

10-Year Financial Plan Update & Projected Revenue Requirement

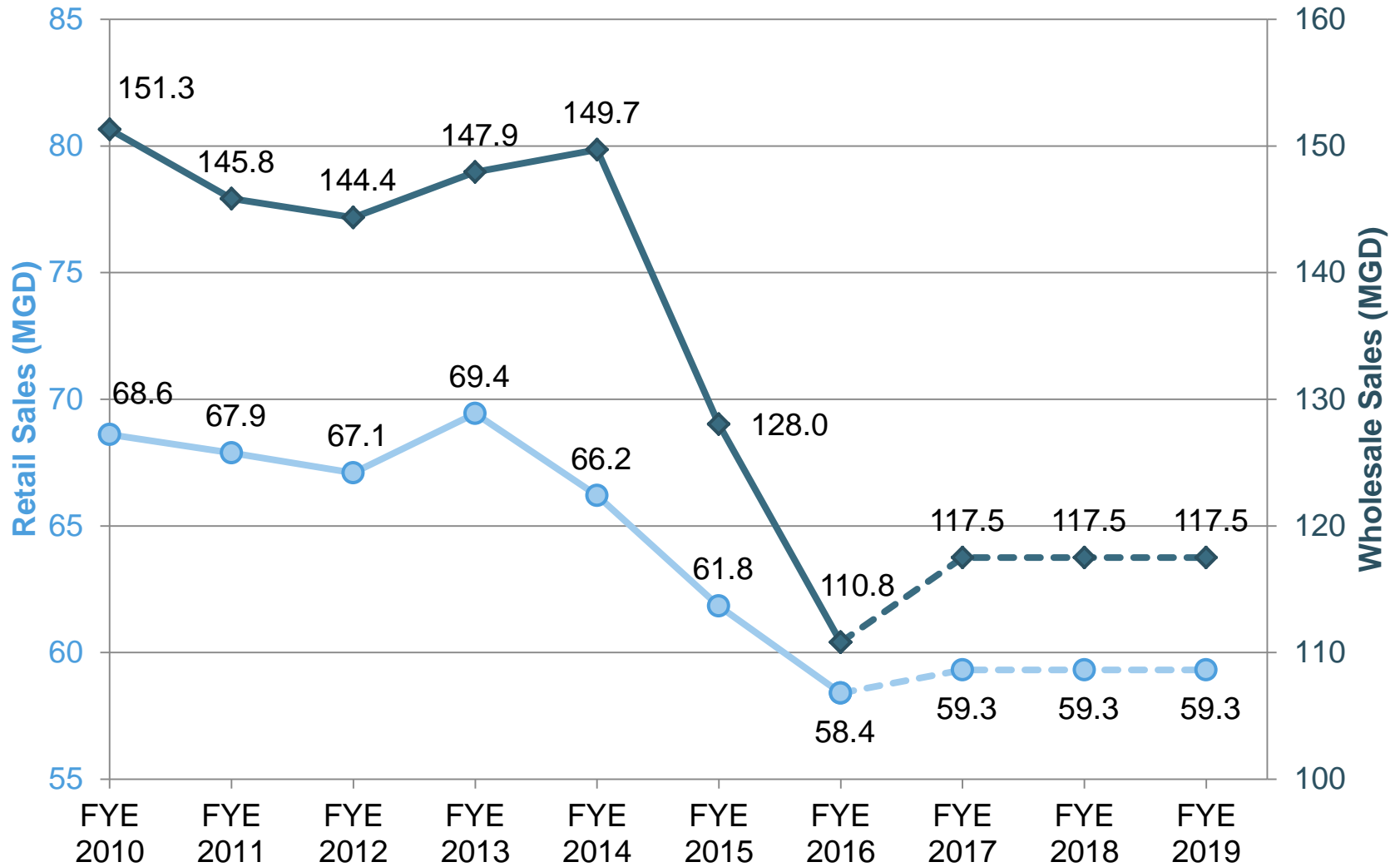
FYE 2018 through FYE 2027

February 28, 2017

Key Assumptions - Water

- **Retail:** modest increase in volumes assumed—at 59.3 MGD for FYE 2017 onward
 - Compares to 58.9 MGD in FYE 2017 plan
 - Compares to 64.1 MGD in FYE 2016 plan
- **Wholesale:** modest increase in volumes assumed—at 117.5 MGD from FYE 2017 onward
 - Compares to 115 MGD in FYE 2017 plan
 - Compares to 130 MGD in FYE 2016 plan
- **10-Year Capital Plan and Debt Service**
 - Water 10-Year Capital Plan \$97M lower than FYE 2017 plan
 - Debt issuance projection reflects revised project spending assumptions

Water Sales





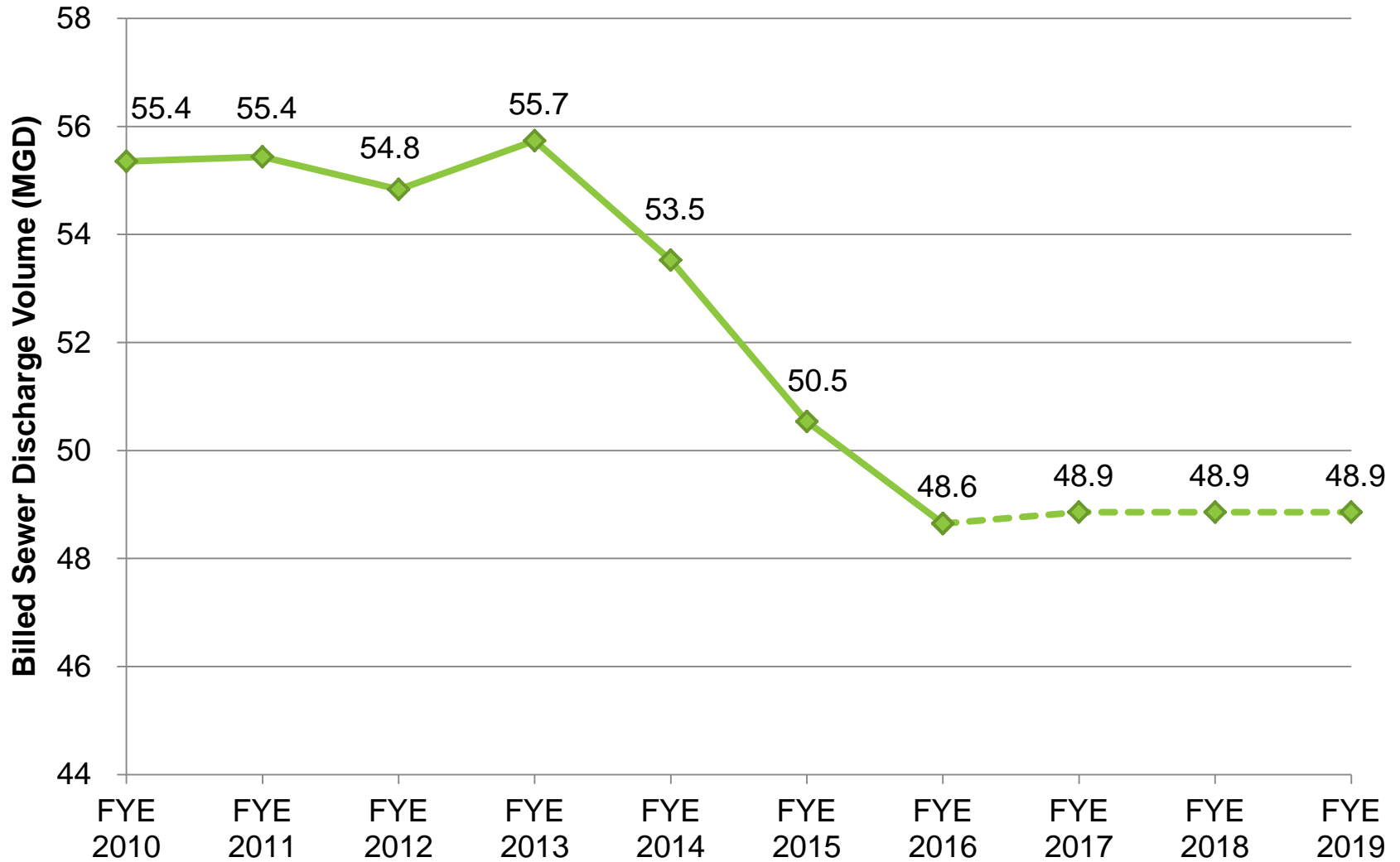
Water Enterprise Projections

(\$M)	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Beginning Fund Balance	\$ 149.5	\$ 174.2	\$ 179.5	\$ 150.7	\$ 132.3	\$ 130.0	\$ 125.3	\$ 125.9	\$ 140.2	\$ 143.2	\$ 143.4
Sources											
Retail Water Sales	234.1	250.4	278.0	305.8	333.3	363.3	399.6	435.6	444.3	457.6	457.6
Wholesale											
Wholesale Share of Operating Costs	109.7	99.4	95.4	97.7	107.7	110.9	114.2	117.3	120.7	124.0	128.2
Wholesale Share of Capital & Debt	128.1	140.0	144.0	149.2	164.4	190.4	210.6	221.6	233.4	243.3	240.7
Wholesale Water Sales	237.8	239.4	239.4	246.9	272.1	301.3	324.8	338.9	354.0	367.2	369.0
Other Miscellaneous Income	53.0	50.4	51.1	51.3	51.9	52.3	52.9	53.2	53.6	55.6	55.6
Total Sources	524.8	\$ 540.2	\$ 568.5	\$ 604.0	\$ 657.3	\$ 716.9	\$ 777.4	\$ 827.7	\$ 851.9	\$ 880.5	\$ 882.2
Uses											
Operations & Maintenance	212.8	217.6	226.1	230.1	234.0	239.7	246.5	253.0	258.2	265.4	263.9
Hetchy Transfer	34.6	32.6	33.6	34.6	35.6	36.7	37.8	38.9	40.1	41.3	42.5
Debt Service	230.0	260.7	284.9	305.8	352.2	396.5	438.1	461.6	475.1	483.6	489.3
Revenue-Funded Projects - Retail	10.8	10.8	19.3	19.3	32.6	42.1	47.1	52.3	61.0	69.4	77.1
Revenue-Funded Projects - Wholesale	11.9	18.0	33.5	33.5	7.3	7.4	7.4	7.6	14.5	20.6	13.7
Total Uses	500.1	\$ 539.8	\$ 597.4	\$ 623.2	\$ 661.8	\$ 722.4	\$ 776.8	\$ 813.4	\$ 848.9	\$ 880.3	\$ 886.5
Net Revenues	24.7	\$ 0.4	\$ (29.0)	\$ (19.3)	\$ (4.6)	\$ (5.4)	\$ 0.6	\$ 14.3	\$ 3.1	\$ 0.2	\$ (4.3)
Ending Fund Balance	174.2	\$ 174.7	\$ 150.5	\$ 131.4	\$ 127.8	\$ 124.5	\$ 125.9	\$ 140.2	\$ 143.2	\$ 143.4	\$ 139.1
Rate Increase - Retail	10.0%	7.0%	11.0%	10.0%	9.0%	9.0%	10.0%	9.0%	2.0%	3.0%	0.0%
Rate Increase - Wholesale	9.3%	0.0%	0.0%	3.2%	11.3%	10.8%	7.7%	3.9%	4.8%	3.8%	0.2%
Fund Balance as % of Op. Revenues	33%	33%	27%	22%	20%	18%	16%	17%	17%	16%	16%
Fund Balance as % of Op. Expenses	70%	72%	58%	50%	48%	45%	44%	48%	48%	47%	45%
Debt Service Coverage (Current)	1.28	1.15	1.11	1.13	1.12	1.13	1.14	1.18	1.18	1.19	1.17
Debt Service Coverage (Indenture)	1.81	1.81	1.74	1.63	1.50	1.46	1.43	1.45	1.47	1.49	1.46
Water Sales - Retail (MGD)	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
Water Sales - Wholesale (MGD)	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5
Water Sales - SFR Monthly Average (CCF)	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

Key Assumptions - Wastewater

- Minimal increase in billed volumes from prior fiscal year, in line with retail water volume increase
 - 48.9 MGD projected in FYE 2017 onward
 - Compares to 48.5 MGD projection in FYE 2017 plan
 - Compares to 52.8 MGD projection in FYE 2016 plan
- 10-Year Capital Plan & Debt Service
 - Wastewater 10-Year Capital Plan \$110M higher than prior plan
 - SSIP bond issuance reflects updated spending projections
 - Excludes SRF loan funding

Sewer Volumes





Wastewater Enterprise Projections

(\$M)	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Beginning Fund Balance	\$ 130.4	\$ 144.0	\$ 156.1	\$ 162.6	\$ 166.4	\$ 163.9	\$ 167.6	\$ 196.4	\$ 155.7	\$ 119.9	\$ 102.0
Sources											
Sewer Charges	269.4	299.1	323.1	348.9	376.9	410.7	451.6	506.3	577.1	657.7	736.4
Interest Income	1.3	1.3	1.6	1.6	2.2	2.1	2.6	3.1	2.4	2.1	1.8
Federal Bond Interest Subsidy	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.8	3.7	3.5	3.4
Other Miscellaneous Income	15.6	5.8	5.8	5.8	5.9	5.9	6.0	6.0	6.0	6.1	6.1
Total Sources	\$ 290.3	\$ 310.1	\$ 334.4	\$ 360.4	\$ 388.9	\$ 422.8	\$ 464.2	\$ 519.2	\$ 589.2	\$ 669.4	\$ 747.7
Uses											
Operations & Maintenance	157.4	160.5	164.0	168.7	173.4	178.3	183.4	188.6	193.8	199.3	204.9
Debt Service	52.3	50.5	62.2	64.3	93.5	137.6	193.6	257.6	311.8	362.7	412.8
Revenue-Funded Projects	67.1	87.0	101.7	123.6	124.5	103.2	58.3	113.7	119.4	125.3	128.6
Total Uses	\$ 276.8	\$ 298.0	\$ 328.0	\$ 356.5	\$ 391.4	\$ 419.1	\$ 435.3	\$ 559.9	\$ 625.0	\$ 687.3	\$ 746.3
Net Revenues	\$ 13.6	\$ 12.2	\$ 6.5	\$ 3.9	\$ (2.5)	\$ 3.7	\$ 28.8	\$ (40.7)	\$ (35.8)	\$ (17.9)	\$ 1.5
Ending Fund Balance	\$ 144.0	\$ 156.1	\$ 162.6	\$ 166.4	\$ 163.9	\$ 167.6	\$ 196.4	\$ 155.7	\$ 119.9	\$ 102.0	\$ 103.4
Retail Rate Increase	7.0%	11.0%	8.0%	8.0%	8.0%	9.0%	10.0%	12.0%	14.0%	14.0%	12.0%
Fund Balance as % of Op. Revenues	52%	51%	49%	47%	42%	40%	43%	30%	20%	15%	14%
Fund Balance as % of Op. Expenses	91%	97%	99%	99%	95%	94%	107%	83%	62%	51%	50%
Debt Service Coverage (Current)	2.55	2.97	2.74	2.98	2.30	1.78	1.45	1.28	1.27	1.29	1.31
Debt Service Coverage (Indenture)	4.81	5.82	5.25	5.51	4.08	2.97	2.31	2.04	1.76	1.62	1.56



Combined Water & Wastewater Retail Rate Changes

Actual

Projected

Fiscal Year	FYE 2015 Combined	FYE 2016 Combined	FYE 2017 Projection				
			Water Nominal	Wastewater Nominal	FYE 2017 Combined	Change vs. Prior Year	Change vs. 2 Years Ago
FYE 2010			15.0%	7.0%	10.1%		
FYE 2011			15.0%	7.0%	10.2%		
FYE 2012			12.5%	5.0%	8.2%		
FYE 2013			12.5%	5.0%	8.3%		
FYE 2014			6.5%	5.0%	5.7%		
FYE 2015			12.0%	5.0%	8.2%		
FYE 2016			12.0%	5.0%	8.3%		
FYE 2017			10.0%	7.0%	8.4%		
FYE 2018			7.0%	11.0%	9.2%		
FYE 2019	12.2%	12.7%	11.0%	8.0%	9.4%	-3.3%	-2.8%
FYE 2020	12.2%	12.7%	10.0%	8.0%	8.9%	-3.7%	-3.3%
FYE 2021	11.8%	12.7%	9.0%	8.0%	8.5%	-4.2%	-3.4%
FYE 2022	10.8%	9.8%	9.0%	9.0%	9.0%	-0.8%	-1.8%
FYE 2023	8.2%	8.3%	10.0%	10.0%	10.0%	1.7%	1.8%
FYE 2024	7.9%	8.4%	9.0%	12.0%	10.6%	2.3%	2.7%
FYE 2025	3.6%	7.2%	2.0%	14.0%	8.8%	1.6%	5.1%
FYE 2026	4.3%	5.2%	3.0%	14.0%	9.5%	4.3%	5.2%
FYE 2027	3.9%	4.4%	0.0%	12.0%	7.4%	3.0%	3.5%
FYE 2028	3.9%	3.8%	0.0%	9.0%	5.7%	1.9%	1.8%
FYE 2029	3.3%	3.9%	1.0%	3.0%	2.3%	-1.6%	-1.0%
FYE 2030	3.3%	3.3%	1.0%	5.0%	3.6%	0.3%	0.3%
FYE 2031	3.3%	3.3%	1.0%	3.0%	2.3%	-1.0%	-1.0%
FYE 2032	3.3%	3.3%	1.0%	4.0%	3.0%	-0.3%	-0.3%
FYE 2033	2.7%	3.3%	1.0%	4.0%	3.0%	-0.3%	0.3%
FYE 2034	2.7%	3.3%	2.0%	5.0%	4.0%	0.7%	1.3%
FYE 2035	2.0%	3.3%	2.0%	5.0%	4.0%	0.7%	2.0%
FYE 2036	2.0%	3.3%	2.0%	3.0%	2.7%	-0.6%	0.7%
FYE 2037	2.0%	2.3%	2.0%	3.0%	2.7%	0.3%	0.7%



Combined Water & Wastewater Average Single Family Monthly Bill

Actual

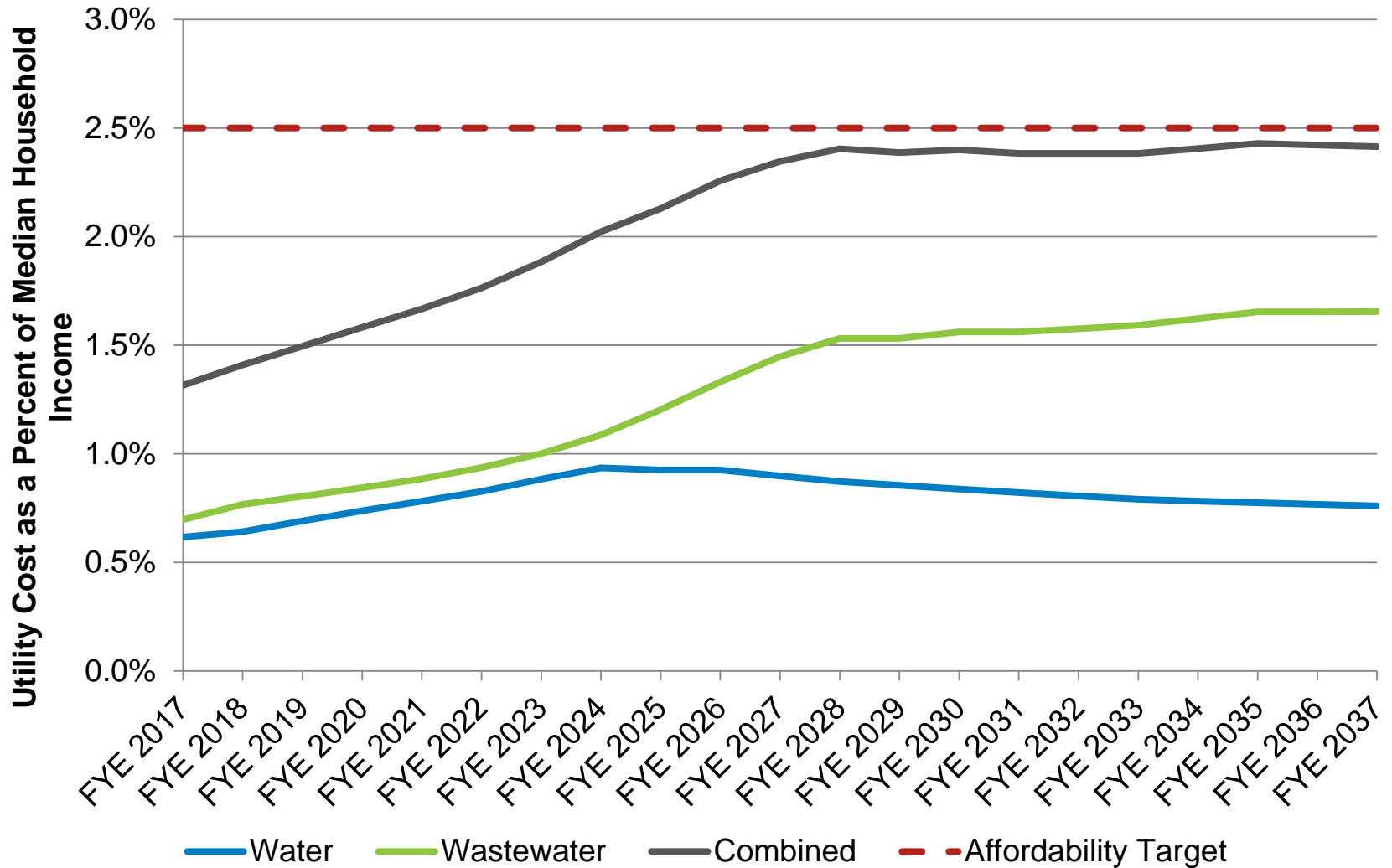
Projected

Fiscal Year	FYE 2015 Combined	FYE 2016 Combined	FYE 2017 Projection				
			Water	Wastewater	FYE 2017 Combined	Change vs. Prior Year	Change vs. 2 Years Ago
FYE 2010			\$24	\$38	\$62		
FYE 2011			\$28	\$41	\$69		
FYE 2012			\$31	\$43	\$74		
FYE 2013			\$36	\$47	\$83		
FYE 2014			\$37	\$47	\$85		
FYE 2015			\$37	\$44	\$81		
FYE 2016			\$39	\$45	\$84		
FYE 2017			\$44	\$50	\$94		
FYE 2018			\$47	\$57	\$104		
FYE 2019	\$125	\$117	\$53	\$61	\$114	-\$3	-\$11
FYE 2020	\$141	\$132	\$58	\$66	\$124	-\$7	-\$16
FYE 2021	\$157	\$148	\$63	\$72	\$135	-\$14	-\$22
FYE 2022	\$174	\$163	\$69	\$78	\$147	-\$16	-\$27
FYE 2023	\$188	\$176	\$76	\$86	\$162	-\$15	-\$27
FYE 2024	\$203	\$191	\$83	\$96	\$179	-\$13	-\$25
FYE 2025	\$211	\$205	\$84	\$110	\$194	-\$11	-\$17
FYE 2026	\$220	\$216	\$87	\$125	\$212	-\$4	-\$8
FYE 2027	\$228	\$225	\$87	\$140	\$227	\$1	-\$2
FYE 2028	\$237	\$234	\$87	\$152	\$239	\$5	\$2
FYE 2029	\$245	\$243	\$88	\$157	\$245	\$2	-\$1
FYE 2030	\$253	\$251	\$89	\$165	\$253	\$3	\$0
FYE 2031	\$262	\$259	\$89	\$170	\$259	\$0	-\$3
FYE 2032	\$271	\$268	\$90	\$177	\$267	-\$1	-\$4
FYE 2033	\$278	\$276	\$91	\$184	\$275	-\$1	-\$3
FYE 2034	\$285	\$285	\$93	\$193	\$286	\$0	\$1
FYE 2035	\$291	\$295	\$95	\$202	\$297	\$3	\$6
FYE 2036	\$297	\$305	\$97	\$209	\$305	\$1	\$9
FYE 2037	\$303	\$312	\$99	\$215	\$314	\$2	\$11



Utility Affordability

Cost as a Percent of Median Household Income



Assumes 3% annual increase from 2015 median household income of \$81,294 and 5.2 CCF monthly water usage

Key Assumptions – Hetch Hetchy

- **Revenues**

- Decrease in retail revenues from revised redevelopment project schedules
- Assumes greater Hetchy hydro generation and higher market sales price, resulting in more power available for sale and higher market sales revenues
- Higher miscellaneous income from assumed transmission cost recovery from MID/TID and higher DAS revenues

- **Operating Expenses**

- Transmission-related charges increased by \$50M
- Additional \$10M annual distribution interconnection costs beginning in FYE 2019

- **Capital Expenses:** Hetch Hetchy 10-Year Capital Plan \$49.5M lower than prior plan



Hetch Hetchy Water & Power Projections

(\$M)	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Beginning Fund Balance	\$ 72.5	\$ 55.7	\$ 48.4	\$ 46.7	\$ 48.1	\$ 56.2	\$ 64.5	\$ 73.8	\$ 81.4	\$ 77.2	\$ 76.8
Sources											
Power Sales - Municipal General Fund Rates	24.2	28.1	30.2	32.4	34.5	36.7	39.0	41.2	43.5	45.7	48.1
Power Sales - Municipal Enterprise Rates	82.2	87.7	90.8	94.0	97.3	100.7	104.3	107.9	111.7	115.7	119.7
Power Sales - Wholesale	18.7	19.8	16.8	18.5	20.5	23.3	24.7	26.7	27.6	28.7	29.7
Power Sales - Retail/Redevelopment	3.1	4.2	6.2	9.1	12.0	12.7	14.7	16.4	17.7	19.4	20.0
Gas & Steam Sales	10.7	14.3	14.7	15.1	15.6	16.1	16.5	17.0	17.5	18.1	18.6
Water Sales	1.2	1.3	1.4	1.5	1.7	1.8	2.0	2.1	2.3	2.3	2.4
Hetchy Transfer	34.6	35.6	36.7	37.8	38.9	40.1	41.3	42.6	43.8	45.1	46.5
Other Misc Income	11.1	13.4	17.8	17.9	17.2	12.4	12.9	13.3	13.6	13.9	14.1
Total Sources	\$ 185.8	\$ 204.4	\$ 214.6	\$ 226.4	\$ 237.8	\$ 243.9	\$ 255.4	\$ 267.2	\$ 277.8	\$ 289.0	\$ 299.0
Uses											
Operations & Maintenance	159.3	169.4	185.5	192.9	200.8	205.5	213.0	221.0	229.3	238.3	247.0
Debt Service	2.3	4.8	6.3	7.4	7.3	9.7	16.2	21.5	27.8	35.1	39.3
Revenue-Funded Projects	41.0	37.5	24.6	24.6	21.7	20.4	16.9	17.1	24.9	15.9	16.0
Total Uses	\$ 202.6	\$ 211.7	\$ 216.3	\$ 225.0	\$ 229.7	\$ 235.6	\$ 246.1	\$ 259.6	\$ 282.0	\$ 289.3	\$ 302.3
Net Revenues	\$ (16.8)	\$ (7.2)	\$ (1.7)	\$ 1.4	\$ 8.1	\$ 8.3	\$ 9.3	\$ 7.6	\$ (4.2)	\$ (0.4)	\$ (3.3)
Ending Fund Balance	\$ 55.7	\$ 48.4	\$ 46.7	\$ 48.1	\$ 56.2	\$ 64.5	\$ 73.8	\$ 81.4	\$ 77.2	\$ 76.8	\$ 73.5
Fund Balance as % of Operating Revenues	30%	24%	22%	22%	24%	27%	29%	31%	28%	27%	25%
Fund Balance as % of Operating Expenses	35%	29%	25%	25%	28%	31%	35%	37%	34%	32%	30%
Debt Service Coverage (Current)	15.68	6.25	3.82	3.79	4.52	4.03	2.67	2.16	1.74	1.42	1.30
Debt Service Coverage (Indenture)	N/A	33.39	17.86	14.28	15.44	11.63	7.34	5.87	4.85	3.72	3.34

Does not include CleanPowerSF sources and uses



Selected Average Power Rates

(\$/kWh)	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027
Municipal General Fund Rates											
Streetlights & City Hall	0.0350	0.0400	0.0450	0.0500	0.0550	0.0600	0.0650	0.0700	0.0750	0.0800	0.0850
Convention Centers	0.0920	0.0970	0.1020	0.1070	0.1120	0.1170	0.1220	0.1270	0.1320	0.1370	0.1420
Other General Fund Departments	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725	0.0725
Municipal Enterprise Rates											
Airport	0.1346	0.1403	0.1445	0.1488	0.1533	0.1579	0.1626	0.1675	0.1725	0.1777	0.1830
Other Enterprise Departments	0.1606	0.1677	0.1727	0.1779	0.1832	0.1887	0.1944	0.2002	0.2062	0.2124	0.2188
Wholesale Rates											
Market Rate Sales	0.0249	0.0226	0.0224	0.0252	0.0282	0.0322	0.0344	0.0374	0.0390	0.0408	0.0423
Retail/Redevelopment Rates											
Residential	0.2020	0.2081	0.2143	0.2207	0.2273	0.2342	0.2412	0.2484	0.2559	0.2636	0.2715
Medium Commercial, Secondary Voltage	0.1804	0.1858	0.1914	0.1971	0.2030	0.2091	0.2154	0.2219	0.2285	0.2354	0.2424
Industrial, Primary Voltage	0.1344	0.1384	0.1426	0.1469	0.1513	0.1558	0.1605	0.1653	0.1703	0.1754	0.1806