b>																	
55	Finance/billing software upgrade (wastewater est'd @ 50%)	R/O	20	80	3			\$ 25,000	\$ 50,000						\$ 75,000		
56	Contingency/reserves (amount remains TBD)	X/R/O	20	20	80	4									\$ -		

Notes:																		
Department priority projects/penditures for remaining of FY								\$ 209,509	\$ 1,047,105	\$ 1,937,400	\$ 1,000,400	\$ 840,400	\$ 2,005,400	\$ 598,800	\$ 802,000	\$ 437,000	\$ 163,000	\$ 8,889,614
Shaded to show costs that would be deferred in order to balance remaining FY expenditures with revenue increase									\$ 211,000									\$ 211,000
Revised timing of project expense																		
Priority Level 1 projects:								\$ 209,509	\$ 300,000	\$ 920,000	\$ 13,000	\$ 13,000	\$ 313,000	\$ 48,000	\$ 328,000	\$ 13,000	\$ 13,000	\$ 2,170,509
Priority Level 2 projects:								\$ -	\$ 591,105	\$ 839,000	\$ 604,000	\$ 514,000	\$ 1,379,000	\$ 244,000	\$ 174,000	\$ 124,000	\$ 100,000	\$ 4,569,105
Priority Level 3 projects:								\$ -	\$ 50,000	\$ 150,000	\$ 355,000	\$ 285,000	\$ 285,000	\$ 285,000	\$ 285,000	\$ 285,000	\$ 35,000	\$ 2,015,000
Priority Level 4 projects:								\$ -	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 135,000
Cummulative Total								\$ 209,509	\$ 1,256,614	\$ 2,146,909	\$ 3,147,309	\$ 3,987,709	\$ 5,993,109	\$ 6,591,909	\$ 7,393,909	\$ 7,830,909	\$ 7,993,909	\$ 8,889,614

**Water Projects (Revised 10/25/2018 - For Discussion Only)**

Preliminary costs need to be updated & tied to an ENR/year basis.

Line/Project No.	Description	Expansion [X], Replacement [R], Operations [O]	% X	% R	% O	Priority Ranking	Mid Year	Budget Year										
								Projected		FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27	FY27/28
								FY18/19 - 1st half	FY18/19 - 2nd half									
<b>Water Distribution System Projects</b>																		
1	Pressure zone 2 to zone 7 transmission main @ SR Creek pedestrian bridge		20	80		1			\$ 20,000	\$ 100,000							\$ 120,000	
2	Subzone metering of distribution system				100	1				\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000				\$ 150,000	
3	Water Meter Replacements & Upgrades	R/O		75	25	1			\$ 50,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000			\$ 1,050,000	
4	Water Master Plan Amendment (revised fire flow modeling/tank sizing check	R/O/X	20	80		2			\$ 35,000								\$ 35,000	
5	Stuart Street Tank Replacement (125K gallon welded steel tank with new foundation					2						\$ 458,000					\$ 458,000	
6	Water pipelines, pumps, and PRV repairs and replacements	R/O		100		2			\$ 25,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 475,000	
7	Valve Replacements					2		\$ 10,000	\$ 10,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000	
8	Inspection & spot repair to water transmission main under S. Parks wetlands area; or do 7E		20	80		3				\$ 80,000							\$ 80,000	
9	Lining of transmission main under S. Parks wetlands area (alt to relocate ~ \$612K to \$1.16 million), or do 7F		20	80		3				\$ 50,000	\$ 150,000	\$ 816,000					\$ 1,016,000	
10	Pine Knolls - Iva Court zone 1 pipeline expansion	R/O	20	80		3				\$ 40,000	\$ 125,000						\$ 165,000	
11	Piney Way erosion control protection for existing pipeline	O			100	3			\$ 10,000								\$ 10,000	
12	Study & pre-design for pipeline in State Parks wetlands					3			\$ 30,000								\$ 30,000	
13	Replacement of problematic service lines within Leimert					3			\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 100,000	
14	Annual GIS updating & upgrades	R/O			100	3		\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 100,000	
15	Replacement of problematic service lines within Leimert					3		\$ 40,000				\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 100,000	
<b>Water Treatment</b>																		
16	Electronic self monitoring reporting program (yr 1 is software + consulting, yrs 2 + are annual tech support				100	2			\$ 10,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 19,000
<b>Tank &amp; Booster Pump Station Projects</b>																		
17	Rodeo Grounds Pump Station Replacement (aka Zone 2 Booster pump station	R/X	20	80		2			\$ 25,000	\$ 101,000	\$ 500,000	\$ 400,000					\$ 1,026,000	
18	Electrical transfer switch and conduit to well SS-3	O			100	2			\$ 25,000								\$ 25,000	
19	San Simeon well field generator replacement	R/O	20	80		2				\$ 100,000							\$ 100,000	
20	SCADA System - Long-term Water Portion	R/O		50	50	3			\$ 10,000	\$ 50,000	\$ 50,000	\$ 50,000					\$ 210,000	
<b>Water conservation</b>																		
21	Database for water conservation program/tracking with parcel links & APN file converter	X/R/O	80		20	3			\$ 10,000	\$ 10,000							\$ 20,000	
<b>Vehicles &amp; Trailer Mounted-Equipment</b>																		
22	Replacement Dump Truck (alternativey, a 76 K purchase with 6 yr loan @ 5% would be 13,000 per yr.					1		\$ 76,000									\$ 76,000	
23	Trailer Mounted Air Compressor	O		100		2		\$ 22,700									\$ 22,700	
24	Trailer mounted, Vacuum Excavator	O		100		2		\$ 48,000									\$ 48,000	
25	Vehicle Replacement Program					2			\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 250,000	
<b>Overhead Projects</b>																		
26	Finance/billing software upgrade (water est'd @ 50%)	R/O		100		1			\$ 50,000	\$ 25,000							\$ 75,000	
27	User Fee study (water rates portion)	O		100		1											\$ -	
28	Contingency/reserves (amount remains TBD)	R/O		100		4											\$ -	

Notes:								\$ -	\$ 206,700	\$ 245,000	\$ 752,000	\$ 1,186,000	\$ 1,091,000	\$ 1,650,000	\$ 326,000	\$ 126,000	\$ 126,000	\$ 126,000	\$ 126,000	\$ 5,960,700
	Department priority projects/ependitures for remaining of FY									\$ 185,000										\$ 185,000
	Shaded to show costs that would be deferred to subsequent year.							\$ -	\$ 76,000	\$ 120,000	\$ 375,000	\$ 250,000	\$ 250,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 1,471,000
	Shows projects that were unshaded and recommended during 10/30/2018 Infrastructure Committee meeting							\$ -	\$ 80,700	\$ 95,000	\$ 257,000	\$ 696,000	\$ 496,000	\$ 554,000	\$ 96,000	\$ 96,000	\$ 96,000	\$ 96,000	\$ 96,000	\$ 2,658,700
								\$ -	\$ 50,000	\$ 30,000	\$ 120,000	\$ 240,000	\$ 345,000	\$ 896,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 1,831,000
								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
								\$ -	\$ 206,700	\$ 451,700	\$ 1,203,700	\$ 2,389,700	\$ 3,480,700	\$ 5,130,700	\$ 5,456,700	\$ 5,582,700	\$ 5,708,700	\$ 5,834,700	\$ 5,960,700	\$ 5,960,700

**SWF Projects (Revised 10/25/2018 - For Discussion Only)**

Preliminary costs need to be updated & tied to an ENR/year basis.

Expansion [X], % % % Priority  
 Replacement [R] X R O Ranking  
 Operations [O] % % %

Check of total

Line/ Project	Description	X	R	O	Priority Ranking	First Half	2nd Half	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY26/27	FY27/28		
						FY18/19	FY18/19										
<b>SWF Projects</b>																	
<b>Regular Coastal Development Permitting Support</b>																	
1	EIR consulting (follow up agency discussions to support the SWF's Regular CDP)		20	80	1		\$ 10,000								\$ 10,000		
2	Section 7 ESA consulting, annual AMP report, & AMP update		20	80	1		\$ 125,000								\$ 125,000		
3	Legal assistance for CEQA support and any subsequent appeals (amounts each year remain to be determined and are not shown)																
<b>Interim, short-term SWF Modifications</b>																	
4	Modifications to facilitate off-hauling RO concentrate, & addition of a flow meter at the AWTP.				1		\$ 50,000								\$ 50,000		
<b>Advanced Water Treatment Plant Improvements</b>																	
5	Miscellaneous instrumentation / monitoring upgrades		20	80	1		\$ 10,000								\$ 10,000		
<b>Long-Term Improvement Modifications</b>																	
6	Consulting assistance for coordination with Army Corps on WRDA grant (meetings, redefine work plan, & update scope of work)				2		\$ 20,000	\$ 20,000							\$ 40,000		
7	Sems, Hach WIMS, or custom programmer for logging/reporting software and tablets (yr 1 is software/programming assistance)		20	80	2		\$ 6,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 22,000		
8	Future permanent mods at SWF for trailer fill station [transfer tanks, piping, & spill containment/loading pad] (1,2)		20	80	2			\$ 200,000							\$ 200,000		
9	AWTP pull-barn style covers for outdoor equipment & control panels (1,2)		20	80	2			\$ 50,000							\$ 50,000		
10	Installation of remote sensing instrumentation at SS creek (needs access agreement with State Parks)		20	80	3			\$ 10,000							\$ 10,000		
11	Surface Water Treatment Plant (SWTP) for Holding Basin and Well SS-1 treatment		20		80	3					\$ 150,000	\$ 600,000	\$ 600,000		\$ 1,350,000		
12	Pipeline from Well SS-1 to surface water treatment plant (SWTP)		20		80	3						\$ 75,000	\$ 350,000		\$ 425,000		
13	Impoundment basin conversion to groundwater storage, pump station at storage basin, and connecting pipelines		20		80	3						\$ 75,000	\$ 350,000		\$ 425,000		
14	Solar Array System (1,2)				3			\$ 375,000							\$ 375,000		
<b>2017 Cease &amp; Desist Order Compliance - Non-capitalized Expenses</b>																	
15	Short term flood damage/CDO response - consultants for surveying, project mgmt assistance & inspection, surface water hydrology & geohydrological		20	80	1										\$ -		
16	Short term flood damage mitigation - drainage swale construction		20	80	1										\$ -		
17	Short term flood damage mitigation - temporary closure plan equipment, installation, rentals, and temp power & controls				100	1	\$ 10,000								\$ 10,000		
18	Hauling off the last 18-inches of impoundment water & emptied impoundment cleaning				100	1	\$ 35,000								\$ 35,000		
Subtotal:							\$ 175,000	\$ 46,000	\$ 222,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 457,000	
Revised to meet projected increase								\$ 20,000								\$ 20,000	
Priority Level 1 projects:							\$ 175,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 195,000	
Priority Level 2 projects:							\$ -	\$ 26,000	\$ 222,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 262,000	
Priority Level 3 projects:							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Priority Level 4 projects:							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Cumulative:							\$ 175,000	\$ 221,000	\$ 397,000	\$ 399,000	\$ 401,000	\$ 403,000	\$ 405,000	\$ 407,000	\$ 409,000	\$ 411,000	\$ 457,000

Notes:  
 Department priority projects/ependitures for remaining of FY  
 Shaded to show costs that would be deferred  
 Estimated operational cost (not included in total for capital cost)

Notes: Red font indicates future projects that may qualify for Army Corps project funding via the existing federal Water Resource Development Act (WRDA) grant. If approved by Army Corps, costs could become zero due to past local share cost credit (see note 2 below).

- Solar array estimated at 250 KW, & approximately \$1.50 per KW installed. Future candidate for Renewable Energy System Credit Transfer (RESCT), which could conceivably allow applying production towards remote CCSD electrical loads, such as WWTP.
- Cost shown do not include any reduction from a 75% federally-funded existing WRDA grant with the Army Corps and are subject to the terms of a project cooperative agreement. Costs shown do not include any local share credit of approximately \$3 million, which as previously approved by the Army Corps. The grant, as well as proposed cost components, need to be revisited with the Army Corps and incorporated into the Corps project management plan updating process.