



# San Francisco Public Utilities Commission

Fiscal Year 2017 – 18 through 2026 – 27

10-Year Capital Plan

CPC Presentation

February 6<sup>th</sup> 2017



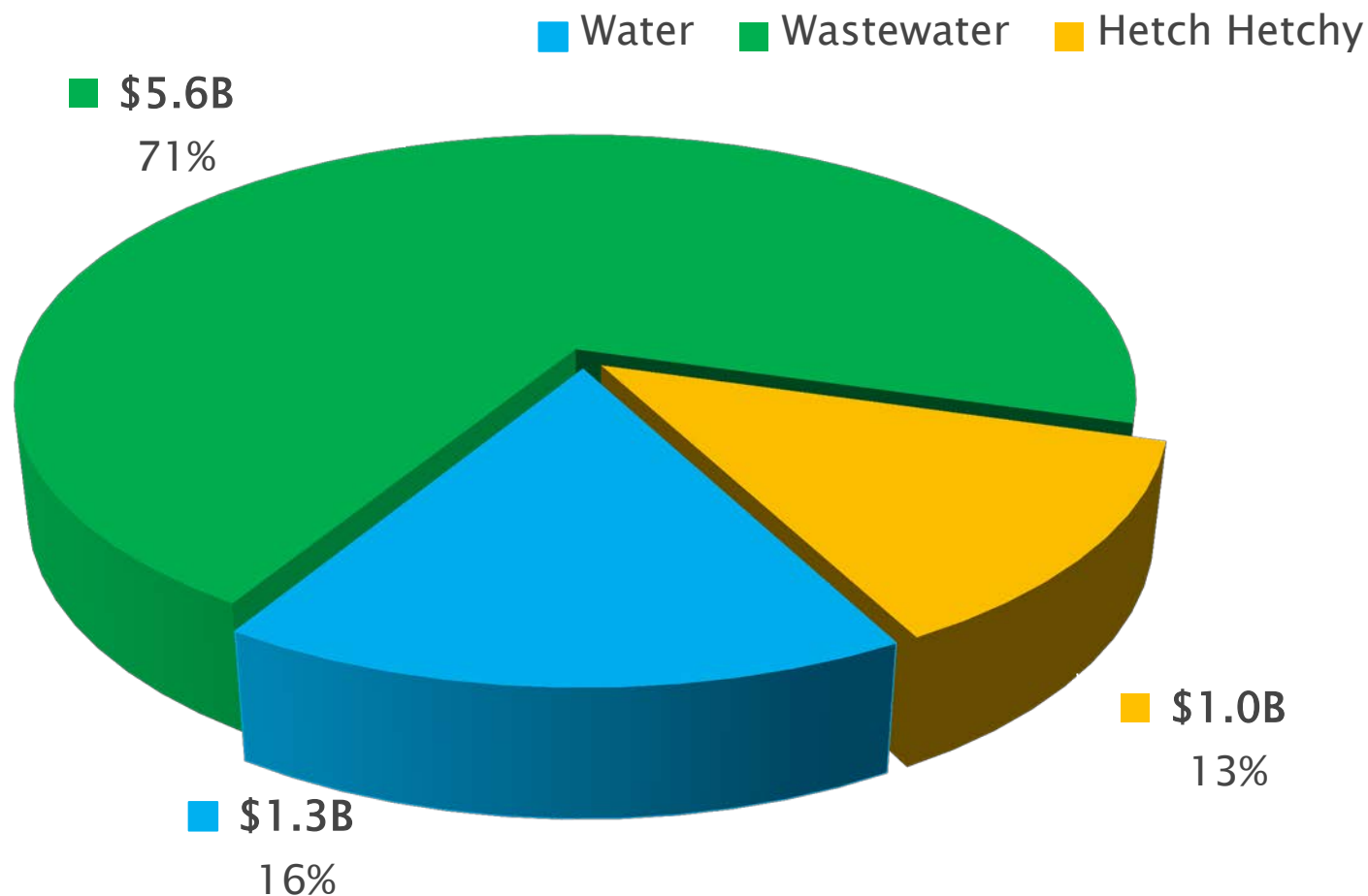
# 10–Year Capital Plan Development

- ▶ 10–Year plan approved as part of 2–year budget process and update to the financial plans
- ▶ Regional Water—Emphasis on preserving water supply including potable reuse and recycled water projects
- ▶ Local Water—Continued ramp–up of local conveyance program to meet Commission LOS goal—15 miles replacement per year
- ▶ Sewer System Improvement Program—Review of existing appropriations and develop March 2016 Baseline scope, schedule and budget
- ▶ Hetchy Power—Re–direct sources in 2–year budget to Distribution and Redevelopment projects to increase customer base and revenues
- ▶ Hetchy Water—Funds Mountain Tunnel Project



# SFPUC Proposed 10-Year Capital Plan

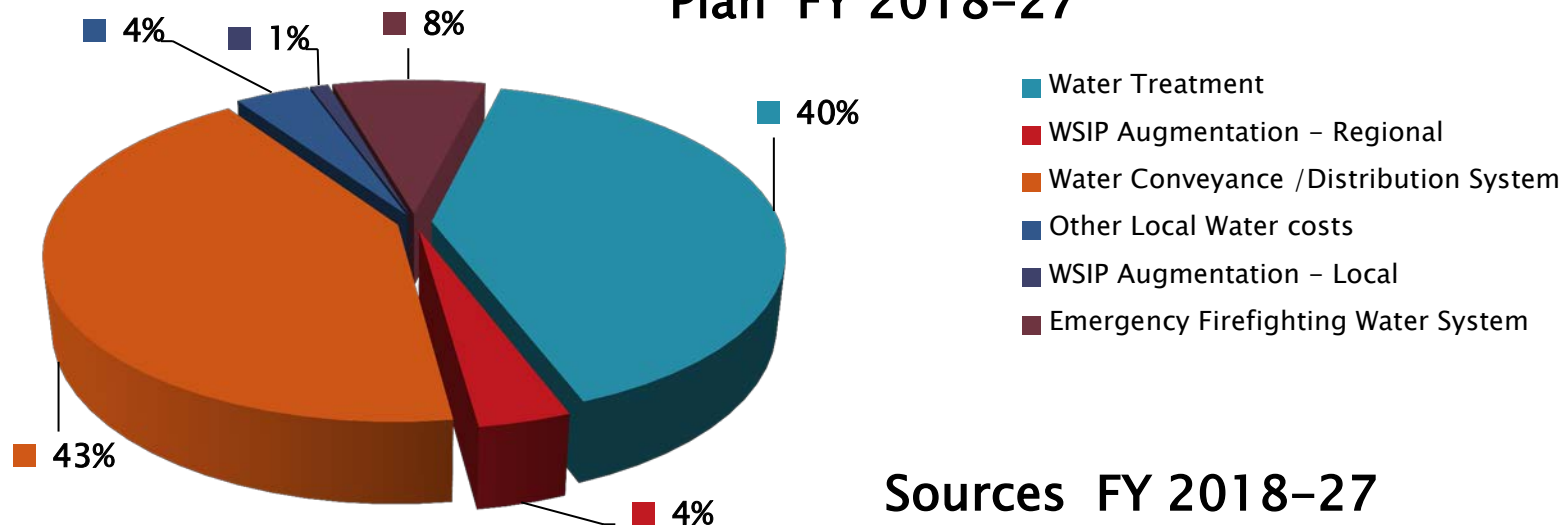
## \$7.9B



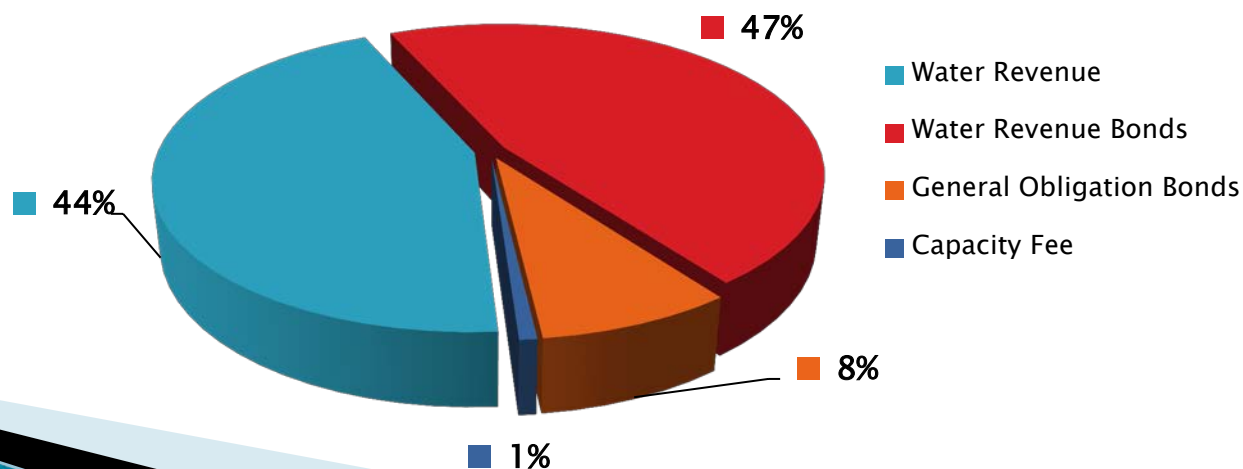
# Water Enterprise 10-Year Capital Plan

## \$1.3B

Plan FY 2018-27



Sources FY 2018-27





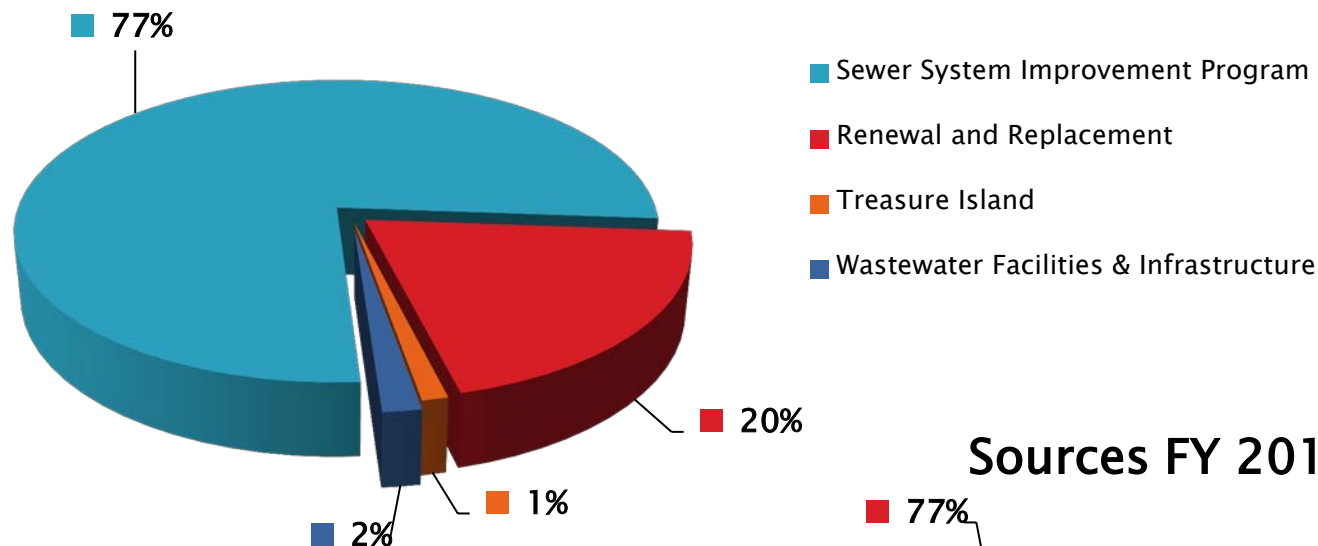


# Water Enterprise 10-Year Capital Plan

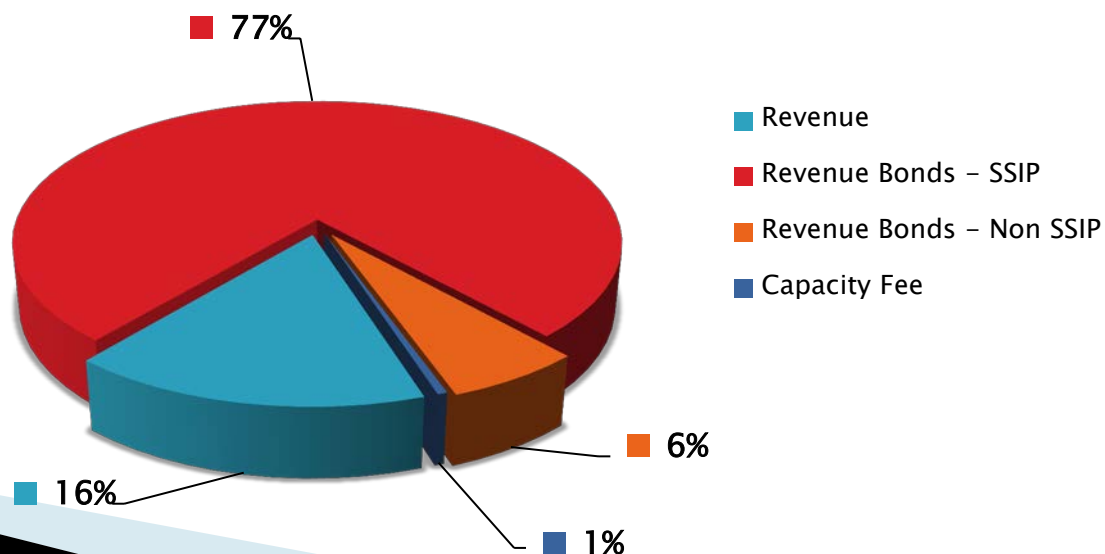
<b>SFPUC: Water Enterprise</b>							
<b>Program / Project</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 - 2027</b>	<b>Plan Total</b>
SPENDING PLAN							
<b>Regional Costs</b>							
Water Treatment Program	3,891	2,992	1,901	1,908	1,914	9,969	22,575
Water Transmission Program	21,635	48,785	58,647	23,147	28,085	49,847	230,146
Water Supply & Storage Program	6,908	39,749	52,479	24,130	8,380	101,908	233,554
Watersheds & Land Management	1,990	1,990	1,990	1,990	1,990	10,018	19,968
Communication & Monitoring Program	994	950	500	500	500	2,560	6,004
Buildings And Grounds Programs	6,221	1,786	5,795	804	813	3,430	18,849
WSIP Augmentation - Regional	27,000	20,000	-	-	-	-	47,000
<b>Regional Subtotal</b>	<b>68,639</b>	<b>116,252</b>	<b>121,312</b>	<b>52,479</b>	<b>41,682</b>	<b>177,732</b>	<b>578,096</b>
<b>Local Costs</b>							
Local Water Conveyance/Distribution System	57,100	56,100	56,100	56,100	56,100	280,500	562,000
Buildings & Grounds Improvements - Local	1,000	10,525	5,000	1,000	500	2,500	20,525
Systems Monitoring & Control	500	2,000	2,000	500	500	2,500	8,000
Local Tanks/Reservoir Improvements	500	3,000	500	500	500	2,500	7,500
Pump Station improvements	1,500	11,000	1,500	500	500	2,500	17,500
WSIP Augmentation - Local	6,500	6,500	272	-	-	-	13,272
Emergency Firefighting Water System	-	-	-	50,000	60,000	-	110,000
<b>Local Subtotal</b>	<b>67,100</b>	<b>89,125</b>	<b>65,372</b>	<b>108,600</b>	<b>118,100</b>	<b>290,500</b>	<b>738,797</b>
<b>TOTAL</b>	<b>135,739</b>	<b>205,377</b>	<b>186,684</b>	<b>161,079</b>	<b>159,782</b>	<b>468,232</b>	<b>1,316,893</b>
<b>REVENUES</b>							
Revenue	27,830	51,804	51,804	38,971	48,477	365,547	584,433
Water Revenue Bonds	106,909	152,573	133,880	71,108	50,305	97,685	612,460
General Obligation Bonds	-	-	-	50,000	60,000	-	110,000
Capacity Fee	1,000	1,000	1,000	1,000	1,000	5,000	10,000
<b>TOTAL</b>	<b>135,739</b>	<b>205,377</b>	<b>186,684</b>	<b>161,079</b>	<b>159,782</b>	<b>468,232</b>	<b>1,316,893</b>
<i>Total San Francisco Jobs/Year</i>	<i>1,211</i>	<i>1,832</i>	<i>1,665</i>	<i>1,437</i>	<i>1,425</i>	<i>4,177</i>	<i>11,747</i>

# Wastewater Enterprise 10-Year Capital Plan \$5.6B

Plan FY 2018-27



Sources FY 2018-27





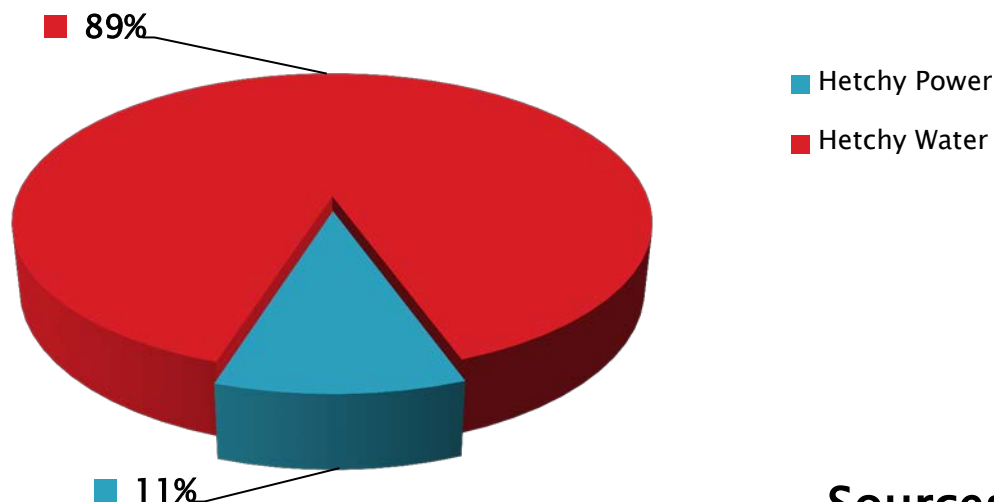
# Wastewater Enterprise 10-Year Capital Plan

## SFPUC: Wastewater Enterprise

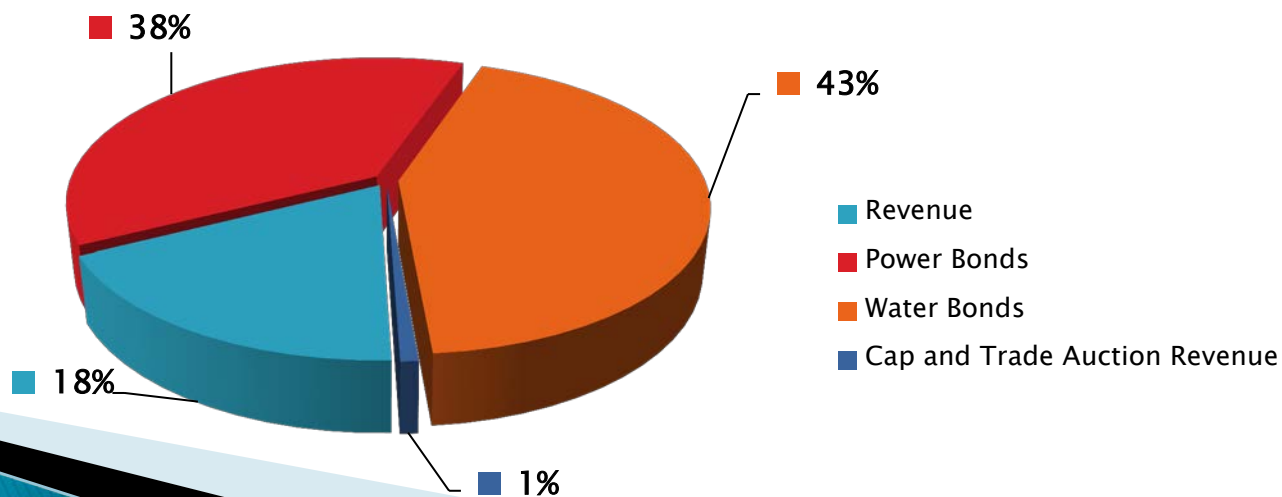
Program / Project	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023 - 2027	Plan Total
<b>SPENDING PLAN</b>							
Sewer System Improvement Program							
Program Wide Management	6,000	16,500	16,500	16,500	16,500	58,500	130,500
Treatment Facilities	573,008	506,841	377,977	192,752	127,452	709,256	2,487,286
Sewer/Collection System	70,319	426,764	348,036	27,528	42,770	314,043	1,229,460
Stormwater Management/Flood Control	21,233	58,724	14,320	205,336	20,260	173,055	492,928
<b>SSIP Subtotal</b>	<b>670,560</b>	<b>1,008,829</b>	<b>756,833</b>	<b>442,116</b>	<b>206,982</b>	<b>1,254,854</b>	<b>4,340,174</b>
<b>Renewal &amp; Replacement</b>							
Collection System - Condition Assessment	3,327	3,443	-	-	-	-	6,770
Collection System - Sewer Improvements	59,902	62,299	64,790	67,382	70,077	404,880	729,330
Collection System - Spot Sewer	21,965	22,844	23,757	24,708	14,280	81,984	189,538
Collection System - Salt Water Intrusion	1,139	1,179	1,219	1,262	1,306	7,242	13,347
Treatment Plant Improvements	14,402	15,121	15,878	16,673	17,506	101,144	180,724
<b>Renewal &amp; Replacement Subtotal</b>	<b>100,735</b>	<b>104,886</b>	<b>105,644</b>	<b>110,025</b>	<b>103,169</b>	<b>595,250</b>	<b>1,119,709</b>
<b>Treasure Island</b>	<b>20,463</b>	<b>22,240</b>	<b>21,090</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63,793</b>
<b>Wastewater Facilities &amp; Infrastructure</b>							
Ocean Beach Protection	4,000	4,000	6,000	-	-	-	14,000
Islais Creek Outfall	10,000	-	-	-	-	-	10,000
Southeast Community Center Improvements	5,000	25,000	20,000	20,000	-	-	70,000
<b>Wastewater Facilities &amp; Infrastructure Subtotal</b>	<b>19,000</b>	<b>29,000</b>	<b>26,000</b>	<b>20,000</b>	<b>-</b>	<b>-</b>	<b>94,000</b>
<b>TOTAL</b>	<b>810,758</b>	<b>1,164,955</b>	<b>909,567</b>	<b>572,141</b>	<b>310,151</b>	<b>1,850,104</b>	<b>5,617,676</b>
<b>REVENUES</b>							
Revenue	45,000	48,000	74,000	102,000	100,669	535,697	905,366
Revenue Bonds	763,258	1,114,455	833,067	467,641	206,982	1,301,907	4,687,310
Capacity Fees	2,500	2,500	2,500	2,500	2,500	12,500	25,000
<b>TOTAL</b>	<b>810,758</b>	<b>1,164,955</b>	<b>909,567</b>	<b>572,141</b>	<b>310,151</b>	<b>1,850,104</b>	<b>5,617,676</b>
Total San Francisco Jobs/Year	7,232	10,391	8,113	5,103	15,740	1,297	47,876

# Hetch Hetchy Enterprise 10-Year Capital Plan \$1.0B

## Plan FY 2018-27



## Sources FY 2018-27







# Hetch Hetchy Enterprise 10-Year Capital Plan

## SFPUC: Hetch Hetchy Water and Power

Program / Project	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023 - 2027	Plan Total
SPENDING PLAN							
<b>Hetchy Power</b>							
Streetlights	3,510	5,160	5,160	5,210	5,180	18,550	42,770
Renew able/Generation	1,100	1,100	1,100	1,100	1,100	5,500	11,000
Energy Efficiency	1,000	1,000	1,000	1,000	1,000	5,000	10,000
Redevelopment	7,100	6,450	4,950	2,100	2,100	-	22,700
Distribution Services for Retail Customers	20,000	-	-	-	-	-	20,000
Reclassification - Pow er Only Joint Projects	31,424	41,510	329,725	9,648	8,273	46,339	466,919
<b>Hetchy Power Subtotal</b>	<b>64,134</b>	<b>55,220</b>	<b>341,935</b>	<b>19,058</b>	<b>17,653</b>	<b>75,389</b>	<b>573,389</b>
<b>Hetchy Water</b>							
Water Infrastructure	10,000	9,502	8,460	8,460	8,530	62,850	107,802
Pow er Infrastructure	15,800	22,883	2,883	2,883	2,883	14,417	61,749
Joint Projects - Water Infrastructure (45%)	12,783	15,240	267,416	5,535	4,410	26,118	331,502
Joint Projects - Pow er Infrastructure (55%)	15,624	18,626	326,841	6,765	5,390	31,922	405,168
Reclassification - Pow er Only Joint Projects	(31,424)	(41,510)	(329,725)	(9,648)	(8,273)	(46,339)	(466,919)
<b>Hetchy Water Subtotal</b>	<b>22,783</b>	<b>24,741</b>	<b>275,875</b>	<b>13,995</b>	<b>12,940</b>	<b>88,968</b>	<b>439,302</b>
<b>TOTAL</b>	<b>86,917</b>	<b>79,961</b>	<b>617,810</b>	<b>33,053</b>	<b>30,593</b>	<b>164,357</b>	<b>1,012,691</b>
REVENUES							
Revenue	33,000	20,000	20,000	17,258	17,653	75,389	183,300
Pow er Bonds	29,034	33,120	319,835	-	-	-	381,989
Water Bonds	22,783	24,741	275,875	13,995	12,940	88,968	439,302
Cap and Trade Auction Revenue	2,100	2,100	2,100	1,800	-	-	8,100
<b>TOTAL</b>	<b>86,917</b>	<b>79,961</b>	<b>617,810</b>	<b>33,053</b>	<b>30,593</b>	<b>164,357</b>	<b>1,012,691</b>
Total San Francisco Jobs/Year	775	713	5,511	295	272	1,244	8,810

# Regional & Local Water Capital Plan Highlights

- **Regional Projects:** Upgrades, permit compliance and reliability improvements
  - Water Transmission: 40%
  - Water Supply & Storage: 40%
  - Other Facilities: 20%
  
- **Local Projects:** Facility upgrades and replacement of 15 miles of water main per year
  - Water Conveyance / Distribution: 90%
  - Other Facilities: 10%
  
- **Water System Improvement Program (WSIP)**
  - 93% Complete (75 out of 87 projects complete)
  - 7 projects currently active in construction
  - Completion by end of 2019

# Harry Tracy Water Treatment Plant





# Calaveras Dam Replacement



# Hetch Hetchy Water Capital Plan Highlights

- **Water Infrastructure – \$107.8M:** SCADA improvements, aqueduct upgrades & continued rehabilitation to San Joaquin Pipeline System
- **Power Infrastructure – \$61.7M:** Rehabilitation and upgrades to powerhouses, penstocks, transformers, pumps and control systems, transmission lines/distribution systems and switchyards/substations
- **Joint Water/Power Projects – \$736.7M (45% / 55%)**
  - Replacements and upgrades to support both water and power systems including improvements to dams, outlet works, roads, security and communication systems and other supporting facilities
  - Largest project: Mountain Tunnel Improvements



# Mountain Tunnel Project



New concrete bulkhead plug at Adit 5/6



# Hetch Hetchy Power 10–Year Capital Plan Highlights

## ➤ Streetlight

- Continued funding for repair and placement of City streetlights to keep our City safe and provide lighting for vehicular and pedestrian traffic
- Replacement of 18,500 City-owned high-pressure sodium street light fixtures with money savings, ultra-efficient light emitting diode (LED) fixtures
- Van Ness Improvement Project – Update streetlights with brighter, more efficient lights and adding sidewalk lighting

## ➤ Redevelopment

- Projects provide for development of the distribution systems on Treasure Island, Candlestick Point and the Alex Griffith Housing Complex consistent with the SFPUC as the exclusive electrical utility provider

## ➤ Distribution Services

- Design and construction of transmission and distribution facilities to serve new retail customers
- Installation of Intervening Facilities required under the new Wholesale Distribution Tariff
- Development, administration, and incentive payments to new retail customers



# Hetch Hetchy Power



# Wastewater Capital Plan Highlights

## ➤ **Sewer System Improvement Program (SSIP):**

Upgrade the existing aging Wastewater system

- Treatment Facilities: 57%
- Sewer / Collection System: 28%
- Stormwater Management/ Flood Control: 12%
- Program-Wide Efforts: 3%

## ➤ **Current Status:**

- Three phase Implementation (Total Cost: \$6.9B)
- In March 2016 Commission approved Level of Service, Baseline Scope, Budget and Schedule for SSIP phase 1 (Total Cost: \$2.9B)
- 16% Complete
- Largest project: Biosolids Digester Facilities Project



# Southeast Plant (SEP)



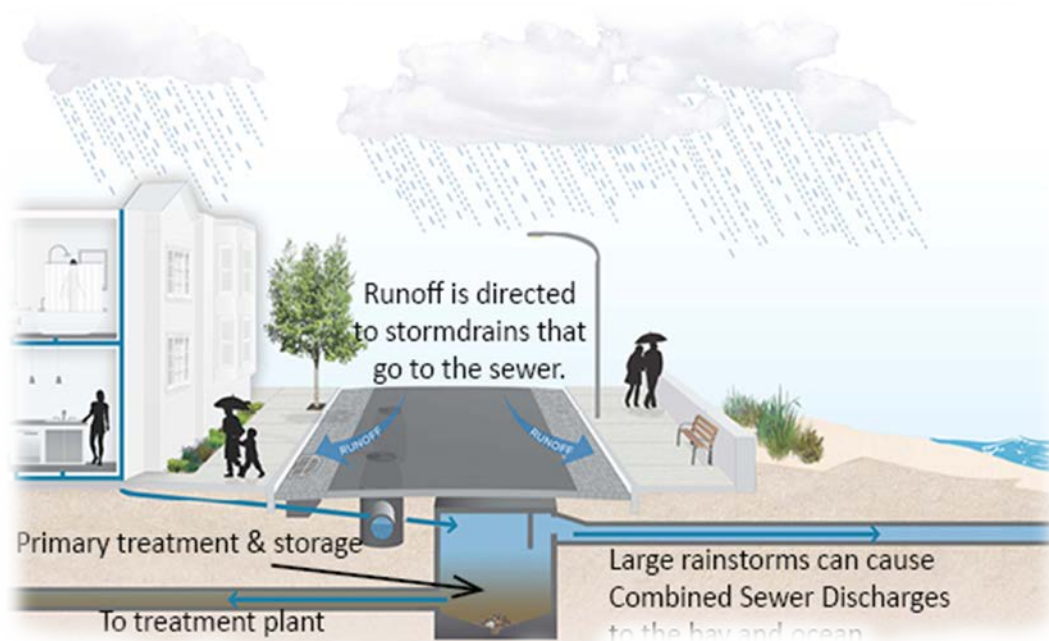


# SEP Biosolids Project



# Wastewater Enterprise Renewal & Replacement

- **Renewal and Replacement:** Proposed Capital Plan funds 15 miles of sewer replacement work per fiscal year
  - Collection System: 84%
  - Treatment Plant Improvements: 16%





# Treasure Island and Wastewater Facilities & Infrastructure

- **Treasure Island – \$63.8M**
  - New Wastewater Treatment Facility
  
- **Wastewater Facilities & Infrastructure – \$94.0M**
  - Ocean Beach Protection: \$14.0M
  - Southeast Community Center Improvements: \$70.0M
  - Islais Creek Outfall: \$10.0M





# Water Enterprise Emergency Firefighting Water System

- \$110M over next 10 years
- Funded through General Obligation Bonds
- \$50M in FY 2020–21, \$60M in FY 2021–22
- Project includes improvements and additions to the Emergency Firefighting Water System
- Provide firefighting water following major earthquake







Questions?