MEMORANDUM

TO: **UTILITIES ADVISORY COMMISSION**

FROM: **UTILITIES DEPARTMENT**

1

DATE: **March 2, 2016**

SUBJECT: **Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt: (1) a Resolution Approving the Fiscal Year 2017 Wastewater Collection Financial Plan; and (2) a Resolution Increasing Wastewater Rates by Amending Rate Schedules S-1 (Residential Wastewater Collection and Disposal), S-2 (Commercial Wastewater Collection and Disposal), S-6 (Restaurant Wastewater Collection and Disposal) and S-7 (Commercial Wastewater Collection and Disposal – Industrial Discharger)**

RECCOMENDATION

Staff requests that the Utilities Advisory Commission (UAC) recommend that the Council:

1. Adopt a resolution (Attachment A) approving the fiscal year (FY) 2017 Wastewater Collection Financial Plan (Attachment B); and
2. Adopt a resolution (Attachment C) increasing wastewater rates by amending Rate Schedules S-1 (Residential Wastewater Collection and Disposal), S-2 (Commercial Wastewater Collection and Disposal), S-6 (Restaurant Wastewater Collection and Disposal) and S-7 (Commercial Wastewater Collection and Disposal – Industrial Discharger) (Attachment D).

EXECUTIVE SUMMARY

The FY 2017 Wastewater Collection Utility Financial Plan includes projections of the utility's costs and revenues through FY 2026. Costs are projected to rise substantially for the next several years due primarily to increasing treatment costs. As a result, staff projects the need for a 9% wastewater rate increase in FY 2017 and rate increases ranging from 6% to 10% through FY 2021. Rates for FY 2022 and beyond are projected to increase by 4%.

BACKGROUND

Every year staff presents the UAC with Financial Plans for its Electric, Gas, Water, and Wastewater Collection Utilities and recommends any rate adjustments required to maintain their financial health. These Financial Plans include a comprehensive overview of the utility's operations, both retrospective and prospective, and are intended to be a reference for UAC and

Council members as they review the budget and staff's rate recommendations. Each Financial Plan also contains a set of Reserves Management Practices describing the reserves for each utility and the management practices for those reserves.

The UAC reviewed preliminary financial forecasts at its February 3, 2016 meeting.

DISCUSSION

Staff's annual assessment of the financial position of the City's wastewater collection utility is completed to ensure adequate revenue to fund operations, in compliance with the cost of service requirements set forth in the California Constitution (Proposition 218). This includes making long-term projections of market conditions, the physical condition of the system, and other factors that could affect utility costs, and setting rates adequate to recover these costs. The current rate proposals are also based on the methodology described in the 2011 *Wastewater Collection Utility cost of Service and Rate Study* completed by Utility Financial Solutions (Staff Report 1399).

Proposed Actions for FY 2016

1. Increase to $3.95 million the Transfer from the Rate Stabilization Reserve to the Operations Reserve ($2 million was proposed in the FY2016 Financial Plan).

Proposed Actions for FY 2017

1. Transfer the remaining $394,000 from the Rate Stabilization Reserve to the Operations Reserve.

These proposed actions are described in more detail in the FY 2017 Wastewater Collection Financial Plan (Attachment B). These transfers will enable staff to maintain Operations Reserve levels while spreading the required rate increases for the wastewater collection utility over several years.

In addition, staff proposes to adjust wastewater rates as shown in Table 1 below, effective July 1, 2016. The adjustments will increase the system average rate by roughly 9%. These rate changes are included in the amended rate schedules provided as Attachment D.

Table 1: Current and Proposed Wastewater Collection Charges

		Current (7/1/2015)	Proposed (7/1/2016)	Change	
				$/mo.	%
Monthly Service and Minimum Charges ($/month)					
S-1 (Residential)	Service charge	$31.95	$34.83	$2.88	9%
S-2 (Commercial), S-6 (Restaurant)	Minimum	31.95	34.83	$2.88	9%
Quantity Rates					
S-1 (Residential)	$/CCF	N/A	N/A	-	-
S-2 (Commercial)	$/CCF	6.16	6.71	0.55	9%
S-6 (Restaurant)	$/CCF	9.52	10.38	0.86	9%
S-7 (Industrial)	$/CCF	2.83	3.08	0.25	9%

(1) Monthly charges for S-1 are fixed monthly charges, and those for S-2 and S-6 are minimum monthly charges.

(2) Currently there are no customers on the S7 rate schedule, however, CPAU continues to maintain it in case there is a need for the rate schedule in the future.

FY 2017 Financial Plan's Projected Rate Adjustments for the Next Five Fiscal Years

Table 2 shows the projected rate adjustments included in the Wastewater Collection Utility Financial Plans and their impact on a residential wastewater bill.

Table 2: Projected Rate Adjustments and Residential Bill Impact, FY 2017 to FY 2021

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Wastewater Utility	9%	10%	9%	7%	6%
Estimated Bill Impact for Residential Customers ($/mo)	$2.88	$3.48	$3.45	$2.92	$2.68

The main drivers for the increase in the Wastewater Collection Utility's costs (and therefore rates) over the next several years are the costs for wastewater treatment, which are projected to go up by 6% to 7% per year as the Regional Water Quality Control Plant makes several upgrades to their facilities, as well as capital improvement costs for the wastewater collection system. Operating and CIP costs are projected to rise roughly 2%-4% annually.

There is uncertainty related to capital costs for the Wastewater Collection Utility in coming years. Wastewater main replacement costs have risen substantially in recent years, and it is possible higher CIP expenditures will be required in the future. Staff plans to perform an updated master plan for the wastewater collection system, and expects better information about future main replacement costs when that plan is completed. Staff does not anticipate this study to commence until sometime in 2016.

Wastewater Bill Comparison with Surrounding Cities

The annual sewer bill for a Palo Alto resident is $383 under current rates, 32% lower than the average neighboring community. Table 3 shows the monthly sewer bills for residential customers compared to what they would be in surrounding communities.

Table 3: Residential Monthly Sewer Bill Comparison (based on rates as of February 1, 2016)

	Neighboring Communities						Neighboring Community Average
Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward	
31.95	81.08	74.95	28.80	32.01	37.94	28.93	47.29

If the proposed wastewater rate change is adopted by Council, and assuming other agencies do not change their sewer rates, Palo Alto would be 26% lower than the average neighboring community. Staff has no information at this time as to whether or when the surrounding communities are planning wastewater rate changes.

Changes from Prior Financial Forecasts

Staff has projected wastewater rate increases for FY 2017 through FY 2019 for several years. Table 4 compares current rate projections to those projected in the last two year's Financial Plans. As shown, the FY 2017 rate projections are the same as projected last year. In the FY 2015 Financial Plan, the rate increase projections were lower than current projections, but the FY 2017 projections reflect current information available regarding the cost of capital improvements at the Regional Water Quality Control Plant.

Table 4: Projected Wastewater Rate Trajectory for FY 2017 to FY 2026

Projection	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Current (FY 2017 Financial Plan)	9%	10%	9%	7%	6%	4%	4%	4%	4%	4%
Last year (FY 2016 Financial Plan)	9%	9%	9%	6%	6%	N/A	N/A	N/A	N/A	N/A
Two years ago (FY 2015 Financial Plan)	7%	7%	7%	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEXT STEPS

The Finance Committee will consider the recommended wastewater rate changes on April 19. Assuming the Finance Committee supports the proposed rate adjustments, notification of the potential rate increases will be sent to customers as required by Article XIIID of the State Constitution (added by Proposition 218). The proposed Financial Plans and amended rate schedules will be considered by the City Council with the FY 2017 budget, at which time the public hearing required by Article XIIID of the State Constitution will be held.

RESOURCE IMPACT

Normal year revenues for the Wastewater Collection Utility are projected to increase by roughly 9% ($1.45 million) in FY 2017 as a result of the proposed rate increases. See the FY 2017 Wastewater Collection Utility Financial Plan (Attachment B) for a more comprehensive overview of projected cost and revenue changes for the next five years.

POLICY IMPLICATIONS

The proposed water rate adjustments are consistent with Council-adopted Reserve Management Practices that are part of the Financial Plans and are developed using a cost of service study and methodology that is consistent with the cost of service requirements of Proposition 218.

ENVIRONMENTAL REVIEW

The UAC's review and recommendation to Council on the proposed FY 2017 Wastewater Collection Financial Plan and rate adjustments do not meet the definition of a project, pursuant to Section 21065 of the California Environmental Quality Act, thus no environmental review is required.

ATTACHMENTS

A. Resolution of the Council of the City of Palo Alto Approving the FY 2017 Wastewater Collection Utility Financial Plan
B. Proposed FY 2017 Wastewater Collection Utility Financial Plan
C. Resolution of the Council of the City of Palo Alto Increasing Wastewater Rates and Adopting a Wastewater Collection Rate Increase and Amending Rate Schedules S-1, S-2, S-6 and S-7
D. Amended Rate Schedules S-1, S-2, S-6 and S-7

PREPARED BY: **ERIC KENISTON,** Acting Rates Manager
REVIEWED BY: **JANE RATCHYE,** Assistant Director, Resource Management

APPROVED BY:

ED SHIKADA
Interim Director of Utilities

Attachment A

* NOT YET APPROVED *
Resolution No. _____
Resolution of the Council of the City of Palo Alto Approving the
FY 2016 Wastewater Utility Financial Plan

R E C I T A L S

A. Each year the City of Palo Alto ("City") assesses the financial position of its utilities with the goal of ensuring adequate revenue to fund operations. This includes making long-term projections of market conditions, the physical condition of the system, and other factors that could affect utility costs, and setting rates adequate to recover these costs. It does this with the goal of providing safe, reliable, and sustainable utility services at competitive rates. The City adopts Financial Plans to summarize these projections.

B. The City uses reserves to protect against contingencies and to manage other aspects of its operations, and regularly assesses the adequacy of these reserves and the management practices governing their operation. The status of utility reserves and their management practices are included in Reserves Management Practices attached to and made a part of the Financial Plans.

The Council of the City of Palo Alto does hereby RESOLVE as follows:

SECTION 1. The Council hereby approves the FY 2017 Wastewater Utility Financial Plan.

SECTION 2. The Council hereby approves the transfer of $3.95 million in FY 2016 from the Rate Stabilization Reserve to the Operations Reserve, as described in the FY 2017 Wastewater Utility Financial Plan approved via this resolution.

SECTION 3. The Council finds that the adoption of this resolution does not meet the California Environmental Quality Act's definition of a project under Public Resources Code Section 21065, and therefore, no environmental assessment is required.

INTRODUCED AND PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

Attachment A

* NOT YET APPROVED *

_____	_____
City Clerk	Mayor
APPROVED AS TO FORM:	APPROVED:
_____	_____
Senior Deputy City Attorney	City Manager
	_____
	Director of Utilities
	_____
	Director of Administrative Services

ATTACHMENT B

FY 2017 WASTEWATER COLLECTION UTILITY FINANCIAL PLAN

FY 2017 TO FY 2026

FY 2017 WASTEWATER COLLECTION UTILITY FINANCIAL PLAN

FY 2017 TO FY 2026

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SECTION 1: DEFINITIONS AND ABBREVIATIONS

CCF The standard unit of measurement for water delivered to water customers, equal to one hundred cubic feet, or roughly 748 gallons. When water usage is used to assess wastewater charges for commercial customers, it is measured in CCF.

CIP Capital Improvement Program

CPAU City of Palo Alto Utilities Department

FOG Fats, oils, and grease. When flushed into the sewer system, these materials accumulate in parts of the sewer system and create blockages.

O&M Operations and Maintenance

RWQCP Regional Water Quality Control Plant, the wastewater treatment plant owned and operated by the City of Palo Alto that serves Palo Alto and several surrounding communities.

UAC Utilities Advisory Commission

SECTION 2: EXECUTIVE SUMMARY AND RECOMMENDATIONS

This document presents a Financial Plan for the City of Palo Alto's Wastewater Collection Utility for the next ten years. It provides revenues to cover the costs of operating the utility safely over that time while adequately investing for the future. It also addresses the financial risks facing the utility over the short term and long term, and includes measures to mitigate and manage those risks.

SECTION 2A: OVERVIEW OF FINANCIAL POSITION

Overall costs in the Wastewater Collection Utility are expected to rise by about 5% per year from fiscal year (FY) 2016 to FY 2026. The primary driver is wastewater treatment costs, which are projected to rise by 7% in FY 2017 and 6% per year thereafter, with other costs rising at roughly 3% to 4% per year. The costs for the Wastewater Collection Utility are shown in Table 1 below.

Table 1: Expenses for FY 2015 to FY 2026

Expenses ($000)	FY 2015 (act.)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Treatment Costs	8,589	9,012	9,855	10,446	11,073	11,737	12,442	13,188	13,980	14,818	15,707	16,650
Operations	3,684	6,044	6,261	6,466	6,670	6,881	7,097	7,320	7,795	7,904	8,150	8,404
Capital Projects	4,067	4,985	4,852	4,996	5,144	5,297	5,455	5,617	5,784	5,955	6,132	6,315
TOTAL	16,340	20,041	20,968	21,908	22,887	23,916	24,993	26,125	27,558	28,678	29,990	31,368

Expenses continue to be higher than revenues, and the Rate Stabilization Reserve has been drawn down in lieu of having larger rate increases. To ensure that revenues cover these rising costs and reserves remain healthy, the financial plan includes the rate trajectory shown in Table

2. The table also shows rate projections from last year's Financial Plan. Note that the rate increase for FY 2017 is the same as projected in the FY 2016 Financial Plan.

Table 2: Projected Wastewater Collection Rate Trajectory for FY 2017 to FY 2026

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Current Plan	9%	10%	9%	7%	6%	4%	4%	4%	4%	4%
FY 2016 Plan	9%	9%	9%	6%	6%	N/A	N/A	N/A	N/A	N/A

The FY 2016 Financial Plan projected that reserves would fall nearly to the minimum reserve levels. However, as costs are increasing faster than projected last year, higher rate increases are required to keep pace.

The Wastewater Collection Utility's Rate Stabilization Reserve is being used to spread the projected cost increases over several years. The FY 2016 Financial Plan proposed a $2 million transfer from the Rate Stabilization Reserve, but staff recommends increasing this to $3.95 million. This Financial Plan projects that the Rate Stabilization Reserve will be exhausted by FY 2017.

Table 3: Transfers To/(From) Reserves for FY 2016 to FY 2026 ($000)

Reserve	FY 2016	FY 2017	FY 2018 to FY 2026
Rate Stabilization	(3,950)	(342)	-
Operations	3,950	342	-

SECTION 2B: SUMMARY OF PROPOSED ACTIONS

Staff proposes the following actions for the Wastewater Collection Utility in FY 2016:

1. Transfer $3.95 million from the Rate Stabilization Reserve to the Operations Reserve. See *Section 3D: Proposed Reserve Transfers* for more details.

Staff proposes the following actions for the Wastewater Collection Utility in FY 2017:

1. Increase the Wastewater Collection rates as shown in *Section 3B: Current and Proposed Rates*. The changes are projected to increase average system revenues by 9% effective July 1, 2016.
2. Transfer $342,000 from the Rate Stabilization Reserve to the Operations Reserve. See *Section 3D: Proposed Reserve Transfers* for more details.

SECTION 3: DETAIL OF FY 2017 RATE AND RESERVES PROPOSALS

SECTION 3A: RATE DESIGN

The Wastewater Collection Utility's rates are evaluated and implemented in compliance with the cost of service requirements and procedural rules set forth in the California Constitution (Proposition 218). Current rates were structured based on staff's annual assessment of the wastewater utility's financial position, as well as the methodology from the January 2011

Wastewater Collection Utility Cost of Service & Rate Study completed by Utility Financial Solutions (Staff Report 1399). Staff plans to review and update this cost of service study in 2 to 3 years, unless any major changes occur to the utility's operations or customer base that would necessitate an earlier study. Before conducting any new cost of service study, staff will review current rates and the scope of the study with the Utilities Advisory Commission (UAC) and Council to determine the City's policy priorities.

SECTION 3B: CURRENT AND PROPOSED RATES

The current rates were adopted July 1, 2015, when the City increased sewer rates by 9%. CPAU's sewer rates for commercial customers are based on the previous winter's water use. This closely approximates non-irrigation water consumption, which represents actual sewer use.

CPAU has three sewer rate schedules: one for residents (S-1), one for commercial customers (S-2), and a special schedule for restaurants (S-6), which discharge higher than average amounts of grease and oil and, therefore, have a greater impact on the sewer system. Residential customers are billed a monthly service charge, while commercial customers are billed based on their dry month water usage (January through March). Restaurant customers are billed monthly based on water usage. CPAU also maintains a rate schedule for industrial dischargers (S-7), but there are currently no customers required to be on this rate schedule.

Table 4, below, summarizes the current and proposed rates for all customer classes. Comparisons with neighboring communities are discussed in *Section 4F: Competitiveness*.

Table 4: Sewer Rates (Current and Proposed)

		Current (7/1/2015)	Proposed (7/1/2016)	Change	
				$/mo.	%
Monthly Service and Minimum Charges ($/month)					
S-1 (Residential)	Service charge	$31.95	$34.83	$2.88	9%
S-2 (Commercial), S-6 (Restaurant)	Minimum	$31.95	$34.83	$2.88	9%
Quantity Rates: based on winter water usage (average for January - March bill period)					
S-2 (Commercial)	$/CCF	6.16	6.71	0.55	9%
S-6 (Restaurant)	$/CCF	9.52	10.38	0.86	9%
S-7 (Industrial)	$/CCF	2.83	3.08	0.25	9%

SECTION 3C: BILL IMPACT OF PROPOSED RATE CHANGES

Table 5 below shows the impact of the proposed July 1, 2016 rate changes.

Table 5: Impact of Proposed Sewer Changes

	Current (7/1/2015)	Proposed (7/1/2016)	Change	
			$/mo.	%
Residential	$ 31.95	$ 34.83	$ 2.88	9%
General Commercial (14 CCF)	86.24	93.94	7.70	9%
Restaurant (56 CCF)	533.12	581.28	48.16	9%

SECTION 3D: PROPOSED RESERVE TRANSFERS

In the FY 2016 Financial Plan, several transfers between reserves were approved. Funds related to CIP's in the Reappropriations Reserve were transferred to the CIP reserve, to comply with updated accounting practices. Staff also proposed a $2 million transfer from the Rate Stabilization Reserve to the Operations Reserve.

In this FY 2017 Financial Plan, staff recommends an additional $1.95 million transfer from the Rate Stabilization Reserve in FY 2016. This will leave a small amount, $342,000, to transfer in FY 2017, which will result in a zero balance in the Rate Stabilization Reserve at the end of FY 2017. These transfers are included in the financial projections in this Financial Plan, and will enable CPAU to maintain adequate Operations Reserve levels while moderating the pace of increase in Wastewater Collection rates. The impact of these transfers on reserves levels can be seen in *Appendix A: Wastewater Collection Financial Forecast Detail*.

SECTION 4: UTILITY OVERVIEW

This section provides an overview of the utility and its operations. It is intended as general background information and to help readers better understand the forecasts in later sections.

SECTION 4A: WASTEWATER UTILITY HISTORY

The Wastewater Utility commenced operation in 1899 to serve Palo Alto and Stanford. In its first three decades the system grew to 60 miles of sewers. Raw sewage was discharged into Mayfield Slough at the edge of the Bay. In the 1930s, at the behest of the State Department of Health, Palo Alto built the South Bay's first wastewater treatment plant. At that time the sewer system served 20,500 Stanford and Palo Alto residents and a cannery. The plant was upgraded twice in the 1940s and 1950s to increase capacity.[1] At the same time, the postwar population and industrial boom in the 1950s required rapid expansion of the sewer system. In the first half of the 1960s Palo Alto's area doubled, as did wastewater flows, overwhelming the capacity of several of the utility's "trunk lines," which are the largest diameter main sewer lines carrying wastewater to the treatment plant. This prompted the City, in 1965, to perform the first of its

[1] *Long Range Facilities Plan for the Regional Water Quality Control Plant,* August 2012, Carollo Engineers, pp 2-1 through 2-2

sewer master plans to identify needed capacity improvements. At that point the Wastewater Utility's system comprised more than 150 miles of sewer mains.[2]

In 1968 the City signed agreements with the Cities of Mountain View and Los Altos to build a new regional treatment plant, the RWQCP, which is still in operation today. Since 1940 the City had been providing treatment services to the East Palo Alto Sanitary District through an existing agreement, and was also serving Stanford University by transporting wastewater across the City's sewer system to the treatment plant. Both of these organizations became partners in the RWQCP as well. At the same time the Town of Los Altos Hills became the sixth partner as it signed an agreement with the City to connect the Town's sewer system to the City's sewer system to carry wastewater to the new RWQCP. The current agreements for the RWQCP extend through 2035.[3]

In the 1980s the City directed increased attention to the condition of its sewer system, performing a series of studies of groundwater inflow and infiltration into the system. The study found high rates of infiltration, estimating that as much as 40% of the water going to the RWQCP from Palo Alto's system was groundwater and stormwater rather than wastewater.[4] In some parts of Palo Alto the land surface had subsided due to groundwater pumping by the water utility, and though that practice had ceased many years earlier as the water utility switched to the Hetch Hetchy Regional Water System, parts of the city had already subsided two to five feet. This subsidence had damaged several parts of the sewer collection system, leading to reduced slopes for sewer mains that caused reductions in capacity. In response to these studies the City commenced an accelerated sewer system rehabilitation program.[5] At that point the sewer system comprised over 190 miles of mains.[6]

A Master Plan study in 1988 recommended a variety of capacity expansions, and in the 1990s the City completed about half of them. However, a 2004 Master Plan update found that the accelerated sewer rehabilitation plan started in the early 1990s had substantially reduced infiltration, easing the capacity problems that had led the to the recommended capacity increases in the 1988 study. Several of the outstanding projects were canceled and replaced with a different set of projects.[7] At the same time the City updated its hydraulic model and developed greater capacity to do system planning in house.

SECTION 4B: CUSTOMER BASE

The City of Palo Alto's Wastewater Collection Utility provides sewer service to the residents and businesses of Palo Alto. It is distinct from the Wastewater Treatment Utility, which provides treatment services for surrounding communities in addition to Palo Alto. Nearly 23,300 customers are connected to the sewer system, approximately 21,450 (92%) of which are residential and 1,850 (8%) of which are non-residential. Residential customers pay a flat fee for

[2] *Wastewater Collection and Storm Drainage,* 1965, Brown and Caldwell Consulting Engineers, pp 4, 6-7, 143
[3] *Long Range Facilities Plan for the Regional Water Quality Control Plant,* August 2012, Carollo Engineers, pg 2-2
[4] *Wastewater Collection System Master Plan – Capacity Assessment*, January 2004, MWH Americas, Inc., pg ES-2
[5] CMR 183:90, *Infrastructure Review and Update*, March 1, 1990
[6] *Master Plan of the Wastewater Collection System*, December 1988, Camp Dresser & McKee, Inc., pg 1-2
[7] *Wastewater Collection System Master Plan – Capacity Assessment*, January 2004, MWH Americas, Inc., pg ES-3

service. Non-residential customers are billed for sewer service based on their metered winter water usage. There is little variability in revenues for this utility.

SECTION 4C: COLLECTION SYSTEM

The Wastewater Collection Utility delivers all the wastewater it collects to the Regional Water Quality Control Plant (RWQCP) operated by the City of Palo Alto under a partnership agreement with several surrounding communities. Palo Alto is responsible for 37% to 40% of the wastewater sent to the RWQCP. The cost of running the RWQCP is contained in the Wastewater Treatment Utility and is not described in detail in this Financial Plan, but since these costs are a major driver of CPAU's sewer rates, there is some discussion of future trends in treatment costs in *Section 6A: Wastewater Treatment Costs.* Treatment costs make up nearly half of the Wastewater Collection Utility's expenses as shown in Table 1 above.

To collect wastewater from its customers and deliver it to the RWQCP, CPAU owns roughly 18,100 sewer laterals (which collect wastewater from customers' plumbing systems) and 217 miles of sewer mains (which transport the waste to the treatment plant). These laterals and mains, along with the associated manholes and cleanouts, represent the vast majority of infrastructure used to collect wastewater in Palo Alto. CPAU conducts a sewer rehabilitation and replacement program to replace mains over time as they deteriorate or to increase capacity. For more discussion of this program, see *Section 6C: Capital Improvement Program (CIP)*. CIP expense accounts for roughly a quarter of the utility's expenditures.

In addition to its CIP, CPAU performs various maintenance activities on the sewer system. These include inspecting and repairing sewer laterals, responding to sewer overflows, regularly cleaning sections of the system heavily impacted by fats, oils, and grease (FOG), and building and replacing sewer laterals for new or redeveloped buildings. The utility also shares the costs of other operational activities (such as customer service, billing, equipment maintenance, and street restoration) with the City's other utilities. These maintenance and operations expenses, as well as associated administration, debt service, rent, and other costs, make up another quarter of the utility's expenses.

SECTION 4D: COST STRUCTURE AND REVENUE SOURCES

In FY 2015, treatment costs represented nearly half of the Wastewater Collection Utility's costs (53%), followed by Operations (25%) and Capital costs (22%). These expenditures are shown in Figure 1. The utility's revenue in FY 2015, shown in Figure 2, came primarily from sewer charges (86%), with the remainder coming mainly from capacity and connection fees and other sources (14%).

Figure 1: Cost Structure (FY 2015)

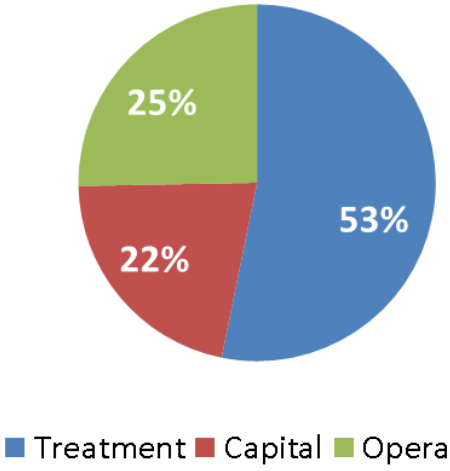
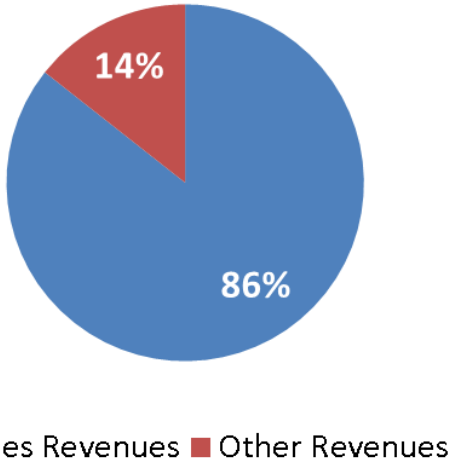


Figure 2: Revenue Structure (FY 2015)



SECTION 4E: RESERVES STRUCTURE

CPAU maintains six reserves for its Wastewater Collection Utility to manage various types of contingencies. These are summarized below, but see *Appendix C: Wastewater Collection Utility Reserves Management Practices* for more detailed definitions and guidelines for reserve management:

- **Reserve for Commitments:** A reserve equal to the utility's outstanding contract liabilities for the current fiscal year. Most City funds, including the General Fund, have a Commitments Reserve.
- **Reserve for Reappropriations:** A reserve for funds dedicated to projects reappropriated by the City Council, nearly all of which are capital projects. Most City funds, including the General Fund, have a Reappropriations Reserve.
- **Capital Improvement Program (CIP) Reserve:** The CIP reserve can be used to accumulate funds for future expenditure on CIP projects and is anticipated to be empty unless a major one-time CIP expenditure is expected in future years. It also acts as a contingency reserve for the CIP. This type of reserve is used in other utility funds (Electric, Gas, and Water) as well.
- **Rate Stabilization Reserve:** This reserve is intended to be empty unless one or more large rate increases are anticipated in the forecast period. In that case, funds can be accumulated to spread the impact of those future rate increases across multiple years. This type of reserve is used in other utility funds (Electric, Gas, and Water) as well.
- **Operations Reserve:** This is the primary contingency reserve for the Wastewater Collection Utility, and is used to manage yearly variances from budget for operational costs. This type of reserve is used in other utility funds (Electric, Gas, and Water) as well.
- **Unassigned Reserve:** This reserve is for any funds not assigned to the other reserves and is normally empty.

SECTION 4F: COMPETITIVENESS

Table 6 shows the monthly sewer bills for residential customers compared to what they would be in surrounding communities. The annual sewer bill for a Palo Alto customer is $383 under current rates, 32% lower than the average neighboring community. Palo Alto has the third lowest bill of the group.

Table 6: Residential Monthly Sewer Bill Comparison

	Neighboring Communities						Neighboring Community Average
Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward	
31.95	81.08	74.95	28.80	32.01	37.94	28.93	47.29
Based on rates as of February 2016							

If the proposed rate change discussed in *Section 3B: Current and Proposed Rates* is adopted by Council, and assuming other agencies do not change their sewer rates, Palo Alto would be 26% lower than the average neighboring community and retain the third lowest bill.

Table 7 compares the sewer bills for two classes of commercial customers to what they would be under surrounding communities' rate schedules. Note that other communities often have specific rates for industrial customers that discharge high intensity wastewater, such as food processors or chemical or electronics manufacturers, but Palo Alto does not currently have any customers that require these special rates. Palo Alto is less competitive with surrounding cities with regards to commercial sewer rates, but is not the most expensive jurisdiction.

Table 7: Commercial Monthly Sewer Bill Comparison

		Neighboring Communities						Neighboring Community Average
	Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward	
General Commercial	$86.24	$125.58	$74.95	$52.78	$44.82	$60.06	$61.18	$69.90
Restaurant	$533.12	$626.08	$686.78	$412.16	$121.68	$537.60	$463.12	$474.57
Based on rates as of February 2016								

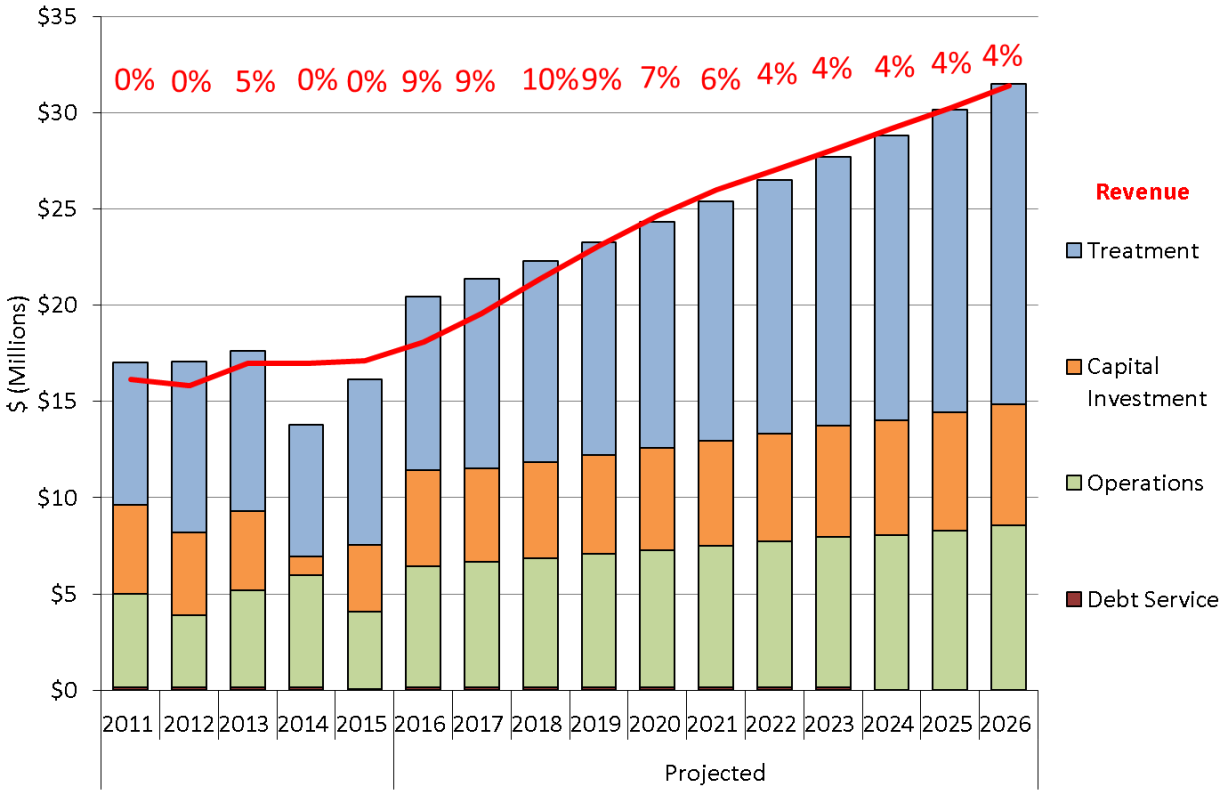
SECTION 5: UTILITY FINANCIAL PROJECTIONS

SECTION 5A: FY 2011 TO FY 2015 COST AND REVENUE TRENDS

Figure 3 shows the Wastewater Collection Utility's actual expenses and revenues for the past five years and projections through FY 2026. For FY 2011 through FY 2015, Operations costs grew at about the pace of inflation, at around 2% per year. Capital Investment expenses actually saw a slight contraction over this period, but this was partially due to backlogged projects necessitating a short term lowering of CIP budgets. Treatment costs during this time rose by 4% annually on average.

Since the revenue for this utility is very stable, revenue changes closely follow rate changes. The other large revenue item of note is the continued connection and capacity fees from new construction. These fees have grown dramatically since FY 2010, and it is uncertain when this trend may dampen.

Figure 3: Wastewater Collection Utility Expenses, Revenues and Rate Changes
Actual Costs through FY 2015 and Projections through FY 2026



SECTION 5B: FY 2015 RESULTS

Forecast sources of funds for FY 2015 were higher than projected by $137,000, but expenses related to Administration and Customer Service activities came in well below expected budget. Total FY 2015 expenses were $16.15 million compared to projections of $18.64 million in the FY 2016 Financial Plan. Table 8 summarizes the variances from forecast.

Table 8: FY 2015, Actual Results vs. Financial Plan Forecast

	Net Cost/ (Benefit)	Type of change
Admin and customer service costs lower than projected	(1,985,000)	Cost savings
Connection, capacity fees and other revenues were higher than forecasted	(489,000)	Revenue increase
Sales revenues lower than forecast	352,000	Revenue decrease
Operations, capital and other cost savings	(502,000)	Cost savings
Net Cost / (Benefit) of Variances	**($2,625,000)**	

SECTION 5C: FY 2016 PROJECTIONS

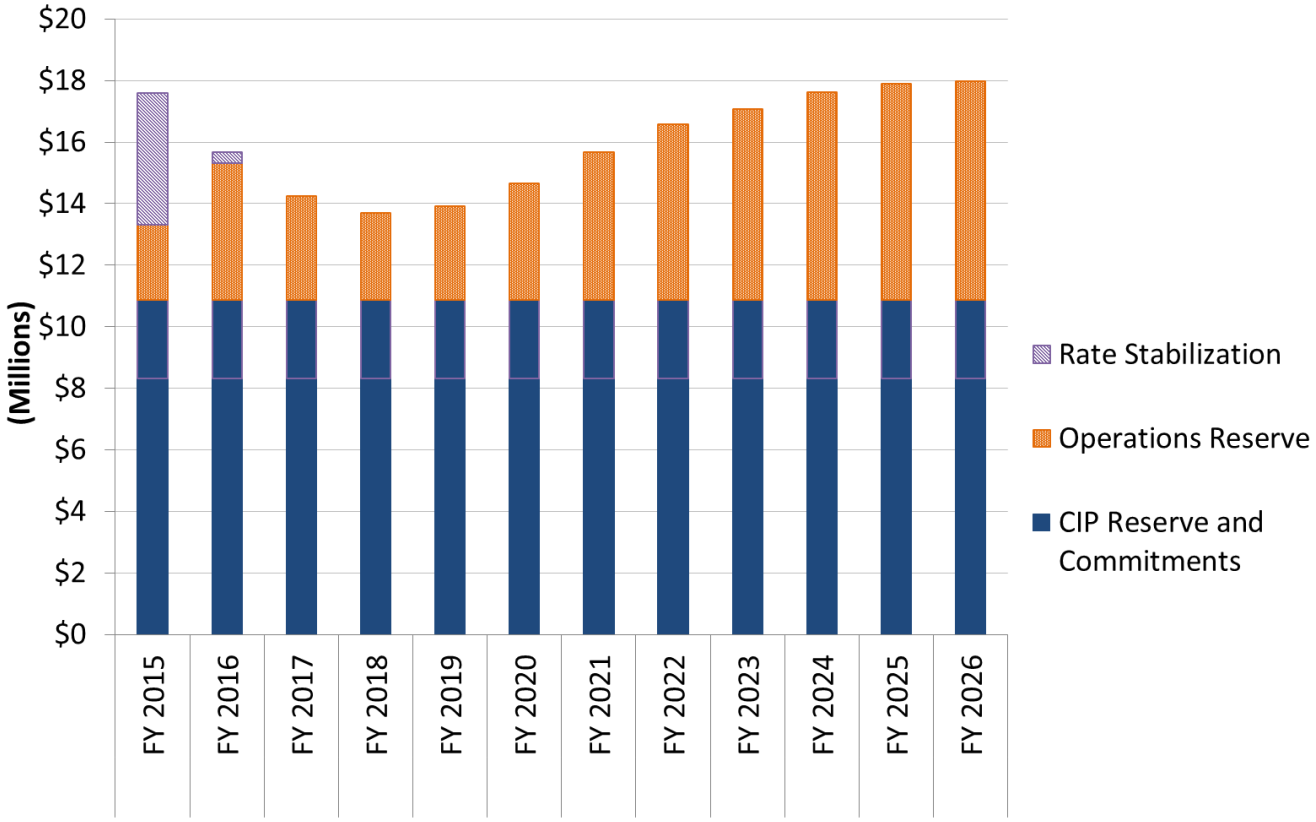
There are no notable changes from the FY 2016 budget identified at this time.

SECTION 5D: FY 2017 – FY 2026 PROJECTIONS

Staff has prepared a forecast of costs and revenues through FY 2026. As shown in Figure 3 above (and, in more detail, in *Appendix A: Wastewater Collection Financial Forecast Detail*), the Wastewater Collection Utility's total costs are projected to increase by roughly 4.4% per year on average for FY 2016 through FY 2026. The majority of this increase is borne by projected treatment cost increases. The treatment plant itself is facing the need for major upgrades in coming years, both due to age of equipment and constantly changing environmental regulations. While the costs of the plant are shared among member agencies, Palo Alto is still expected to see average cost increases of 6.3% per year over the forecast horizon.

Revenues are shown by the red line in Figure 3, and what is notable here is that costs have been generally higher than revenue. While some relief was experienced during times of lower CIP expenditures, this trend of under-collection continues into the future, resulting in a rapid reduction of reserves. A path of 9% and 10% annual rate increases in the near term, decreasing to more inflationary increases in outer years, is required to keep reserves from dropping too low. Figure 4 below shows the relative drop in reserves, only showing slowing replenishment after the projected 10% increase in FY 2018.

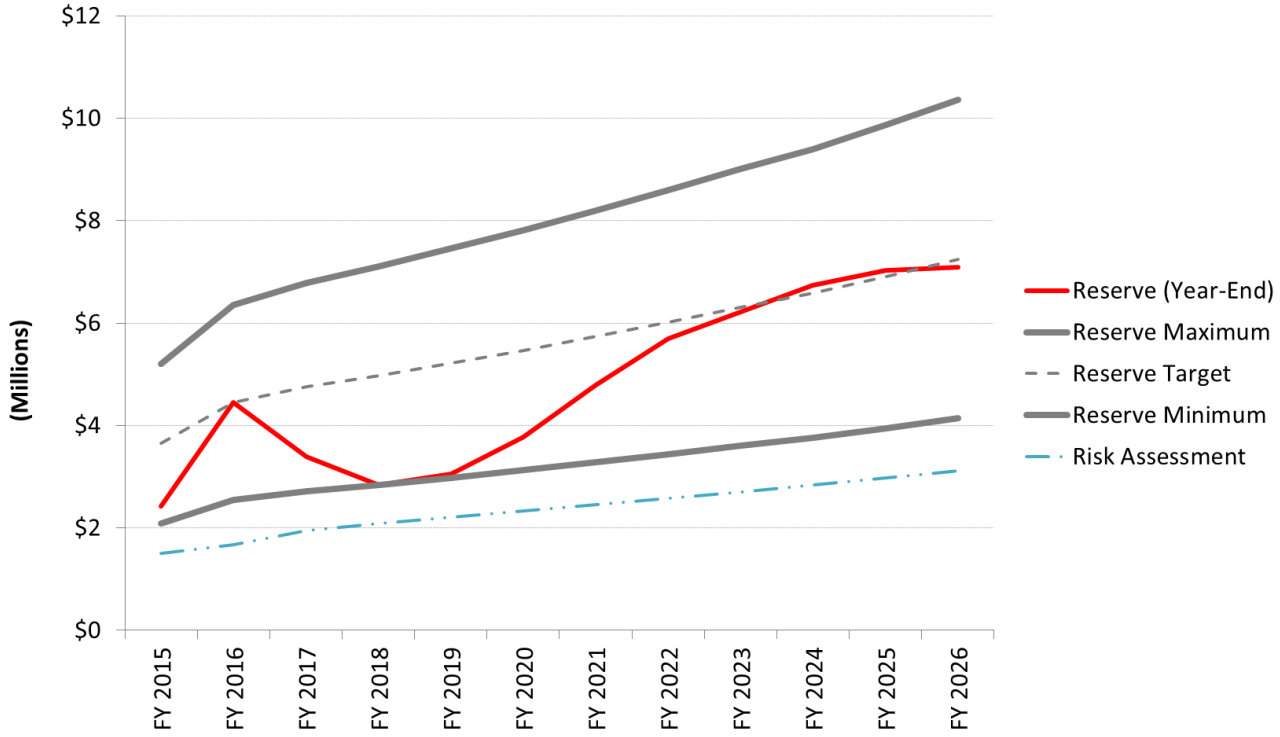
Figure 4: Wastewater Collection Reserves Projections



SECTION 5E: RISK ASSESSMENT AND RESERVES ADEQUACY

The Wastewater Collection Utility currently has one contingency reserve, the Operations Reserve, and this Financial Plan maintains reserves within the approved guideline levels throughout the forecast period, as shown in Figure 5 below. Reserve levels also exceed the short term risk assessment for the utility.

Figure 5: Operations Reserve Adequacy



Staff performs an annual assessment of risks for the Wastewater Collection Utility. For this evaluation, staff estimates the revenue shortfall due to:

1. the maximum observed budget-to-actual variance in one year during the past five years;
2. an increase of 10% in system improvement CIP expenditures for the year; and
3. an increase of 10% in treatment costs.

Table 9 summarizes the risk assessment calculation for the Wastewater Collection Utility through FY 2021. The Operations Reserve is projected to be adequate to manage these levels of risk over the entire forecast period.

Table 9: Wastewater Collection Risk Assessment

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total Revenue ($000)	17,505	19,249	20,989	22,474	23,832
Max. Historical Budget-to-Actual variance	3%	3%	3%	3%	3%
Budget-to-Actual Risk ($000)	525	577	630	674	715
System Rehabilitation CIP Budget ($000)	4,458	4,590	4,726	4,867	5,011
CIP Contingency @10% ($000)	446	459	473	487	501
Treatment Budget ($000)	9,855	10,446	11,073	11,737	12,442
Treatment Cost Contingency @10% ($000)	986	1,045	1,107	1,174	1,244
Total risk assessment value ($000)	**1,957**	**2,081**	**2,210**	**2,335**	**2,460**
Projected Operations Reserve Level ($000)	**3,386**	**2,837**	**3,048**	**3,780**	**4,793**

SECTION 5F: ALTERNATE SCENARIOS

At its February 2016 meeting, the UAC suggested that staff prepare two alternate scenarios for rate increases. The first ("Target") scenario keeps the Operations Reserve at or near the Target level during the forecast period. The second ("Minimum") scenario tries to mitigate rate increases and get as near to the minimum reserve level as possible for five years before moving to Target level. Rate trajectories for both alternate scenarios as well as the proposed rate adjustments are shown in Table 10 below.

Staff also modeled a scenario with no wastewater rate increase in FY 2017. This scenario decreases the Operations Reserve to the Risk Assessment value, and requires a 25% in FY 2018 to keep reserves at that value for one more year, before net revenue growth starts.

Table 10: Projected Wastewater Rate Trajectory for FY 2017 to FY 2026

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Proposed	9%	10%	9%	7%	6%	4%	4%	4%	4%	4%
Target	16%	9%	4%	4%	5%	5%	4%	6%	4%	4%
Minimum	5%	19%	4%	4%	6%	6%	6%	6%	5%	4%

The Target scenario, represented in Figure 6 below, requires a 16% rate increase (larger than the proposed 9% increase) in FY 2017, but reduces the rate increase slightly in FY 2018. The Minimum scenario, represented in Figure 7 below, allows a lower rate increase in FY 2017, but requires a significant rate increase (19%) in FY 2018.

Staff recommends a 9% wastewater rate increase in FY 2017 to smooth the rate increases over the next two years while keeping the Wastewater Collection Operations Reserve at healthy levels.

Figure 6: Operations Reserve at Target Level

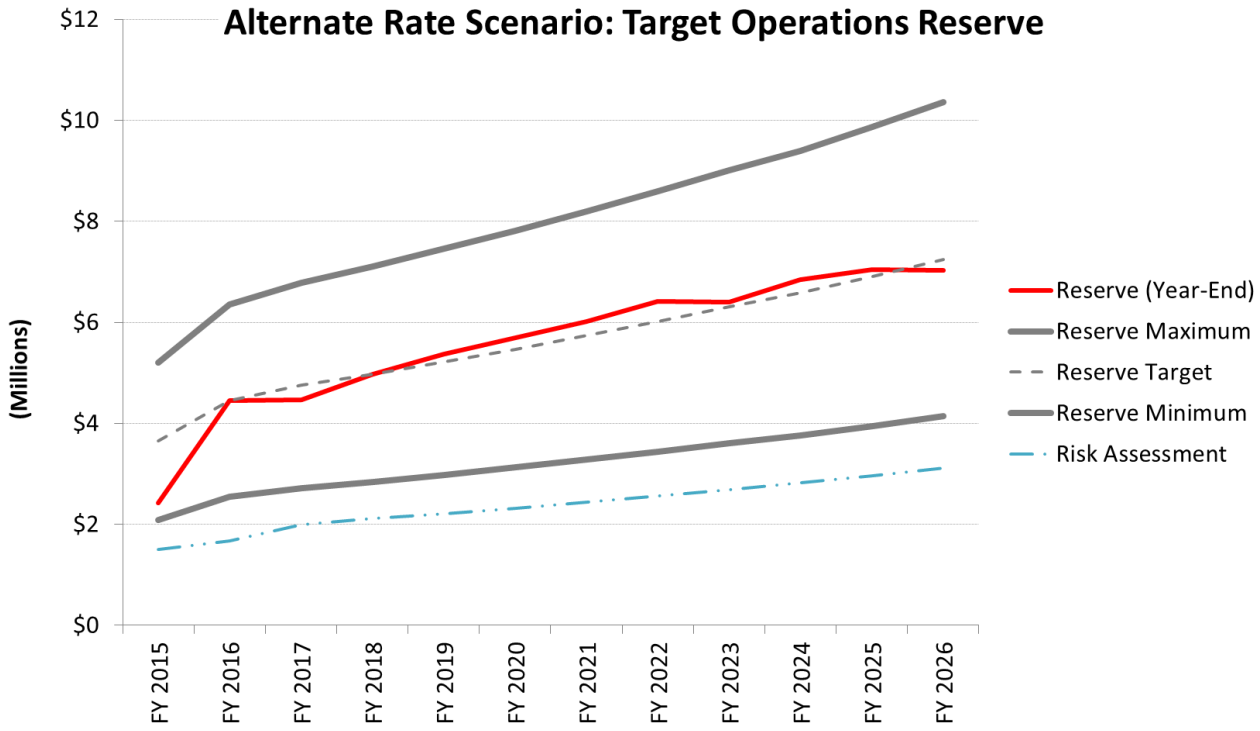
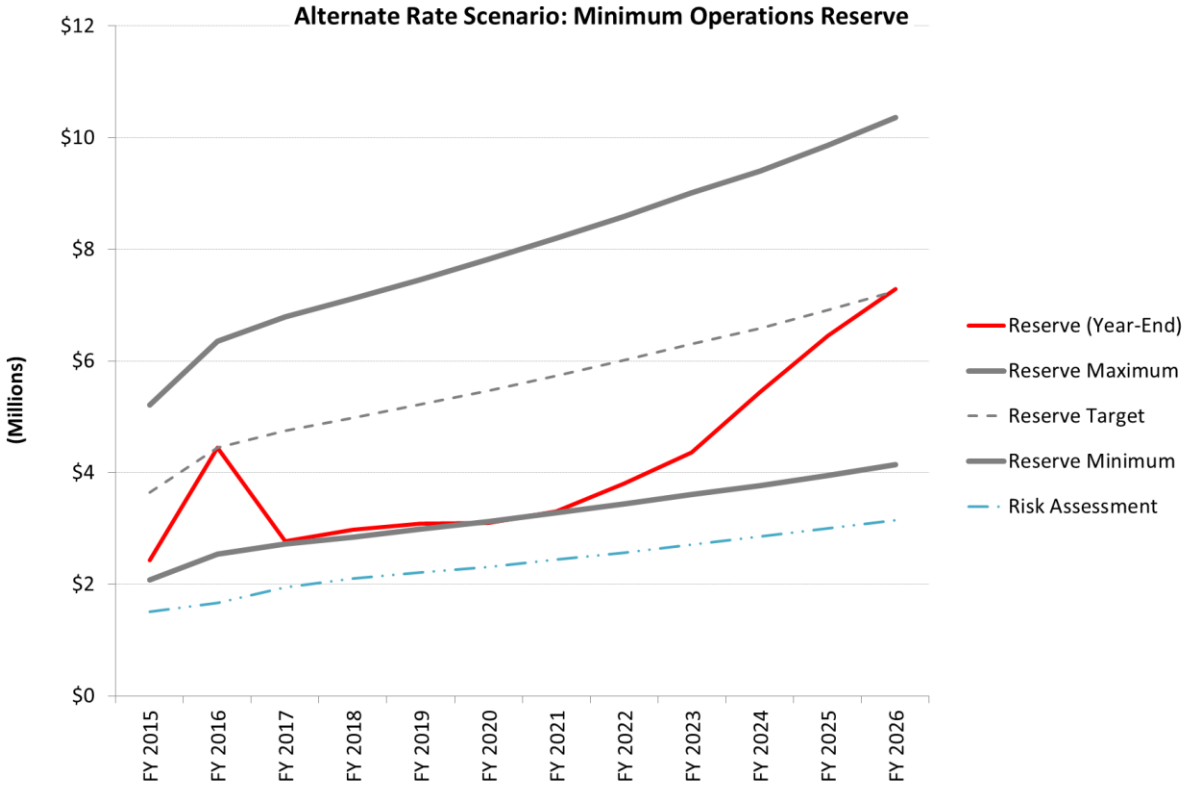


Figure 7: Operations Reserve at Minimum for FY 2017 through FY 2021



SECTION 5G: LONG-TERM OUTLOOK

In the longer term (5 to 35 years) the primary factor that could lead to increased costs for the Wastewater Collection Utility are major upgrades at the RWQCP, a share of which will be allocated to the utility as part of treatment costs. These upgrades includes replacement or rehabilitation of the parts of the facility that pump raw sewage to the main treatment works (the headworks), separate out primary sludge (the primary settling tank), process sludge (the bio-solids facility), and treat wastewater (the fixed film reactors). Upgrades to the laboratories and operational buildings are planned as well. In addition, the 72-inch regional trunk sewer line flowing into the plant needs to be evaluated and rehabilitated.

SECTION 6: DETAILS AND ASSUMPTIONS

SECTION 6A: WASTEWATER TREATMENT COSTS

Treatment expenses represent the Wastewater Collection Utility's share of the costs of operating the RWQCP. Per the partnership agreements between Palo Alto and its partner agencies, these charges are assessed based on a formula that takes into account the total amount of wastewater delivered, the amount of organic material in it, its ammonia content, and the total suspended solids it is carrying. The Wastewater Collection Utility's assessed share of the RWQCP's revenue requirement fluctuates in the 38% to 40% range. Mountain View is the other large agency served by the RWQCP (39% of the revenue requirement for FY 2014) with the smaller agencies (Stanford, Los Altos, East Palo Alto, and Los Altos Hills) making up the remainder of the flow to the treatment plant.

Due to the ongoing drought and reduced wastewater flows to the plant, concentrations of chemicals and solids have increased. The amount of chemicals needed to counteract and treat this more concentrated wastewater increases and the cost of those chemicals has gone up in recent years. Therefore, FY 2017 treatment costs are projected to increase by 7%, while over the forecast horizon in general treatment costs are expected to rise by 6% per year. The longer term cost increases are primarily due to increased CIP spending by the RWQCP.

Based on detailed project cost projections provided by RWQCP staff, treatment costs are likely to continue to increase by roughly 5% per year through at least 2030. Two of Palo Alto's comparison cities, Mountain View and Los Altos, are partners in the RWQCP and will see similar increases, but other comparison agencies may not.

SECTION 6B: OPERATIONS

Operations costs include the Customer Service, Distribution Operations, Engineering, and Allocated Charges categories in *Appendix A: Wastewater Collection Financial Forecast Detail*. Debt service, rent, and transfers are also included in this category. Customer Service costs are primarily related to the call center and collections on delinquent accounts. The Distribution Operations category includes preventative and corrective maintenance on sewer mains and laterals, investigation of sewer overflows, regular cleaning of heavily impacted sections of the sewer system, and services shared with other utilities (such as street restoration and

equipment maintenance). Allocated Charges include the costs of accounting, purchasing, legal, and other administrative functions provided by the City's General Fund staff, as well as shared communications services and Utilities Department administrative overhead and billing system maintenance costs.

Operations costs are projected to increase by 3% per year, on average, over the forecast period. Underlying these projections are salary and benefit, consumer price index, and other cost projections used in the City's long-range financial forecast.

SECTION 6C: CAPITAL IMPROVEMENT PROGRAM (CIP)

The Wastewater Collection Utility's CIP consists of the following programs:

- The Sewer System Replacement/Rehabilitation Program, under which the Wastewater Collection Utility replaces aging sewer mains.
- Customer Connections, which covers the cost when the Wastewater Collection Utility installs new services or upgrades existing services at a customer's request in response to development or redevelopment. CPAU charges a fee to these customers to cover the cost of these projects.
- Ongoing Projects, which covers the cost of replacing degraded manholes and sewer laterals, as well as the cost of capitalized tools and equipment.

The Sewer System Replacement and Rehabilitation Program funds the replacement of deteriorating sewer mains and projects to increase capacity in various parts of the sewer system. The sewer system consists of over 217 miles of mains, and CPAU uses a variety of tools to establish which sections are in need of replacement. Maintenance statistics (such as records of the location and number of sewer overflows on the system) and videotape of sewer mains during regular cleaning can reveal areas with large amounts of deteriorating pipe. CPAU uses a scoring system to prioritize which mains to replace first, and coordinates with the Public Works street maintenance program to avoid cutting into newly repaved streets. A major goal of the program is to minimize groundwater and rainwater infiltration. As mains deteriorate they begin to allow groundwater and rainwater to infiltrate the system. Some level of infiltration is expected on any sewer system, but if there is too much, the combined flow of wastewater and groundwater/rainwater can overwhelm the capacity of various parts of the sewer system. Reducing infiltration can reduce the need to expand the system to accommodate increased flow. To achieve this goal, deteriorating mains are either repaired with a plastic lining or replaced. CPAU replaces or repairs approximately 25,000 feet of main per year, or 2.5% of the system.

The CIP program also funds sewer capacity improvements. CPAU uses a hydraulic model, data from various flow meters on the system, and land use data to identify sections of the system that are being overloaded. When sewer mains are operating at or above their capacity on a regular basis it will increase the likelihood of sewer overflows. CPAU also does occasional comprehensive master planning studies to identify necessary capacity improvements. The most recent study, in 2004, identified eight projects, three of which have been completed. The

remaining four projects are low priority projects and will be scheduled and planned as the need arises.

Over the last few years, main replacement costs have been increasing for Wastewater as well as the Gas and Water utilities. The replacement cost per linear foot has increased by between 25 and 50% in some cases. Several factors may be contributing to this. Economic recovery in the Bay Area, as well as a greater focus on infrastructure improvement by many municipal agencies and utilities could be creating high demand for contractors in this field. There may be ongoing greater costs for newer, more leak resistant pipe materials. Should these trends prove to be less than short-term phenomena, wastewater main replacement budgets may need to be increased by $1.5 to $1.7 million more per year to maintain the current pace of replacement.

Since the last master plan study was updated over a decade ago, and due to these escalating costs, staff is considering a new wastewater collection system master plan study, tentatively planned for 2016, to evaluate the current state of the sewer system and determine the optimal rate of main replacement in future years. The process may reveal a need for a higher or lower replacement, or possibly target areas for more urgent focus. In the case that prices remain high and the updated plan shows a need for similar rates of replacement that CPAU had previously planned, CIP costs will rise.

Customer Connections costs are projected to increase steadily by around 3% each year through the end of the forecast period. Ongoing projects are seeing a temporary surge in FY 2016 but are expected to drop by $200,000 in FY 2017, then resume a path of cost increases similar to Customer Connections. Actual expenses for these projects fluctuate annually depending on how many defective laterals and manholes are discovered during routine maintenance, as well as how much development and redevelopment is going on that prompts the replacement or upgrade of sewer laterals. It is worth noting that property owners pay a fee for sewer lateral replacement or expansion during redevelopment, so when the number of projects increases, so does fee revenue.

Projected CIP spending is displayed in Table 11 for the 5-year financial forecast period.

Table 11: Projected CIP Spending

Project Category	Current Budget*	Spending, Curr. Yr	Remain. Budget**	Committed	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Sewer Rehab/Augmentation	12,848	(646)	12,202	7,009	3,511	3,616	3,725	3,836	3,951
Ongoing Projects	1,562	-	1,562	1,232	907	933	959	985	1,015
Customer Connections	288	(173)	115	58	394	406	418	431	443
TOTAL	14,698	(819)	13,878	8,298	4,812	4,955	5,101	5,252	5,410

*Includes unspent funds from previous years carried forward or reappropriated into the current fiscal year

**Equal to CIP Reserves (Reserve for Reappropriations + Reserve for Commitments).

Aside from Customer Connections, the CIP plan for FY 2017 to FY 2021 is funded by sewer rates and capacity fees. The details of the plan are shown in *Appendix B: Wastewater Collection Utility Capital Improvement Program (CIP) Detail*.

SECTION 6D: DEBT SERVICE

The Wastewater Collection Utility currently pays its share of one bond issuance, the 1999 Utility Revenue Bonds, Series A, which is due to be retired in 2024. This $17.7 million issuance refinanced various earlier Storm Drain, Wastewater Treatment, and Wastewater Collection Utility bond issuances. The Wastewater Collection Utility's share of the issuance was roughly $1.9 million. This amount represented the second refinancing of the remaining principal of a 1990 bond issuance which itself was a refinancing of a 1985 issuance that financed a variety of improvements to the sewer system. The cost of debt service for the Wastewater Collection Utility's share of this bond issuance for the financial forecast period is roughly $128,000 per year as shown in Table 12 below.

Table 12: Wastewater Collection Utility Debt Service ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1999 Utility Revenue Bonds, Series A	128	128	128	128	128	128

The 1999 Utility Revenue Bonds include two covenants stating that 1) the Wastewater Collection Utility will maintain a debt coverage ratio of 125% of debt service, and 2) that the City will maintain "Available Reserves"[8] equal to five times the annual debt service. The current financial plan maintains compliance with both covenants throughout the forecast period. Compliance with covenant one is shown below in Table 13, below. Due to the small size of the annual debt service payment for these bonds, the Wastewater Collection Utility's Operations Reserve alone more than satisfies the second covenant at more than 30 times annual debt service throughout the forecast period.

Table 13: Debt Service Coverage Ratio ($000)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	19,565	21,359	23,099	24,647	26,007	27,026
Expenses (Excl. CIP and Debt Service)	(16,388)	(17,184)	(18,015)	(18,891)	(19,810)	(20,779)
Net Revenues	3,177	4,175	5,084	5,756	6,197	6,247
Debt Service	128	128	128	128	128	128
Coverage Ratio	2482%	3262%	3972%	4497%	4841%	4880%

The Wastewater Collection Utility's reserves (but not its net revenues) are also considered security for the Storm Drain and Wastewater Treatment Utilities' shares of the debt service on the 1999 bonds. Throughout the term of the bonds there remains a small risk that the Wastewater Collection Utility's reserves could be called upon to make a debt service payment on behalf of one of those utilities if it cannot meet its debt service obligations. Staff does not foresee this occurring based on the current financial condition of those utilities. If the Wastewater Collection Utility's reserves were used this way, any amounts advanced would have to be repaid by the borrowing utility.

[8] Available Reserves as defined in the 1999 Utility Revenue Bonds included reserves for the Water, Wastewater Treatment, Wastewater Collection, Refuse, Storm Drain, Electric, and Gas Utilities

One other bond series is secured by the net revenues (but not the reserves) of the Wastewater Collection Utility. The 1995 Series A Utility Revenue Bonds issued for the Storm Drain utility was secured by the net revenues of the City's "Enterprise," which was defined as the City's water, gas, wastewater, storm drain, and electric utilities, and are senior to the 1999 bonds referenced above. Debt service payments of roughly $680,000 per year are made on the 1995 Series A bonds by the City's Storm Drain Utility, and staff does not currently foresee any risk of that utility being unable to make payment.

SECTION 6E: OTHER REVENUES

The utility has seen substantial increases in connection and capacity fee revenues in recent years, offsetting the need for increased sales revenue in the past, and these are assumed to continue, albeit slightly reduced from current levels. Income from interest and transfers in are projected to remain steady through the forecast horizon.

SECTION 7: COMMUNICATIONS PLAN

The FY 2017 Wastewater Collection Utility communications strategy covers three primary areas: rates, operations and infrastructure, and safety. Communication about wastewater rate adjustments will highlight the important infrastructure and operations upgrades that are occurring at the Regional Water Quality Control Plant to improve wastewater collection utility services. To keep customers apprised of the status and accomplishments of CIP projects, a network of project web pages are maintained and updated as needed. Traffic is driven to the website via ads in publications, newspaper inserts, social media and email blasts.

An important communications topic for the wastewater utility is avoiding sewer back-ups due to FOG (fats, oil and grease) and trash being dumped down drains and toilets. Safety topics are emphasized year-round. Staff continues its outreach goal of educating customers about the utility's gas-sewer line cross-bore inspection program, including the importance of calling Utilities first when there is a sewer back-up.

Promotional activity about wastewater utility maintenance and safety operations includes use of bill inserts, ads in local print publications, website pages, email blasts and social media. While print materials and website pages feature prominently, CPAU is increasing the outreach emphasis on use of direct mail, social media and digital advertising including videos and short commercials on the local television channels. Staff is also attending more community safety/emergency preparation events and neighborhood meetings.

APPENDICES

Appendix A: Wastewater Collection Financial Forecast Detail

Appendix B: Wastewater Collection Utility Capital Improvement Program (CIP) Detail

Appendix C: Wastewater Collection Utility Reserves Management Practices

Appendix D: Sample of Wastewater Collection Outreach Materials

APPENDIX A: WASTEWATER COLLECTION FINANCIAL FORECAST DETAIL

City of Palo Alto
Wastewater Collection

FINANCIAL PROJECTIONS

($'000)

	Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1																	
2	% CHANGE IN RETAIL RATE	0%	0.0%	5.0%	0.0%	0.0%	9.0%	9.0%	10.0%	9.0%	7.0%	6.0%	4.0%	4.0%	4.0%	4.0%	4.0%
3	PROJECTED CHANGE IN RETAIL SALES REVENUE	-	-	715	-	-	1,352	1,450	1,757	1,739	1,474	1,352	956	994	1,033	1,075	1,118
4																	
5	RETAIL SALES REVENUE	14,287	14,094	15,019	14,588	14,658	16,139	17,529	19,272	21,012	22,497	23,855	24,827	25,819	26,851	27,924	29,040
6	CONNECTION AND CAPACITY FEES	1,081	989	1,609	1,703	1,392	1,402	1,445	1,487	1,519	1,578	1,578	1,578	1,578	1,578	1,578	1,578
7	OTHER / TRANSFERS IN	307	264	545	361	753	271	241	271	241	271	241	271	241	271	241	271
8	INTEREST	454	494	(211)	339	315	295	351	328	327	301	333	351	438	513	529	545
9	TOTAL SOURCES OF FUNDS	16,129	15,841	16,963	16,991	17,119	18,106	19,565	21,359	23,099	24,647	26,007	27,026	28,075	29,212	30,271	31,434
10																	
11	PURCHASES/CHARGES OF UTILITIES (TREATM	7,414	8,895	8,314	6,863	8,589	9,012	9,855	10,446	11,073	11,737	12,442	13,188	13,980	14,818	15,707	16,650
12	ALLOCATED CHARGES (CIP&OPERATING)	1,787	791	1,926	2,359	1,062	2,363	2,442	2,518	2,594	2,673	2,753	2,836	2,921	3,010	3,101	3,194
	CUSTOMER SERVICE	281	72	1	133	(324)	499	504	509	513	518	523	528	533	538	544	549
13	DISTRIBUTION OPERATIONS	2,227	2,466	2,617	2,570	2,646	2,725	2,837	2,941	3,043	3,150	3,258	3,370	3,486	3,606	3,730	3,859
	ENGINEERING (OPERATING)	195	258	271	310	319	328	342	355	368	381	394	408	423	438	453	469
14	DEBT SERVICE	128	128	128	129	51	128	128	128	128	128	129	129	129	-	-	-
15	RENT	115	106	110	217	223	293	300	308	316	324	333	341	350	359	369	378
16	OTHER/ TRANSFERS OUT	267	88	147	241	108	108	108	108	108	108	108	108	108	108	108	108
17	CAPITAL IMPROVEMENT FUNDING	4,630	4,274	4,094	989	3,477	4,985	4,852	4,996	5,144	5,297	5,455	5,617	5,784	5,955	6,132	6,315
	ALLOWANCE FOR UNSPENT CAPITAL FUNDS				-	-	(400)	(400)	(400)	(400)	(400)	(400)	(400)	(155)	(154)	(154)	(154)
18	TOTAL USES OF FUNDS	17,044	17,079	17,610	13,811	16,150	20,041	20,968	21,908	22,887	23,916	24,993	26,125	27,558	28,678	29,990	31,368
19																	
20	INTO / (OUT OF) RESERVES	(914)	(1,238)	(647)	3,180	969	(1,935)	(1,402)	(549)	212	731	1,013	902	517	534	282	66
21																	
24	ENDING COMMITMENTS & REAPPROPRIATI	10,250	11,044	11,228	8,312	8,291	8,291	8,291	8,291	8,291	8,291	8,291	8,291	8,291	8,291	8,291	8,291
23	ENDING PLANT REPLACEMENT RESERVE	1,000	1,000	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-
	ENDING CIP RESERVE	-	-	-	-	2,551	2,551	2,551	2,551	2,551	2,551	2,551	2,551	2,551	2,551	2,551	2,551
22	ENDING RATE STABILIZATION RESERVE	5,858	4,751	4,104	4,556	4,292	342	-	-	-	-	-	-	-	-	-	-
	ENDING OPERATIONS RESERVE	-	-	-	3,728	2,431	4,446	3,386	2,837	3,048	3,780	4,793	5,695	6,212	6,746	7,027	7,093
25	UNASSIGNED RESERVES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	RISK ASSESSMENT VALUE	**1,815**	**1,879**	**2,736**	**2,230**	**2,722**	**2,876**	**3,043**	**3,221**	**3,409**	**3,598**	**3,727**					
27																	
28	OPERATIONS RESERVE GUIDELINES																
29	MIN (60 DAYS TREATMENT/O&M EXP)	2,156	2,156	2,253	1,915	2,083	2,541	2,715	2,846	2,982	3,126	3,278	3,437	3,605	3,760	3,947	4,144
	TARGET (105 DAYS TREATMENT/O&M E	1,815	1,879	1,681	3,352	3,646	4,446	4,751	4,980	5,219	5,471	5,736	6,015	6,308	6,581	6,907	7,251
30	MAX (150 DAYS TREATMENT/O&M EXP)	4,311	4,311	4,506	4,788	5,208	6,352	6,787	7,115	7,456	7,816	8,194	8,592	9,012	9,401	9,867	10,359
31																	

APPENDIX B: WASTEWATER COLLECTION UTILITY CAPITAL IMPROVEMENT PROGRAM (CIP) DETAIL

Project #	Project Name	Reappropriated / Carried Forward from Previous Years	Current Year Funding	Budget Amendments	Spending, Current Year	Remaining in CIP Reserve Fund	Commitments	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
SEWER SYSTEM REHABILITATION AND AUGMENTATION (SSR/A) PROGRAM												
WC-07004	SSR/A - Project 20	39,293	-	-	-	39,293	-	-	-	-	-	
WC-08012	SSR/A - Project 21	151,847	-	(151,847)	-	-	-	-	-	-	-	
WC-09001	SSR/A - Project 22	(42,912)	-	42,912	(176)	(176)	-	-	-	-	-	
WC-10002	SSR/A - Project 23	982,263	-	-	-	982,263	224,253	-	-	-	-	
WC-11000	SSR/A - Project 24	2,340,130	206,084	(206,084)	(200,554)	2,139,576	2,032,231	-	-	-	-	
WC-12001	SSR/A - Project 25	2,686,175	528,246	(528,246)	(164,950)	2,521,225	2,046,281	-	-	-	-	
WC-13001	SSR/A - Project 26	3,163,649	268,014	(268,014)	(200,567)	2,963,082	2,705,906	-	-	-	-	
WC-14001	SSR/A - Project 27	216,417	3,358,133	(268,133)	(79,938)	3,226,479	1	-	-	-	-	
WC-15001	SSR/A - Project 28	-	330,000	-	-	330,000	-	3,183,000	-	-	-	-
WC-16001	SSR/A - Project 29	-	-	-	-	-	-	327,849	3,278,490	-	-	-
WC-17001	SSR/A - Project 30	-	-	-	-	-	-	-	337,684	3,376,845	-	-
WC-19001	SSR/A - Project 31	-	-	-	-	-	-	-	-	347,815	3,478,150	-
WC-20000	SSR/A - Project 32	-	-	-	-	-	-	-	-	-	358,249	3,582,495
WC-21000	SSR/A - Project 33	-	-	-	-	-	-	-	-	-	-	368,997
Subtotal, Sewer Rehab./Augmentation		9,536,862	4,690,477	(1,379,412)	(646,185)	12,201,742	7,008,672	3,510,849	3,616,174	3,724,660	3,836,399	3,951,492
ONGOING PROJECTS												
WC-13002	Fusion & Gen. Equip./Tools	78,132	50,000	(78,132)	-	50,000	-	50,000	50,000	50,000	50,000	50,000
WC-15002	WW System Improvements	435,981	232,000	(377,717)	-	290,264	216,120	239,000	246,000	253,000	260,000	269,000
WC-99013	Sewer / Manhole Rehab.	621,917	600,000	(506)	-	1,221,411	1,015,451	618,000	636,540	655,636	675,305	695,564
Subtotal, Ongoing Projects		1,136,030	882,000	(456,355)	-	1,561,675	1,231,571	907,000	932,540	958,636	985,305	1,014,564
CUSTOMER CONNECTIONS (FEE FUNDED)												
WC-80020	Sewer System Extensions	210,275	383,000	(305,227)	(173,204)	114,844	57,994	394,000	405,820	417,995	430,534	443,450
Subtotal, Customer Connections		210,275	383,000	(305,227)	(173,204)	114,844	57,994	394,000	405,820	417,995	430,534	443,450
GRAND TOTAL		10,883,167	5,955,477	(2,140,994)	(819,389)	13,878,261	8,298,237	4,811,849	4,954,534	5,101,291	5,252,239	5,409,507
Funding Sources												
Connection/Capacity Fees			383,000	(305,227)				394,000	405,820	417,995	430,534	443,450
Funded by Rates and Other Revenue			5,572,477	(1,835,767)				4,417,849	4,548,714	4,683,296	4,821,704	4,966,056

CIP-RELATED RESERVES DETAIL	6/30/2015 (Actual)	9/30/2015
Reappropriations	2,700,167	5,580,024
Commitments	8,183,000	8,298,237

APPENDIX C: WASTEWATER COLLECTION UTILITY RESERVES MANAGEMENT PRACTICES

The following reserves management practices shall be used when developing the Wastewater Collection Utility Financial Plan:

Section 1. Definitions

a) "Financial Planning Period" – The Financial Planning Period is the range of future fiscal years covered by the Financial Plan. For example, if the Financial Plan delivered in conjunction with the FY 2015 budget includes projections for FY 2015 to FY 2019, FY 2015 to FY 2019 would be the Financial Planning Period.
b) "Fund Balance" – As used in these Reserves Management Practices, Fund Balance refers to the Utility's Unrestricted Net Assets.
c) "Net Assets" - The Government Accounting Standards Board defines a Utility's Net Assets as the difference between its assets and liabilities.
d) "Unrestricted Net Assets" - The portion of the Utility's Net Assets not invested in capital assets (net of related debt) or restricted for debt service or other restricted purposes.

Section 2. Reserves

The Wastewater Collection Utility's Fund Balance is reserved for the following purposes:
a) For existing contracts, as described in Section 3 (Reserve for Commitments)
b) For operating and capital budgets re-appropriated from previous years, as described in Section 4 (Reserve for Re-appropriations)
c) For cash flow management and contingencies related to the Wastewater Collection Utility's Capital Improvement Program (CIP), as described in Section 5 (CIP Reserve)
d) For rate stabilization, as described in Section 6 (Rate Stabilization Reserve)
e) For operating contingencies, as described in Section 7 (Operations Reserve)
f) Any funds not included in the other reserves will be considered Unassigned Reserves and shall be returned to ratepayers or assigned a specific purpose as described in Section 8 (Unassigned Reserves).

Section 3. Reserve for Commitments

At the end of each fiscal year the Reserve for Commitments will be set to an amount equal to the total remaining spending authority for all contracts in force for the Wastewater Collection Utility at that time.

Section 4. Reserve for Re-appropriations

At the end of each fiscal year the Reserve for Re-appropriations will be set to an amount equal to the amount of all remaining capital and non-capital budgets, if any, that will be re-appropriated to the following fiscal year in accordance with Palo Alto Municipal Code Section 2.28.090.

Section 5. CIP Reserve

The CIP Reserve is used to manage cash flow for capital projects and acts as a reserve for capital contingencies. Staff will manage the CIP Reserve according to the following practices:

a) The following guideline levels are set forth for the CIP Reserve. These guideline levels are calculated for each fiscal year of the Financial Planning Period based on the levels of CIP expense budgeted for that year.

Minimum Level	12 months of budgeted CIP expense
Maximum Level	24 months of budgeted CIP expense

b) Changes in Reserves: Staff is authorized to transfer funds between the CIP Reserve and the Reserve for Commitments when funds are added or removed from to that reserve as a result of a change in contractual commitments related to CIP projects. Any other additions to or withdrawals from the CIP reserve require Council action.

c) Minimum Level:
   i) Funds held in the Reserve for Commitments may be counted as part of the CIP Reserve for the purpose of determining compliance with the CIP Reserve minimum guideline level.
   ii) If, at the end of any fiscal year, the minimum guideline is not met, staff shall present a plan to the City Council to replenish the reserve. The plan shall be delivered by the end of the following fiscal year, and shall, at a minimum, result in the reserve reaching its minimum level by the end of the next fiscal year. For example, if the CIP Reserve is below its minimum level at the end of FY 2017, staff must present a plan by June 30, 2018 to return the reserve to its minimum level by June 30, 2019. In addition, staff may present, and the Council may adopt, an alternative plan that takes longer than one year to replenish the reserve, or that does so in a shorter period of time.

d) Maximum Level: If, at any time, the CIP Reserve reaches its maximum level, no funds may be added to this reserve. If there are funds in this reserve in excess of the maximum level staff must propose to transfer these funds to another reserve or return them to ratepayers in the next Financial Plan. Staff may also seek City Council to approve holding funds in this reserve in excess of the maximum level if they are held for a specific future purpose related to the CIP.

Section 6. Rate Stabilization Reserve

Funds may be added to the Rate Stabilization Reserve by action of the City Council and held to manage the trajectory of future year rate increases. Withdrawal of funds from the Rate Stabilization Reserve requires Council action. If there are funds in the Rate Stabilization Reserve at the end of any fiscal year, any subsequent Wastewater Collection Utility Financial Plan must result in the withdrawal of all funds from this Reserve by the end of the Financial Planning Period.

Section 7. Operations Reserve

The Operations Reserve is used to manage normal variations in costs and as a reserve for contingencies. Any portion of the Wastewater Collection Utility's Fund Balance not included in the reserves described in Section 3-Section 6 above will be included in the Operations Reserve unless this reserve has reached its maximum level as set forth in Section 7(d) below. Staff will manage the Operations Reserve according to the following practices:

a) The following guideline levels are set forth for the Operations Reserve. These guideline levels are calculated for each fiscal year of the Financial Planning Period based on the levels of Operations and Maintenance (O&M) and commodity expense forecasted for that year in the Financial Plan.

Minimum Level	60 days of O&M and commodity expense
Target Level	105 days of O&M and commodity expense
Maximum Level	150 days of O&M and commodity expense

b) Minimum Level: If, at the end of any fiscal year, the funds remaining in the Operations Reserve are lower than the minimum level set forth above, staff shall present a plan to the City Council to replenish the reserve. The plan shall be delivered within six months of the end of the fiscal year, and shall, at a minimum, result in the reserve reaching its minimum level by the end of the following fiscal year. For example, if the Operations Reserve is below its minimum level at the end of FY 2014, staff must present a plan by December 31, 2014 to return the reserve to its minimum level by June 30, 2015. In addition, staff may present, and the Council may adopt, an alternative plan that takes longer than one year to replenish the reserve.

c) Target Level: If, at the end of any fiscal year, the Operations Reserve is higher or lower than the target level, any Financial Plan created for the Wastewater Collection Utility shall be designed to return the Operations Reserve to its target level within four years.

d) Maximum Level: If, at any time, the Operations Reserve reaches its maximum level, no funds may be added to this reserve. Any further increase in the Wastewater Collection Utility's Fund Balance shall be automatically included in the Unassigned Reserve described in Section 8, below.

Section 8. Unassigned Reserve

If the Operations Reserve reaches its maximum level, any further additions to the Wastewater Collection Utility's Fund Balance will be held in the Unassigned Reserve. If there are any funds in the Unassigned Reserve at the end of any fiscal year, the next Financial Plan presented to the City Council must include a plan to assign them to a specific purpose or return them to the Wastewater Collection Utility ratepayers by the end of the first fiscal year of the next Financial Planning Period. For example, if there were funds in the Unassigned Reserves at the end of FY 2015, and the next Financial Planning Period is FY 2016 through FY 2020, the Financial Plan shall include a plan to return or assign any funds in the Unassigned Reserve by the end of FY 2016. Staff may present an alternative plan that retains these funds or returns them over a longer period of time.

APPENDIX D: SAMPLE OF WASTEWATER COLLECTION OUTREACH MATERIALS

* NOT YET APPROVED *

Resolution No. _____

Resolution of the Council of the City of Palo Alto Increasing Wastewater Rates by Amending Rate Schedules S-1 (Residential Wastewater Collection and Disposal), S-2 (Commercial Wastewater Collection and Disposal), S-6 (Restaurant Wastewater Collection and Disposal) and S-7 (Commercial Wastewater Collection and Disposal – Industrial Discharger)

R E C I T A L S

A. Pursuant to Chapter 12.20.010 of the Palo Alto Municipal Code, the Council of the City of Palo Alto may by resolution adopt rules and regulations governing utility services, fees and charges.

B. On ____, 2016, the City Council held a full and fair public hearing regarding the proposed rate increase and considered all protests against the proposals.

C. As required by Article XIII D, Section 6 of the California Constitution and applicable law, notice of the _____ 2016 public hearing was mailed to all City of Palo Alto Utilities wastewater customers by _____, 2016.

D. The City Clerk has tabulated the total number of written protests presented by the close of the public hearing, and determined that it was less than fifty percent (50%) of the total number of customers and property owners subject to the proposed wastewater rate amendments, therefore a majority protest does not exist against the proposal.

The Council of the City of Palo Alto does hereby RESOLVE as follows:

SECTION 1. Pursuant to Section 12.20.010 of the Palo Alto Municipal Code, Utility Rate Schedule S-1 (Residential Wastewater Collection and Disposal) is hereby amended to read as attached and incorporated. Utility Rate Schedule S-1, as amended, shall become effective July 1, 2016.

SECTION 2. Pursuant to Section 12.20.010 of the Palo Alto Municipal Code, Utility Rate Schedule S-2 (Commercial Wastewater Collection and Disposal) is hereby amended to read as attached and incorporated. Utility Rate Schedule S-2, as amended, shall become effective July 1, 2016.

SECTION 3. Pursuant to Section 12.20.010 of the Palo Alto Municipal Code, Utility Rate Schedule S-6 (Restaurant Wastewater Collection and Disposal) is hereby amended to read as attached and incorporated. Utility Rate Schedule S-6, as amended, shall become effective July 1, 2016.

* NOT YET APPROVED *

SECTION 4. Pursuant to Section 12.20.010 of the Palo Alto Municipal Code, Utility Rate Schedule S-7 (Commercial Wastewater Collection and Disposal – Industrial Discharger) is hereby amended to read as attached and incorporated. Utility Rate Schedule S-7, as amended, shall become effective July 1, 2016.

SECTION 5. The Council finds that the revenue derived from the wastewater rates approved by this resolution do not exceed the funds required to provide water service, and the revenue derived from the adoption of this resolution shall be used only for the purposes set forth in Article VII, Section 2, of the Charter of the City of Palo Alto.

SECTION 6. The Council finds that the fees and charges adopted by this resolution are charges imposed for a specific government service or product provided directly to the payor that are not provided to those not charged, and do not exceed the reasonable costs to the City of providing the service or product.

SECTION 7. The Council finds that the adoption of this resolution changing wastewater collection rates to meet operating expenses, purchase supplies and materials, meet financial reserve needs and obtain funds for capital improvements necessary to maintain service is not subject to the California Environmental Quality Act (CEQA), pursuant to California Public Resources Code Sec. 21080(b)(8) and Title 14 of the California Code of Regulations Sec. 15273(a). After reviewing the staff report and all attachments presented to Council, the Council incorporates these documents herein and finds that sufficient evidence has been presented setting forth with specificity the basis for this claim of CEQA exemption.

INTRODUCED AND PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

_____	_____
City Clerk	Mayor
APPROVED AS TO FORM:	APPROVED:
_____	_____
Senior Deputy City Attorney	City Manager

Attachment C

* NOT YET APPROVED *

_____
Director of Utilities

_____
Director of Administrative Services

ATTACHMENT D

RESIDENTIAL WASTEWATER COLLECTION AND DISPOSAL

UTILITY RATE SCHEDULE S-1

A. APPLICABILITY:

This schedule applies to each occupied residential dwelling unit.

B. TERRITORY:

This schedule applies everywhere the City of Palo Alto provides wastewater service.

C. RATES:

Per Month

Each domestic dwelling unit.....
$~~31~~34.83~~95~~

D. SPECIAL NOTES:

1. Any dwelling unit being individually served by a water, gas, or electric meter will be considered continuously occupied.

2. For two or more occupied dwelling units served by one water meter, the monthly wastewater charge will be calculated by multiplying the current wastewater rate by the number of dwelling units.

3. Each developed separate lot shall have a separate service lateral to a sanitary main or manhole.

{End}

COMMERCIAL WASTEWATER COLLECTION AND DISPOSAL

UTILITY RATE SCHEDULE S-2

A. APPLICABILITY:

This schedule applies to all commercial establishments other than those served under Utility Rate Schedule S-1 (~~Domestic~~ Residential Wastewater Collection and Disposal), Rate Schedule S-6 (Restaurant Wastewater Collection and Disposal) or Rate Schedule S-7 (Commercial Establishments Wastewater Disposal – Industrial Discharger).

B. TERRITORY:

This schedule applies everywhere the City of Palo Alto provides wastewater services.

C. RATES:

1. Minimum Charge per connection per month .....$~~31~~34.83~~95~~

2. Quantity Rates, per 100 cubic feet (See Section D.1)..... $6.71~~16~~

D. SPECIAL NOTES:

1. The monthly charge for the quantity rate set forth in Section C.2 of this rate schedule will be based upon the average water usage for the months of January, February and March, and applied in the following July. If a water meter is identified as exclusively serving irrigation landscaping, such meter will be exempted from wastewater charge calculations. Customers without an applicable usage history will be charged at the minimum monthly charge until such time as such usage may reasonably be established by the City of Palo Alto Utilities Department.

2. The City of Palo Alto Utilities Department may require wastewater metering facilities, in which case service will be governed by terms of a special agreement between the City and the Customer.

{End}

RESTAURANT WASTEWATER COLLECTION AND DISPOSAL

UTILITY RATE SCHEDULE S-6

A. APPLICABILITY:

This schedule applies to all restaurants.

B. TERRITORY:

This schedule applies everywhere the City of Palo Alto provides wastewater services.

C. RATES:

1. Minimum charge per connection per month ..... $~~31~~34.83~~95~~

2. Quantity Rates, per 100 cubic feet of monthly metered water usage..... $ ~~9~~10.~~52~~38

D. SPECIAL NOTES:

1. The City of Palo Alto Utilities Department may require wastewater metering facilities, in which case service will be governed by terms of a special agreement between the City and the Customer.

{End}

COMMERCIAL WASTEWATER COLLECTION AND DISPOSAL – INDUSTRIAL DISCHARGER

UTILITY RATE SCHEDULE S-7

A. APPLICABILITY:

This schedule applies to any establishment requiring sampling of industrial discharges in excess of 25,000 gallons per day, or special discharge monitoring, as defined in Rule and Regulation 23, Section D.

B. TERRITORY:

This schedule applies everywhere the City of Palo Alto provides wastewater services.

C. RATES:

1. Collection System Operation, Maintenance, and Infiltration Inflow: $1.~~78~~94 per 100 cubic feet of metered water use.

2. Advanced Waste Treatment Operations and Maintenance Charge: $1.14~~05~~ per 100 cubic feet of metered water use

3. $ 247.56 per 1000 pounds (lbs) of COD (Chemical Oxygen Demand)
4. $ 596.62 per 1000 lbs of SS (Suspended Solids)
5. $ 3,983.85 per 1000 lbs of NH_3 (Ammonia)
6. $ 14,781.25 per 1000 lbs of toxics (chromium, copper, cyanide, lead, nickel, silver, and zinc)

D. SPECIAL NOTES:

1. Water usage will be determined as defined in Rule and Regulation 23, Section D. If a water meter is identified as exclusively serving irrigation landscaping, such meter will be exempted from wastewater charge calculations.

2. The City of Palo Alto Utilities Department may require wastewater metering facilities, in which case service will be governed by terms of a special agreement between the City of Palo Alto and the Customer.

3. Charges for large discharges will be determined on the basis of sampling as outlined in Utilities Rule and Regulation 23, Section D. However, for purposes of arriving at an accurate flow estimate, discharge meters, if installed, can be utilized to measure outflow for billing purposes. Annual charges will be determined and allocated monthly for billing purposes.

{End}