

**CUPERTINO SANITARY DISTRICT
SANITARY BOARD MEETING
WEDNESDAY, MARCH 06, 2019**

A_G_E_N_D_A

Meeting to be held at 7:00 p.m. in the **Stevens Creek Office Center,
Suite 100, 20863 Stevens Creek Boulevard, Cupertino, California.**

1. ROLL CALL:

2. MINUTES:

- A. APPROVAL OF THE MINUTES OF FEBRUARY 20, 2019
- B. APPROVED MINUTES OF JANUARY 16, 2019

3. PERSONAL PRESENTATIONS:

THIS PORTION OF THE MEETING IS RESERVED FOR PERSONS DESIRING TO ADDRESS THE BOARD ON ANY MATTER NOT ON THE AGENDA. SPEAKERS ARE LIMITED TO THREE (3) MINUTES.

ALL STATEMENTS REQUIRING A RESPONSE WILL BE REFERRED TO STAFF FOR FURTHER ACTION. IN MOST CASES, STATE LAW WILL PROHIBIT THE BOARD FROM MAKING ANY DECISIONS WITH RESPECT TO A MATTER NOT LISTED ON THE AGENDA.

4. CORRESPONDENCE:

NONE

5. MEETINGS:

- A. REGULAR MEETING OF THE SAN JOSE/SANTA CLARA TREATMENT PLANT TECHNICAL ADVISORY COMMITTEE (TAC) TO BE HELD MARCH 12, 2019
- B. REGULAR MEETING OF THE SAN JOSE/SANTA CLARA TREATMENT PLANT ADVISORY COMMITTEE (TPAC) TO BE HELD MARCH 14, 2019

6. REPORTS:

- A. SANTA CLARA COUNTY SPECIAL DISTRICTS ASSOCIATION MEETING HELD MARCH 4, 2019

7. UNFINISHED BUSINESS:

NONE

**CUPERTINO SANITARY DISTRICT
SANITARY BOARD MEETING
WEDNESDAY, MARCH 06, 2019**

8. NEW BUSINESS:

- A. CITY OF SAN JOSE FY2019-20 CAPITAL AND O&M DRAFT PROPOSED BUDGET
- B. CONSIDERATION OF RATE INCREASE FOR FY 2019-2020

9. STAFF REPORT:

- A. STATUS OF PROSPECT PUMP STATION

10. CLOSED SESSION:

- A. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION

in accordance with government code section Paragraph (1) of Subdivision (d) of Section 54956.9, existing litigation. Name of Case: County Sanitation District 2-3, West Valley Sanitation District, Cupertino Sanitary District, Burbank Sanitary District, and the City of Milpitas v. The City of San Jose, The City of Santa Clara and Does 1 through 50 inclusive.

11. ADJOURNMENT:

CUPERTINO SANITARY DISTRICT MEETING/EVENT SCHEDULE

MARCH 2019

03/04: SCCSDA Meeting
 03/06: 1st Regular Meeting (*Director Saadati excused*)
 03/12: TAC
 03/14: TPAC
 03/27: 2nd Regular Meeting (delayed)

MARCH 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
	SCCSDA		1 st Regular Meeting			
10	11	12	13	14	15	16
		TAC		TPAC		
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31			2 nd Regular Meeting			

APRIL 2019

04/03: 1st Regular Meeting - CANCELED
 04/09: TAC
 04/11: TPAC
 04/17: 2nd Regular Meeting

APRIL 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
			1 st Regular Meeting Canceled			
7	8	9	10	11	12	13
		TAC		TPAC		
14	15	16	17	18	19	20
			2 nd Regular Meeting			
21	22	23	24	25	26	27
28	29	30				

MAY 2019

05/03: 1st Regular Meeting
 05/09: TAC
 05/11: TPAC
 05/17: 2nd Regular Meeting

MAY 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 st Regular Meeting	2	3	4
5	6	7	8	9	10	11
		TAC		TPAC		
12	13	14	15	16	17	18
			2 nd Regular Meeting			
19	20	21	22	23	24	25
26	27	28	29	30	31	
	Memorial Day Holiday					

SANITARY BOARD MEETING
WEDNESDAY, JANUARY 16, 2019

The Sanitary Board of the Cupertino Sanitary District convened this date at 7:00 p.m. in the Stevens Creek Office Center, 20863 Stevens Creek Boulevard, Suite 100, Cupertino, California.

1. ROLL CALL:

President Kwok called the meeting to order and the following proceedings were had to wit: Roll call was taken, with the following members in attendance:

Directors present: Angela S. Chen, Patrick S. Kwok, Taghi S. Saadati, and John M. Gatto, William A. Bosworth.

Staff present: District Manager Richard K. Tanaka, Deputy District Manager Benjamin Porter, and Counsel Marc Hynes.

Guest: Liz Chu, 11150 Bubb Road

Item 8C, Lateral replacement at 11150 Bubb Road, was moved up to the beginning of the agenda to accommodate the guest. Property owner, Liz Chu, was present. After discussion by the Board, staff was instructed to work with contractor to get clarification and report back to the Board.

2. MINUTES & BILLS:

- A. On a motion by Director Gatto, seconded by Director Bosworth, by a vote of 5-0-0, the minutes of Wednesday, January 2, 2019 were approved.
- B. By consensus, the Minutes of Wednesday, December 19, 2019 are to be Noted & Filed.
- C. The Board reviewed the December financials for payment. Director Saadati discussed outstanding balance of H.A.K. invoice, the hourly rate not shown on all sheets of Able and Roto-Rooter invoices, print size on Able summary, and emergency response travel time and hourly rate. Director Gatto requested clarification on Trimble GPS unit purchase (one-time purchase authorized during 1/2/19 meeting) and the invoice for training that occurred during the summer.

On a motion by Director Saadati, Gatto, seconded by Director Bosworth, by a vote of 5-0-0, the payment of bills was approved.

- D. The Directors submitted their January 2019 timesheets to Staff.

3. PERSONAL PRESENTATIONS:

There were none.

4. CORRESPONDENCE:

There was none.

5. MEETINGS:

- A. Board and staff will attend CASA Winter Conference to be held January 23-25, 2019 in Indian Wells, Ca. No Board action was taken.

6. REPORTS:

There were none.

7. UNFINISHED BUSINESS:

There was none.

8. NEW BUSINESS:

- A. Manager Tanaka presented on hydraulic modeling report results. Options to reduce I&I and maintenance costs through lateral lining were discussed. Board and staff also discussed other options to reduce I&I, including sealing manholes.
- B. The Board reviewed request to extend uniform policy to include winter jackets. On a motion by Director Gatto, seconded by Director Chen, by a vote of 5-0-0, the Board approved jackets in a light safety color with District logo on shoulder.
- C. Item 8C, Lateral replacement at 11150 Bubb Road, was moved up to the beginning of the agenda.

9. STAFF REPORTS:

- A. District Manager Tanaka reported on smoke testing.
- B. Deputy District Manager Porter reported on the Monthly Maintenance Report. Discussed the SSO that occurred on 12/2/2018.

10. CLOSED SESSION:

President Kwok adjourned the regular meeting session and opened the closed session at 8:55 p.m. in accordance with government code section Paragraph (1) of Subdivision (d) of Section 54956.9, existing litigation. Name of Case: County Sanitation District 2-3, West Valley Sanitation District, Cupertino Sanitary District, Burbank Sanitary District, and the City of Milpitas v. The City of San Jose, The City of Santa Clara, and Does 1 through 50 inclusive.

President Kwok adjourned the closed session and the regular meeting was called to order at 9:05 p.m.

There was no reportable action.

11. ADJOURNMENT:

Director Bosworth was excused from the regular meeting to be held on 2/6/19.

President Kwok was excused from the regular meeting to be held on 2/20/19.

Director Saadati was excused from the regular meeting to be held on 3/4/19.

On a motion properly made and seconded, at 9:07 p.m. the meeting was adjourned.

Secretary of the Sanitary Board

President of the Sanitary Board

SANITARY BOARD MEETING
WEDNESDAY, FEBRUARY 20, 2019

The Sanitary Board of the Cupertino Sanitary District convened this date at 7:00 p.m. in the Stevens Creek Office Center, 20863 Stevens Creek Boulevard, Suite 100, Cupertino, California.

1. ROLL CALL:

Acting President Chen called the meeting to order and the following proceedings were had to wit: Roll call was taken, with the following members in attendance:

Directors present: Angela S. Chen, Taghi S. Saadati, and John M. Gatto, William A. Bosworth. President Patrick S. Kwok was on excused absence.

Staff present: District Manager Richard K. Tanaka, Deputy District Manager Benjamin Porter, and Counsel Marc Hynes.

Guest: Liz Chu, resident at 11150 Bubb Road, Cupertino

2. SPECIAL STAFF REPORT:

- A. Manager Tanaka reported on Prospect Pump Station pump failure and answered questions from the Board such as: Was any kind of material found in the pumps? How many bolts were removed? What is the potential for cost recovery? Where was the concrete found? The Board and staff discussed making the pumps more redundant and fool-proof.

On motion by Director Gatto, seconded by Director Bosworth, by a vote of 4-0-0, the Board authorized staff to purchase 3 pumps and thank the field staff for their efforts.

- 8.A.-Unfinished Business - 11150 Bubb Road Lateral Replacement. Staff reported that they requested estimates from other contractors and received 1 bid similar to what the property owner's contractor provided. On a motion by Director Gatto, Bosworth, seconded by Director Bosworth, by a vote of 4-0-0, the Board agreed to revisit this item in March.

3. MINUTES & BILLS:

- A. On a motion by Director Gatto, seconded by Director Bosworth, by a vote of 4-0-0, the minutes of Wednesday, January 16, 2019 were approved as written.
- B. By consensus, the Minutes of Wednesday, January 02, 2019 are to be Noted & Filed.
- C. The Board reviewed the January financials for payment. Director Saadati had some questions regarding the terminology "dipstick", and the AB/JDD, and Roto-Rooter invoices. On a motion by Director Chen, Taghi, Gatto, Bosworth, seconded by Director Chen, Taghi, Gatto, Bosworth, by a vote of 4-0-0, the payment of bills was approved.
- D. The Directors submitted their February 2019 timesheets to Staff.

4. PERSONAL PRESENTATIONS:

There were none.

5. CORRESPONDENCE:

There was none.

6. MEETINGS:

- A. Director Bosworth plans to attend the Santa Clara County Special Districts Association Meeting to Be Held March 4, 2019.

7. REPORTS:

- A. The Board, District Council and Staff attended the CASA Winter Conference held January 23-25, 2019 In Indian Wells, Ca. Director Gatto mentioned this year's theme was geared towards us of all electronics. Director Bosworth brought up a discussion to consider costs of infrastructure vs. cost of failure. Board members reported on the following:
- a. CSRMA training seminar held on January 23, 2019 – Acting President Chen expressed her disappointment in cancelation of Regional presenter. Director Bosworth discussed West Valley emergency procedures.
 - b. Roundtable series held on January 23, 2019 - Acting President Chen discussed the topic of emergency response public information officer. Director Gatto discussed forward thinking.
 - c. Director Bosworth attended the CSRMA Board of Directors meeting held on January 24, 2019. He reported on the topic of primary insurance – there is no pool of costs; 2017 had the worst property loss on record; 2018 looks to be even worse.
 - d. Counsel Hynes attended the Attorneys Committee meeting held on January 25, 2019. He discussed the potential to have requirements in the future to have Districts be required to be represented by people that are in line with census results.
 - e. Other conference sessions – Director Gatto mentioned that the millennials presentation was interesting and that not as much technical information was shared as in the past. Director Bosworth mentioned that the topic of artificial intelligence as interesting.
- B. Deputy Manager Porter reported on the Regular Meeting of the San Jose/Santa Clara Treatment Plant Technical Advisory Committee (TAC) held February 12, 2019.
- C. Director Gatto reported on the Regular Meeting of the San Jose/Santa Clara Treatment Plant Advisory Committee (TPAC) held February 14, 2019.

8. UNFINISHED BUSINESS:

A. 11150 Bubb Road Lateral Replacement. This item was moved up to after Special Staff Reports.

9. NEW BUSINESS:

A. The Board discussed consideration to move second Board meeting in March 20, 2019.

On a motion by Director Gatto, seconded by Director Taghi, by a vote of 4-0-0, the Board agreed to move the second regular Board meeting in March to Wednesday, March 27, 2019 and cancel the regular Board meeting to be held Wednesday, April 3, 2019.

B. The Board discussed Cristo Rey Pump Station generator that was stolen from the pump station. A police report and insurance claim were filed. The insurance deductible for the generator is \$2,000.

C. The Board discussed request for reimbursement for D&B Legacy APN 326-15-096. On a motion by Director Gatto, Bosworth, seconded by Director Bosworth, by a vote of 4-0-0, reimbursement was approved in the amount of \$7,778.30.

10. STAFF REPORTS:

A. Manager Tanaka reported on Reimbursement from City of San Jose. Accounting procedures are more transparent.

B. Deputy Manager Porter reported on Monthly Maintenance Report. There were no SSOs; maintenance is ahead of schedule.

C. Manager Tanaka reported on On-Going Development Projects. Forum still determining cause of I/I. Vallco – Santa Clara flow has been modeled and staff met with City of Cupertino and the developer.

11. CLOSED SESSION:

Acting President Chen adjourned the regular meeting session and opened the closed session at 9:20 p.m. in accordance with government code section Paragraph (1) of Subdivision (d) of Section 54956.9, existing litigation. Name of Case: County Sanitation District 2-3, West Valley Sanitation District, Cupertino Sanitary District, Burbank Sanitary District, and the City of Milpitas v. The City of San Jose, The City of Santa Clara, and Does 1 through 50 inclusive.

Acting President Chen adjourned the closed session and the regular meeting was called to order at 9:27 p.m.

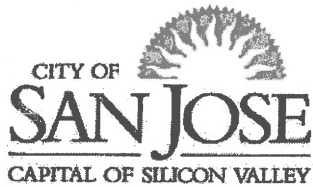
There was no reportable action.

12. ADJOURNMENT:

On a motion properly made and seconded, at 9:27 p.m. the meeting was adjourned.

Secretary Pro-Tem of the Sanitary Board

Acting President of the Sanitary Board



Environmental Services Department

March 1, 2019

To: City of Santa Clara and Tributary Agency Representatives

RE: Draft Proposed 2019-20 Regional Wastewater Facility (RWF) Capital Budget, Draft Proposed 2020-24 RWF Capital Improvement Program, and Draft Proposed 2019-20 RWF Operating and Maintenance (O&M) Budget

Dear Mr. Welling, Mr. Newby, Mr. Tanaka, and Mr. Ndah,

In accordance with the Master Agreement, we are providing you with the preliminary draft proposed budget by March 1. As a courtesy, we are also providing you project detail sheets on each project.

In the draft proposed 2019-20 O&M budget document, the Proposed O&M Budget "Estimated Cost Distribution" table reflects estimates based upon mass distribution information provided by each agency to the City of San José for the fiscal year 2019-20 budget. Descriptions of the budget proposals impacting the San José/Santa Clara Treatment Plant Operating Fund are also included.

The numbers in both Draft Proposed Budgets are preliminary and are subject to change as San José works through our normal budgeting processes. The official Proposed 2019-20 Capital Budget will be published by April 22, 2019 and the official Proposed 2019-20 Operating Budget will be published on May 1, 2019. The City will present both budgets to the Treatment Plant Advisory Committee at its May 2019 meeting.

Sincerely,

For Kerrie Romanow, Director

cc: Napp Fukuda



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ENVIRONMENTAL SERVICES DEPARTMENT

SJ/SC Water Pollution Control Plant

PRELIMINARY - 2019-2020 Operating & Maintenance Budget Summary

	2017-2018 Actual Expenses	2018-2019 Proposed Budget	2018-2019 Adopted Budget	2019-2020 Estimated Budget
Personal Services	53,675,478	\$58,488,819	58,737,337	64,911,475
Non-personal Services	29,336,747	30,695,194	30,695,194	31,660,194
Equipment	557,785	906,000	906,000	906,000
Inventory	541,602	400,000	400,000	600,000
Overhead	9,687,081	13,466,283	13,466,283	12,900,000
NCH Debt Service	1,175,345	1,057,934	1,057,934	967,037
Workers' Compensation	322,313	607,000	607,000	607,000
City Services	983,835	782,744	785,536	800,000
Total Operating Expenses	96,280,186	106,403,974	106,655,284	113,351,706

ESTIMATED COST DISTRIBUTION

PRELIMINARY ESTIMATES

2019-2020 Total Gallons Treated (MG)	(1) Percent of Total Sewage Treated	City / District	2019-2020 Estimated
25,228.542	62.784	City of San Jose	\$71,166,736
4,876.365	15.288	City of Santa Clara	17,329,209
30,104.907	78.072	Sub-Total	\$88,495,945
3,449.133	9.054	West Valley Sanitation District	10,262,863
1,989.095	5.517	Cupertino Sanitary District	6,253,614
2,253.310	6.196	City of Milpitas	7,023,272
347.522	0.931	Sanitation District # 2 - 3	1,055,304
86.180	0.230	Burbank Sanitary District	260,709
8,125.240	21.928	Sub-Total	\$24,855,762
38,230.147	100.000	TOTAL	\$113,351,706

(1) Composite of four parameters (flow, BOD, SS, ammonia). Source 2019-20 Revenue Program.

**SJ/SC Water Pollution Control Plant
PRELIMINARY - 2019-2020 Budget Proposals**

Proposal Title:

Capital Improvement Program Staffing

FTE: 1.0

Funding Source: SJ/SC Treatment Plant Operating Fund (513) – 30%

SJ/SC Treatment Plant Capital Fund (512) – 70%

Est. 2019-2020 Cost/(Savings): \$183,571

Proposal Description/Objective:

This proposal would add 1.0 Principal Engineer in the Regional Wastewater Facility (RWF) Capital Improvement Program (CIP) division to provide needed managerial oversight for the implementation of Liquids projects as part of the \$1.4 billion RWF CIP.

The Adopted Plant Master Plan (PMP) recommends more than 100 major capital improvement projects to be implemented at the Regional Wastewater Facility (RWF) over a 30-year planning period to address aging infrastructure, future regulatory requirements, population growth and sea-level rise, and treatment process improvements (e.g., odor control improvement, new treatment technologies, operational efficiencies, etc.). In late 2013, a Program Management Consultant (PMC) firm was brought on board to provide executive level program management services including start-up, validation, program organization, program controls, and project delivery planning and implementation. According to the program validation efforts, the RWF Ten-Year CIP is estimated at \$1.4 billion.

Now in its fifth year, the Ten-Year CIP has required significant staffing resources to deliver and support this multi-year program and multi-discipline projects. To more effectively deliver the program, projects have been organized into four packages: 1) Power & Energy, 2) Plant-wide Facilities, 3) Solids Processing, and 4) Liquids Processing. Each package is a portfolio of large, highly complex projects that requires a principal engineer to oversee the technical direction and implementation, including providing day-to-day guidance to the project delivery teams. For the past four years, the PMC has provided an engineering professional to perform package management services for the Liquids package, with the plan to phase out the consultant and transition this role to City staff. Given the number of active, critical rehabilitation projects, particularly in the Liquids packages, the Principal Engineer is needed to facilitate phasing out the consultant and ensure successful delivery of the CIP. The Liquids package currently has eight active projects with an estimated value of \$450 million. Two additional large projects, with an estimated value of \$150 million are programmed to start in 2019-2020.

Staff will reassess the need for this position in three years, as part of the CIP's annual resourcing analysis.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
\$180,071	\$3,500	\$180,071	

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**SJ/SC Water Pollution Control Plant
PRELIMINARY - 2019-2020 Budget Proposals**

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Proposal Title:

Legacy Lagoon Closure Environmental Study and Permitting

FTE: N/A

Funding Source: SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings): \$150,000

Proposal Description/Objective:

This proposal will fund consultant services for the preparation of a California Environmental Quality Act (CEQA) study, of a scale that will be determined by the project description arrived at by May of 2019, and for the subsequent environmental permitting required by State and Federal resource agencies in advance of a formal closure of the site that is owned by the San José-Santa Clara Regional Wastewater Facility (RWF). Closure will be required under formal order from the San Francisco Bay Regional Water Quality Control Board (Board) and will likely result in physical movement and consolidation of the legacy biosolids to a smaller area within the existing site, where they would then be covered with clean fill material. The consultant work will identify environmental impacts created by the project, as required under CEQA, and any additional environmental permitting needs. Environmental Services expects to receive the formal order from the Board in early 2019. The proposed start date for this funding is July 1, 2019.

This funding will allow for the effective scoping and permitting of the formal closure project anticipated in fiscal year 2020-2021. These activities will serve to rehabilitate RWF-owned property for potential operational uses.

Estimated Cost/(Savings):

2019-2020	2019-2020	Ongoing	Ongoing
Personal Services	Non-Personal Total	Personal Services	Non-Personal Total
Total		Total	
	\$150,000		

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SJ/SC Water Pollution Control Plant PRELIMINARY - 2019-2020 Budget Proposals

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Proposal Title:

Laboratory Equipment Replacement

FTE:

N/A

Funding Source:

SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings):

\$250,000/annually

Proposal Description/Objective:

The Laboratory located at the San José-Santa Clara Regional Wastewater Facility provides critical analytical services in support of facility operations, compliance monitoring of National Pollution Discharge Elimination System (NPDES) permit, recycled water, and source control monitoring at the Regional Wastewater Facility.

Much of the Laboratory's major analytical equipment has exceeded the general recommended life expectancy of five to ten years. Considerations for equipment replacement were based on current usage, operating conditions, breakdowns, City technology support, and manufacturer support. The Laboratory has evaluated its current major equipment inventory and proposes a tentative five-year purchase/replacement plan.

The purchase/replacement plan for equipment replacement was developed with considerations of current, new, and anticipated regulatory requirements, improved technologies, green chemistry tenets (minimizing or eliminating chemical hazards), and the implementation of new and developing analytical methodologies. Additional considerations or drivers have included energy savings, automation, increased laboratory safety, and water conservation. Additionally, a five-year, or longer, purchase plan is preferred over a single purchase given staffing constraints and the level of effort required to bring new equipment on-line.

The release of the 2017 Method Update Rule (MUR) by the Environmental Protection Agency (EPA) provided laboratory stakeholders increased flexibility in current and new analytical methodologies. Many of the proposed procurements have been evaluated to leverage this flexibility while complying with laboratory accreditation requirements, increasing lab safety, efficiency, and energy savings.

Another replacement consideration is the Windows operating system version used in much of the computer-controlled instrumentation. Currently, the City's Information Technology Department is recommending that all computers be updated to the Windows 10 operating system. A large majority of the laboratory's current instrument operating software runs on Windows XP or Windows 7 and may be restricted from network access due to security concerns with the older operating systems. Although the proposal covers a five-year period, changes in regulatory requirements, staffing, process monitoring, or laboratory needs may result in modification of the proposed items/schedule for each term year.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
	\$250,000		\$250,000

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SJ/SC Water Pollution Control Plant PRELIMINARY- 2019-2020 Budget Proposals

Proposal Title:

Electrical Substation Inspection, Testing and Maintenance

FTE: N/A

Funding Source: SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings): \$290,000

Proposal Description/Objective:

This proposal would provide funding for inspection, testing and repair for the two (2) electrical substations located at the Regional Wastewater Facility.

The San José-Santa Clara Regional Wastewater Facility meets its energy demands through a combination of onsite cogeneration engines and power supply from Pacific Gas & Electric (PG&E). There are two separate electrical power sources from PG&E at 115KV, at substations M3 and M4 which connect PG&E power to the Facility electrical distribution system. The two substations consist of multiple transformers, numerous high voltage breakers, and switches and are currently in need of major maintenance and inspection work. Major maintenance inspection of high voltage transformers and electrical switches are infrequent and require specialty equipment and trained personnel that the Facility does not have.

Facility Operations and Maintenance staff will prepare design specifications and contract procurement will be done via competitive bidding process. The contract term will be for four (4) years. Staff will also provide oversight for the services conducted by the contractor.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
	\$290,000		

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**SJ/SC Water Pollution Control Plant
PRELIMINARY - 2019-2020 Budget Proposals**

Proposal Title:

RWF Operational Needs -- Refurbish Dredges

FTE: N/A

Funding Source: SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings): \$380,000

Proposal Description/Objective:

This proposal would provide funding for refurbishing/rehabilitating two of the old dredges which are located at the Residual Sludge Management (RSM) process area of the San José-Santa Clara Regional Wastewater Facility with new hydraulic systems, replaces existing pumps, motors, refurbish the engine, travel drive system etc.

The Residual Solids Management process of the wastewater treatment facility consists of dredging, mixing and drying, stockpiling in place, hauling and bed restoration. There are 28 active sludge lagoons where the digested sludge is continuously pumped into. The lagoons are grouped into four blocks with each block containing about six to eight lagoons. Once a lagoon block is stabilized for at least two to three years it is emptied by dredging process and sludge is transferred into shallow drying beds for final processing before being hauled to local landfill. It takes about six months to dredge one block of the lagoons. The process is one block being filled, one block is being emptied and the other two blocks are in stabilization process rendering the sludge to Class A. The Facility currently maintains a fleet of four dredges. Under normal conditions three to four dredges are used for the dredging process.

Two of the dredges were purchased in 2004 and need extensive maintenance repairs. Various components of the dredges like the pumps, hydraulic hoses, batteries, alternators, belts, mufflers, injectors, air conditioning system etc. needs to be replaced, and engines, various gear boxes, valves etc. need to be inspected and resealed, cabs need to be repaired for water leaks. If approved, the maintenance repairs will be done by an outside vendor who are specialized in maintenance repairs of this type of equipment.

It is important to note that the current capital improvement program includes the transitioning of the current solids management process into mechanical sludge dewatering and the new process is expected to be operational within three to four years. The digested sludge will continue to be transferred into the lagoons until the new sludge dewatering process is operational and followed by another four years to empty out the remaining sludge lagoons. As such, the current dredging operation is expected to continue for at least eight years.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
	\$380,000		

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SJ/SC Water Pollution Control Plant
PRELIMINARY - 2019-2020 Budget Proposals

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Proposal Title:

Operations and Maintenance Staffing in support of the CIP

FTE: 8.0

Funding Source: SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings): \$915,490

Proposal Description/Objective:

This proposal would provide funding for six (6) additional Wastewater Operator and two (2) Industrial Electrician at the San José-Santa Clara Regional Wastewater Facility with a limit date end of June 30, 2026.

The Regional Wastewater Facility (Facility) is one of the largest advanced secondary wastewater treatment facility in the Bay Area. The operational area is divided into three paired treatment areas; Primary/Sludge Control, BNR 1/2, and Filtration/Disinfection. The electrical system consists of onsite cogeneration engines, high voltage substations, transformers, switchgears, and many motor control centers. The physical size, complexity of equipment, and varied operational process of each area require extensive training to master the duties required of these positions. Independently operating and maintaining complex equipment and process areas requires extensive training and years of hands-on work experience at the Facility.

Over the last few years, the Facility has undertaken unprecedented number of capital improvement projects to address the critical rehabilitation needs for the Facility. Many of the projects are under construction now and the number of projects in construction is expected to double or triple over the next five years. Almost every process area at the Facility is impacted by various condition assessment and construction projects. These activities include document review, attend numerous coordination meetings, enable numerous process shutdowns, flow diversion, power interruptions and commissioning and start up activities. These activities need to be carefully planned and coordinated, requires extensive planning/brain storming sessions between Operations & Maintenance (O&M) staff, CIP engineering and the contractors, preparing shutdown memos, followed up by field verifications, trial runs and then implementing full scale shutdowns. As a result, demand for O&M staff participation in various CIP projects is gradually increasing and expected to peak over the next five years. This will create a void in critical O&M responsibilities related to the wastewater treatment process.

This proposal will fund additional wastewater operators to provide adequate shift coverage for various process areas and free up available time from more experienced operators at the Facility and dedicate their time for various activities associated with various CIP projects. The addition of Industrial Electricians will free up the time for more experienced Electricians to dedicate their time for various CIP projects shutdowns and start up and commissioning activities.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
\$915,490		\$915,490	

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**SJ/SC Water Pollution Control Plant
PRELIMINARY - 2019-2020 Budget Proposals**

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Proposal Title:

SQL Server Database Upgrade for Environmental Services Department

FTE: N/A

Funding Source: SJ/SC Treatment Plant Operating Fund (513)

Est. 2019-2020 Cost/(Savings): \$46,904

Proposal Description/Objective:

This proposal would provide proportionate funding from the SJ/SC Treatment Plant Operating Fund for the purchase of six new virtual servers and Microsoft SQL Enterprise and Standard licenses to support the upgrade and migration of Environmental Services Department (ESD) SQL databases.

For the past five years, the City's Information Technology (IT) Department has operated a redundant SQL database environment in partnership with ESD. The system involved two clusters of servers – one located at City Hall and one set located at the San José-Santa Clara Regional Wastewater Facility. The purpose of the mirrored environment was to ensure that if something happened to the Production server at one location, services could easily be switched to the alternate location to ensure SQL databases remain operational.

The IT Department is currently working on a project to redesign the City's central data center that will involve upgrading hardware, software and network design. As part of this project, they will be decommissioning the SQL mirror and moving to a different method of providing redundancy and disaster recovery for SQL databases. This requires ESD to upgrade since the SQL mirror will no longer exist. ESD will provision six new virtual servers, 10 SQL Enterprise licenses and eight SQL Standard licenses. Four of the virtual servers will reside in the City Hall data center and two servers will be on standby in the City's redundant data center.

Estimated Cost/(Savings):

2019-2020 Personal Services Total	2019-2020 Non-Personal Total	Ongoing Personal Services Total	Ongoing Non-Personal Total
	\$46,904		

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Water Pollution Control Capital Program 2020-2024 Proposed Capital Improvement Program Overview

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INTRODUCTION

The San José-Santa Clara Water Pollution Control Plant (Plant) is a regional wastewater treatment facility serving eight South Bay cities and four special districts including: San José, Santa Clara, Milpitas, Cupertino Sanitary District (Cupertino), West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation Districts 2-3 (unincorporated), and Burbank Sanitary District (unincorporated). The Plant is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José’s Environmental Services Department (ESD). ESD is also responsible for planning, designing, and constructing capital improvements at the Plant, including water reuse facilities. On March 26, 2013, the City Council approved to change the name of the Plant to the San José-Santa Clara Regional Wastewater Facility (RWF) for use in public communications and outreach.

PLANT INFRASTRUCTURE	
ACRES OF LAND	2,684
AVERAGE DRY WEATHER INFLUENT CAPACITY (MILLIONS OF GALLONS PER DAY)	167
AVERAGE DRY WEATHER INFLUENT FLOW (MILLIONS OF GALLONS PER DAY)	107
DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR	43,500
AVERAGE MEGAWATTS PRODUCED	5.6

The 2020-2024 Proposed Capital Improvement Program (CIP) provides funding of \$1.31 billion, of which \$335.8 million is allocated in 2019-2020. The five-year CIP is developed by City staff, reviewed by the Treatment Plant Advisory Committee (TPAC), and approved by the San José City Council. The budgeted costs are allocated to each agency based on its contracted-for capacity in the Plant. Each agency is responsible for its allocated share of Plant costs, as well as the operation, maintenance, and capital costs of its own sewage collection system; debt service on bonds issued by the agency for sewer purposes; and any other sewer service related costs. Each agency is also responsible for establishing and collecting its respective sewer service and use charges, connection fees, or other charges for sewer service.

This program is part of the Environmental and Utility Services City Service Area (CSA) and supports the following outcomes: *Reliable Utility Infrastructure* and *Healthy Streams, Rivers, Marsh, and Bay*.

PROGRAM PRIORITIES AND OBJECTIVES

The 2020-2024 Proposed CIP is consistent with the goals and policies outlined in the City’s Envision San José 2040 General Plan. These include maintaining adequate operational capacity for wastewater treatment to accommodate the City’s economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the Plant in compliance with all applicable local, state, and federal regulatory requirements.

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Water Pollution Control Capital Program 2020-2024 Proposed Capital Improvement Program

DRAFT

Overview

PROGRAM PRIORITIES AND OBJECTIVES

The development of this Proposed CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long-term rehabilitation and modernization of the Plant. On April 19, 2011, the City Council approved a preferred alternative for the Draft PMP and directed staff to proceed with a program-level environmental review of the preferred alternative. In November 2013, the City Council approved the PMP and certified the final Environmental Impact Report. In December 2013, Santa Clara's City Council took similar actions.



San José-Santa Clara Regional Wastewater Facility

The PMP recommends more than 114 capital improvement projects to be implemented over a 30-year planning period at an estimated investment level of approximately \$2 billion. The PMP assumed an implementation schedule of 2010 through 2040.

On September 24, 2013, the City Council approved a multi-year master services agreement with MWH Americas, Inc. for program management consultant services to assist with managing and implementing the RWF CIP¹. By February 2014, the consultant program management team, along with City staff, completed a project validation process that included a review and prioritization of PMP projects, along with gap projects identified through discussions with Operations and Maintenance staff. The projects included with this Proposed CIP are based on the outcome of that project validation and the completion of various programmatic studies. On October 17, 2017, the City Council approved an amendment to extend the consultant program management services through 2023 to align with the implementation of the ten-year capital program.

Program priorities for the near term include: obtaining long-term financing (for San José only); continuing to build operating reserves needed for bond issuance; continuing to prioritize projects based on criticality and staffing resources; and actively managing project risks and variables to inform timing and amount of major encumbrances.

Program Funding: Since early 2014, staff has been working with representatives from the City of Santa Clara and the tributary agencies to develop a ten-year funding strategy for the CIP. On May 14, 2015, TPAC recommended approval of, and on June 2, 2015, the City Council approved the Ten-Year Funding Strategy. An update on the Ten-Year Funding Strategy was recommended for approval by TPAC on December 10, 2015 and approved by the City Council on January 12, 2016. The staff reports are available online.²

¹ Effective January 1, 2017, MWH Americas, Inc. was acquired and merged with Stantec Consulting Services, Inc.

² June 2, 2015 Memo: http://sanjose.granicus.com/Viewer.php?view_id=&event_id=732&meta_id=516433

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Water Pollution Control Capital Program

2020-2024 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

In August 2017, staff provided an update on Clean Water State Revolving Fund (SRF) funding to the City Council, which included news that the State Water Resources Control Board (SWRCB) would not be funding the Digester and Cogeneration projects. Staff will continue to monitor the issue and evaluate further SRF opportunities as appropriate. However, based on the City's recent experience with this program, unless significant changes are made to the funding level, program priorities, program resources, and loan agreement terms, SRF loans do not appear to be a potential source of funding for the RWF CIP.

In October 2017, the City Council approved the establishment of a \$300 million interim financing facility to finance San José's portion of the capital costs. As the CIP progresses, the City will periodically pay off the interim financing facility with long-term bonds. This strategy provides funding for the CIP at the lowest possible cost with the least amount of risk.

Program/Project Delivery and Implementation: Successful delivery of this large, multi-disciplinary CIP requires an integrated team of City staff, outside consultants, and contractors. The program continues to operate under an integrated project delivery model using a combination of City staff and consultants. The program is being delivered using a mix of City staff from Environmental Services Department, Public Works Department, Planning, Building and Code Enforcement Department, Finance Department, and the City Attorney's Office, as well as program management consultant staff and various other consultant firms.

With more than two dozen large projects moving through the feasibility/development and design development phases, the program will need to continue to draw from the professional consultant and/or contractor community for program management, project management, subject-matter technical expertise, engineering design, and construction management services. Staff has implemented an owner-controlled insurance program (OCIP), a design and construction management document system (EADOC), and a Building Official Program to support the volume of ongoing and upcoming construction activity.

Developing a construction management resourcing model and plan is a top priority for the 2020-2024 Proposed CIP, with a ramp up in large-scale construction projects expected in 2019-2020 and 2020-2021 that require additional construction management support from Public Works and/or third-party construction managers.

Program/Project Delivery Variables: The program team continues to develop and refine project schedules and budgets and implement regular reporting and centralized document management systems for consistent and efficient program and project delivery. The program team continues to work on developing standardized project delivery tools, design standards and specifications, control system and integration strategies, startup, commissioning, and training.

Water Pollution Control Capital Program
2020-2024 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

On the project delivery front, it is important to recognize that many projects in the Proposed CIP are in the feasibility/development or design phases. Staff will continue to develop and refine project scope, schedules, and budgets as the projects progress through scoping, preliminary engineering, detailed design, and bid award. To the extent possible, staff will continue to monitor and implement mitigation measures to minimize impacts to project delivery schedule and cost caused by various factors such as changes in project delivery staffing resources, long lead time items, external permit reviews and approvals, and construction bidding climate.

A number of program tools and resources will be used to counter potential impacts to the overall program delivery; these include employing a program risk and interface manager, program safety officer, and construction coordinator to address project interface issues during design and construction, obtaining local professional cost estimating services, scheduling regular meetings with regulatory and permitting entities, and continuing to implement the CIP Program Delivery Model (PDM) stage gate approvals.

In addition, staff will continue to apply the lessons learned from large construction projects, like the Digester and Thickener Facilities Upgrade project, to future projects. This includes proactively performing subsurface utility investigations, condition assessments, process shutdown verifications, and hazardous materials investigations.

SOURCES OF FUNDING

Revenues for the 2020-2024 Proposed CIP are derived from several sources: transfers from the City of San José Sewer Service and Use Charge (SSUC) Fund and Sewage Treatment Plant Connection Fee Fund; contributions from the City of Santa Clara and other tributary agencies; interest earnings; Calpine Metcalf Energy Center Facilities repayments; a federal grant from the U.S. Bureau of Reclamation; and debt-financing proceeds.

The SSUC Fund derives its revenues from fees imposed on San José users of the residential, commercial, and industrial sanitary sewer system. Transfers from this fund to the Plant CIP over the five years total \$227.4 million, which represents a \$12.5million (5.8%) increase as compared to the 2019-2023 Adopted CIP.

Contributions from the City of Santa Clara and other agencies are determined according to agreements with the participating agencies, based on financing plans, anticipated Plant expenditures, and the amount and characteristics of flows from each agency's connections to the Plant. These contributions reimburse the City for actual project expenditures. In this Proposed CIP, contributions from the City of Santa Clara and other agencies total \$316.3 million, which represents a \$1 million (0.3%) decrease compared to the 2019-2023 Adopted CIP.

To accommodate San José's portion of the project costs for the San José – Santa Clara Regional Wastewater Facility (RWF), wastewater revenue notes (notes) (\$345.0 million) and bond proceeds

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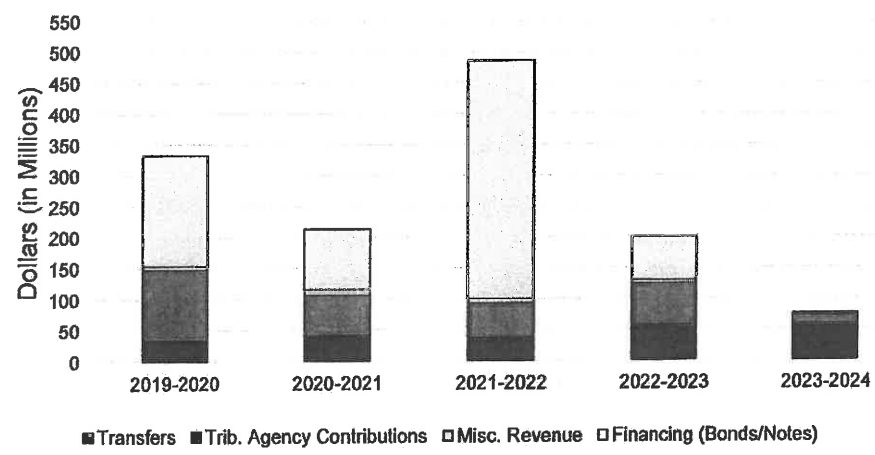
Water Pollution Control Capital Program

2020-2024 Proposed Capital Improvement Program

Overview

(\$385) million are assumed to cover costs of the RWF improvements in the Proposed CIP for the 2019-2020 through 2023-2024 period. The establishment of an interim financing program, in the form of wastewater revenue notes, (\$300 million) was approved and issued in 2017-2018. The notes will provide periodic short-term, flexible funding to meet the cash flow needs of the RWF improvement project. Generally, the notes are repaid within a 3-year period and offer a lower interest costs than fixed rate bonds. During this CIP period, bonds will also be issued in the amount of \$385 million to both repay the notes issued in 2017-2018 and provide \$70 million in additional funding for the RWF project. Associated debt service for the wastewater revenue notes and debt service for the bonds is estimated to be \$2.1 million in 2019-2020, \$4 million in 2020-2021, \$304.9 million in 2021-2022, \$25.3 million in 2022-2023, and \$27.5 in 2023-2024. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2020-2024 Proposed CIP while avoiding large rate increases that would be required to fund the PMP in a “pay-as-you-go” scenario. City of San José staff costs will be cash-funded and not included in either the wastewater revenue notes program or long-term debt financing. Additional debt financing, in the form of notes and bonds will likely be needed to fund project costs beyond the Proposed CIP period.

Summary of Revenues



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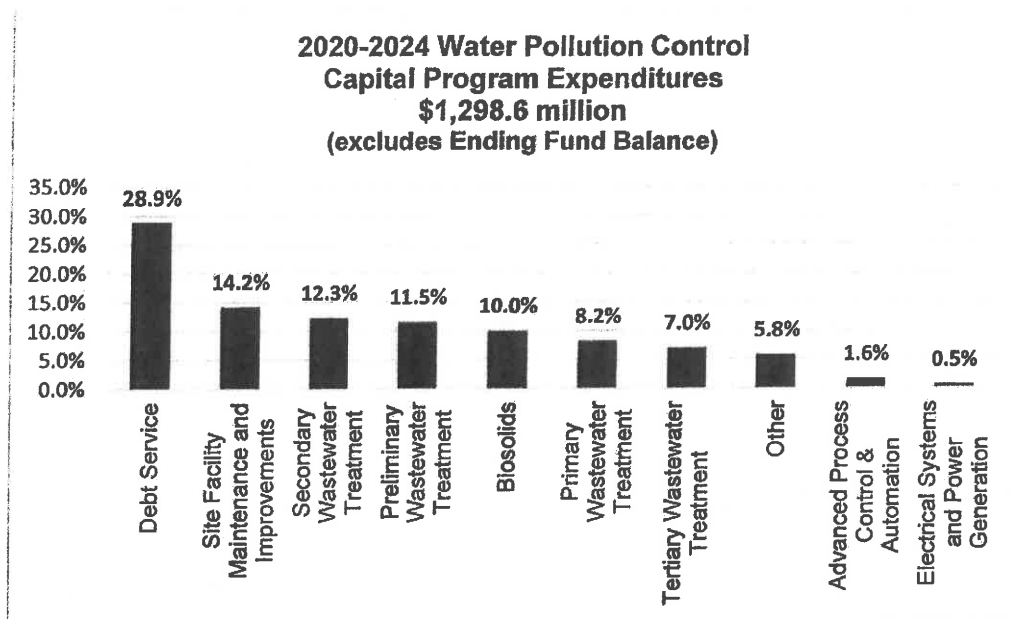
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Water Pollution Control Capital Program 2020-2024 Proposed Capital Improvement Program

Overview

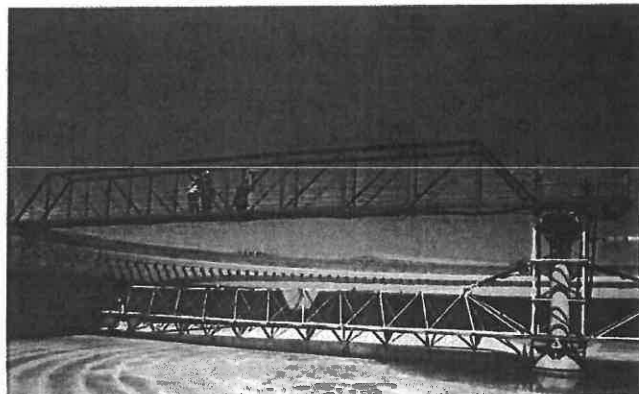
PROGRAM HIGHLIGHTS

The Water Pollution Control Capital Program's expenditures are organized to show the use of funds in several categories. The following highlights the major projects in the program. For further information on the program's individual projects, please refer to the Detail Pages.



Nitrification Clarifiers Rehabilitation

The Plant has 26 clarifiers associated with the secondary aeration basins (BNR1) and 16 clarifiers associated with the nitrification aeration basins (BNR2). These clarifiers, together with the aeration basins, form the biological treatment process and function to remove organics from the wastewater. The 16 BNR2 clarifiers are divided into Batteries A and B, and were constructed in the 1970s and 1980s. Each clarifier is a circular reinforced concrete tank measuring 140 feet in diameter and approximately 16 feet deep and containing major mechanical components. Two motor control centers provide power to the clarifiers.



Clarifier Interior and Mechanism

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Water Pollution Control Capital Program
2020-2024 Proposed Capital Improvement Program
Overview

DRAFT

PROGRAM HIGHLIGHTS

Nitrification Clarifiers Rehabilitation (continued)

Condition assessments have shown that many components of the clarifiers are nearing the end of their useful life. The project will rehabilitate the clarifiers and supporting infrastructure to ensure continued operational reliability and efficiency, as well as regulatory compliance, for the next 30 years. The project will be completed in two phases.

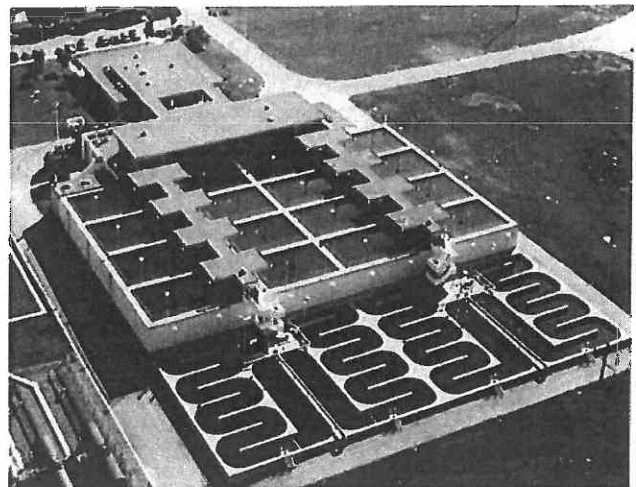
The first phase will replace clarifier mechanisms and appurtenances for eight clarifiers, modify service water system and add wash water piping and hose bibs, repair concrete clarifier walls and slabs, replace drain valves and return activated sludge (RAS) valves serving A-side and B-side clarifiers, rehabilitate clarifier basin groundwater pressure relief valves for the 16 clarifiers, rehabilitate up to eight RAS pipelines, install six groundwater monitoring wells, replace two mixed liquor channel sluice gates, and replace electrical and instrumentation and control equipment for all 16 clarifiers.

The second phase will rehabilitate the remaining eight clarifiers and up to eight of the remaining RAS pipelines.

The 2020-2024 Proposed CIP allocates \$91.2 million for design, construction, contingency, and project management costs. The estimated total project cost is \$99.8 million, based on 60% design completion. Construction award of Phase 1 is expected in late 2019 and construction completion is anticipated in 2021-2022. Construction award of Phase 2 is expected in early 2022 and construction is anticipated to be finished in 2024-25.

Filter Rehabilitation

The Plant currently has a tertiary filtration unit process which consists of 16 granular media filters and associated ancillary equipment. The filtration process is one of the final treatment steps at the RWF that results in the production of effluent that is in compliance with the Plant's National Pollutant Discharge Elimination System ("NPDES") regulatory permit. Much of the filtration process and infrastructure were constructed in the 1970s and 1980s and is now in need of significant refurbishment. The Filter Rehabilitation project will rehabilitate the filter influent pump station, supplemental filter influent pump station, filter building, disinfection tanks, backwash equalization tanks, and backwash treatment tanks.



Aerial of Filter Building

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Water Pollution Control Capital Program
2020-2024 Proposed Capital Improvement Program

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Overview

PROGRAM HIGHLIGHTS

Filter Rehabilitation (continued)

These improvements will enable continued regulatory compliance and long-term operational reliability. In particular, this project will rehabilitate the structural, mechanical, electrical, and instrumentation/controls components of the filtration process.

The 2020-2024 Proposed CIP allocates \$38.6 million for design, construction, contingency, and project management costs. The estimated total project cost is \$45.7 million, based on 30% design completion. Construction award is expected in summer 2020 and construction completion is anticipated in 2022-2023.

MAJOR CHANGES FROM THE 2019-2023 ADOPTED CIP

The overall size of the Water Pollution Control CIP has decreased by \$73.9 million from \$1.38 billion in the 2019-2023 Adopted CIP to \$1.31 billion in the 2020-2024 Proposed CIP. The following table outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

Project Name	Incr/(Decr)
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	\$70.4 million
Nitrification Clarifiers Rehabilitation	\$43.9 million
Debt Service Repayment for Plant Capital Improvement Projects	\$18.6 million
Tunnel Rehabilitation	(\$26.1 million)
Additional Digester Upgrades	(\$51.6 million)
Aeration Tanks & Blower Rehabilitation	(\$54.2 million)

OPERATING BUDGET IMPACT

Several projects in this Proposed CIP are expected to introduce new operating costs to the Operating Budget. These include: Energy Generation Improvements, Digester and Thickener Facilities Upgrade, and Digested Sludge Dewatering Facility. The operation and maintenance impacts are due to chemical, labor, maintenance consumables (e.g. parts, oil), electrical, and hauling & tipping costs.

A new Cogeneration Facility (part of the Energy Generation Improvements project) is expected to come online in early 2020 that will introduce a new generator building, new engine generators, a gas treatment system, boilers, chillers, and other ancillary equipment. In addition, a new chilled water system pump station may be incorporated as part of the project.

DRAFT

Water Pollution Control Capital Program
2020-2024 Proposed Capital Improvement Program

DRAFT

Overview

OPERATING BUDGET IMPACT

Depending on the timing of when new facilities come online and existing facilities are decommissioned, there may be a temporary increase in operating costs due to the dual operations.

The Digester and Thickener Facilities Upgrade project will include a new chemical dosing station and new sludge screening facility. It is expected to be in operation by late 2020.

A new Digested Sludge Dewatering Facility is anticipated to be in operation by late 2022, which will include new mechanical dewatering units, feed tank, sludge storage, conveyance, and chemical dosing facilities to be housed in a new building. This facility will allow for the eventual retirement of the current lagoons and sludge drying beds expected to be completed in 2027.

Net operating cost impacts will continue to be evaluated and updated based on final design and operation configurations. The table below summarizes the operating and maintenance impact to the San Jose-Santa Clara Treatment Plant Operating Fund for several projects.

Net Operating Budget Impact Summary

	<u>2020-2021</u>	<u>2021-2022</u>	<u>2022-2023</u>	<u>2023-2024</u>
Digester and Thickener Facilities Upgrade	1,194,000	\$2,122,000	\$2,202,000	\$2,285,000
Digested Sludge Dewatering Facility			7,941,000	12,251,000
Energy Generation Improvements	<u>\$89,000</u>	<u>\$92,000</u>	<u>\$95,000</u>	<u>\$97,000</u>
	\$1,283,000	\$2,214,000	\$10,238,000	\$14,633,000

Note: The estimated operating costs have been provided by the Environmental Services Department and have not yet been fully analyzed by the City Manager's Budget Office. That analysis may result in different costs when the actual budget for the year in question is developed.

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Water Pollution Control
2020-2024 Proposed Capital Improvement Program
Source of Funds (Combined)

	Estimated	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund (512)								
Beginning Balance	301,152	3,510,152	2,888,152	8,474,152	27,572,152	2,871,152	3,510,152	
Reserve for Encumbrance	213,655,411							
Transfers								
Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541)	5,369,000	5,372,000	5,371,000					10,743,000
Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541)	1,310,000	2,138,000	4,083,000	6,356,000	25,273,000	27,502,000		65,352,000
Transfer for Capital Projects from Sewer Service and Use Charge Fund (541)	27,000,000	27,000,000	30,000,000	30,000,000	30,000,000	30,000,000		147,000,000
Transfer for Equipment Replacement from Sewer Service and Use Charge Fund (541)	1,249,000	1,083,000	1,083,000	1,083,000	1,083,000	1,083,000		4,332,000
Transfer from the Sewage Treatment Plant Connection Fee Fund (539)								
TOTAL Transfers	34,928,000	34,510,000	40,537,000	37,439,000	56,356,000	58,585,000	227,427,000	
Revenue from Use of Money and Property								
Interest Income	3,057,000	6,153,000	7,179,000	6,783,000	5,117,000	3,169,000		28,401,000
TOTAL Revenue from Use of Money and Property	3,057,000	6,153,000	7,179,000	6,783,000	5,117,000	3,169,000	28,401,000	
Revenue from Local Agencies								
2009 Bond Debt Repayment	155,000	155,000	155,000					310,000
State Revolving Fund - Loan Repayment	565,000							

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Water Pollution Control
2020-2024 Proposed Capital Improvement Program
Source of Funds (Combined)

	<u>Estimated</u>	<u>2018-2019</u>	<u>2019-2020</u>	<u>2020-2021</u>	<u>2021-2022</u>	<u>2022-2023</u>	<u>2023-2024</u>	<u>5-Year Total</u>
WPCP Projects and Equipment Replacement	31,307,000	113,049,000	65,286,000	56,011,000	67,887,000	13,783,000	316,016,000	

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Water Pollution Control
2020-2024 Proposed Capital Improvement Program
Source of Funds (Combined)

	Estimated						
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5-Year Total
TOTAL Revenue from Local Agencies	32,017,000	113,204,000	65,441,000	56,011,000	67,887,000	13,783,000	316,326,000
Revenue from the Federal Government							
U.S. Bureau of Reclamation Grant			2,545,000				2,545,000
TOTAL Revenue from the Federal Government			2,545,000				2,545,000
Other Revenue							
Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
TOTAL Other Revenue	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
Financing Proceeds							
Wastewater Revenue Notes	98,510,000	178,000,000	97,000,000		70,000,000		345,000,000
Bond Proceeds				385,000,000			385,000,000
TOTAL Financing Proceeds	98,510,000	178,000,000	97,000,000	385,000,000	70,000,000		730,000,000
Total San José-Santa Clara Treatment Plant Capital Fund (512)	382,857,563	335,766,162	215,979,152	494,096,152	227,321,152	78,797,152	1,310,154,152

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San José-Santa Clara Treatment Plant Capital Fund (512)

2020-2024 Proposed Capital Improvement Program
Use of Funds (Combined)

	Estimated	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund (512)							
Headworks Improvements	2,520,665	14,983,000	288,000	259,000	88,000		15,619,000
New Headworks	8,275,103	130,495,000	1,498,000	1,383,000	571,000		133,947,000
Preliminary Wastewater Treatment	10,795,968	145,478,000	1,787,000	1,642,000	659,000		149,566,000
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	1,000,212	10,885,000	94,530,000	686,000			106,785,000
Iron Salt Feed Station	651,797						
Primary Wastewater Treatment	1,652,009	1,155,000	2,099,000	1,470,000	59,840,000	684,000	106,785,000
Aeration Tanks and Blower Rehabilitation	54,802,341	1,155,000	2,099,000	1,470,000	59,840,000	1,065,000	65,629,000
Nitrification Clarifier Rehabilitation	3,907,975	53,031,000	2,357,000	2,925,000	30,690,000	2,152,000	91,155,000
Secondary Clarifier Rehabilitation	565,000					2,833,000	2,833,000
Secondary Wastewater Treatment	59,275,315	54,186,000	4,456,000	4,395,000	90,530,000	6,050,000	159,617,000
Filter Rehabilitation	4,546,106	34,872,000	1,658,000	1,089,000	943,000		38,562,000
Final Effluent Pump Station & Stormwater Channel Improvements		902,000	5,999,000	1,104,000	37,234,000	1,925,000	47,164,000
Outfall Bridge and Levee Improvements	2,480,037	4,826,000	723,000				5,549,000
Tertiary Wastewater Treatment	7,026,143	40,600,000	8,380,000	2,193,000	38,177,000	1,925,000	91,275,000
Additional Digester Upgrades				1,191,000	8,031,000	1,298,000	10,520,000
Digested Sludge Dewatering Facility	13,312,466	2,002,000	105,615,000	2,174,000	1,118,000		110,909,000
Digester and Thickener Facilities Upgrade	103,008,675	6,182,000	1,875,000				8,057,000
Lagoons and Drying Beds Retirement	1,564						
Biosolids	116,322,705	8,184,000	107,490,000	3,365,000	9,149,000	1,298,000	129,486,000
Combined Heat and Power Equipment Repair and Rehabilitation	88,844						
Energy Generation Improvements	87,960,878	3,335,000	737,000				4,072,000

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San José-Santa Clara Treatment Plant Capital Fund (512)

2020-2024 Proposed Capital Improvement Program

Use of Funds (Combined)

Plant Electrical Reliability	6,694,304	1,792,000	394,000	493,000	2,679,000
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San José-Santa Clara Treatment Plant Capital Fund (512)

2020-2024 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5-Year Total
Electrical Systems and Power Generation	94,744,026	5,127,000	1,131,000	493,000				6,751,000
Advanced Facility Control and Meter Replacement	10,850,783	13,287,000	990,000	408,000		322,000		15,007,000
Treatment Plant Distributed Control System	2,215,600	5,438,000						5,438,000
Advanced Process Control & Automation	13,066,383	18,725,000	990,000	408,000		322,000		20,445,000
Construction-Enabling Improvements	554,287							
Equipment Replacement	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000		1,663,000	8,315,000
Facility Wide Water Systems Improvements	2,466,244	2,419,000	389,000	8,737,000	915,000		898,000	13,358,000
Flood Protection	2,456,732	489,000	6,441,000	1,098,000	976,000			9,004,000
Plant Infrastructure Improvements	2,349,422	1,000,000	1,000,000	1,000,000	1,000,000		1,000,000	5,000,000
Plant Instrument Air System Upgrade	724,864							
Storm Drain System Improvements	1,470,317	939,000	11,039,000	883,000	653,000			13,514,000
Support Building Improvements	8,074,408	11,325,000	1,350,000	689,000	795,000		360,000	14,519,000
Tunnel Rehabilitation	2,317,309							
Urgent and Unscheduled Treatment Plant Rehabilitation	2,500,000	500,000	500,000	500,000	500,000	500,000		2,500,000
Various Infrastructure Decommissioning	469,000			2,590,000	691,000	18,470,000		21,751,000
Yard Piping and Road Improvements	5,787,389	18,452,000	21,947,000	20,249,000	21,433,000			96,043,000
Site Facility Maintenance and Improvements	30,832,952	36,787,000	44,329,000	37,409,000	46,405,000	19,074,000		184,004,000
Water Pollution Control - Construction	333,715,500	309,087,000	179,448,000	144,435,000	185,928,000	28,031,000		847,929,000
Debt Service Repayment for Plant Capital Improvement Projects	3,828,000	2,138,000	4,083,000	304,926,000	27,502,000			363,922,000
Owner Controlled Insurance Program	7,771,000		3,705,000	3,705,000	1,399,000			10,073,000
Master Plan Updates	3,000,000							
Preliminary Engineering - Water Pollution Control	2,026,614	1,000,000	1,000,000	1,000,000	1,000,000		1,000,000	5,000,000
Program Management - Water Pollution Control	13,039,297	8,122,000	11,738,000	11,712,000	9,794,000		7,426,000	48,792,000

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San José-Santa Clara Treatment Plant Capital Fund (512)

2020-2024 Proposed Capital Improvement Program

Use of Funds (Combined)

Record Drawings

3,675,000

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San José-Santa Clara Treatment Plant Capital Fund (512)

2020-2024 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5-Year Total
General Non-Construction - Water Pollution Control	33,339,911	11,260,000	20,526,000	20,526,000	321,343,000	37,466,000	37,192,000	427,787,000
Water Pollution Control - Non Construction	33,339,911	11,260,000	20,526,000	20,526,000	321,343,000	37,466,000	37,192,000	427,787,000
Public Art Allocation	443,000							
Public Art Projects	443,000							
Capital Program and Public Works Department Support Service Costs	629,000	1,887,000		1,887,000	628,000	943,000	943,000	6,288,000
State Revolving Fund Loan Repayment	1,804,000							
Payment for Clean Water Financing Authority Trustee	5,000	5,000		5,000	5,000			15,000
Allocations	2,438,000	1,892,000	1,892,000	1,892,000	633,000	943,000	943,000	6,303,000
Transfer to the South Bay Water Recycling Capital Fund	3,691,000							
Transfers to Capital Funds	3,691,000							
City Hall Debt Service Fund	196,000	112,000		113,000				564,000
Clean Water Financing Authority Debt Service Payment Fund	5,524,000	5,527,000		5,526,000		113,000		11,053,000
Transfers to Special Funds	5,720,000	5,639,000	5,639,000	5,639,000	113,000	113,000	113,000	11,617,000
Equipment Replacement Reserve	9,411,000	5,639,000	5,639,000	5,639,000	113,000	113,000	113,000	11,617,000
Expense Reserves - Non Construction		5,000,000	5,000,000					5,000,000
		5,000,000	5,000,000					5,000,000
Total Expenditures	379,347,411	332,878,000	207,505,000	207,505,000	466,524,000	224,450,000	67,279,000	1,298,636,000
Ending Fund Balance	3,510,152	2,888,152	8,474,152	27,572,152	2,871,152	11,518,152	11,518,152	11,518,152
TOTAL	382,857,563	335,766,152	215,979,152	215,979,152	494,096,152	227,321,152	78,797,152	1,310,154,152

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program
Detail of One-Time Construction Projects

Digested Sludge Dewatering Facility

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Department	Environmental Services	Revised Start Date	3rd Qtr. 2014
Location	Water Pollution Control Plant	Revised End Date	4th Qtr. 2023
Council Districts	4	Initial Project Budget	\$1,000,000
Appropriation	A7452	FY Initiated	2012-2013

Description This project will construct a new mechanical dewatering facility and support systems to replace the existing sludge storage lagoons and open air solar drying beds. All new mechanical dewatering units, feed tank, storage, conveyance, and chemical dosing facilities will be housed in an odor-controlled building.

Justification This project responds to a recommendation in the adopted Plant Master Plan to consolidate the Plant's operational area by reducing the biosolids process footprint. It also provides greater flexibility in biosolids disposal options in anticipation of the potential Newby Island landfill closure in 2025, responds to stricter regulations for landfilling and alternative daily cover, and addresses odor, noise, and aesthetics concerns from the operations of the lagoons and sludge drying beds.

Notes This project corresponds to Plant Master Plan Project Nos. 44, 54, 57-60 and Validation Project PS-03.

Major Cost Changes 2014-2018 CIP - increase of \$325.0 million due to accelerated project start and compressed implementation schedule. 2015-2019 CIP - decrease of \$256.8 million due to creation of separate biosolids projects through project validation. 2016-2020 CIP - increase of \$1.6 million due to escalation of construction costs. 2017-2021 CIP - increase of \$28.1 million due to increased scope and revised cost estimate. 2019-2023 CIP - increase of \$18.3 million due to an updated construction cost estimate. 2020-2024 CIP - increase of \$11.8 million due to an increase in scope and updated construction cost estimate.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	4,691	1,245								5,935
Design	10	10,479	1,986	518				2,504		12,993
Bid & Award	181	1,588								1,770
Construction			16	105,097	2,174	794		108,081		108,081
Post Construction						324		324		324
Total	4,882	13,312	2,002	105,615	2,174	1,118		110,909		129,103

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	4,882	13,312	2,002	105,615	2,174	1,118		110,909		129,103
Total	4,882	13,312	2,002	105,615	2,174	1,118		110,909		129,103

Annual Operating Budget Impact (000s)			
Operating		7,791	12,019
Maintenance		150	232
Total		7,941	12,251

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program
Detail of One-Time Construction Projects

Digester and Thickener Facilities Upgrade

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2006
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2008
Department	Environmental Services	Revised Start Date	
Location	Water Pollution Control Plant	Revised End Date	1st Qtr. 2022
Council Districts	4	Initial Project Budget	\$1,000,000
Appropriation	A4127	FY Initiated	2006-2007

Description This project rehabilitates four digesters and modifies the system to operate as a two-phase Temperature Phased Anaerobic Digestion (TPAD) system. The project also rehabilitates and modifies six dissolved air flotation units for sludge co-thickening, pressure saturation tanks, pipes, pumps, and ancillary equipment. A new odor control system, primary sludge screening facility, heat exchangers, biogas flare, and polymer dosing facility will be constructed. A new rack mounted digester gas conveyance system will also be constructed above grade to replace existing piping in the digester tunnels.

Justification The Plant has 16 anaerobic digesters constructed between 1956 and 1983, of which six are permanently out of service. This project is needed to ensure safe and reliable operation of the digester facilities including the gas conveyance system. The upgrade to TPAD provides the facility with the ability to increase biogas production and produce Class A biosolids (if required by future regulations).

Notes This project corresponds to Plant Master Plan Project Nos. 45 - 53 and Validation Project PS-01. Prior to 2015-2019, this project was titled "Digester Rehabilitation".

Major Cost Changes 2008-2012 CIP through 2019-2023 CIP - increase of \$168.3 million due to increased scope, realignment of project, higher than projected construction costs, inclusion of scope from other projects, and unforeseen conditions during construction, including air board regulatory requirements, major utility relocations, and a 78" SES line. 2020-2024 CIP - increase of \$31.5 million due to unforeseen conditions and increased construction management costs.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	707	1								708
Design	14,888	2,934								17,822
Bid & Award	115									115
Construction	74,265	100,074	6,182	1,222				7,404		181,743
Post Construction				653				653		653
Total	89,975	103,009	6,182	1,875				8,057		201,041

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	89,975	103,009	6,182	1,875				8,057		201,041
Total	89,975	103,009	6,182	1,875				8,057		201,041

Annual Operating Budget Impact (000s)						
Operating			1,012	1,798	1,865	1,934
Maintenance			182	324	337	351
Total			1,194	2,122	2,202	2,285

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Water Pollution Capital Program

2020-2024 Proposed Capital Improvement Program

Detail of One-Time Construction Projects

Energy Generation Improvements

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Department	Environmental Services	Revised Start Date	1st Qtr. 2012
Location	Water Pollution Control Plant	Revised End Date	3rd Qtr. 2021
Council Districts	4	Initial Project Budget	\$1,300,000
Appropriation	A7454	FY Initiated	2012-2013

Description This project will install new, lower-emission engine-generators to replace the aged existing engine-generators and allow the aged engine-driven blowers to be retired. It includes a new generator building, gas cleaning and blending systems, piping, control system, and motor control centers. This project will also install emergency diesel generators and storage tanks to provide backup power in the event of an extended PG&E power outage.

Justification Energy generation capacity and operational reliability are significant issues at the Plant. The outdated engine-generators are increasingly difficult to maintain. Moreover, while the existing systems meet current air regulations, they will not meet the stricter regulations anticipated in the future. Replacing these facilities with new lower-emission engine-generators will reduce the risk of operational failure and permit violations while providing reliable energy generating facilities to power the Plant for decades.

Notes This project corresponds to Plant Master Plan Nos. 74, 75, and 76 and Validation Projects PE-01 and PE-02. Prior to 2014-2018, this project was titled "Combined Heat and Power Technology Evaluation".

Major Cost Changes 2014-2018 CIP - increase of \$100.0 million due to acceleration of the implementation schedule. 2015-2019 CIP - increase of \$24.5 million due to revised program validation cost estimate. 2016-2020 CIP - decrease of \$10.4 million due to reduction of project scope and revised cost estimate. 2017-2021 CIP - increase of \$4.9 million due to revised cost estimate. 2018-2022 increase of \$7.5 million due to revised construction cost estimate.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,274	31								2,306
Design	9,662	1,056								10,718
Bid & Award	1,375	93								1,468
Construction	26,855	86,781	3,335	387			3,722			117,357
Post Construction	257			350				350		607
Total	40,423	87,961	3,335	737			4,072			132,456

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	40,423	87,961	3,335	737				4,072		132,456
Total	40,423	87,961	3,335	737			4,072			132,456

Annual Operating Budget Impact (000s)							
Operating			45	46	48	49	50
Maintenance			42	43	44	46	47
Total			87	89	92	95	97

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Water Pollution Capital Program
 2020-2024 Proposed Capital Improvement Program
Detail of One-Time Construction Projects

New Headworks

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2013
Department	Environmental Services	Revised Start Date	
Location	Water Pollution Control Plant	Revised End Date	4th Qtr. 2023
Council Districts	4	Initial Project Budget	\$79,400,000
Appropriation	A7449	FY Initiated	2012-2013

Description This project will construct a new headworks to serve as the Plant's duty headworks. It also involves potentially increasing the equalization basin volume and installing lining and spraydown systems to facilitate cleaning. The project will also be tasked with odor control over select areas, such as junction boxes and grit collection. This project will need to be coordinated with the modifications made to the Headworks 2 hydraulics and the eventual decommissioning of Headworks 1.

Justification Headworks No. 1 was built in the mid-1950s and further expanded in the 1960s. Due to its age and condition, extensive structural rehabilitation and mechanical rehabilitation would be needed to operate it as the Plant's long-term duty headworks. Based on previous studies, building a new duty headworks facility would be more cost effective and provide greater operational reliability and enhanced treatment, potentially piping and hydraulic simplification, addressing some of the operational issues currently experienced at the Plant, such as the deposition of grit in downstream processes.

Notes This project corresponds to Plant Master Plan Project Nos. 1, 3, 4, 5, and 8 and Validation Project PLH-02. This project will have close-out costs only in 2022-2023.

Major Cost Changes 2015-2019 CIP - increase of \$11.8 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
 2016-2020 CIP - increase of \$4.8 million due to revised cost 2018-2022 CIP - increase of \$27.0 million due to revised project cost estimate.
 2020-2024 CIP - increase of \$19.4 million due to an updated construction cost estimate.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,447	340								3,787
Design	1	7,316	1,762					1,762		9,079
Bid & Award	1,020	618								1,638
Construction			128,308	1,498	1,383	470		131,659		131,659
Post Construction			425			101		526		526
Total	4,468	8,275	130,495	1,498	1,383	571		133,947		146,690

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	4,468	8,275	130,495	1,498	1,383	571		133,947		146,690
Total	4,468	8,275	130,495	1,498	1,383	571		133,947		146,690

Annual Operating Budget Impact (000s)										
Total										

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Water Pollution Capital Program

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2020-2024 Proposed Capital Improvement Program

Detail of One-Time Construction Projects**Support Building Improvements**

CSA	Environmental and Utility Services	Initial Start Date	1st Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	3rd Qtr. 2023
Department	Environmental Services	Revised Start Date	2nd Qtr. 2015
Location	Water Pollution Control Plant	Revised End Date	1st Qtr. 2028
Council Districts	4	Initial Project Budget	\$55,590,000
Appropriation	A7681	FY Initiated	2014-2015

Description This project constructs various tenant improvements to the administration, operations, engineering, and other support buildings located throughout the Plant. It may include floor, ceiling, wall, partition, plumbing, heating, ventilation and air conditioning upgrades, fire protection, and security improvements, as well as ancillary landscaping improvements. It also constructs new warehousing facilities and an electronic warehouse management system which may include new computers, a central database, barcode scanners, mobile tablets, and other technology improvements. This project will be constructed in phases based on a detailed tenant improvement study, warehouse design study, and priority of needs.

Justification Most of the buildings at the Plant are between 30 and 50 years old and are in need of refurbishment to improve worker health, safety, and environment. The tenant improvements are also needed to bring the buildings into compliance with current building and safety codes. The new warehousing facility and warehouse management system will improve operational efficiency through better control of the movement and storage of materials, including shipping, receiving, material stocking, use, and distribution.

Notes This project corresponds to Plant Master Plan Project Nos. 94, 95, 96, 98, 106, and 107 and Validation Project PF-02.

Major Cost Changes 2016-2020 CIP - decrease of \$856,000 due to revised cost estimate. 2018-2022 CIP - increase of \$2.2 million due to revised project delivery cost estimate.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	0									0
Project Feasibility Development	1,226	3,898							1,848	6,972
Design	42	1,610	356					356	4,193	6,201
Bid & Award	6	218	152					152	493	869
Construction		2,348	10,817	1,237	689	518		13,261	25,202	40,811
Post Construction				113		277	360	750	1,141	1,891
Equipment, Materials and Supplies	346									346
Total	1,620	8,074	11,325	1,350	689	795	360	14,519	32,877	57,090

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,620	8,074	11,325	1,350	689	795	360	14,519	32,877	57,090
Total	1,620	8,074	11,325	1,350	689	795	360	14,519	32,877	57,090

Annual Operating Budget Impact (000s)**Total**

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Water Pollution Capital Program
 2020-2024 Proposed Capital Improvement Program
Detail of Ongoing Construction Projects

Plant Infrastructure Improvements

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	Water Pollution Control Plant	Revised End Date	
Council Districts	4	Initial Project Budget	
Appropriation	A5690		

Description This allocation provides for improvements, rehabilitation, or replacement of existing Plant infrastructure. Examples of the ongoing replacement and rehabilitation work include handrail replacement, concrete repairs, telecommunication systems upgrade, and Plant support system improvements.

Justification Many mechanical, electrical, and structural assets at the Plant are in poor condition due to age and wear. Rehabilitation, improvements, and replacement of capital infrastructure are necessary to maintain process viability and to ensure regulatory compliance, structural integrity, reliability, functionality, and safety of Plant buildings and process facilities.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	2,349	1,000	1,000	1,000	1,000	1,000	5,000
Total	2,349	1,000	1,000	1,000	1,000	1,000	5,000

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	2,349	1,000	1,000	1,000	1,000	1,000	5,000
Total	2,349	1,000	1,000	1,000	1,000	1,000	5,000

Annual Operating Budget Impact (000s)							
Total							

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Water Pollution Capital Program
 2020-2024 Proposed Capital Improvement Program
Detail of Ongoing Construction Projects

Urgent and Unscheduled Treatment Plant Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	Water Pollution Control Plant	Revised End Date	
Council Districts	4	Initial Project Budget	
Appropriation	A7395		

Description This ongoing allocation is used to investigate, prioritize, and rehabilitate structures and systems at the Water Pollution Control Plant. This funding will be used to respond to the Plant's urgent maintenance and rehabilitation needs that cannot be programmed during the annual CIP budget process.

Justification This allocation is required due to the deterioration of structures and systems at the Plant.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	2,500	500	500	500	500	500	2,500
Total	2,500	500	500	500	500	500	2,500

	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	2,500	500	500	500	500	500	2,500
Total	2,500	500	500	500	500	500	2,500

	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL
Annual Operating Budget Impact (000s)							
Total							

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Summary of Projects that Start After 2019-2020

Project Name	Additional Digester Upgrades	Initial Start Date	3rd Qtr. 2021
5-Yr CIP Budget	\$ 10,520,000	Initial End Date	2nd Qtr. 2028
Total Budget	\$ 64,475,000	Revised Start Date	
Council Districts	4	Revised End Date	
Description	This project will rehabilitate up to six existing anaerobic digesters, including installation of new covers and mixers, upgrades the existing sludge distribution piping, and upgrades the digester heat supply system. The project may also include the installation of batch tanks to produce Class A biosolids (if required by future regulations).		

Project Name	Secondary Clarifier Rehabilitation	Initial Start Date	3rd Qtr. 2022
5-Yr CIP Budget	\$ 2,833,000	Initial End Date	4th Qtr. 2028
Total Budget	\$ 26,455,000	Revised Start Date	
Council Districts	4	Revised End Date	
Description	The Plant has 26 secondary clarifiers configured with peripheral mix liquor feed channel, and either central or peripheral launders. The first phase of this project rehabilitates one secondary (BNR1) clarifier and retrofits it to receive a new baffle configuration based on computational fluid dynamic (CFD) modeling results. The new configuration is expected to improve clarifier performance and efficiency. The subsequent phases of the project will rehabilitate and convert the remaining 25 clarifiers based on the results of the first phase. Rehabilitation will include structural, mechanical, electrical, and instrumentation improvements.		

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Detail of One-Time Non-Construction Projects

Debt Service Repayment for Plant Capital Improvement Projects

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A402C

Description This allocation provides for the repayment of financing proceeds, including short-term wastewater revenue notes and long-term bonds, drawn for the Plant Capital Improvement Projects.

Notes The use of Wastewater Revenue Notes for funding began in October 2017.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	845	3,828	2,138	4,083	304,926	25,273	27,502	363,922	137,510	506,105
Total	845	3,828	2,138	4,083	304,926	25,273	27,502	363,922	137,510	506,105

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	845	3,828	2,138	4,083	304,926	25,273	27,502	363,922	137,510	506,105
Total	845	3,828	2,138	4,083	304,926	25,273	27,502	363,922	137,510	506,105

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Water Pollution Capital Program
 2020-2024 Proposed Capital Improvement Program
Detail of One-Time Non-Construction Projects

Owner Controlled Insurance Program

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A401B

Description This allocation provides funding for a centrally managed insurance and risk control program for construction projects in the Water Pollution Control CIP.

Notes

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	2,831									2,831
Construction	273	7,771		3,705	3,705	1,399	1,264	10,073		18,117
Total	3,104	7,771		3,705	3,705	1,399	1,264	10,073		20,948

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,104	7,771		3,705	3,705	1,399	1,264	10,073		20,948
Total	3,104	7,771		3,705	3,705	1,399	1,264	10,073		20,948

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Detail of One-Time Non-Construction Projects

Payment for Clean Water Financing Authority Trustee

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A6584

Description This allocation provides for administrative costs of the San José/Santa Clara Clean Water Financing Authority related to bond issuances.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	437	5	5	5	5			15		457
Bid & Award	15									15
Total	452	5	5	5	5			15		472

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	452	5	5	5	5			15		472
Total	452	5	5	5	5			15		472

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Water Pollution Capital Program
 2020-2024 Proposed Capital Improvement Program
Detail of One-Time Non-Construction Projects

Record Drawings

CSA Environmental and Utility Services
 CSA Outcome Reliable Utility Infrastructure
 Department Environmental Services
 Council Districts 4
 Appropriation A7683

Description This project develops a document management system and standards for electronically capturing, indexing, storing, retrieving, distributing, and versioning master drawings, specifications, and other final design documents. It also involves inventorying, developing, updating, and integrating existing records and field drawings.

Notes This project corresponds to Plant Master Plan Project No. 114 and Validation Project PF-05. Funding in 2017-2018 was for consultant services and some staff costs; the remaining years fund staff costs necessary to complete the project.

	PRIOR YEARS	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		321								321
Design		3,354							10,527	13,881
Post Construction									62	62
Total		3,675							10,589	14,264

Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)		3,675							10,589	14,264
Total		3,675							10,589	14,264

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Detail of Ongoing Non-Construction Projects

Program Management - Water Pollution Control

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7481

Description This allocation funds the administration and management of the Water Pollution Control CIP.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	FY19 EST	FY20	FY21	FY22	FY23	FY24	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	12,908	8,122	11,738	11,712	9,794	7,426	48,792
Project Feasibility Development	0						
Construction	132						
Total	13,039	8,122	11,738	11,712	9,794	7,426	48,792

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	13,039	8,122	11,738	11,712	9,794	7,426	48,792
Total	13,039	8,122	11,738	11,712	9,794	7,426	48,792

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Summary of Reserves

Project Name	Equipment Replacement Reserve	Initial Start Date	N/A
5-Yr CIP Budget	\$ 5,000,000	Initial End Date	N/A
Total Budget	\$ 5,000,000	Revised Start Date	
Council Districts	4	Revised End Date	
Description	This reserve provides for unforeseen replacement and rehabilitation of equipment that, due to age, wear, or obsolescence, must be replaced for the efficient operation of the Plant.		

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program
Attachment A - Operating Budget Impact

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	<u>2020-2021</u>	<u>2021-2022</u>	<u>2022-2023</u>	<u>2023-2024</u>
Water Pollution Capital Program				
Digested Sludge Dewatering Facility			\$7,941,000	\$12,251,000
Digester and Thickener Facilities Upgrade	\$1,194,000	\$2,122,000	\$2,202,000	\$2,285,000
Energy Generation Improvements	\$89,000	\$92,000	\$95,000	\$97,000
Total Water Pollution Capital Program	\$1,283,000	\$2,214,000	\$10,238,000	\$14,633,000

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Water Pollution Capital Program
2020-2024 Proposed Capital Improvement Program

Summary of Projects with Close-Out Costs Only in 2019-2020

Project Name	State Revolving Fund Loan Repayment	Initial Start Date	3rd Qtr. 1998
5-Yr CIP Budget	\$	Initial End Date	2nd Qtr. 2019
Total Budget	\$ 82,721,272	Revised Start Date	Ongoing
Council Districts	N/A	Revised End Date	Ongoing
Description	This allocation provides for the repayment of low interest State loans awarded for South Bay Water Recycling projects.		

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CIP AGENCY ALLOCATIONS-TEN YEAR FORECAST

	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	5-Year Total	10-Year Total
Santa Clara												
WPCP Projects	50,017,057	32,000,981	25,421,287	31,680,071	6,098,739	15,751,414	6,139,369	1,903,898	5,098,825	15,084,910	145,158,135	189,117,881
Equipment Replacement	0	0	229,976	229,976	229,976	229,976	229,976	229,976	229,976	229,976	919,904	2,069,784
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	0	0	0	0	0	0	0	0	0	0	0	0
Total	50,017,057	32,230,957	25,651,287	31,910,047	6,268,715	15,981,390	6,369,375	2,133,874	5,328,801	15,294,886	145,078,039	191,187,365
West Valley												
WPCP Projects	21,328,977	11,714,111	10,337,287	12,353,410	2,457,145	5,570,941	2,510,551	763,265	2,117,481	6,056,996	58,150,528	75,210,163
Equipment Replacement	0	144,565	144,565	144,565	144,565	144,565	144,565	144,565	144,565	144,565	578,260	1,301,085
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	0	0	0	0	0	0	0	0	0	0	0	0
Total	21,328,977	11,858,676	10,481,852	12,497,975	2,601,710	5,716,506	2,655,116	907,830	2,262,046	6,201,561	58,755,189	76,511,248
Cupertino												
WPCP Projects	14,065,408	7,913,318	6,725,310	8,024,818	1,806,302	3,418,974	1,650,923	499,025	1,336,482	3,595,369	37,735,155	48,696,938
Equipment Replacement	0	85,262	85,262	85,262	85,262	85,262	85,262	85,262	85,262	85,262	341,048	787,358
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	0	0	0	0	0	0	0	0	0	0	0	0
Total	14,065,408	7,998,580	6,810,572	8,110,080	1,891,564	3,504,236	1,736,185	584,287	1,421,744	4,081,631	38,076,203	49,484,296
Milpitas												
WPCP Projects	25,147,049	12,382,923	11,755,310	13,781,539	2,813,214	5,752,821	2,881,472	864,425	2,462,007	6,395,034	65,889,055	84,737,854
Equipment Replacement	0	98,882	98,882	98,882	98,882	98,882	98,882	98,882	98,882	98,882	395,528	885,938
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	43,001	42,994	42,994	42,994	42,994	42,994	42,994	42,994	42,994	42,994	171,986	367,926
Total	25,190,050	12,524,799	11,892,192	13,980,481	2,912,086	5,851,703	2,980,354	983,307	2,550,889	6,997,916	66,369,617	85,713,785
CSD 2/3												
WPCP Projects	1,780,962	907,374	839,066	995,492	200,265	423,822	205,668	62,057	174,199	486,708	4,704,159	5,066,513
Equipment Replacement	0	15,965	15,965	15,965	15,965	15,965	15,965	15,965	15,965	15,965	63,850	143,685
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	96,005	95,980	95,980	95,980	95,980	95,980	95,980	95,980	95,980	95,980	387,929	812,928
Total	1,876,967	1,019,329	935,031	1,012,457	216,230	439,787	221,533	78,022	190,164	512,673	4,860,015	5,983,126
Burbank												
WPCP Projects	729,223	396,795	354,905	460,684	87,402	178,674	91,799	27,984	76,776	294,535	2,018,908	2,628,777
Equipment Replacement	0	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	18,482	41,607
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
CWFA Debt Service Payment	15,863	15,860	15,860	15,860	15,860	15,860	15,860	15,860	15,860	15,860	63,850	143,685
Total	745,086	407,278	385,428	481,167	92,025	188,227	96,422	32,607	81,399	299,258	2,085,123	2,702,107
San Jose												
WPCP Projects	205,398,828	131,414,499	104,330,936	130,093,926	24,787,933	64,684,354	25,211,287	7,818,346	20,942,230	51,882,348	596,086,619	778,905,174
Equipment Replacement	0	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	4,334,908	9,753,549
SRF Loan Annual Repayment	0	0	0	0	0	0	0	0	0	0	0	0
City Hall Debt Service	112,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	554,000	1,129,000
New Debt Service 2017-18	2,196,000	4,083,000	304,926,000	25,273,000	27,502,000	27,502,000	27,502,000	27,502,000	27,502,000	27,502,000	363,922,000	501,432,000
CWFA Debt Service Payment	5,872,218	5,371,356	5,371,356	5,371,356	5,371,356	5,371,356	5,371,356	5,371,356	5,371,356	5,371,356	21,513,574	47,743,574
Total	213,011,544	142,085,581	410,513,669	156,683,663	53,383,081	93,383,680	53,910,014	35,517,073	49,840,947	90,561,075	975,651,101	1,298,683,291

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CIP AGENCY ALLOCATIONS-TEN YEAR FORECAST

	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	5-Year Total	10-Year Total
TOTAL												
WPCP Projects	318,438,000	196,120,000	159,822,000	197,401,000	38,001,000	95,781,000	98,691,000	11,839,000	32,259,000	94,611,000	909,782,000	1,183,063,000
Equipment Replacement	0	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	6,652,000	14,967,000
SRF Loan Annual Repmt	0	0	0	0	0	0	0	0	0	0	0	0
City Hall Debt Service	112,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	113,000	584,000	1,129,000
New Debt Service 2017-18	2,138,000	4,063,000	304,926,000	25,273,000	27,502,000	27,502,000	27,502,000	27,502,000	27,502,000	27,502,000	963,922,000	961,432,000
CWFA Debt Service Repayment	5,527,000	5,526,000	0	0	0	0	0	0	0	0	11,053,000	11,053,000
	328,215,000	207,505,000	486,524,000	224,450,000	67,279,000	125,059,000	67,866,000	41,217,000	61,537,000	123,869,000	1,291,873,000	1,711,644,000