

San Francisco Public Utilities Commission

Two-Year Capital Budget FY 2018-19 & FY 2019-20

10-Year Capital Plan FY 2019-2028

Capital Planning Committee
March 5, 2018



San Francisco
**Water
Power
Sewer**



Two-Year Capital Budget Development

- 💧 Capital budget was developed as part of an update to the 10-year Capital and Financial Plans.
- 💧 Process includes a comprehensive review of infrastructure needs, taking into account existing project balances, and re-prioritizing existing project balances if necessary.
- 💧 3 public hearings with the Commission. Capital Budget and Capital Plan update approved by Commission February 13, 2018.



Two-Year Capital Budget Highlights

- 💧 Water – WSIP over 95% complete. Continued ramp-up of local conveyance program to meet the Commission LOS goal – 15 miles replacement per year and Regional Water Transmission Pipeline Program.
- 💧 Wastewater – Sewer System Improvement Program
 - 💧 Phase 1 (19% complete) increase of \$68M
 - 💧 Phase 2 and 3 planning & design funding
 - 💧 Non-SSIP
 - 💧 Local collection system goal of 15 miles replacement per year
 - 💧 Green Infrastructure and other priorities included
- 💧 Hetchy – Improvement to Water/Power/Joint Infrastructure. Redevelopment, and Transmission and Distribution projects to increase Power Enterprise customer base.



Two-Year Capital Budget Summaries

Enterprise (Millions)	FY 2018-2019	FY 2019-2020	Total
Water	\$ 264.3	\$ 187.7	\$ 452.1
Wastewater	632.4	461.9	1,094.2
Hetch Hetchy	126.8	177.3	304.1
SFPUC Total	\$ 1,023.5	\$ 826.9	\$ 1,850.4



Two-Year Financing Authorization Summaries

Enterprise (Millions)	FY 2018-2019		FY 2019-2020		Total
Water					
Water Bonds	\$	194.8	\$	134.4	\$ 329.2
Hetchy Water Bonds		29.0		60.4	89.4
Financing Costs		32.0		27.8	59.8
Total		255.8		222.7	478.4
Wastewater					
Wastewater Bonds		519.6		344.4	864.0
Financing Costs		74.2		49.2	123.4
Total		593.8		393.6	987.4
Hetch Hetchy Power					
Hetchy Power Bonds		54.3		77.3	131.7
Financing Costs		9.6		13.6	23.2
Total		63.9		91.0	154.9
SFPUC Total	\$	913.6	\$	707.2	\$ 1,620.8



Water Enterprise 10-Year Capital Plan Summary

Program / Project (Millions)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 - 2028	Capital Plan 2018-2027	Capital Plan 2019-2028
<u>SPENDING PLAN</u>								
Regional Costs								
Water Treatment Program	15.3	14.5	105.5	2.0	1.9	10.0	22.6	149.3
Water Transmission Program	40.0	45.1	42.3	11.6	12.4	160.2	230.1	311.6
Water Supply & Storage Program	15.4	7.1	20.0	44.6	41.5	87.7	248.6	216.3
Watersheds & Land Management	11.1	12.5	5.1	4.9	4.5	14.9	4.9	53.0
Communication & Monitoring Program	1.0	0.5	0.5	0.5	0.5	3.6	6.0	6.5
Buildings And Grounds Programs	35.6	33.5	8.1	2.7	2.7	11.6	18.8	94.3
WSIP Augmentation - Regional	62.0	-	-	-	-	-	47.0	62.0
Regional Subtotal	180.3	113.2	181.6	66.4	63.6	288.0	578.1	893.0
Local Costs								
Local Water Conveyance/Distribution System	56.1	56.1	57.0	58.0	59.0	314.3	561.0	600.5
Local other	28.0	18.4	32.8	24.9	37.7	1.4	67.8	143.2
Auxiliary Water Supply System	-	-	50.0	40.0	-	-	110.0	90.0
Local Subtotal	84.1	74.5	139.8	122.9	96.7	315.7	738.8	833.7
TOTAL	264.3	187.7	321.5	189.3	160.2	603.6	1,316.9	1,726.7
<u>REVENUES</u>								
Water Revenue	51.8	51.8	47.1	47.6	62.9	392.8	584.4	654.0
Water Revenue Bonds	194.8	134.4	222.8	100.2	95.8	203.0	612.5	951.1
General Obligation Bonds	-	-	50.0	40.0	-	-	110.0	90.0
Revenue Bonds - Re-appropriation	16.0	-	-	-	-	-	-	16.0
Capacity Fee	1.8	1.5	1.6	1.5	1.5	7.8	10.0	15.7
TOTAL	264.3	187.7	321.5	189.3	160.2	603.6	1,316.9	1,726.7
Total San Francisco Jobs/Year	2,207	1,567	2,684	1,581	1,338	5,040	10,996	14,418
<i>Surplus/(Shortfall)</i>	-	-	-	-	-	-	-	-



Water Enterprise Two-Year Capital Budget Summary

Program/Project (Millions)	FY 2017-18 Approved	FY 2018-19 <i>Two - Year Request</i>	FY 2019-20
<u>Uses</u>			
Regional Costs			
Water Treatment Program	\$ 3.9	\$ 15.3	\$ 14.5
Water Transmission Program	21.6	40.0	45.1
Water Supply & Storage Program	6.9	15.4	7.1
Watersheds & Land Management	2.0	11.1	12.5
Communication & Monitoring Program	1.0	1.0	0.5
Buildings & Grounds Programs	6.2	35.6	33.5
WSIP Augmentation - Regional	27.0	62.0	-
Regional Subtotal	68.6	180.3	113.2
Local Costs			
Water Conveyance /Distribution System	57.1	56.1	56.1
Local other	10.0	28.0	18.4
Local Subtotal	67.1	84.1	74.5
Regional & Local Costs	135.7	264.3	187.7
Financing Cost	13.6	27.8	19.2
Total Regional & Local	\$ 149.3	\$ 292.2	\$ 206.9
<u>Sources</u>			
Water Revenue	\$ 27.8	\$ 51.8	\$ 51.8
Water Revenue Bonds	93.5	222.7	153.6
Revenue Bonds - Re-appropriation	27.0	16.0	-
Capacity Fee	1.0	1.8	1.5
Total	\$ 149.3	\$ 292.2	\$ 206.9
Surplus/(Shortfall)	-	-	-



Water Enterprise Two-Year Capital Budget: Managing Regional Assets

- Water Transmission pipeline improvement program:
 - Crystal Springs Pipeline No. 2 in Hillsborough-\$28.9M
 - San Andreas Pipeline No. 2 \$23.1M
- Improvements at Sunol Valley Water Treatment Plant for managing taste and odor issues and disinfection byproducts:
 - Powdered Activated Carbon-\$5.0M
 - Ozone-\$12.0M (\$120M in FY21)





Water Enterprise Two-Year Capital Budget: Managing Regional Assets

- Pump station improvements-\$4.9M
- Dam improvements:
 - Monitoring, Instrumentation, and Emergency Action Plans - \$6.1M
 - San Andreas-\$5.4M
 - Turner Dam-\$1.0M



Water Enterprise Two-Year Capital Budget: Managing Regional Assets

- New and improved facilities:
 - Alameda Creek Watershed Center-\$34.0M
 - Replacement WST Millbrae Yard shop-\$29.7M
 - Ongoing maintenance/improvements at Rollins Road facility in Burlingame-\$1.6M



Water Enterprise Two-Year Capital Budget: Managing Local Assets

- In-City projects:
 - Main replacement-\$112.2M
 - Sunset Pipeline (Potable AWSS)-\$12.0M (FY21-FY23 \$32.8M)
 - New Service Connection Process Improvements-\$2.4M





Wastewater Enterprise 10-Year Capital Plan Summary

Program / Project (Millions)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 - 2028	Capital Plan 2018-2027	Capital Plan 2019-2028
<u>SPENDING PLAN</u>								
Sewer System Improvement Program								
Program Wide Management	\$ 16.5	\$ 16.6	\$ 16.5	\$ 16.5	\$ 12.5	\$ 59.6	\$ 130.5	\$ 138.2
Land Reuse	0.5	-	-	-	-	-	-	0.5
Treatment Facilities	341.2	169.1	365.1	346.5	291.9	388.8	2,487.3	1,902.5
Sewer/Collection System	29.5	69.3	323.1	395.7	293.4	150.0	1,229.5	1,261.0
Stormwater Management/Flood Control	45.4	40.5	187.6	47.9	98.8	284.7	492.9	704.8
SSIP Subtotal	433.0	295.4	892.3	806.5	696.6	883.1	4,340.2	4,007.0
Renewal & Replacement								
Collection System - Salt Water Intrusion	1.2	1.2	1.3	1.3	1.4	4.3	13.3	10.7
Collection System - Sewer Improvements	62.3	64.8	67.4	70.1	73.6	426.9	729.3	765.0
Collection System - Condition Assessment	3.4	3.6	3.7	3.8	3.9	21.9	6.8	40.4
Collection System - Spot Sewer	22.8	23.8	24.7	14.3	15.0	87.0	189.5	187.6
Treatment Plant Improvements	23.0	24.2	25.4	26.6	28.0	162.2	180.7	289.3
Renewal & Replacement Subtotal	112.8	117.5	122.4	116.1	121.8	702.4	1,119.7	1,293.0
Treasure Island	6.4	24.0	13.0	-	-	-	63.8	43.3
Wastewater Facilities & Infrastructure								
Ocean Beach Protection	8.1	5.4	3.0	95.6	4.3	-	14.0	116.4
Southeast Community Center Improvemen	66.0	3.5	3.5	-	-	-	70.0	73.0
SWOO Condition Assessment	-	-	0.9	1.0	11.0	17.0	-	29.8
Southeast Outfall Assessment & Rehab	1.1	1.1	11.1	1.2	1.2	18.1	-	33.8
Islais Creek Outfall	5.0	15.0	-	-	-	-	10.0	20.0
WWE Facilities & Infrastructure Subtotal	80.2	25.0	18.5	97.7	16.5	35.0	94.0	273.0
TOTAL	\$ 632.4	\$ 461.9	\$ 1,046.2	\$ 1,020.3	\$ 834.9	\$ 1,620.5	\$ 5,617.7	\$ 5,616.2
<u>REVENUES</u>								
Revenue	\$ 106.8	\$ 113.0	\$ 117.9	\$ 111.6	\$ 117.3	\$ 679.9	\$ 905.4	\$ 1,246.5
Revenue Bonds	519.6	344.4	923.8	904.2	713.1	918.1	4,687.3	4,323.3
Capacity Fees	6.0	4.5	4.5	4.5	4.5	22.5	25.0	46.5
TOTAL	\$ 632.4	\$ 461.9	\$ 1,046.2	\$ 1,020.3	\$ 834.9	\$ 1,620.5	\$ 5,617.7	\$ 5,616.2
Total San Francisco Jobs/Year	5,280	3,856	8,736	8,520	6,972	13,531	46,908	46,896
Surplus/(Shortfall)	-	-	-	-	-	-	-	-



Wastewater Enterprise Two-Year Capital Budget Summary

Program/Project (Millions)	FY 2017-18 Approved	FY 2018-19 Two - Year Request	FY 2019-20
<u>Uses</u>			
Sewer System Improvement Program			
Program Wide Efforts	\$ 6.0	\$ 16.5	\$ 16.6
Land Reuse	-	0.5	-
Treatment Facilities	573.0	341.2	169.1
Sewer/Collection System	70.3	29.5	69.3
Stormwater Management/Flood Control	21.2	45.4	40.5
SSIP Total	670.6	433.0	295.4
Renewal and Replacement			
Collection System	86.3	89.8	93.3
Treatment Plant Improvements	14.4	23.0	24.2
R & R Total	100.7	112.8	117.5
Treasure Island	20.5	6.4	24.0
Wastewater Facilities & Infrastructure			
Ocean Beach Protection	4.0	8.1	5.4
Southeast Community Center Improvements	5.0	66.0	3.5
Southeast Outfall Assessment & Rehab	-	1.1	1.1
Islais Creek Outfall	10.0	5.0	15.0
Facilities & Infrastructure Total	19.0	80.2	25.0
SSIP, R&R, & Facilities & Infrastructure Costs	810.8	632.4	461.9
Financing Cost	91.6	74.2	49.2
Total SSIP, R&R, Facilities & Infrastructure, & Financing	\$ 902.4	\$ 706.6	\$ 511.1
<u>Sources</u>			
Revenue	\$ 45.0	\$ 106.8	\$ 113.0
Revenue Bonds	854.9	593.8	393.6
Capacity Fee	2.5	6.0	4.5
Total	\$ 902.4	\$ 706.6	\$ 511.1
Surplus/(Shortfall)	-	-	-

Wastewater Two-Year Capital Budget

Sewer System Improvement Program

- Phase 1
 - Overall increase of \$68 million
 - Treatment Facilities; includes \$60 million for Headworks Project
- Phases 2 and 3
 - Two-year request for planning and potential design efforts for a limited number of Phase 2 projects in FY19, and possibly construction in FY20
 - Earliest Phase 3 start anticipated in FY25 for projects at SEP



Wastewater Two-Year Capital Budget

Non-SSIP

- Renewal and Replacement
 - Collection System-continued sewer pipeline replacement program of 15 miles per year-\$176.1M
 - Treatment Plant Improvements and Upgrades-\$46.2M
- Treasure Island
 - New Treatment Facility-\$30.4M
- Wastewater Facilities and Infrastructure
 - Ocean Beach Protection of WWE conveyance facilities-\$13.6M
 - New Southeast Community Center at 1550 Evans Ave.-\$70.0M
 - Southeast Outfall Assessment and Rehab-\$2.2M
 - Islais Creek Crossing-\$20.0M





Hetch Hetchy Enterprise 10-Year Capital Plan Summary

Program / Project (Millions)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024 - 2028	Capital Plan FY2018-2027	Capital Plan FY2019-2028
<u>SPENDING PLAN</u>								
Hetchy Water								
Water Infrastructure	\$ 13.4	\$ 26.8	\$ 17.3	\$ 74.9	\$ 36.7	\$ 78.6	\$ 107.8	\$ 247.7
Power Infrastructure	17.2	11.8	57.6	26.2	4.5	24.9	61.7	142.1
Joint Projects - Water Infrastructure (45%)	15.6	33.6	32.4	30.1	32.4	89.5	331.5	233.7
Joint Projects - Power Infrastructure (55%)	19.1	41.1	39.6	36.8	39.7	109.4	405.2	285.7
Hetchy Water Subtotal	65.3	113.3	147.0	167.9	113.3	302.4	906.2	909.2
Hetchy Power								
Streetlights	6.0	6.0	5.5	5.5	4.0	20.1	42.8	47.1
Renewable/Generation	1.0	1.0	1.0	1.0	1.0	5.0	11.0	10.0
Redevelopment	13.7	9.5	10.1	9.9	7.0	22.6	22.7	72.9
Transmission/Distribution	39.8	46.5	19.6	19.6	19.6	86.3	20.0	231.3
Energy Efficiency	1.0	1.0	1.0	1.0	1.0	5.0	10.0	10.0
Hetchy Power Subtotal	61.5	64.0	37.2	37.0	32.6	138.9	106.5	371.3
TOTAL	\$ 126.8	\$ 177.3	\$ 184.3	\$ 204.9	\$ 145.9	\$ 441.3	\$ 1,012.7	\$ 1,280.5
<u>REVENUES</u>								
Revenue	\$ 42.5	\$ 38.5	\$ 26.8	\$ 26.6	\$ 22.2	\$ 85.9	\$ 183.3	\$ 242.4
Water Bonds	29.0	60.4	49.8	105.0	69.1	168.1	439.3	481.4
Power Bonds	54.3	77.3	107.2	72.9	54.1	184.0	382.0	549.9
Cap and Trade Auction Revenue	1.0	1.0	0.5	0.5	0.5	3.3	8.1	6.7
TOTAL	\$ 126.8	\$ 177.3	\$ 184.3	\$ 204.9	\$ 145.9	\$ 441.3	\$ 1,012.7	\$ 1,280.5
Total San Francisco Jobs/Year	1,059	1,480	1,539	1,711	1,218	3,685	8,456	10,692
Surplus/(Shortfall)	-	-	-	-	-	-	-	-



Hetch Hetchy Enterprise Two-Year Capital Budget Summary

Program/Project (Millions)	FY 2017-18 Approved	FY 2018-19 Requested	FY 2019-20 Requested
<i>Two - Year Request</i>			
<u>Uses</u>			
Hetchy Water			
Water Infrastructure	\$ 10.0	\$ 13.4	\$ 26.8
Power Infrastructure	15.8	17.2	11.8
Joint Projects - Water Infrastructure 45%	12.8	15.6	33.6
Joint Projects - Power Infrastructure 55%	15.6	19.1	41.1
Hetchy Water Subtotal	54.2	65.3	113.3
Hetchy Power			
Streetlights	3.5	6.0	6.0
Renewable and Generation	1.1	1.0	1.0
Redevelopment	7.1	13.7	9.5
Transmission/Distribution	20.0	39.8	46.5
Energy Efficiency	1.0	1.0	1.0
Hetchy Power Subtotal	32.7	61.5	64.0
Hetchy Water & Hetchy Power Costs	86.9	126.8	177.3
Financing Cost			
Hetchy Water	2.7	4.1	8.6
Hetchy Power	3.5	9.6	13.6
Total Financing Costs	6.2	13.7	22.3
Total Hetchy Water/Power & Financing Costs	\$ 93.1	\$ 140.5	\$ 199.6
<u>Sources</u>			
Revenue	\$ 33.0	\$ 42.5	\$ 38.5
Water Bonds	25.5	33.1	69.1
Power Bonds	32.5	63.9	91.0
Cap and Trade Auction Revenue	2.1	1.0	1.0
Total	\$ 93.1	\$ 140.5	\$ 199.6
Surplus/(Shortfall)	-	-	-

Hetchy Water Two-Year Capital Budget

- Water Infrastructure
 - SJPL Valve and Safe Entry Improvement-\$6.3M
 - Priest-Moccasin Water Transmission Line-\$5.6M
 - Moccasin Res. Perimeter Security Fence-\$5.1M
- Power Infrastructure
 - Moccasin Powerhouse and GSU Rehab-\$16.8M (\$50M in FY21)
 - Transmission Lines-\$4.3M
- Joint Infrastructure
 - Mountain Tunnel-\$61.1M
 - Dams and Reservoirs-\$25.1M
 - Bridge Replacement-\$11.9M



Hetchy Power Two-Year Capital Budget

- On-going
 - Streetlights-\$12.1M
 - Energy Efficiency & Renewable Projects-\$4.0M
- Significant Additions:
 - Redevelopment-\$23.2M
 - Transmission & Distribution-\$86.5M
 - SFO Substation-\$10.7M
 - Intervening Facilities-\$20.0M
 - Bay Corridor T&D-\$41.0M
 - Distribution Interface (New Customers)-\$14.8M





San Francisco
**Water
Power
Sewer**

Thank You

