



Study Report:

**FY 2016/17 Municipal & Industrial
Connection Fee Program Update**

February 2017

OFFICE LOCATIONS:

Temecula – Corporate Headquarters
32605 Temecula Parkway, Suite 100
Temecula, CA 92592

San Francisco - Regional Office
870 Market Street, Suite 1223
San Francisco, CA 94102

Davis - Regional Office
140 B Street, Suite 5-292
Davis, CA 95616

Phone: 800.676.7516

www.nbsgov.com

TABLE OF CONTENTS

SECTION 1. EXECUTIVE SUMMARY	4
EXECUTIVE SUMMARY.....	4
SECTION 2. INTRODUCTION TO THE STUDY	6
INTRODUCTION.....	6
OVERVIEW OF THE FEE UPDATE STUDY.....	6
HISTORICAL OVERVIEW OF CONNECTION FEES	7
CONNECTION FEE ORDINANCE.....	7
GENERAL CONNECTION FEE METHODOLOGY.....	8
FACILITY STANDARDS, LEVEL OF SERVICE, AND DEFICIENCIES	8
MITIGATION FEE ACT AND REQUIRED FINDINGS	9
OTHER POTENTIAL MITIGATION PROGRAMS.....	10
SECTION 3. ZONE 7 GROWTH & DEMAND	11
DEMOGRAPHICS.....	11
CONNECTION PROJECTIONS.....	13
SECTION 4. WATER SYSTEM EXPANSION PROGRAM.....	16
ZONE 7 WATER SYSTEM POLICIES.....	16
Water Supply Reliability	16
Sustainable Groundwater Basin Management	16
Water Quality.....	17
PLANNING STUDIES	18
EXPANSION PROGRAM COSTS AND COMPONENTS	18
SECTION 5. DETERMINATION OF THE CONNECTION FEE	24
FINANCIAL PLAN OVERVIEW	24
CALCULATED WATER CONNECTION FEES	25
WATER CONNECTION FEE FINDINGS STATEMENTS	26
SECTION 6. MITIGATION FEE ACT FINDINGS	28
CONNECTION FEE PROGRAM ADOPTION PROCESS	28
PROGRAMMING REVENUES AND CAPITAL IMPROVEMENT PROJECTS	28
FUNDS NEEDED TO COMPLEMENT CONNECTION FEE PROGRAM	28
INFLATION ADJUSTMENT	28
COMPLIANCE REQUIREMENTS	28
LOCAL IMPLEMENTATION.....	29
WATER CONNECTION FEE	29
SECTION 7. RECOMMENDATIONS AND ADOPTION	30
CONSULTANT RECOMMENDATIONS	30
NEXT STEPS	30
PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS	30
ADOPTION.....	30
APPENDIX A – CONNECTION FEE ANALYSIS.....	31
APPENDIX B – CONNECTION FEE ORDINANCE NO. FC 72-1	32
APPENDIX C – AMENDMENT NO. 1 TO CONTRACT BETWEEN ZONE 7 WATER AGENCY AND DUBLIN SAN RAMON SERVICES DISTRICT FOR MUNICIPAL WATER SUPPLY	33

TABLE OF FIGURES

Figure 1 – Projected Growth in Dwelling Unit Equivalents (DUE’s) through Buildout (FY 2040/41)	5
Figure 2 –Areas Served by Zone 7 Water Supply	11
Figure 3 – Population Projections through 2040.....	12
Figure 4 – Projected Water Demand through 2040	13
Figure 5 – Current and Projected Dwelling Unit Equivalents.....	14
Figure 6 – Projected System Growth through 2040.....	14
Figure 7 – Dwelling Unit Equivalents (DUEs) Based on Meter Size.....	15
Figure 8 – Water System Expansion Program: Cost Basis	20
Figure 9 – Connections, Expenditures, and Major New Facilities	23
Figure 10 – Five-Year Financial Plan Summary	25
Figure 11 – Calculated New Water Connection Fee	26

SECTION 1. EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Zone 7 Water Agency (Zone 7 or Agency) supplies treated drinking water to retailers serving approximately 240,000 people and businesses in Pleasanton, Livermore, Dublin and, through special agreement with the Dublin San Ramon Services District, the Dougherty Valley area in San Ramon. Zone 7 also supplies untreated irrigation water to local vineyards, farms and golf courses, and provides flood protection to all of eastern Alameda County.

In August 2016, Zone 7 retained NBS to assist Zone 7 in preparing a comprehensive update of the Agency's connection fee study, which was last updated in 2011¹. This report documents the findings necessary for compliance with State of California's Mitigation Fee Act (Government Code Section 66000, *et seq.*), which prescribes the means by which public agencies may impose connection fees.

The connection fees the Agency charges are intended to assure that development pays its own way and to place new utility customers on equal basis from a financial perspective with existing customers. Once new customers are added to the system, they incur the obligation to pay the same service charges that existing customers pay. Zone 7's connection fees are calculated using an "incremental cost" methodology, as existing system assets have been funded through property tax revenue, water rates and earlier connection fees.

After a downturn in growth due to the recession starting in 2008, the Agency's service area has experienced stronger growth in more recent years and is expected to continue growing for at least the next 15 years. Using 2015 as a base year, Zone 7's service area population is projected to grow from 244,000 to 301,000 people by buildout in 2040, which is a 23 percent increase. Using 2013² as a base year for projected water demand, the service area's water demand is expected to grow by about 20 percent by 2040, from about 45,000 to about 54,400 acre-feet (AF) per year, consistent with the Water Conservation Act of 2009, which requires 20% reduction in per-capita water usage by year 2020. Through buildout in 2040, a total of 24,533³ new dwelling unit equivalents (DUEs)⁴ are expected.

Figure 1 shows steady growth through FY 2028/29.

¹Zone 7 Water Agency 2011 Municipal and Industrial (M&I) Connection Fee Program Update (Zone 7, 2011).

² 2013 is referenced as the base year; there were significant decreases in water demands from 2013-2015 as a result of the drought in California. Future consumption is expected to increase to levels closer to pre-drought levels over the next few years.

³ Not including 192 pre-paid connections.

⁴ A DUE is equivalent to a typical single-family residence (a 5/8-inch displacement-type meter).

Figure 1 – Projected Growth in Dwelling Unit Equivalents (DUE's) through Buildout (FY 2040/41)

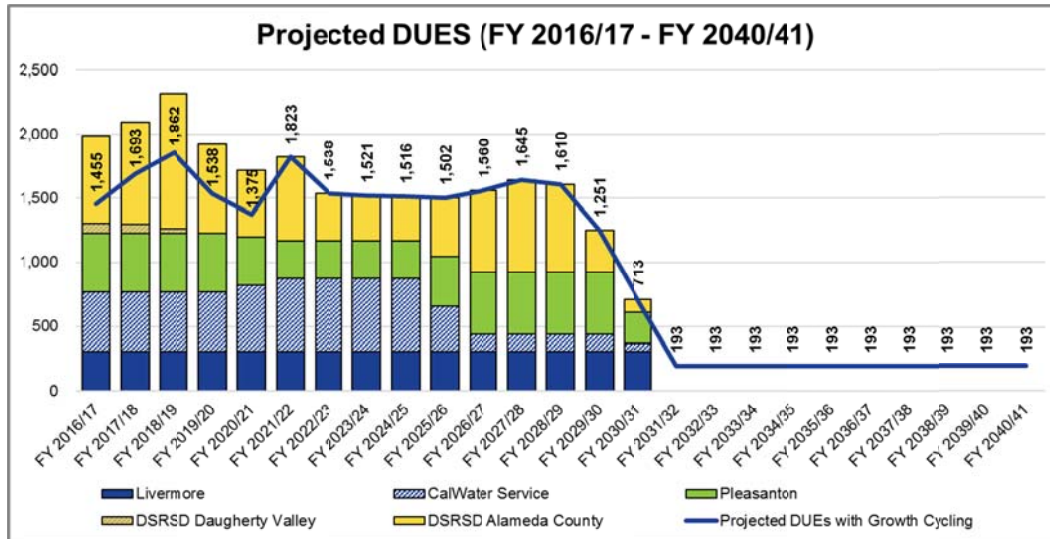


Figure 1 indicates that DUE projections taper off significantly after FY 2028/29; however, the data from the Retailers indicate there is additional expected population and demand growth through 2040. The projected total DUEs through buildout are assumed to occur through buildout to provide a more conservative project planning and implementation timeline and ensure that demands do not outpace Zone 7's system capacity. This approach is referred to as growth cycling.

The capital improvement projects needed to meet the demand from future connections are funded through Zone 7's Expansion Program Fund (Fund 130). A number of projects have been identified as needing funding through buildout in 2040. Including discretionary project expenditures, contingencies, administrative fees and non-discretionary expenditures (i.e. debt service obligations), Zone 7 has a total fee cost basis of approximately \$900 million over the next 25 years.

Zone 7's connection fees are calculated per DUE, with one DUE being equivalent to a single-family residential connection with a 5/8-inch meter. New connections with meter sizes and types that exceed the typical DUE of capacity are charged higher prorated fees based on their higher capacity. Based on projected population growth, water demand and new connections to the Zone 7 system, the recommended new connection fee for the retailers in the Agency's service area is \$27,180/DUE, and for Dougherty Valley, the fee is recommended to be \$26,080/DUE. These recommended connection fees are calculated based on an effective date of May 1, 2017. Inflationary adjustments are recommended to be made annually thereafter on January 1st.

On February 15, 2017, the Zone 7 Board of Directors adopted this report and the fees recommended herein. The newly adopted fees become effective May 1, 2017.

SECTION 2. INTRODUCTION TO THE STUDY

INTRODUCTION

This report summarizes the findings of the connection fee update that NBS jointly prepared with Zone 7 staff. As described in more detail in Section 3, Zone 7 is a wholesale water agency serving four water retail agencies (“Retailers”), as well as a few direct retail customers. This study updates water connection fees for the Agency, provides a financial plan for long-term cash-flow viability, and creates a functional connection fee model for updating the connection fee calculations in the future. This study also includes a review of the Agency’s connection fee-related policies and methodologies.

OVERVIEW OF THE FEE UPDATE STUDY

This connection fee report presents an overview of the analysis that NBS and Zone 7 staff performed in calculating updated water connection fees for Zone 7, including (1) providing the general background and purpose of connection fees and how the fees will be established in Zone 7, (2) documenting the costs of the water system assets and improvements needed to accommodate new development in Zone 7’s service area, and (3) explaining the methods used to determine the new connection fees. The following topics are included in this section:

- Historical Overview of Connection Fees
- Connection Fee Ordinance
- General Connection Fee Methodology
- Facility Standards, Levels of Service, and Deficiencies
- Mitigation Fee Act and Required Findings
- Other Potential Mitigation Programs

This report documents new development’s fair share for expansion costs of Zone 7’s water system, and calculates the maximum fees that may be charged to new development to fund those costs in accordance with regulations. The water connection fees have been updated based on current estimates of future water connections and demands, facility needs, and costs to accommodate future users of the water system.

This report also documents the findings necessary for compliance with State of California’s Mitigation Fee Act (Government Code Section 66000, *et seq.*), which prescribes the means by which public agencies may impose connection fees.

HISTORICAL OVERVIEW OF CONNECTION FEES

Zone 7 adopted a policy of “growth-pays-for-growth” in 1972. This policy shifted the burden of funding infrastructure expansion from existing ratepayers and taxpayers to new development, primarily through the imposition of connection and developer impact fees.

Assessments and special taxes require approval of affected property owners and are appropriate when the funded facilities are directly related to the property being developed. In contrast, connection fees are an appropriate funding source for facilities that ultimately benefit all customers within an agency’s service area, and are approved and adopted by a majority vote of the legislative body, such as Zone 7’s Board of Directors.

This report documents the relationship between new development in Zone 7 and the incremental cost of wholesale water system facilities and supplies needed to serve growth within the service area. It also provides estimates of the cost of these facilities and calculates the updated connection fees by water meter size (in dwelling unit equivalents) needed to cover these costs. The new facilities funded by connection fees will ensure the Agency maintains its level-of-service standards.

To adopt the connection fees proposed in this report, the Agency will rely on its authority to levy public facilities connection fees under the police powers granted by the State Constitution (Article XI, Sections 5 and 7) which provides that cities, counties, and agencies may make and enforce ordinances, as long as they are not in conflict with state law. The exercise of that power is guided by the Mitigation Fee Act (“Act”)⁵ contained in California Government Code Section 66000, *et seq.* This report provides the documentation and findings necessary for the adoption of the proposed Zone 7 connection fees.

CONNECTION FEE ORDINANCE

In January 1972, the Alameda County Board of Supervisors adopted Ordinance No. FC 72-1, pursuant to the Alameda County Flood Control and Water Conservation District Act (included as Appendix B). This ordinance allowed Zone 7 to impose a connection fee to finance water system improvements within the Zone 7 service area to meet future water supply needs. These water connection fees are subject to the provisions contained in California Government Code Sections 66013 and 66016. The provisions in Government Code Section 66013 define Zone 7 water connection fees as follows:

“(a) Notwithstanding any other provision of law, when a local agency imposes fees for water connections...or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed, unless a question regarding the amount of the fee or charge imposed in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue.”

“(b) As used in this section: “Water connection” means the connection of a structure or project to a public water system, as defined in subdivision (f) of Section 116275 of the Health and Safety Code.”

Revenues collected from water connection fees are segregated into a separate fund, Water Expansion Fund – Fund 130 in Zone 7’s accounting system. While Zone 7 serves both Municipal and Industrial (M&I) customers and agricultural customers, the connection fees discussed in this document only apply to M&I

⁵ Passed by the California Legislature on January 1, 1989 as AB 1600. Prior to that time, while there may have been attempts to calculate connection fees, it was quite often a matter of checking with neighboring agencies to see what they had adopted (Development Connection fees, Scott Thorpe, Revenue & Cost Specialists, Costing in the Agency – Cost Accounting in Local Government, February 4, 2008).

customers. There are no plans for Zone 7 to add any new direct retail customers through buildout; therefore, the Retailers determine the number of new connections in their respective service areas⁶.

GENERAL CONNECTION FEE METHODOLOGY

The connection fees imposed by Zone 7 on new or upsized connections are subject to California's Mitigation Fee Act (Government Code Section 66000, *et seq.*). The connection fees presented herein are calculated using typical industry methodologies and, in Zone 7's case, reflect the incremental costs of planned capital improvements.

The two primary components used in the connection fee calculation methodology are:

- The reasonable allocation of the estimated costs of planned future facilities and improvements required to serve new development.
- The projected number of new units of development (i.e., growth) expected to occur within the timeframe covered by the connection fee analysis.

In its simplest form, connection fees (for utilities they are often also referred to as developer fees, capacity fees or system development charges) are calculated by dividing the estimated costs allocated to future development by the number of units of new development.

Connection fees are intended to place new utility customers on equal basis from a financial perspective with existing customers. Once new customers are added to the system, they then incur the obligation to pay the same service charges or water rates that existing customers pay.

FACILITY STANDARDS, LEVEL OF SERVICE, AND DEFICIENCIES

Throughout this report the words "standard" and "level of service" are used (at times interchangeably) to describe the level of investment in capital facilities that are needed to serve the Retailers' communities. A standard is defined as the adopted policy, or benchmark, that the Agency currently provides or intends to achieve for any particular facility. On the other hand, level of service (LOS) refers to the actual level of benefit that the current population experiences. Level of service may be different from the standard for a given facility. If the existing LOS is less than the standard, a deficiency exists for that facility.

New development alone cannot be required to improve the LOS provided by those facilities that serve both new and existing development⁷. State law limits connection fees to the cost of maintaining services for new development at the same LOS as existing development.

Level of Service

In contrast to other services, such as fire, police and transportation, the "level of service" for water services is tied to the public agency where residents and businesses are located. That is, each utility provides a consistent level of service to all customers in their service area – for example, clean, potable water under acceptable levels of pressure. Rather than focusing on the facilities needed to meet a particular level of service, the only real question for water services is whether there is adequate capacity available in the system for new customers.

New water customers typically cover 100 percent of any specific infrastructure needed to "extend" or directly provide service to them. For example, a water main may need to be extended to those new customers and may be solely needed for serving that specific new development. However, in some

⁶ Including Dougherty Valley.

⁷ New development can, and often does fund facilities beyond those covered by connection fees through "developer agreements", which are voluntarily and mutually agreed upon by new development and an individual utility. Developer agreements are outside the scope of this report, and not considered a part of the connection fee programs addressed herein.

cases, if additional growth is expected to occur in the future, the size of pipes installed, the capacity of treatment facilities, etc., may need to be enlarged to meet the needs of both the current and future development's needs. In these cases, future customers would typically reimburse either the Agency or the current development for the costs of oversizing that pipeline, depending on which one paid the initial cost of oversizing the improved facilities to accommodate growth.

Additionally, connection fees are based on an equivalent level of capacity (such as an equivalent residential unit (ERU), equivalent dwelling unit (EDU), or dwelling unit equivalent (DUE)). For Zone 7, water connection fees are sized to match the number of DUE's, which is a typical residential meter service size (e.g., a 5/8-inch meter).

MITIGATION FEE ACT AND REQUIRED FINDINGS

As a result of the growing use of connection fees after passage of Proposition 13 and concern over inconsistencies in their application, the State Legislature passed the Mitigation Fee Act ("Act"), starting with Assembly Bill 1600 in 1989. The Act, contained in California Government Code Section 66000, *et seq.*, establishes requirements for imposing connection fees, including necessary funding for the ongoing administration of connection fee programs. The Act requires local governments to document the following when adopting a connection fee:

- Identify the purpose of the fee.
- Identify the use of fee revenues.
- Determine a reasonable relationship exists between the fee's use and the type of development paying the fee.
- Determine a reasonable relationship exists between the need for the fee and the type of development paying the fee.
- Determine a reasonable relationship exists between the amount of the fee and the cost of the facility attributable to development paying the fee.

Together, these items constitute a "nexus study" when documented and presented in a report to Zone 7's Board of Directors. This report complies with California Government Code Section 66000, *et seq.* by providing the required documentation for the above findings and the determinations that establish the basis for the recommended fees.

Connection fee revenues may not be used for annual operations or maintenance of existing or new facilities. The cost of the public facilities analyzed does not consider the operational costs of these facilities, which, over their useful life, may be quite substantial, and will be borne by customers connected to the system at the time of operation.

Another fundamental premise of connection fees is that the burden of the fees cannot total more than the actual cost of the public facilities needed to serve the development paying the fee, including costs associated with administering the fee program. In addition, fee revenues can only be used for their intended purposes and the Act has specific accounting and reporting requirements both annually and after every five-year period for the use of fee revenues. These requirements are outlined in *SECTION 6. MITIGATION FEE ACT FINDINGS* of this report.

Fee Updates

This connection fee study and the recommended fees assume a given level of development activity over the study period based on the best available data. The development that actually occurs may result in both different impacts and fee revenues than those that are calculated in this study. For that reason, regular updates are recommended to adjust the connection fees to match the needs created by the rate of actual development.

OTHER POTENTIAL MITIGATION PROGRAMS

This study does not necessarily address the full impact of every development project in Zone 7's service area. Due to its size, density, intensity of activity, and location any given development project may impose additional burdens upon the Agency's facilities and services. Based on the findings of a project-specific impact analysis, an applicant for such a development project may be required to construct other improvements, develop or participate in other fee, assessment, and/or special tax programs, or otherwise provide or fund mitigation(s) for those additional impacts. These additional mitigations are independent of the fees set forth in this study, and are designed to address different project-specific impacts. Consequently, payment of the fees set forth in this study may not reduce or eliminate these additional mitigations, and conversely, fulfillment of these additional mitigations may not reduce or eliminate the fees set forth herein.

SECTION 3. ZONE 7 GROWTH & DEMAND

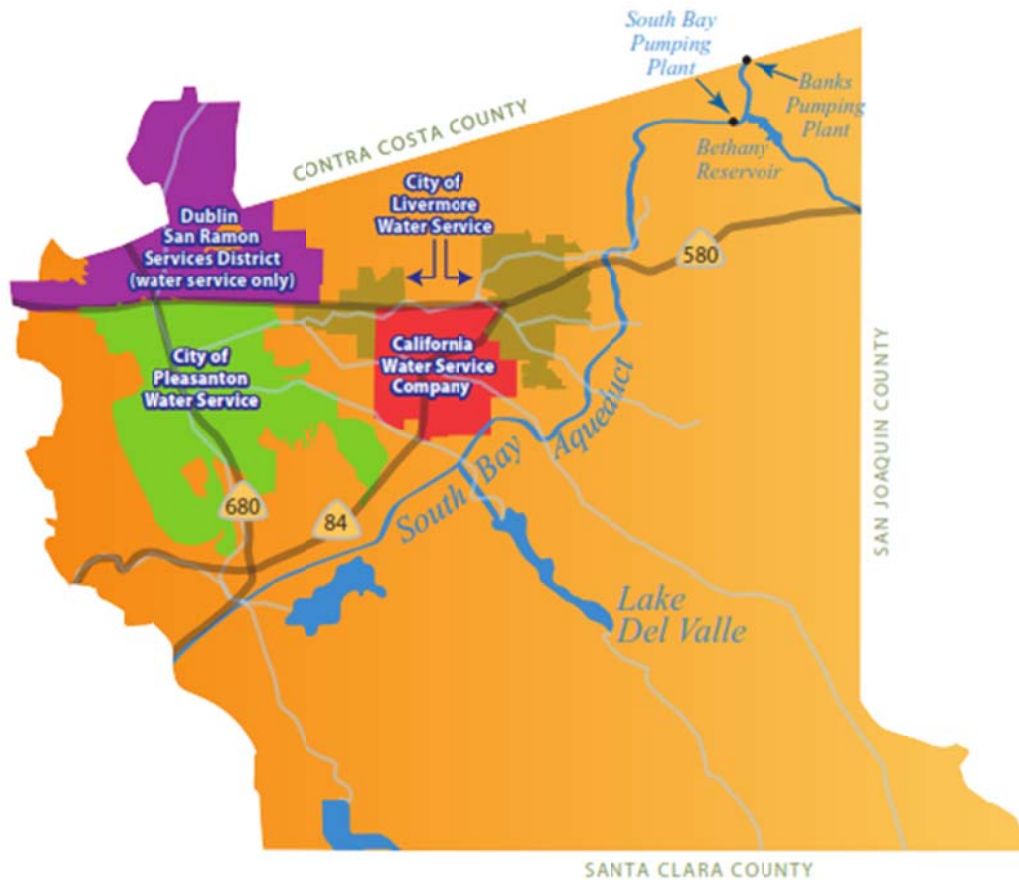
DEMOGRAPHICS

Zone 7's water service area is located about 40 miles south-east of San Francisco, and encompasses an area of approximately 425 square miles in eastern Alameda County, including the Livermore-Amador Valley, Sunol Valley, and portions of the Diablo Range. Zone 7 also serves potable water to a portion of Contra Costa County (Dougherty Valley in San Ramon) through an out-of-service area agreement with Dublin San Ramon Services District. Figure 2 is a map of the areas served water by Zone 7.

As previously mentioned, Zone 7 is primarily a wholesale water agency. The Agency's Retailer customers include:

- Dublin San Ramon Services District (DSRSD) – serving the City of Dublin and the Dougherty Valley area of San Ramon.
- Livermore Municipal Water – serving part of the City of Livermore.
- California Water Service Company (Cal Water) – serving remaining City of Livermore customers.
- City of Pleasanton – serving the City of Pleasanton.

Figure 2 –Areas Served by Zone 7 Water Supply

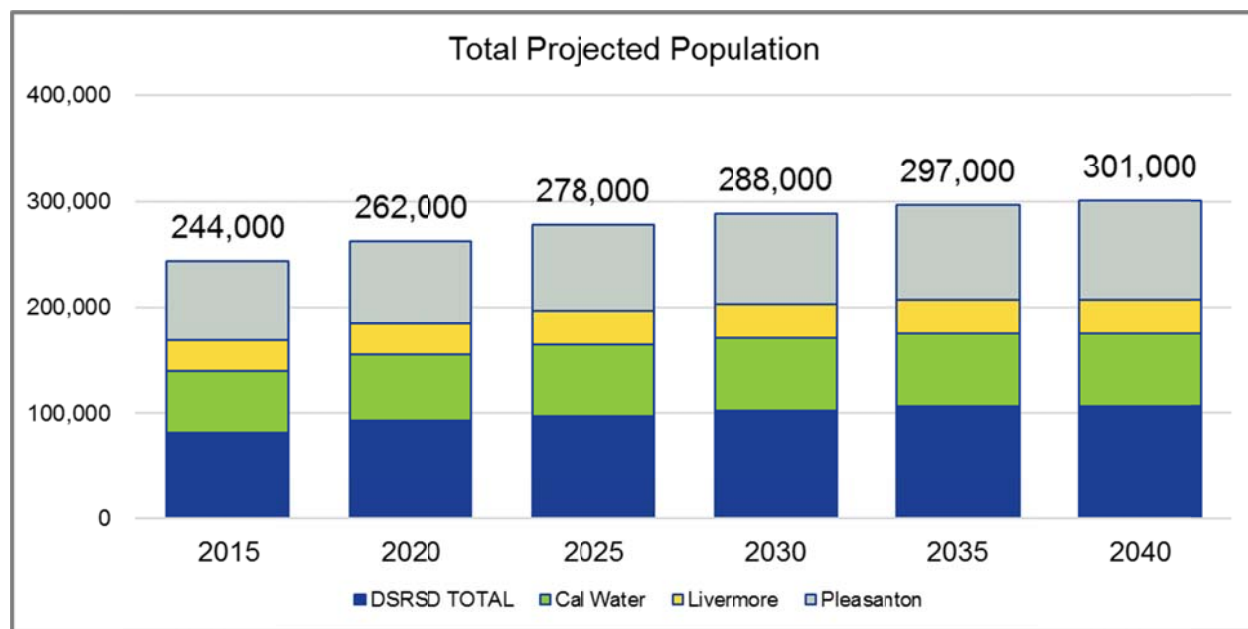


Zone 7 worked closely with the Retailers to determine projected growth rates appropriate for use in this study. Retailers projected growth based on their cities' general and specific plans, developer permit applications, land-use based demand analysis, historical trends, recently-completed Urban Water Management Plans and other planning documents. Based on population and demand projections,

buildout within each Retailer’s service area is currently projected through 2040. This connection fee update includes financial plans through buildout. See Appendix A for further tables and calculations.

Using 2015 as a base year, Retailers are projecting various population growth rates over the next 25 years, ranging from 13 to 34 percent through 2040⁸. This represents a 23.0 percent population increase in Zone 7’s service area. See Figure 3 for estimated population by Retailer through buildout.

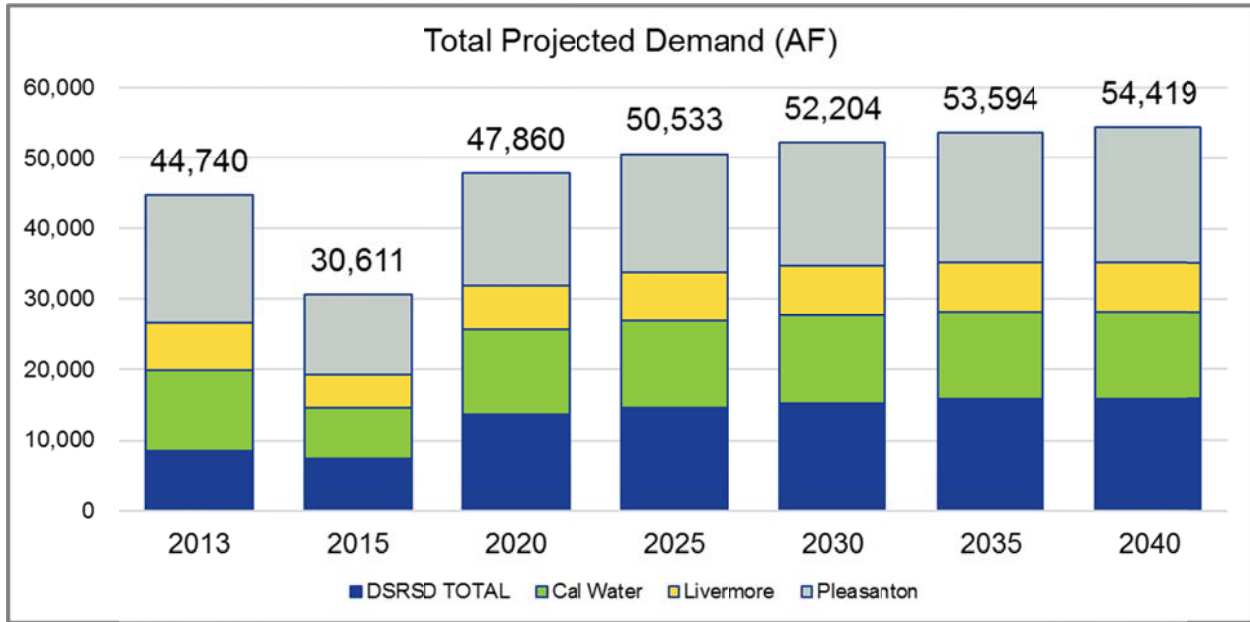
Figure 3 – Population Projections through 2040



Water demand is also projected by each Retailer and, over the next few years (through 2020) is expected to increase significantly, as customers return to levels more typical of pre-drought levels. Increases in water demand over the remaining 20 years are expected to be less dramatic, accounting for long-term trends—and regulatory requirements—of increased conservation and water use efficiency. Figure 4 summarizes the estimated water demands by Retailer through buildout in 2040.

⁸ Dougherty Valley is projected to increase by only one percent over this period.

Figure 4 – Projected Water Demand through 2040



CONNECTION PROJECTIONS

Connection fees are calculated by dividing the total value of expansion-related assets allocated to growth by the total projected additional units of growth in DUE's – in other words, dividing the new capacity in the system by the number of new connections.

The existing total DUEs include adjustments for the type of connection. In other words, customers are converted to a dwelling unit equivalent by each Retailer. Dublin San Ramon Service District calculates DUEs on a gpd/DUE basis⁹. The other Retailers – CalWater, Livermore, and Pleasanton – calculate DUEs based on water use sectors (i.e., single-family residential, multi-family residential, commercial, and industrial, etc.).

Figure 5 summarizes the current and future dwelling unit equivalents (DUEs) used in the study. There are a total of 131,995 existing DUEs. As discussed above, data from the Retailers indicate expected population and demand growth through 2040. However, the majority of projected total DUEs through buildout are projected to occur by 2031.

For the purposes of projecting cash flows, growth cycling is used. Although this does not affect the calculation of appropriate connection fees, it does serve as a conservative financial projection by accounting for the uncertainty in the rate of new connections; it assumes only 80% of the first five years' projections occur during that period and the remaining 20% occur over the ten-year period from FY 2032 through FY 2040. Zone 7's Expansion Program is discussed in the next section. Figure 6 summarizes projected DUE growth to fiscal year 2040/41, and indicates an 18.6 percent growth, or 24,533 new DUEs, over that period.

⁹ gpd = gallons per day.

Figure 5 – Current and Projected Dwelling Unit Equivalents

Year	New DUE Projections	DSRSD Daugherty Valley	DSRSD Alameda County	CalWater Service	Pleasanton	Livermore	Prepaid Connections	Total	DUEs with Growth Cycling
1	FY 2015/16	7,972	23,524	33,620	52,968	13,911	0	131,995	131,995
2	FY 2016/17	81	685	462	455	307	(192)	1,798	1,455
3	FY 2017/18	76	797	462	455	307	0	2,097	1,693
4	FY 2018/19	40	1,054	462	455	307	0	2,318	1,862
5	FY 2019/20	0	698	463	455	307	0	1,923	1,538
6	FY 2020/21	0	522	517	373	307	0	1,719	1,375
7	FY 2021/22	0	656	569	291	307	0	1,823	1,823
8	FY 2022/23	0	371	569	291	307	0	1,538	1,538
9	FY 2023/24	0	354	569	291	307	0	1,521	1,521
10	FY 2024/25	0	348	570	291	307	0	1,516	1,516
11	FY 2025/26	0	457	351	387	307	0	1,502	1,502
12	FY 2026/27	0	640	131	482	307	0	1,560	1,560
13	FY 2027/28	0	725	131	482	307	0	1,645	1,645
14	FY 2028/29	0	690	131	482	307	0	1,610	1,610
15	FY 2029/30	0	332	130	482	307	0	1,251	1,251
16	FY 2030/31	0	105	65	241	302	0	713	713
17	FY 2031/32	0	0	0	0	0	0	0	193
18	FY 2032/33	0	0	0	0	0	0	0	193
19	FY 2033/34	0	0	0	0	0	0	0	193
20	FY 2034/35	0	0	0	0	0	0	0	193
21	FY 2035/36	0	0	0	0	0	0	0	193
22	FY 2036/37	0	0	0	0	0	0	0	193
23	FY 2037/38	0	0	0	0	0	0	0	193
24	FY 2038/39	0	0	0	0	0	0	0	193
25	FY 2039/40	0	0	0	0	0	0	0	193
26	FY 2040/41	0	0	0	0	0	0	0	193
	Total	8,169	31,958	39,201	58,881	18,511	-192	156,528	156,528
	Total (Excluding FY 2015/16)	197	8,434	5,581	5,913	4,600	-192	24,533	24,533

Figure 6 – Projected System Growth through 2040

Demographic Statistics	Total Existing DUEs	Projected Total DUEs (thru 2040/41)	Cumulative Change: Number of Units (thru 2040/41)	% of Total New DUEs
Dougherty Valley (via DSRSD)	7,972	8,169	197	1%
Dublin-San Ramon Services District (DSRSD)	23,524	31,958	8,434	34%
California Water Service Company - Livermore District	33,620	39,201	5,581	23%
City of Livermore*	13,911	18,319	4,408	18%
City of Pleasanton	52,968	58,881	5,913	24%
Total	131,995	156,528	24,533	100.0%
* Projected Total DUEs exclude 192 prepaid connections.		New Growth:		18.6%

One DUE is equivalent to a typical single-family residential water connection; the most common size among the Retailers is a 5/8" meter. Figure 7 indicates the DUE factors by meter size for new connections to the system. Both turbine and displacement-type meter factors are included; displacement-type meters are more commonly used.

Figure 7 – Dwelling Unit Equivalent (DUEs) Based on Meter Size

Meter Size (Inches)	Dwelling Unit Equivalent (DUE) (1)	
	Turbine Meters	Displacement- Type Meters
5/8	1.00	1.00
3/4	1.50	1.50
1	2.50	2.50
1.5	12.00	5.00
2	16.00	8.00
3	35.00	17.50
4	100.00	50.00
6	200.00	100.00
8	350.00	175.00

1. Sources: AWWA M1, Table VI.2-5 and AWWA M6, Table 5-3.

In comparison to the previous Connection Fee Update Study performed by Zone 7 staff in 2011, there are several notable differences.

- Population growth has a slower trajectory through buildout; however, total growth at buildout has not changed significantly (buildout population of 301,000 vs 299,000 in 2011 fee study).
- Water Demands for the base year of 2015 were far lower than previously expected; lower water demands were in large part, due to the drought in California.
- Water Demands at buildout in 2040 are 2,200 AF lower than previously reported (54,400 AF vs. 56,600 AF annually from 2011 fee study), reflecting long-term conservation and water-use efficiency trends.

SECTION 4. WATER SYSTEM EXPANSION PROGRAM

Zone 7's Water System Expansion Program (Expansion Program) is a major component of Zone 7's overall Capital Improvement Program (CIP). However, it is important to note that the existing ten-year CIP goes through FY 2024/25 and this study covers a longer period. Also, any timing changes do not affect the overall cost or, by extension, the connection fee calculation.

The Expansion Program identifies the capital projects needed to meet the needs of new customers as planned for and approved by the local government agencies having such jurisdiction within Zone 7's service area. The Expansion Program is funded through connection fees, which are directed into a separate account, within Fund 130. An overview of the policies that shape the development of the Expansion Program is presented below, followed by a summary of the key planning documents used by Zone 7 and, finally, a summary of the Expansion Program used to develop the estimated reasonable cost for the connection fee update, in accordance with Government Code Section 66013.

ZONE 7 WATER SYSTEM POLICIES

Zone 7's water system planning efforts are guided by policies set by its governing Board of Directors. These policies are classified into water supply reliability, groundwater basin management, and water quality. The current policies are briefly described and presented below.

Water Supply Reliability

Zone 7 strives to maintain a highly reliable water supply system for its M&I customers. In 2012, the Zone 7 Board adopted a revised Water Supply Reliability Policy (Resolution No. 13-4230) with the following level of service goals to guide the management of Zone 7's M&I water supplies as well as its CIP:

Goal 1. Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent Urban Water Management Plan (UWMP), during normal, average, and drought conditions, as follows:

- At least 85% of M&I water demands 99% of the time
- 100% of M&I water demands 90% of the time

Goal 2: Provide sufficient treated water production capacity and infrastructure to meet at least 80% of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

Sustainable Groundwater Basin Management

A key responsibility of Zone 7 is the sustainable management of the Livermore-Amador Valley Groundwater Basin, portions of which are used to supply approximately 20% the area's water demands and to provide local storage to meet demands during dry years. In 2005, Zone 7 adopted a Groundwater Management Plan (GMP) that integrated various Zone 7 policies and programs (*Resolution No. 06-2796*). A key element of the GMP is the 2004 Salt Management Plan (SMP), which was prepared for the California Regional Water Quality Control Board as part of the authorization process for the production and distribution of recycled water in the Livermore-Amador Valley. The SMP sets forth a plan to facilitate recycling without degrading local water quality. Furthermore, the SMP strives to maintain or improve groundwater mineral quality and delivered water quality as stated in the following goals:

Goal 1: Protect and enhance the quality of groundwater.

Goal 2: Offset current and future salt loading, while facilitating reasonable regional recycled water use.

- Goal 3:** Maintain or improve groundwater mineral quality.
Goal 4: Provide more comparable delivered water quality to Retailers.

Zone 7 is in the process of becoming the Groundwater Sustainability Agency for the entire Livermore Valley Basin in 2017 and has submitted an Alternative Groundwater Sustainability Plan to the State that incorporates the GMP, including the SMP and the 2015 Nutrient Management Plan developed with the following primary groundwater Basin Management Objectives: 1) monitor and maintain groundwater levels through conjunctive use and management of regional water supplies, 2) monitor and manage groundwater quality, as well as track and address any groundwater quality degradation, and 3) prevent inelastic land surface subsidence from occurring as a result of groundwater withdrawals.

Water Quality

All of Zone 7's water deliveries to the Retailers meet state and federal health standards and in most cases are better than minimum standards; however, surface water and groundwater taste, odor, and/or appearance vary depending on the source, season or customer's location. To maintain Zone 7's compliance with health-related water quality standards and to continue to improve the aesthetic quality of Zone 7's water supply, the Zone 7 Board adopted the *Water Quality Policy for Potable and Non-Potable Water (Resolution No. 14-4365)*. Its goals are presented below.

- Goal 1:** Zone 7 shall continue to meet all State and federal primary Maximum Contaminant Levels (MCLs)¹⁰ for potable water delivered to the M&I Contractors' turnouts. In addition, Zone 7 shall deliver potable water of a quality that is as close as technically feasible and fiscally responsible to the Public Health Goals (PHGs)¹⁰ and/or Maximum Contaminant Level Goals (MCLGs)¹⁰. To ensure a margin of safety, the delivered water shall generally be of a quality that contains no greater than 80 percent of the applicable State or federal primary MCLs.
- Goal 2:** Zone 7 shall meet all State and federal secondary MCLs in the potable water delivered to its M&I Contractors' turnouts. In addition, Zone 7 shall, within technical and fiscal constraints, proactively mitigate earthy-musty taste and odor events¹⁰ from surface water supplies and reduce hardness levels to "moderately hard", defined as 75 to 150 mg/L. Also, Zone 7 shall optimize its treatment processes to minimize chlorinous odors by maintaining consistent disinfectant dosage and residual.
- Goal 3:** Zone 7 shall endeavor to deliver to its untreated water turnouts, from a variety of sources, water of a quality that meets the irrigation needs and does not negatively impact vegetation, crops, or soils.
- Goal 4:** In order to achieve Goals 1 through 3, Zone 7 shall continue to work to improve the quality of its source waters. This may be achieved through Zone 7's Salt and Nutrient Management Plan, which will maintain or improve the water quality in the groundwater basin, and through advocacy of improvements in the State Water Project, its facilities and their operations, which may improve the source water of Zone 7's surface water supplies.
- Goal 5:** Zone 7 will partner with M&I Contractors to assist them in taking similar steps as those outlined in this policy to maintain or improve the quality of water delivered to the M&I Contractor's retail customers.

¹⁰ Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water. Public Health Goal (PHG): The level of a primary contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency. Public Health Goal (PHG): The level of a primary contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency. Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency. An event is defined as when three or more similar complaints are received in a 7-day period.

PLANNING STUDIES

Zone 7 has completed the planning efforts listed below, which provide the engineering basis for the Expansion Program. These efforts evaluated alternatives for water acquisition, supply reliability, conveyance, treated water facilities, new production wells, water quality, and transmission facilities that provide feasible, flexible and cost-effective projects to meet the needs of future M&I customers without negatively affecting existing customers.

- Treated Facilities Master Plan (Camp Dresser and McKee, February 2000)
- Water Conveyance Study (Camp Dresser and McKee, June 2001)
- Water Quality Management Program (MWH Americas, April 2003)
- Well Master Plan (CH2M Hill, October 2003)
- Salt Management Plan (Zone 7, May 2004)
- Lakes H&I and Cope Lake Management Plan (Stetson Engineers, June 2004)
- Well Master Plan EIR (ESA Associates, September 2005)
- 2011 Water Supply Evaluation (Zone 7, July 2011)
- 2011 Municipal and Industrial Water Connection Fee Update (Zone 7, November 2011)
- Preliminary Lake Use Evaluation for the Chain of Lakes (March 2014)
- Zone 7 Fiscal Year (FY) 15/16 Capital Improvement Program – Ten-Year Water System Plan (Zone 7, October 2014)
- Nutrient Management Plan (Zone 7, July 2015)
- Transmission System Planning Update (West Yost Associates, February 2016)
- 2010 Urban Water Management Plan (Zone 7, December 2010)
- 2015 Urban Water Management Plan (Zone 7, March 2016)
- 2016 Water Supply Evaluation Update (Zone 7, February 2016)

EXPANSION PROGRAM COSTS AND COMPONENTS

The recommended facilities and supplies resulting from the planning efforts described above are included in the Water System Expansion Program as specific projects. Cost estimates and timing needs are incorporated into the CIP. To develop the most current estimated reasonable cost for the connection fee update, in accordance with Government Code Section 66013, the following key adjustments were made to the Expansion Program since the 2011 connection fee update:

- Project list was updated to reflect partially or fully completed projects since 2011.
- Unit costs were updated (e.g., pipelines, pump stations, etc.) based on most current data.
- Project costs were updated.
- Fund allocations were updated to reflect expansion-related portions of projects such as Patterson Pass Water Treatment Plant [PPWTP] New Clearwell, PPWTP Ozone, and PPWTP Sludge Handling Expansion.

These adjustments will ultimately be incorporated the next time Zone 7's CIP is updated, which is typically done every couple of years.

Figure 8 identifies the projects that are included in the Expansion Program, the percent allocation of costs to Fund 130, and the responsible group for each of the projects. The projects and their timing form the basis of Zone 7's expenditures—and required revenues—over time.

To determine the appropriate costs to include in the Water System Expansion Program portion of the CIP, a key general principle used by Zone 7 is that *those who benefit should pay the proportionate cost*. Costs for those facilities and supplies that serve both existing and new customers are allocated to the customers (and their funding sources) in proportion to the benefits they receive. Some projects have both water supply and flood control benefits (e.g., Chain of Lakes projects); costs are allocated to reflect this since flood control has a separate funding source.

Based on Amendment No. 1 to the Contract Between Zone 7 Water Agency and Dublin San Ramon Services District for a Municipal and Industrial Water Supply (Appendix C), customers in Dougherty Valley do not pay for specific projects related to water acquisition and non-local groundwater storage because Dougherty Valley customers pre-purchased their water supply and storage.

Note that “sinking funds” are established for the Administrative and Engineering Building, Fourth Contractor’s Share of the South Bay Aqueduct (SBA), and the SBA Enlargement Project. The sinking fund for the Administrative and Engineering Building can be used to purchase the existing building at the end of the fifteen-year lease in FY 2019/20 or to otherwise obtain a headquarters building. For the other two projects, the sinking funds ensure that there is funding for expenditures that continue beyond substantial buildout of the system—after 2031, new connections drop substantially and do not bring in sufficient revenues to meet financial obligations. To calculate the required contributions towards the sinking funds, Zone 7 staff assumed buildout by FY 2030/31. After FY 2030/31, money available in the sinking funds will be used to pay continuing obligations for the Fourth Contractor’s Share of the SBA and the SBA Enlargement Project.

Projects funded in whole or in part by Fund 130 with a total funding need of \$898,660,000 (including contingency and connection fee administration) through FY 2040/41 have been identified.

Figure 9 shows the projected new connections and expenditures over time, and the major facilities that need to be constructed to meet demand growth. As noted in Section 3, the vast majority projected total DUEs through buildout have been assumed to substantially occur by 2031 to provide a more conservative project planning and implementation timeline and ensure that demands do not outpace Zone 7’s system capacity. Zone 7 will continue to update its CIP every couple of years and changes in demands and available funding will be incorporated into the ultimate scheduling of project construction; projects intended to meet new demands will be shifted according to when those demands are expected.

Note that the updated Expansion Program cost basis is around \$900M for FY 2017-2041, compared to around \$1B for FY 2011-2040 as estimated in the 2011 Connection Fee Update. The difference is due to the adjustments described above, and the completion of approximately \$85M worth of projects since 2011.

Figure 8 – Water System Expansion Program: Cost Basis

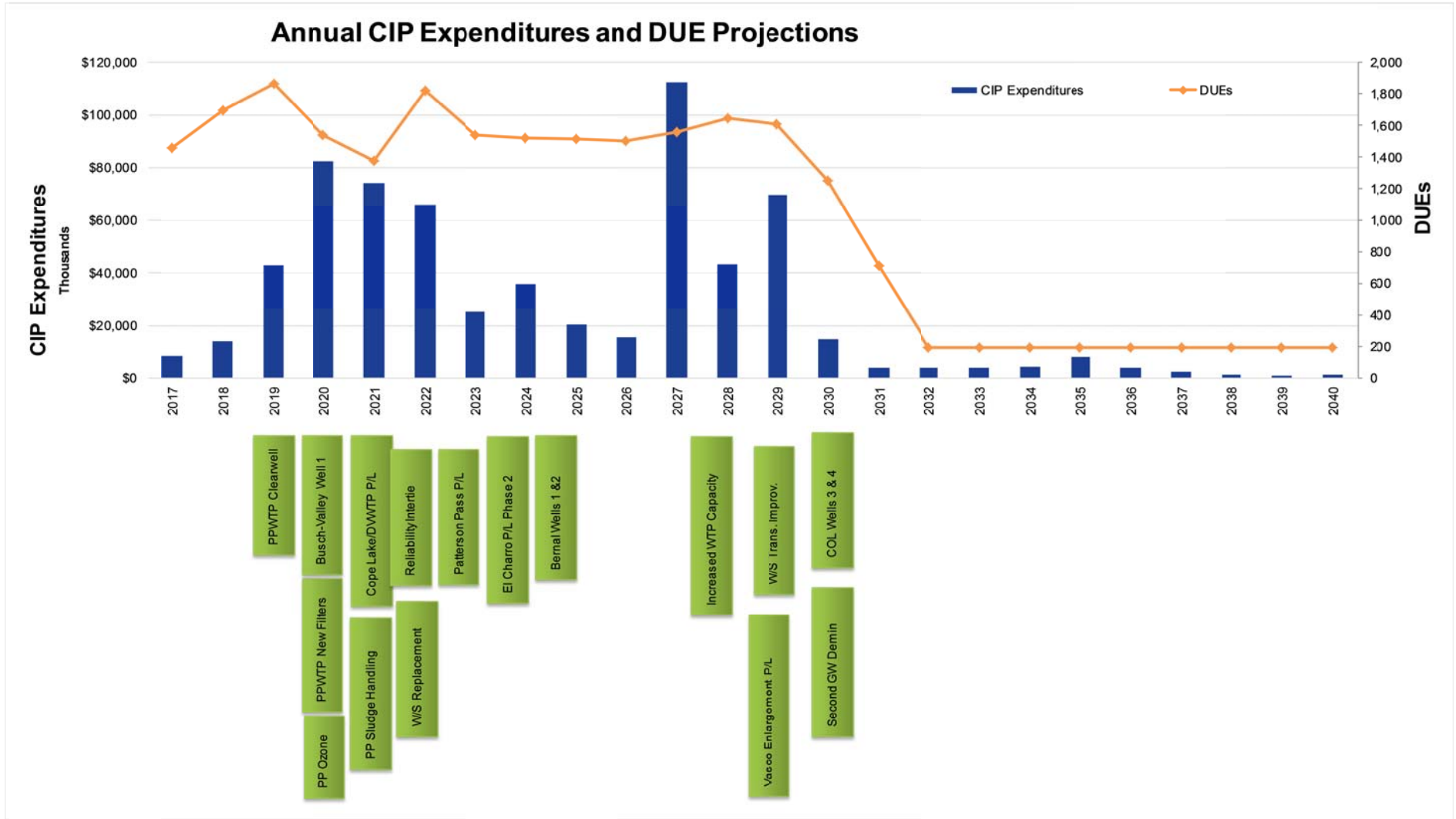
PROJECT TITLE	% ALLOCATION TO FUND 130	PROJECT COSTS	RESPONSIBLE GROUP ^a
		(FY 2016/17 - 2040/411)	
		\$1,000s	
BUILDINGS & GROUNDS			
Administrative & Engineering Building Lease (Water System)	35%	\$1,648	Z7/DV
Subtotal		\$1,648	
PROGRAM MANAGEMENT			
Capital Improvement Program Management	67%	\$1,963	Z7/DV
Subtotal		\$1,963	
TRANSMISSION & DISTRIBUTION			
New Water Treatment Plant Transmission Pipeline	100%	\$22,957	Z7/DV
Westside Transmission System Improvements	60%	\$16,953	Z7/DV
Transmission System Planning Update	100%	\$742	Z7/DV
Subtotal		\$40,652	
WATER SUPPLY & CONVEYANCE			
Arroyo Mocho Diversion Facility Coordination and Implementation	100%	\$3,436	Z7/DV
Arroyo Mocho Low Flow Crossings	100%	\$3,753	Z7/DV
Bay Delta Conservation Plan (Zone 7)	30%	\$57	Z7/DV
Chain of Lakes Facilities and Improvements - Water Supply	70%	\$71,478	Z7/DV
Chain of Lakes Master Planning	70%	\$909	Z7/DV
Delta Outreach Program	30%	\$57	Z7/DV
High-Efficiency Toilet Rebate Program	30%	\$15	Z7
High-Efficiency Washing Machine Rebate Program	30%	\$40	Z7
Lakes H, I and Cope Facility Planning	70%	\$146	Z7/DV
PPWTP New Clearwell	60%	\$9,150	Z7/DV
Reliability Intertie	20%	\$9,677	Z7/DV
SWP Peaking Payment (Lost Hills & Belridge Water Districts)	100%	\$350	Z7
Water Conservation Best Management Practices	30%	\$685	Z7
Water Supply and Bay Area Regional Projects	100%	\$10,291	Z7/DV
Water Supply Replacement	100%	\$96,826	Z7/DV
Water System Master Plan	20%	\$256	Z7/DV
Subtotal		\$207,129	

PROJECT TITLE	% ALLOCATION TO FUND 130	PROJECT COSTS	RESPONSIBLE GROUP ^a
		(FY 2016/17 - 2040/411)	
		\$,000s	
WATER TREATMENT FACILITIES			
Increased Treatment Plant Capacity	100%	\$119,542	Z7/DV
PPWTP Expansion/New Media Filters ^b	100%	\$14,192	Z7/DV
PPWTP Ozone Project ^b	50%	\$13,302	Z7/DV
PPWTP Sludge Handling Expansion ^b	100%	\$10,578	Z7/DV
Maintenance Yard and Building Improvements	20%	\$795	Z7/DV
Water Quality Management Program	20%	\$308	Z7/DV
Subtotal		\$158,716	
WELLS			
Bernal Wells 1 & 2 and Pipeline	100%	\$37,025	Z7/DV
Busch-Valley Well 1	100%	\$11,052	Z7/DV
Chain of Lakes Wells 3 & 4	100%	\$26,271	Z7/DV
El Charro Pipeline Phase 2	100%	\$13,626	Z7/DV
Review of Well Implementation Plan	100%	\$203	Z7/DV
Second Groundwater Demineralization Facility	100%	\$51,993	Z7/DV
Subtotal		\$140,171	Z7/DV
DEBT SERVICE PAYMENTS THROUGH BUILDOUT			
Cawelo Groundwater Banking Program	100%	\$24,784	Z7
Semitropic Stored Water Recovery Unit	100%	\$984	Z7/DV
South Bay Aqueduct Enlargement Project ^c	100%	\$249,782	Z7/DV
Subtotal		\$275,550	
SINKING FUNDS			
Administrative & Engineering Building - Sinking Fund (Fund 130) ^d	35%	\$1,560	Z7/DV
Fourth Contractor's Share of the SBA - Sinking Fund ^e	100%	\$10,064	Z7/DV
South Bay Aqueduct Enlargement Project - Sinking Fund ^e	100%	\$20,529	Z7/DV
Subtotal		\$32,153	Z7/DV
OTHER			
Fixed Cost of Water Entitlement	sliding scale	\$19	Z7
Fourth Contractor's Share of the SBA (Capital Costs) ^f	100%	\$60,000	Z7/DV
Program Contingency	100%	\$18,230	Z7/DV
Connection Fee Administration (1% of Revenue)	100%	\$8,345	Z7/DV
Subtotal		\$86,594	
Subtotal		\$944,575	
Use of Accumulated Sinking Funds		(\$45,916)	
EXPANSION PROGRAM TOTAL		\$898,659	

Figure 8 footnotes:

- a) Z7 = the Alameda County portion of Zone 7's service area. DV = Dougherty Valley.
- b) Previously included in the Increased Treatment Plant Capacity project.
- c) This includes the cumulative revenue bond cover surcharge of \$66M, which will be refunded to Zone 7. The gross payments will be \$250M but the net payments will be \$183M.
- d) The sinking fund for the Administrative and Engineering Building will be used to purchase existing building at the end of the fifteen-year lease in FY 2019/20 or to otherwise obtain a headquarters building.
- e) After FY 2030/31, money available in the sinking funds will be used to pay continuing obligations for the Fourth Contractor's Share of the SBA and the SBA Enlargement projects.
- f) Only the Transportation Capital and Water System Revenue Bond Surcharge portions are included in Fund 130.

Figure 9 – Connections, Expenditures, and Major New Facilities



SECTION 5. DETERMINATION OF THE CONNECTION FEE

FINANCIAL PLAN OVERVIEW

A connection fee model, which included a financial plan, was developed as part of this study, and is based on the projected revenue and expenditure stream in order to develop a connection fee structure suitable to finance the Water System Expansion Program (Program). Municipal and Industrial (M&I) connection fees have historically been designed to fund all Program costs with the goal of 100% pay-as-you-go financing provided by connection fees and interest income earned on reserves in order to minimize risk to existing rate payers. Zone 7 also has a goal of maintaining a minimum fund balance based on 60% of non-discretionary¹¹ obligations for the following year. Connection fees are set to meet these goals.

The various costs allocated to future connections include the following items:

- **Planned future capital projects** – the Agency's planned expansion-related capital improvements (those increasing capacity) are allocated to new connections; some percentage of other capital improvements (that include a component of increased capacity) are assigned to growth as their fair share based on Zone 7's engineering analysis.
- **Cash reserves** – existing connection fees have funded the Agency's current cash reserves in Fund 130 and, just like a capital asset, future connections should fund their fair share of these cash reserves.
- **Outstanding long-term debt** – includes remaining principal and interest payments, and assumes that connection fee revenue will be used to pay growth's fair share of future principal and interest payments.
- **Administration Fee** – calculated at 1.0 percent of connection fees collected; amounts are paid to Retailers to compensate their costs for the collection of connection fees on behalf of Zone 7.
- **Contingencies** – included at \$500,000 annually (current-year dollars, inflated in future years) to ensure adequate revenues are collected to fund the Expansion Program needs, including unforeseeable projects that may be required by new regulations, etc.
- **Sinking fund contributions** – included for three specific non-discretionary expenditures; funds are collected annually and will be used to pay for the identified expenditures after significant system buildout has been realized (i.e. projected growth slows after FY 2030/31, and sinking funds collected through FY 2029/30 are used to meet non-discretionary obligations from FY 2030/31 – 2034/35).

As previously mentioned, the financial plans developed as part of the connection fee update include the application of growth cycling. While having no material effect on the calculated fee, *when* new connections are realized has an effect on Zone 7's projected cash flows. Financial plans were closely evaluated both with and without the use of growth cycling. With growth cycling effectively spreading out when new connections will occur, the Expansion Fund is projected to experience periodic cash-flow challenges. This can be mitigated with several strategies such as shifting when CIP projects will occur or the use of short-term or long-term debt financing.

Based on the connection fees calculated, the recommended Financial Plan for the first five years is shown in Figure 10 below. The remainder of the Financial Plan through FY 2040/41 is shown in Appendix A at the end of this report, along with further details and related information used in calculating connection fees.

¹¹ Non-discretionary obligations include the following: Fourth Contractors Share of SBA, SBA Enlargement debt service payments, Cawelo Groundwater In-Lieu Banking Program debt service payments, Semitropic Water Storage District debt service payments, and the Zone 7 Building Lease payments.

Figure 10 – Five-Year Financial Plan Summary

FINANCIAL PLAN EXPANSION PROGRAM - FUND 130	Budget	Projected				
	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Beginning Year Fund Balance	\$ 55,681,392	\$ 71,985,181	\$ 91,611,181	\$ 88,964,287	\$ 43,269,774	\$ (1,797,689)
Sources of Funds						
Connection Fees - Dougherty Valley (1)	\$ 1,951,493	\$ 2,017,648	\$ 1,093,600	\$ -	\$ -	\$ -
Connection Fees - Zone 7 (1)	35,428,590	44,735,922	51,916,068	45,143,376	41,571,750	56,760,928
25.0 Percent Bond Cover Credit from DWR for SBA Project	4,021,312	3,819,448	3,780,947	3,770,254	3,746,561	3,737,233
Interest Income (2)	193,214	249,789	458,056	667,232	432,698	-
Other	-	-	-	-	-	-
Total Sources of Funds	\$ 41,594,608	\$ 50,822,807	\$ 57,248,671	\$ 49,580,862	\$ 45,751,009	\$ 60,498,161
<i>Projected DUEs - Dougherty Valley</i>	81	76	40	0	0	0
<i>Projected DUEs - DSRD, Livermore, Pleasanton with Growth Cycling</i>	1,374	1,617	1,822	1,538	1,375	1,823
<i>Projected DUEs - Total</i>	<i>1,455</i>	<i>1,693</i>	<i>1,862</i>	<i>1,538</i>	<i>1,375</i>	<i>1,823</i>
Uses of Funds						
Discretionary Project Expenditures (3)	\$ 2,070,428	\$ 7,961,184	\$ 36,622,113	\$ 76,852,238	\$ 68,594,360	\$ 60,184,524
Discretionary Project Expenditures - New Debt Credit	-	-	-	-	-	-
Discretionary Project Expenditures - Reduction	-	-	-	-	-	-
Fourth Contractors Share of SBA Payments (4)	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Use of Sinking Fund Balance	-	-	-	-	-	-
Fixed Cost of Water Entitlement	19,000	-	-	-	-	-
SBA Enlargement Financing Payments (4)	15,277,793	15,123,788	15,081,015	14,986,245	14,948,931	14,951,107
Use of Sinking Fund Balance	-	-	-	-	-	-
Groundwater In-Lieu Banking Program (Cawelo) (4)	1,297,056	1,299,256	1,299,713	1,299,138	1,297,531	1,303,219
Semitropic Water Storage District Payments (4)	49,178	49,178	49,178	49,178	49,178	49,178
Building Lease Payment (4)	451,371	460,048	463,000	274,000	-	-
Use of Sinking Fund Balance	-	-	-	(4,063,222)	-	-
Administration Fee (5)	373,801	467,536	530,097	451,434	415,718	567,609
Contingencies	500,000	515,000	530,450	546,364	562,754	579,637
Sinking Fund Contributions	2,252,192	2,320,817	2,320,000	1,880,000	1,950,000	2,030,000
New Debt Service	-	-	-	-	-	-
Total Uses of Water Funds	\$ 25,290,819	\$ 31,196,807	\$ 59,895,565	\$ 95,275,375	\$ 90,818,473	\$ 82,665,274
Annual Contribution To/From Reserves	\$ 16,303,789	\$ 19,626,000	\$ (2,646,894)	\$ (45,694,513)	\$ (45,067,464)	\$ (22,167,114)
Year End Fund Balance	\$ 71,985,181	\$ 91,611,181	\$ 88,964,287	\$ 43,269,774	\$ (1,797,689)	\$ (23,964,803)
Minimum Fund Balance	\$ 11,959,362	\$ 11,935,743	\$ 11,765,137	\$ 11,577,384	\$ 11,582,102	\$ 11,687,385
<i>Annual Interest Earnings Rate (6)</i>	<i>0.35%</i>	<i>0.35%</i>	<i>0.50%</i>	<i>0.75%</i>	<i>1.00%</i>	<i>1.25%</i>

1. Annual revenues assume annual inflationary adjustment to connection fees.
2. Interest calculated on beginning year fund balance, based on historical Local Agency Investment Fund (LAIF) returns.
3. Discretionary Project Expenditures include Fund 130 capital project expenditures, inflated annually by ENR CCI; see footnote (4).
4. Expenses are considered non-discretionary. Excluding Cawelo & Semitropic, Sinking Funds are used to pay the obligation in future years.
5. Calculated at 1.0 percent of connection fee revenue; paid to Retailers for collection of connection fees.
6. Historical interest earning rates were referenced on the California Treasurer's Office website for funds invested in LAIF. Future years earnings were conservatively estimated through 2025 and phase into the historical 10 year average interest earnings rate.

CALCULATED WATER CONNECTION FEES

New connection fees have been calculated based on the growth and allocated costs as previously described. Due to previous payments and in accordance with existing agreements¹², the Dougherty Valley connection fee was designed to exclude specific projects related to water acquisition and non-local storage; see Appendix A for full details. The recommended fees would replace the Agency's current charge (see Figure 11). Existing and new connection fees are based on the costs per DUE but also reflect meter sizes. An annual inflation adjustment should be applied to the new fee, such as the annual change in the Engineering & News Record construction cost index.

¹² Water Service Escrow Agreement between Zone 7, DSRSD and Berrenda Mesa Water District and Amendment No. 1 to Contract Between Zone 7 and DSRSD for M&I Water Supply (Appendix C).

Figure 11 – Calculated New Water Connection Fee

Effective Period	Alameda County (\$/DUE)	Dougherty Valley (\$/DUE)
Current Fee (Effective January 1, 2016)	\$25,320	\$23,430
Proposed New Fee (Effective May 1, 2017) ¹³	\$27,180	\$26,080

WATER CONNECTION FEE FINDINGS STATEMENTS

The new connection fees calculated in this report are based on regulatory requirements and accepted industry standards, and are further documented in Appendix A. This study makes the following findings:

- The purpose of Zone 7’s water connection fee is to ensure that new and upsized connections reimburse and/or mitigate a reasonable portion of Zone 7’s planned capital investments. These are investments that benefit and/or are necessary to accommodate increased demand for water service.
- Zone 7 uses connection fee proceeds to fund capital investments in the water system, which include the future design and construction of planned facilities. Zone 7 also uses some portion of connection fees to repay the outstanding debt that was used to fund past expansion-related capital improvements and to repay debt that the Agency plans on issuing to fund capital projects for expansion related purposes.
- All parcels seeking permission to connect to Zone 7’s water system, through the appropriate retailer, are subject to the water connection fee, payment of which is a condition of connection approval. Appendix A identifies the total number of projected future water customers. In addition to the 131,995 single-family dwelling unit equivalents (DUEs) currently in service, the Agency expects to add approximately 24,533¹⁴ additional equivalent DUEs by year 2040.
- Connection fees for new water customers vary depending on the size of the water meter serving the connection. Meter size is generally proportionate to the demands a parcel places on the water utility system, specifically the peaking requirements related to the meter size.
- Figure 7 and tables in Appendix A illustrate the equivalency factors differentiating meter sizes, based on their maximum continuous flow. Of the meters currently connected to the system, a majority are 5/8-inch meters, representing an equivalency factor of 1.0, from which the number of equivalent meters (DUEs) for all larger meters is calculated.
- Zone 7 has made past investments in water infrastructure, and plans to invest further in expanded and upgraded facilities. These investments make possible the availability and continued reliable provision of utility service of high quality water sufficient to meet demands of growth within Zone 7’s service area.
- Without capital investment in existing facilities, the water system capacity available to serve the needs of future connections would be uncertain. Without planned investments in future facilities, water service would not be sustainable at the level of service enjoyed by current users. Appendix A identifies the total value of planned water system assets that are attributable to serving future connections.
- Connection fees are derived directly from the value of capital investments in planned water facilities.

¹³ Proposed fees would initially be effective May 1, 2017, and then January 1st each year thereafter. Connection fees will be updated annually by the Engineering News-Record’s construction cost index (ENR CCI) inflation factor (September – September).

¹⁴ Excluding 192 prep-paid connections.

- Figure 11 identifies the water infrastructure cost per single-family dwelling unit equivalent (DUE) for a new connection. A unit cost of \$27,180 per DUE was calculated for Zone 7's customers in Alameda County, and a unit cost of \$26,080 per DUE was calculated for customers in Dougherty Valley.
- Upon payment of a connection fee, a new customer incurs the obligation to pay the same ongoing service rates as existing customers to the appropriate Retailer, regardless of the date of connection to the systems or the actual start of service. Assessment of connection fees ensures that, over time, ongoing service rates are not disproportionately burdened by the accommodation of system growth.

SECTION 6. MITIGATION FEE ACT FINDINGS

This section identifies Zone 7's responsibilities pursuant to California Government Code Section 66000, *et seq.*, which the Agency must complete when implementing and/or updating any connection fee program.

CONNECTION FEE PROGRAM ADOPTION PROCESS

Connection fee program adoption procedures are found in the California Government Code Section 66000, *et seq.* Adoption of a connection fee program requires the Zone 7 Water Agency Board of Directors to follow certain procedures including holding a public hearing (California Government Code Section 6062a). Mailed notice 14 days prior to the public hearing is required only for those individuals who request such notification.

PROGRAMMING REVENUES AND CAPITAL IMPROVEMENT PROJECTS

Zone 7 Water Agency should regularly update its Capital Improvement Program (CIP) Ten-Year Water System Plan¹⁵ to identify specific projects and program fee revenues to those projects. Using the CIP Ten-Year Water System Plan in this manner documents a reasonable relationship between new development and the use of fee revenues. Zone 7 typically updates its CIP every couple of years.

For the planning period of the CIP Ten-Year Water System Plan, the Agency should allocate all existing fund balances and projected fee revenues to fund facilities projects. The Agency should plan its CIP expenditures at least five years in advance and show where all collected connection fee revenues will be spent; consistent with this recommendation, Zone 7 has a ten-year water system CIP that is periodically updated.

FUNDS NEEDED TO COMPLEMENT CONNECTION FEE PROGRAM

In adopting the fees as presented in this report, additional funds may be identified to fund the share of costs not related to new development (e.g., renewal/replacement, and system wide improvements unrelated to increased capacity of existing assets).

INFLATION ADJUSTMENT

The costs in this report are shown in 2017 dollars (unless otherwise noted) based on information provided by the Agency and researched sources. To ensure that the fee program stays current with the prevailing cost of construction, the Agency should periodically adjust the costs by an inflation index, or by a factor based on experience with actual local construction projects. The Engineering News Record Construction Cost Index 20-Agency average or other suitable index may be used to adjust connection fees in general.

COMPLIANCE REQUIREMENTS

The California Mitigation Fee Act (Government Code Section 66000, *et seq.*) mandates procedures for administration of connection fee programs, including collection, accounting, refunds, updates, and reporting. The Agency must comply with applicable reporting requirements, as well as all other applicable requirements of the Mitigation Fee Act.

¹⁵ Most recent version: Fiscal Year 2015/16 Capital Improvement Program: Ten-Year Water System Plan and Five-Year Flood Protection Plan (Zone 7 Water Agency, October 2014)

LOCAL IMPLEMENTATION

Local administrative procedures will be necessary to insure that the on-going application and collection of the connection fees on a development project-specific basis meets the direction and intent of California Government Code Section 66000, *et seq.* The Retailers' local administrative procedures will address topics such as a change in use or the demolition of a building, calculation of fees for specific types of uses, the transfers of credits from one property to another, the calculation of fees for mixed-use projects, and similar issues. The full range of these topics is beyond the scope of this study, but they must be consistent with the requirements of California Government Code Sec. 66000, *et seq.*

WATER CONNECTION FEE

Government Code Section 66013(a) stipulates:

...[W]hen a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed...

SECTION 5. DETERMINATION OF THE CONNECTION FEE of this study shows that the proposed connection fee does not exceed the cost of providing the facilities needed to expand the Agency's water treatment and transmission system as new development occurs. New development in Zone 7's service area will require investment in new and expanded treatment plants, transmission mains, and storage reservoirs.

The fees are calculated by identifying the cost of facility improvements needed to accommodate projected growth in the Agency through 2040. The projected expansion facility costs are divided by the anticipated growth in dwelling unit equivalents. Finally, the maximum connection fee is scaled to the hydraulic equivalency factor associated with each water meter size to determine the connection fee for new water connections. In this manner, the study ensures that the proposed development fee equals¹⁶, but does not exceed, the cost of facilities required to serve the new development.

¹⁶ Excludes future inflationary factor use (such as ENR CCI).

SECTION 7. RECOMMENDATIONS AND ADOPTION

CONSULTANT RECOMMENDATIONS

Based on the analysis and results presented in this report, the recommended actions include the following:

- **Approve and accept this report:** NBS recommends the Zone 7 Water Agency Board of Directors formally approve and adopt this report and its recommendations.
- **Adopt the updated connection fees:** NBS has prepared an analysis of current and planned capital assets and determined that the connection fees should be adjusted, with larger meters having proportionally larger fees. These fees should be adjusted annually based on a reasonable inflation adjustment index such as the Engineering News-Record construction cost index. This minimizes the problem of fees falling behind the actual capital asset costs once they are adjusted for normal inflation.

NEXT STEPS

- **Annually Review Fees and Revenue** – Any time an Agency adopts new connection fees, those new fees should be monitored over the next several years. Changing economic development patterns and regulatory requirements underscore the need for this review. Continue periodic updates to the study every five years.

Note: The attached Appendices provide more detailed information on the water connection fee analysis summarized in this report.

PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

In preparing this report and the opinions and recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, costs of projected capital improvement projects, allocations of those costs to growth, Agency policies such as the use of an incremental approach to connection fees, as well as other conditions and events that may occur in the future. This information and these assumptions, including the Agency's planned capital improvement program costs prepared by Agency staff and/or engineering consultants, were provided by sources we believe to be reliable. However, NBS has not independently verified this information.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report, some assumptions will invariably not materialize as stated herein, and may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others. Also, NBS assumes that the Agency will have recommended connection fees thoroughly reviewed by legal counsel.

ADOPTION

On February 15, 2017, the Zone 7 Board of Directors adopted this report and the recommended fees. The newly adopted fees become effective May 1, 2017.

APPENDIX A – Connection Fee Analysis

ALAMEDA ZONE 7 WATER AGENCY
Water Connection Fee Update
Table of Contents

Table of Contents

Exhibit Number	Function
1	Population & Water Demand Data
2	Existing & Projected Equivalent Dwelling Units
3	Cash Reserves and Debt Service Allocation
4	Planned Capital Improvement Program Expenditures
5	Financial Plan
6	Fee Schedule
7	Incremental Approach - Fee Calculation

Population Statistics

Population Year	DSRSD - Dougherty Valley	DSRSD - Alameda Co.	DSRSD TOTAL	Cal Water	Livermore	Pleasanton	TOTAL
2010	19,146	48,821	67,967	56,956	31,994	69,300	226,000
2015	26,029	55,844	81,873	58,095	28,782	75,000	244,000
2020	32,018	60,531	92,549	62,212	29,213	78,137	262,000
2025	32,018	65,218	97,236	67,382	31,700	81,569	278,000
2030	32,018	69,905	101,923	68,566	32,391	85,217	288,000
2035	32,018	74,592	106,610	68,566	32,391	89,126	297,000
2040	32,018	74,592	106,610	68,566	32,391	93,188	301,000
Increase (2015 to 2040)	5,989	18,748	24,737	10,471	3,609	18,188	57,000
% Increase (2015 to 2040)	23%	34%	30%	18%	13%	24%	23%

Source: 2015 Urban Water Management Plans and updated data provided via email, for each retailer.

Water Demand Statistics

Expected Demand (Acre Feet) Including GPQs	DSRSD TOTAL	Cal Water	Livermore	Pleasanton	TOTAL
2013	8,508	11,420	6,732	18,080	44,740
2015	7,445	7,255	4,556	11,355	30,611
2020	13,678	11,946	6,294	15,942	47,860
2025	14,554	12,457	6,822	16,700	50,533
2030	15,223	12,507	6,969	17,505	52,204
2035	15,840	12,418	6,969	18,367	53,594
2040	15,840	12,346	6,969	19,264	54,419
Increase (2013 to 2040)	7,332	926	237	1,184	9,679
% Increase (2013 to 2040)	86%	8%	4%	7%	22%
Increase (2015 to 2040)	8,395	5,091	2,413	7,909	23,808
% Increase (2015 to 2040)	113%	70%	53%	70%	78%

Source: 2015 Urban Water Management Plans and updated data provided via email, for each retailer.

GPQ = Groundwater Pumping Quotas

EXISTING AND PROJECTED SERVICE NUMBERS:

Demographic Statistics	Total Existing DUEs	Projected Total DUEs (thru 2040/41)	Cumulative Change: Number of Units (thru 2040/41)	% of Total New DUEs
Dougherty Valley (via DSRSD)	7,972	8,169	197	1%
Dublin-San Ramon Services District (DSRSD)	23,524	31,958	8,434	34%
California Water Service Company - Livermore District	33,620	39,201	5,581	23%
City of Livermore*	13,911	18,319	4,408	18%
City of Pleasanton	52,968	58,881	5,913	24%
Total	131,995	156,528	24,533	100.0%
* Projected Total DUEs exclude 192 prepaid connections.		New Growth:	18.6%	

EXISTING AND PROJECTED SERVICE NUMBERS, BY YEAR:

Year	New DUE Projections	DSRSD Daugherty Valley	DSRSD Alameda County	CalWater Service	Pleasanton	Livermore	Prepaid Connections	Total	DUEs with Growth Cycling
1	FY 2015/16	7,972	23,524	33,620	52,968	13,911	0	131,995	131,995
2	FY 2016/17	81	685	462	455	307	(192)	1,798	1,455
3	FY 2017/18	76	797	462	455	307	0	2,097	1,693
4	FY 2018/19	40	1,054	462	455	307	0	2,318	1,862
5	FY 2019/20	0	698	463	455	307	0	1,923	1,538
6	FY 2020/21	0	522	517	373	307	0	1,719	1,375
7	FY 2021/22	0	656	569	291	307	0	1,823	1,823
8	FY 2022/23	0	371	569	291	307	0	1,538	1,538
9	FY 2023/24	0	354	569	291	307	0	1,521	1,521
10	FY 2024/25	0	348	570	291	307	0	1,516	1,516
11	FY 2025/26	0	457	351	387	307	0	1,502	1,502
12	FY 2026/27	0	640	131	482	307	0	1,560	1,560
13	FY 2027/28	0	725	131	482	307	0	1,645	1,645
14	FY 2028/29	0	690	131	482	307	0	1,610	1,610
15	FY 2029/30	0	332	130	482	307	0	1,251	1,251
16	FY 2030/31	0	105	65	241	302	0	713	713
17	FY 2031/32	0	0	0	0	0	0	0	193
18	FY 2032/33	0	0	0	0	0	0	0	193
19	FY 2033/34	0	0	0	0	0	0	0	193
20	FY 2034/35	0	0	0	0	0	0	0	193
21	FY 2035/36	0	0	0	0	0	0	0	193
22	FY 2036/37	0	0	0	0	0	0	0	193
23	FY 2037/38	0	0	0	0	0	0	0	193
24	FY 2038/39	0	0	0	0	0	0	0	193
25	FY 2039/40	0	0	0	0	0	0	0	193
26	FY 2040/41	0	0	0	0	0	0	0	193
Total		8,169	31,958	39,201	58,881	18,511	-192	156,528	156,528
Total (Excluding FY 2015/16)		197	8,434	5,581	5,913	4,600	-192	24,533	24,533

Data source: UWMP Summaries provided by Retailers; DSRSD and Livermore projected DUEs updated via email January 2017.

Water Connection Fee Update

Allocation of Cash Reserves and Outstanding Debt to Existing and Future Services

ALLOCATION OF DEBT TO EXISTING AND FUTURE USERS:

Debt Service	Outstanding Principal & Interest	% Allocation			Total	\$ - Allocation			Total	()
		Exclude from Analysis	Existing Users	Future Users		Exclude from Analysis	Existing Users	Future Users		
South Bay Aqueduct Improvement/Enlargement Project (\$211.6 million)	\$ 249,781,993	0%	0.0%	100.0%	100%	\$ -	\$ -	\$ 249,781,993	\$ 249,781,993	1
Cawelo Water Storage District: 2006 Water Banking COP Series 2006	\$ 24,784,006	0%	0.0%	100.0%	100%	\$ -	\$ -	\$ 24,784,006	\$ 24,784,006	1
Semitropic Water Storage District: Stored Water Recovery Unit (\$11.1 million)	\$ 983,560	0%	0.0%	100.0%	100%	\$ -	\$ -	\$ 983,560	\$ 983,560	1
Grand Total	\$ 275,549,560	0%	0.0%	100.0%	100%	\$ -	\$ -	\$ 275,549,560	\$ 275,549,560	

1. Outstanding bond principal is allocated to existing and future services based on remaining debt service to be allocated to future users.

ALLOCATION OF CASH RESERVES TO EXISTING AND FUTURE USERS:

Water Cash Reserves	Beginning Cash (1)	% Allocation			\$ - Allocation			
		Exclude from Analysis	Existing Users	Future Users	Exclude from Analysis	Existing Users	Future Users	
Cash in Fund 100 - Water Enterprise	\$ 5,407,135	0%	100.0%	0.0%	\$ -	\$ 5,407,135	\$ -	<i>Restricted</i>
Cash in Fund 110 - State Water Facilities	\$ 12,936,524	0%	100.0%	0.0%	\$ -	\$ 12,936,524	\$ -	<i>Restricted</i>
Cash in Fund 120 - Water Renewal/Replacement & System-Wide Improvements	\$ 29,243,930	0%	100.0%	0.0%	\$ -	\$ 29,243,930	\$ -	
Cash in Fund 130 - Expansion	\$ 69,445,048	0%	0.0%	100.0%	\$ -	\$ -	\$ 69,445,048	
Total Beginning Cash	\$ 117,032,637	0%	40.7%	59.3%	\$ -	\$ 47,587,589	\$ 69,445,048	

1. Beginning cash balances are as of July 1, 2016; reported directly by staff via email on December 12, 2016.

Water Cash Reserves Fund 130 (Expansion)	Beginning Cash (1)	% Allocation			\$ - Allocation			
		Exclude from Analysis	Existing Users	Future Users	Exclude from Analysis	Existing Users	Future Users	
Capital Projects Reserve	\$ 55,681,392	0%	0.0%	100.0%	\$ -	\$ -	\$ 55,681,392	
Building Sinking Fund	\$ 2,502,822	100%	0.0%	0.0%	\$ 2,502,822	\$ -	\$ -	<i>Restricted</i>
SBA Sinking Fund	\$ 9,054,145	100%	0.0%	0.0%	\$ 9,054,145	\$ -	\$ -	<i>Restricted</i>
FC Share Sinking Fund	\$ 2,206,689	100%	0.0%	0.0%	\$ 2,206,689	\$ -	\$ -	<i>Restricted</i>
Total Beginning Cash	\$ 69,445,048	20%	0%	80%	\$ 13,763,656	\$ -	\$ 55,681,392	

1. Beginning cash balances are as of July 1, 2016; reported directly by staff via email on December 12, 2016.

Future Year Program Expenses	Total Fund 130
Expansion Program Projects	
Buildings & Grounds	\$ 1,648,419
Program Management	1,962,858
Transmission & Distribution	40,652,179
Water Supply & Conveyance	207,128,648
Water Treatment Facilities	158,716,159
Wells	140,170,609
Subtotal Expansion Program Projects	\$ 550,278,873
Debt Service Payments through Buildout	
Total Debt Service Payments (1)	\$ 245,966,379
Other Expenditures through Buildout	
Other Expenditures (2)	52,030,465
Contingency	18,229,632
Sinking Fund Contributions	32,153,009
TOTAL	\$ 898,658,357

1. Debt Service Payments is net of Sinking Funds, applied to future debt service obligations.
2. Other Expenditures includes the following: Fourth Contractors Share of the SBA net of accumulated sinking funds, Fixed Cost of Water Entitlement, Administration Fees and the Building Lease Payment accumulated sinking funds.

Exclude from Dougherty Valley Fee	
Additional Entitlements	\$ 19,000
Additional Storage	\$ 25,767,566
Other Projects	\$ 955,000
	<u>\$ 26,741,566</u>
Dougherty Valley Exclusion	95.95%

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Current-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2017	2018	2019	2020	2021
Fund 130 Expansion Projects						
Expansion Program Projects						
Buildings & Grounds		451,371	460,048	463,000	274,000	-
Groundwater Basin Management		-	-	-	-	-
Program Management		43,000	86,000	37,500	75,000	37,500
Regulatory Compliance		-	-	-	-	-
Transmission & Distribution		-	-	-	-	2,066,950
Water Supply & Conveyance		4,026,273	7,674,272	20,248,310	59,458,165	50,868,375
Water Treatment Facilities		920,155	1,260,489	9,206,914	13,000,914	10,975,721
Wells		100,000	1,710,000	8,030,000	800,000	-
Expansion Program Projects Subtotal		5,540,799	11,190,809	37,985,724	73,608,079	63,948,546
Other Program Expenses						
Contingency		500,000	500,000	500,000	500,000	500,000
Sinking Fund Contributions		2,252,192	2,320,817	2,320,000	1,880,000	1,950,000
TOTAL		\$ 8,292,991	\$ 14,011,626	\$ 40,805,724	\$ 75,988,079	\$ 66,398,546

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.

FORECASTING ASSUMPTIONS:

Economic Variables	2017	2018	2019	2020	2021
Annual Construction Cost Inflation, Per Engineering News Record (2)	0.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.00	1.03	1.06	1.09	1.13

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Current-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2022	2023	2024	2025	2026
Fund 130 Expansion Projects						
Expansion Program Projects						
Buildings & Grounds		-	-	-	-	-
Groundwater Basin Management		-	-	-	-	-
Program Management		75,000	37,500	75,000	37,500	75,000
Regulatory Compliance		-	-	-	-	-
Transmission & Distribution		10,847,300	519,250	-	250,000	-
Water Supply & Conveyance		41,929,521	5,132,500	3,764,000	6,004,000	4,145,500
Water Treatment Facilities		308,000	4,000	8,000	6,004,000	6,010,000
Wells		1,760,000	13,890,000	23,650,000	2,320,000	-
Expansion Program Projects Subtotal		54,919,821	19,583,250	27,497,000	14,615,500	10,230,500
Other Program Expenses						
Contingency		500,000	500,000	500,000	500,000	500,000
Sinking Fund Contributions		2,030,000	2,100,000	2,190,000	2,280,000	2,370,000
TOTAL		\$ 57,449,821	\$ 22,183,250	\$ 30,187,000	\$ 17,395,500	\$ 13,100,500

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.

FORECASTING ASSUMPTIONS:

Economic Variables	2022	2023	2024	2025	2026
Annual Construction Cost Inflation, Per Engineering News Record (2)	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.16	1.19	1.23	1.27	1.30

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Current-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2027	2028	2029	2030	2031
Fund 130 Expansion Projects						
Expansion Program Projects						
Buildings & Grounds		-	-	-	-	-
Groundwater Basin Management		-	-	-	-	-
Program Management		37,500	75,000	37,500	75,000	37,500
Regulatory Compliance		-	-	-	-	-
Transmission & Distribution		-	2,638,000	13,866,700	658,000	-
Water Supply & Conveyance		3,054,000	7,254,000	3,054,000	4,005,000	3,044,000
Water Treatment Facilities		75,414,000	2,010,000	6,000	10,000	6,000
Wells		3,500,000	17,840,000	30,360,000	3,800,000	-
Expansion Program Projects Subtotal		82,005,500	29,817,000	47,324,200	8,548,000	3,087,500
Other Program Expenses						
Contingency		500,000	500,000	500,000	500,000	500,000
Sinking Fund Contributions		2,460,000	2,560,000	2,670,000	2,770,000	-
TOTAL		\$ 84,965,500	\$ 32,877,000	\$ 50,494,200	\$ 11,818,000	\$ 3,587,500

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.

FORECASTING ASSUMPTIONS:

Economic Variables	2027	2028	2029	2030	2031
Annual Construction Cost Inflation, Per Engineering News Record (2)	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.34	1.38	1.43	1.47	1.51

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Current-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2032	2033	2034	2035	2036
Fund 130 Expansion Projects						
Expansion Program Projects						
Buildings & Grounds		-	-	-	-	-
Groundwater Basin Management		-	-	-	-	-
Program Management		75,000	37,500	75,000	37,500	75,000
Regulatory Compliance		-	-	-	-	-
Transmission & Distribution		-	-	-	250,000	-
Water Supply & Conveyance		3,044,000	3,044,000	3,304,000	5,154,000	3,014,000
Water Treatment Facilities		12,000	6,000	12,000	6,000	14,000
Wells		-	-	-	-	-
Expansion Program Projects Subtotal		3,131,000	3,087,500	3,391,000	5,447,500	3,103,000
Other Program Expenses						
Contingency		500,000	500,000	500,000	500,000	500,000
Sinking Fund Contributions		-	-	-	-	-
TOTAL		\$ 3,631,000	\$ 3,587,500	\$ 3,891,000	\$ 5,947,500	\$ 3,603,000

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.

FORECASTING ASSUMPTIONS:

Economic Variables	2032	2033	2034	2035	2036
Annual Construction Cost Inflation, Per Engineering News Record (2)	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.56	1.60	1.65	1.70	1.75

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Current-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2037	2038	2039	2040	2041	Grand Total
Fund 130 Expansion Projects							
Expansion Program Projects							
Buildings & Grounds		-	-	-	-	-	1,648,419
Groundwater Basin Management		-	-	-	-	-	-
Program Management		37,500	75,000	37,500	75,000	-	1,366,500
Regulatory Compliance		-	-	-	-	-	-
Transmission & Distribution		-	-	-	-	-	31,096,200
Water Supply & Conveyance		854,000	14,000	14,000	14,000	14,000	242,131,916
Water Treatment Facilities		8,000	14,000	8,000	16,000	8,000	125,248,193
Wells		-	-	-	-	-	107,760,000
Expansion Program Projects Subtotal		899,500	103,000	59,500	105,000	22,000	509,251,228
Other Program Expenses							
Contingency		500,000	500,000	500,000	500,000	500,000	12,500,000
Sinking Fund Contributions		-	-	-	-	-	32,153,009
TOTAL		\$ 1,399,500	\$ 603,000	\$ 559,500	\$ 605,000	\$ 522,000	\$ 553,904,237

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.

FORECASTING ASSUMPTIONS:

Economic Variables	2037	2038	2039	2040	2041
Annual Construction Cost Inflation, Per Engineering News Record (2)	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.81	1.86	1.92	1.97	2.03

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Future-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2017	2018	2019	2020	2021
Fund 130 Expansion Projects						
Buildings & Grounds	Administrative & Engineering Building Lease (Water System)*	\$ 451,371	\$ 460,048	\$ 463,000	\$ 274,000	\$ -
Program Management	Capital Improvement Program Management	43,000	88,580	39,784	81,955	42,207
Transmission & Distribution	Patterson Pass Pipeline	-	-	-	-	2,326,370
Transmission & Distribution	Vasco Enlargement Pipeline	-	-	-	-	-
Transmission & Distribution	Transmission System Planning Update	-	-	-	-	-
Transmission & Distribution	Westside Transmission System Improvements	-	-	-	-	-
Water Supply & Conveyance	PPWTP New Clearwell	372,273	383,440	5,540,989	2,853,610	-
Water Supply & Conveyance	Arroyo Mocho Diversion Facility Coordination & Implementation	-	-	562,277	3,190,763	-
Water Supply & Conveyance	Arroyo Mocho Low Flow Crossings	-	515,000	2,790,167	131,127	-
Water Supply & Conveyance	Water Supply and Bay Area Regional Projects	500,000	535,600	4,559,107	4,695,880	-
Water Supply & Conveyance	Bay-Delta Conservation Planning (Zone 7) (2)	5,000	5,150	5,305	5,464	5,628
Water Supply & Conveyance	Cawelo Groundwater Banking Program* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Facilities and Improvements (WATER SUPPLY)	-	-	668,367	-	1,859,341
Water Supply & Conveyance	Chain of Lakes - Cope Lake to DVWTP Pipeline	-	3,201,240	3,297,277	35,216,406	1,559,955
Water Supply & Conveyance	Chain of Lakes Master Planning (WATER SUPPLY)	-	14,420	14,853	191,227	15,757
Water Supply & Conveyance	Cope/Lake I/Lake H Management Plan (WATER SUPPLY)	-	72,100	74,263	-	-
Water Supply & Conveyance	Delta Habitat Conservation and Conveyance Program	-	-	-	-	-
Water Supply & Conveyance	Delta Outreach Program	5,000	5,150	5,305	5,464	5,628
Water Supply & Conveyance	Fixed Cost of Water Entitlement* (2)	19,000	-	-	-	-
Water Supply & Conveyance	Fourth Contractor's Share of the SBA (capital costs)*	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Water Supply & Conveyance	High-Efficiency Toilet Rebate Program (2)	15,000	-	-	-	-
Water Supply & Conveyance	High-Efficiency Washing Machine Rebate Program (2)	30,000	10,300	-	-	-
Water Supply & Conveyance	Reliability Intertie	-	-	706,559	727,756	7,858,303
Water Supply & Conveyance	Semitropic Stored Water Recovery Unit* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	South Bay Aqueduct Enlargement Project* (3)	-	-	-	-	-
Water Supply & Conveyance	SWP Peaking Payment (Lost Hills & Belridge Water Districts)* (2)	60,000	50,000	50,000	40,000	30,000
Water Supply & Conveyance	Water Conservation Best Management Practices (2)	20,000	20,600	21,218	21,855	22,510
Water Supply & Conveyance	Water Supply Replacement	-	-	-	14,500,829	42,515,392
Water Supply & Conveyance	Water System Master Plan	-	-	-	109,273	-
Water Treatment Facilities	Increased Treatment Plant Capacity	-	-	-	-	-
Water Treatment Facilities	PPWTP Expansion/New Media Filters	577,822	595,157	5,095,411	5,248,274	2,675,020
Water Treatment Facilities	Maintenance Yard and Building Improvements	-	-	-	109,273	337,653
Water Treatment Facilities	Water Quality Management Program	4,000	6,180	4,244	8,742	4,502
Water Treatment Facilities	PPWTP Ozone Treatment	338,333	696,967	4,667,960	5,015,617	2,583,043
Water Treatment Facilities	PPWTP Sludge Handling Expansion	-	-	-	3,824,545	6,753,053
Wells	Busch-Valley Well 1	-	1,658,300	8,519,027	874,182	-
Wells	Chain of Lakes Wells 3 & 4	-	-	-	-	-
Wells	EI Charro Pipeline Phase 2	-	-	-	-	-
Wells	Review of Well Implementation Plan	100,000	103,000	-	-	-
Wells	Second Groundwater Demineralization Facility	-	-	-	-	-
Wells	Third Groundwater Demineralization Facility	-	-	-	-	-
Wells	Bernal Wells 1&2	-	-	-	-	-
Contingency	Contingency	500,000	515,000	530,450	546,364	562,754
Sinking Fund Contributions	Administrative & Engineering Building - Sinking Fund (Fund 130)**	520,200	520,200	520,000	-	-
Sinking Fund Contributions	Fourth Contractor's Share of the SBA - Sinking Fund**	570,700	592,873	590,000	620,000	640,000
Sinking Fund Contributions	South Bay Aqueduct Enlargement Project - Sinking Fund**	1,161,292	1,207,744	1,210,000	1,260,000	1,310,000
		\$ 8,292,991	\$ 14,257,049	\$ 42,935,563	\$ 82,552,602	\$ 74,107,115

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.
 2. Projects identified by Zone 7 Staff to be excluded from Dougherty Valley fee calculation; see Dougherty Valley connection agreement for further details.
 3. Projects are zeroed out in this exhibit; these projects represent debt service, which is included on Exhibit 3.
- *Do not apply inflation to these projects, classify as non-discretionary
 **Do not apply inflation to these projects

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Future-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2022	2023	2024	2025	2026
Fund 130 Expansion Projects						
Buildings & Grounds	Administrative & Engineering Building Lease (Water System)*	\$ -	\$ -	\$ -	\$ -	\$ -
Program Management	Capital Improvement Program Management	86,946	44,777	92,241	47,504	97,858
Transmission & Distribution	Patterson Pass Pipeline	12,574,994	620,012	-	-	-
Transmission & Distribution	Vasco Enlargement Pipeline	-	-	-	-	-
Transmission & Distribution	Transmission System Planning Update	-	-	-	316,693	-
Transmission & Distribution	Westside Transmission System Improvements	-	-	-	-	-
Water Supply & Conveyance	PPWTP New Clearwell	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Diversion Facility Coordination & Implementation	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Low Flow Crossings	-	-	-	-	-
Water Supply & Conveyance	Water Supply and Bay Area Regional Projects	-	-	-	-	-
Water Supply & Conveyance	Bay-Delta Conservation Planning (Zone 7) (2)	5,796	5,970	6,149	6,334	6,524
Water Supply & Conveyance	Cawelo Groundwater Banking Program* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Facilities and Improvements (WATER SUPPLY)	4,849,243	2,469,897	860,912	3,736,972	1,411,112
Water Supply & Conveyance	Chain of Lakes - Cope Lake to DVWTP Pipeline	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Master Planning (WATER SUPPLY)	16,230	16,717	17,218	17,735	18,267
Water Supply & Conveyance	Cope/Lake I/Lake H Management Plan (WATER SUPPLY)	-	-	-	-	-
Water Supply & Conveyance	Delta Habitat Conservation and Conveyance Program	-	-	-	-	-
Water Supply & Conveyance	Delta Outreach Program	5,796	5,970	6,149	6,334	6,524
Water Supply & Conveyance	Fixed Cost of Water Entitlement* (2)	-	-	-	-	-
Water Supply & Conveyance	Fourth Contractor's Share of the SBA (capital costs)*	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Water Supply & Conveyance	High-Efficiency Toilet Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	High-Efficiency Washing Machine Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	Reliability Intertie	384,879	-	-	-	-
Water Supply & Conveyance	Semitropic Stored Water Recovery Unit* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	South Bay Aqueduct Enlargement Project* (3)	-	-	-	-	-
Water Supply & Conveyance	SWP Peaking Payment (Lost Hills & Belridge Water Districts)* (2)	30,000	20,000	20,000	10,000	10,000
Water Supply & Conveyance	Water Conservation Best Management Practices (2)	23,185	23,881	24,597	25,335	39,143
Water Supply & Conveyance	Water Supply Replacement	39,810,076	-	-	-	-
Water Supply & Conveyance	Water System Master Plan	-	-	-	-	-
Water Treatment Facilities	Increased Treatment Plant Capacity	-	-	-	7,600,620	7,828,639
Water Treatment Facilities	PPWTP Expansion/New Media Filters	-	-	-	-	-
Water Treatment Facilities	Maintenance Yard and Building Improvements	347,782	-	-	-	-
Water Treatment Facilities	Water Quality Management Program	9,274	4,776	9,839	5,067	13,048
Water Treatment Facilities	PPWTP Ozone Treatment	-	-	-	-	-
Water Treatment Facilities	PPWTP Sludge Handling Expansion	-	-	-	-	-
Wells	Busch-Valley Well 1	-	-	-	-	-
Wells	Chain of Lakes Wells 3 & 4	-	-	-	-	-
Wells	EI Charro Pipeline Phase 2	2,040,322	11,044,984	541,145	-	-
Wells	Review of Well Implementation Plan	-	-	-	-	-
Wells	Second Groundwater Demineralization Facility	-	-	-	-	-
Wells	Third Groundwater Demineralization Facility	-	-	-	-	-
Wells	Bernal Wells 1&2	-	5,540,403	28,545,372	2,938,907	-
Contingency	Contingency	579,637	597,026	614,937	633,385	652,387
Sinking Fund Contributions	Administrative & Engineering Building - Sinking Fund (Fund 130)**	-	-	-	-	-
Sinking Fund Contributions	Fourth Contractor's Share of the SBA - Sinking Fund**	670,000	690,000	720,000	750,000	780,000
Sinking Fund Contributions	South Bay Aqueduct Enlargement Project - Sinking Fund**	1,360,000	1,410,000	1,470,000	1,530,000	1,590,000
		\$ 65,794,161	\$ 25,494,413	\$ 35,928,560	\$ 20,624,885	\$ 15,453,501

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.
 2. Projects identified by Zone 7 Staff to be excluded from Dougherty Valley fee calculation; see Dougherty Valley connection agreement for further details.
 3. Projects are zeroed out in this exhibit; these projects represent debt service, which is included on Exhibit 3.
- *Do not apply inflation to these projects, classify as non-discretionary
 **Do not apply inflation to these projects

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Future-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2027	2028	2029	2030	2031
Fund 130 Expansion Projects						
Buildings & Grounds	Administrative & Engineering Building Lease (Water System)*	\$ -	\$ -	\$ -	\$ -	\$ -
Program Management	Capital Improvement Program Management	50,397	103,818	53,466	110,140	56,722
Transmission & Distribution	Patterson Pass Pipeline	-	-	-	-	-
Transmission & Distribution	Vasco Enlargement Pipeline	-	1,112,924	6,027,689	295,175	-
Transmission & Distribution	Transmission System Planning Update	-	-	-	-	-
Transmission & Distribution	Westside Transmission System Improvements	-	2,538,685	13,742,909	671,120	-
Water Supply & Conveyance	PPWTP New Clearwell	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Diversion Facility Coordination & Implementation	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Low Flow Crossings	-	-	-	-	-
Water Supply & Conveyance	Water Supply and Bay Area Regional Projects	-	-	-	-	-
Water Supply & Conveyance	Bay-Delta Conservation Planning (Zone 7) (2)	-	-	-	-	-
Water Supply & Conveyance	Cawelo Groundwater Banking Program* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Facilities and Improvements (WATER SUPPLY)	-	5,813,782	-	1,027,974	-
Water Supply & Conveyance	Chain of Lakes - Cope Lake to DVWTP Pipeline	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Master Planning (WATER SUPPLY)	18,815	19,379	19,961	256,993	21,176
Water Supply & Conveyance	Cope/Lake I/Lake H Management Plan (WATER SUPPLY)	-	-	-	-	-
Water Supply & Conveyance	Delta Habitat Conservation and Conveyance Program	-	-	-	-	-
Water Supply & Conveyance	Delta Outreach Program	-	-	-	-	-
Water Supply & Conveyance	Fixed Cost of Water Entitlement* (2)	-	-	-	-	-
Water Supply & Conveyance	Fourth Contractor's Share of the SBA (capital costs)*	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Water Supply & Conveyance	High-Efficiency Toilet Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	High-Efficiency Washing Machine Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	Reliability Intertie	-	-	-	-	-
Water Supply & Conveyance	Semitropic Stored Water Recovery Unit* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	South Bay Aqueduct Enlargement Project* (3)	-	-	-	-	-
Water Supply & Conveyance	SWP Peaking Payment (Lost Hills & Belridge Water Districts)* (2)	10,000	10,000	10,000	-	-
Water Supply & Conveyance	Water Conservation Best Management Practices (2)	40,317	41,527	42,773	44,056	45,378
Water Supply & Conveyance	Water Supply Replacement	-	-	-	-	-
Water Supply & Conveyance	Water System Master Plan	-	-	-	146,853	-
Water Treatment Facilities	Increased Treatment Plant Capacity	101,344,734	2,768,468	-	-	-
Water Treatment Facilities	PPWTP Expansion/New Media Filters	-	-	-	-	-
Water Treatment Facilities	Maintenance Yard and Building Improvements	-	-	-	-	-
Water Treatment Facilities	Water Quality Management Program	5,376	13,842	8,555	14,685	9,076
Water Treatment Facilities	PPWTP Ozone Treatment	-	-	-	-	-
Water Treatment Facilities	PPWTP Sludge Handling Expansion	-	-	-	-	-
Wells	Busch-Valley Well 1	-	-	-	-	-
Wells	Chain of Lakes Wells 3 & 4	-	3,931,224	21,899,687	440,560	-
Wells	EI Charro Pipeline Phase 2	-	-	-	-	-
Wells	Review of Well Implementation Plan	-	-	-	-	-
Wells	Second Groundwater Demineralization Facility	4,703,707	20,763,508	21,386,413	5,139,868	-
Wells	Third Groundwater Demineralization Facility	-	-	-	-	-
Wells	Bernal Wells 1&2	-	-	-	-	-
Contingency	Contingency	671,958	692,117	712,880	734,267	756,295
Sinking Fund Contributions	Administrative & Engineering Building - Sinking Fund (Fund 130)**	-	-	-	-	-
Sinking Fund Contributions	Fourth Contractor's Share of the SBA - Sinking Fund**	810,000	840,000	880,000	910,000	-
Sinking Fund Contributions	South Bay Aqueduct Enlargement Project - Sinking Fund**	1,650,000	1,720,000	1,790,000	1,860,000	-
		\$ 112,305,305	\$ 43,369,274	\$ 69,574,334	\$ 14,651,692	\$ 3,888,646

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.
 2. Projects identified by Zone 7 Staff to be excluded from Dougherty Valley fee calculation; see Dougherty Valley connection agreement for further details.
 3. Projects are zeroed out in this exhibit; these projects represent debt service, which is included on Exhibit 3.
- *Do not apply inflation to these projects, classify as non-discretionary
 **Do not apply inflation to these projects

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Future-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2032	2033	2034	2035	2036
Fund 130 Expansion Projects						
Buildings & Grounds	Administrative & Engineering Building Lease (Water System)*	\$ -	\$ -	\$ -	\$ -	\$ -
Program Management	Capital Improvement Program Management	116,848	60,176	123,964	63,841	131,513
Transmission & Distribution	Patterson Pass Pipeline	-	-	-	-	-
Transmission & Distribution	Vasco Enlargement Pipeline	-	-	-	-	-
Transmission & Distribution	Transmission System Planning Update	-	-	-	425,608	-
Transmission & Distribution	Westside Transmission System Improvements	-	-	-	-	-
Water Supply & Conveyance	PPWTP New Clearwell	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Diversion Facility Coordination & Implementation	-	-	-	-	-
Water Supply & Conveyance	Arroyo Mocho Low Flow Crossings	-	-	-	-	-
Water Supply & Conveyance	Water Supply and Bay Area Regional Projects	-	-	-	-	-
Water Supply & Conveyance	Bay-Delta Conservation Planning (Zone 7) (2)	-	-	-	-	-
Water Supply & Conveyance	Cawelo Groundwater Banking Program* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Facilities and Improvements (WATER SUPPLY)	-	-	413,212	3,575,109	-
Water Supply & Conveyance	Chain of Lakes - Cope Lake to DVWTP Pipeline	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Master Planning (WATER SUPPLY)	21,812	22,466	23,140	23,834	24,549
Water Supply & Conveyance	Cope/Lake I/Lake H Management Plan (WATER SUPPLY)	-	-	-	-	-
Water Supply & Conveyance	Delta Habitat Conservation and Conveyance Program	-	-	-	-	-
Water Supply & Conveyance	Delta Outreach Program	-	-	-	-	-
Water Supply & Conveyance	Fixed Cost of Water Entitlement* (2)	-	-	-	-	-
Water Supply & Conveyance	Fourth Contractor's Share of the SBA (capital costs)*	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Water Supply & Conveyance	High-Efficiency Toilet Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	High-Efficiency Washing Machine Rebate Program (2)	-	-	-	-	-
Water Supply & Conveyance	Reliability Intertie	-	-	-	-	-
Water Supply & Conveyance	Semitropic Stored Water Recovery Unit* (2) (3)	-	-	-	-	-
Water Supply & Conveyance	South Bay Aqueduct Enlargement Project* (3)	-	-	-	-	-
Water Supply & Conveyance	SWP Peaking Payment (Lost Hills & Belridge Water Districts)* (2)	-	-	-	-	-
Water Supply & Conveyance	Water Conservation Best Management Practices (2)	46,739	48,141	66,114	68,097	-
Water Supply & Conveyance	Water Supply Replacement	-	-	-	-	-
Water Supply & Conveyance	Water System Master Plan	-	-	-	-	-
Water Treatment Facilities	Increased Treatment Plant Capacity	-	-	-	-	-
Water Treatment Facilities	PPWTP Expansion/New Media Filters	-	-	-	-	-
Water Treatment Facilities	Maintenance Yard and Building Improvements	-	-	-	-	-
Water Treatment Facilities	Water Quality Management Program	18,696	9,628	19,834	10,215	24,549
Water Treatment Facilities	PPWTP Ozone Treatment	-	-	-	-	-
Water Treatment Facilities	PPWTP Sludge Handling Expansion	-	-	-	-	-
Wells	Busch-Valley Well 1	-	-	-	-	-
Wells	Chain of Lakes Wells 3 & 4	-	-	-	-	-
Wells	EI Charro Pipeline Phase 2	-	-	-	-	-
Wells	Review of Well Implementation Plan	-	-	-	-	-
Wells	Second Groundwater Demineralization Facility	-	-	-	-	-
Wells	Third Groundwater Demineralization Facility	-	-	-	-	-
Wells	Bernal Wells 1&2	-	-	-	-	-
Contingency	Contingency	778,984	802,353	826,424	851,217	876,753
Sinking Fund Contributions	Administrative & Engineering Building - Sinking Fund (Fund 130)**	-	-	-	-	-
Sinking Fund Contributions	Fourth Contractor's Share of the SBA - Sinking Fund**	-	-	-	-	-
Sinking Fund Contributions	South Bay Aqueduct Enlargement Project - Sinking Fund**	-	-	-	-	-
		\$ 3,983,077	\$ 3,942,765	\$ 4,472,687	\$ 8,017,921	\$ 4,057,364

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.
 2. Projects identified by Zone 7 Staff to be excluded from Dougherty Valley fee calculation; see Dougherty Valley connection agreement for further details.
 3. Projects are zeroed out in this exhibit; these projects represent debt service, which is included on Exhibit 3.
- *Do not apply inflation to these projects, classify as non-discretionary
 **Do not apply inflation to these projects

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Planned Capital Improvement Plan Expenditures (System Development)

EXHIBIT 4

Capital Improvement Program Costs (in Future-Year Dollars):

Capital Projects Category	Capital Improvement Program Projects (1)	2037	2038	2039	2040	2041	Grand Total
Fund 130 Expansion Projects							
Buildings & Grounds	Administrative & Engineering Building Lease (Water System)*	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,648,419
Program Management	Capital Improvement Program Management	67,729	139,522	71,854	148,019	-	1,962,858
Transmission & Distribution	Patterson Pass Pipeline	-	-	-	-	-	15,521,376
Transmission & Distribution	Vasco Enlargement Pipeline	-	-	-	-	-	7,435,789
Transmission & Distribution	Transmission System Planning Update	-	-	-	-	-	742,301
Transmission & Distribution	Westside Transmission System Improvements	-	-	-	-	-	16,952,714
Water Supply & Conveyance	PPWTP New Clearwell	-	-	-	-	-	9,150,312
Water Supply & Conveyance	Arroyo Mocho Diversion Facility Coordination & Implementation	-	-	-	-	-	3,753,040
Water Supply & Conveyance	Arroyo Mocho Low Flow Crossings	-	-	-	-	-	3,436,294
Water Supply & Conveyance	Water Supply and Bay Area Regional Projects	-	-	-	-	-	10,290,588
Water Supply & Conveyance	Bay-Delta Conservation Planning (Zone 7) (2)	-	-	-	-	-	57,319
Water Supply & Conveyance	Cawelo Groundwater Banking Program* (2) (3)	-	-	-	-	-	-
Water Supply & Conveyance	Chain of Lakes Facilities and Improvements (WATER SUPPLY)	1,517,133	-	-	-	-	28,203,054
Water Supply & Conveyance	Chain of Lakes - Cope Lake to DVWTP Pipeline	-	-	-	-	-	43,274,878
Water Supply & Conveyance	Chain of Lakes Master Planning (WATER SUPPLY)	25,286	26,044	26,825	27,630	28,459	908,793
Water Supply & Conveyance	Cope/Lake I/Lake H Management Plan (WATER SUPPLY)	-	-	-	-	-	146,363
Water Supply & Conveyance	Delta Habitat Conservation and Conveyance Program	-	-	-	-	-	-
Water Supply & Conveyance	Delta Outreach Program	-	-	-	-	-	57,319
Water Supply & Conveyance	Fixed Cost of Water Entitlement* (2)	-	-	-	-	-	19,000
Water Supply & Conveyance	Fourth Contractor's Share of the SBA (capital costs)*	-	-	-	-	-	60,000,000
Water Supply & Conveyance	High-Efficiency Toilet Rebate Program (2)	-	-	-	-	-	15,000
Water Supply & Conveyance	High-Efficiency Washing Machine Rebate Program (2)	-	-	-	-	-	40,300
Water Supply & Conveyance	Reliability Intertie	-	-	-	-	-	9,677,497
Water Supply & Conveyance	Semitropic Stored Water Recovery Unit* (2) (3)	-	-	-	-	-	-
Water Supply & Conveyance	South Bay Aqueduct Enlargement Project* (3)	-	-	-	-	-	-
Water Supply & Conveyance	SWP Peaking Payment (Lost Hills & Belridge Water Districts)* (2)	-	-	-	-	-	350,000
Water Supply & Conveyance	Water Conservation Best Management Practices (2)	-	-	-	-	-	685,468
Water Supply & Conveyance	Water Supply Replacement	-	-	-	-	-	96,826,296
Water Supply & Conveyance	Water System Master Plan	-	-	-	-	-	256,126
Water Treatment Facilities	Increased Treatment Plant Capacity	-	-	-	-	-	119,542,461
Water Treatment Facilities	PPWTP Expansion/New Media Filters	-	-	-	-	-	14,191,684
Water Treatment Facilities	Maintenance Yard and Building Improvements	-	-	-	-	-	794,708
Water Treatment Facilities	Water Quality Management Program	14,449	26,044	15,329	31,577	16,262	307,788
Water Treatment Facilities	PPWTP Ozone Treatment	-	-	-	-	-	13,301,920
Water Treatment Facilities	PPWTP Sludge Handling Expansion	-	-	-	-	-	10,577,597
Wells	Busch-Valley Well 1	-	-	-	-	-	11,051,509
Wells	Chain of Lakes Wells 3 & 4	-	-	-	-	-	26,271,472
Wells	EI Charro Pipeline Phase 2	-	-	-	-	-	13,626,451
Wells	Review of Well Implementation Plan	-	-	-	-	-	203,000
Wells	Second Groundwater Demineralization Facility	-	-	-	-	-	51,993,497
Wells	Third Groundwater Demineralization Facility	-	-	-	-	-	-
Wells	Bernal Wells 1&2	-	-	-	-	-	37,024,682
Contingency	Contingency	903,056	930,147	958,052	986,793	1,016,397	18,229,632
Sinking Fund Contributions	Administrative & Engineering Building - Sinking Fund (Fund 130)**	-	-	-	-	-	1,560,400
Sinking Fund Contributions	Fourth Contractor's Share of the SBA - Sinking Fund**	-	-	-	-	-	10,063,573
Sinking Fund Contributions	South Bay Aqueduct Enlargement Project - Sinking Fund**	-	-	-	-	-	20,529,036
		\$ 2,527,653	\$ 1,121,758	\$ 1,072,060	\$ 1,194,020	\$ 1,061,119	\$ 660,680,514

1. FY 2015/16 - FY 2040/41 Capital projects are per source file: *Long Term CIP V 12.01.xls*.
 2. Projects identified by Zone 7 Staff to be excluded from Dougherty Valley fee calculation; see Dougherty Valley connection agreement for further details.
 3. Projects are zeroed out in this exhibit; these projects represent debt service, which is included on Exhibit 3.
- *Do not apply inflation to these projects, classify as non-discretionary
 **Do not apply inflation to these projects

Financial Plan Summary		Buildout in FY 2040/41
Discretionary Project Expenditures through Buildout		\$ 548,630,454
Debt Service Payments through Buildout		\$ 245,966,379
Other Expenditures through Buildout		\$ 104,061,525
TOTAL		\$ 898,658,357
Discretionary Project Expenditures Adjustment		0.00%
Target Fund Balance at Buildout		\$ 15,000,000

New Fees will be effective January 1st annually.	
Percent of Fees Collected in a Fiscal Year:	
July - December	40%
January - June	60%
	100%
For FY 2016/17 Only:	
New Fee will be effective May 1, 2017.	
Percent of Fees Collected in a Fiscal Year:	
July - April	75%
May - June	25%
	100%

Use Growth Cycling:
 Yes
 80/20

Connection Fee Calculation	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Zone 7 - Water Connection Per DUE	\$ 27,180	\$ 27,990	\$ 28,830	\$ 29,700	\$ 30,590	\$ 31,500	\$ 32,450	\$ 33,420	\$ 34,430	\$ 35,460
Dougherty Valley Water Connection Per DUE	\$ 26,080	\$ 26,860	\$ 27,660	\$ 28,490	\$ 29,350	\$ 30,230	\$ 31,140	\$ 32,070	\$ 33,030	\$ 34,020
Annual Construction Cost Inflation, Per Engineering News Record (1)	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.00	1.03	1.06	1.09	1.13	1.16	1.19	1.23	1.27	1.30

Connection Fee Calculation	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	FY 2035/36
Zone 7 - Water Connection Per DUE	\$ 36,520	\$ 37,620	\$ 38,750	\$ 39,910	\$ 41,110	\$ 42,340	\$ 43,610	\$ 44,920	\$ 46,270	\$ 47,660
Dougherty Valley Water Connection Per DUE	\$ 35,040	\$ 36,100	\$ 37,180	\$ 38,290	\$ 39,440	\$ 40,630	\$ 41,850	\$ 43,100	\$ 44,390	\$ 45,730
Annual Construction Cost Inflation, Per Engineering News Record (1)	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.34	1.38	1.43	1.47	1.51	1.56	1.60	1.65	1.70	1.75

Connection Fee Calculation	FY 2036/37	FY 2037/38	FY 2038/39	FY 2039/40	FY 2040/41
Zone 7 - Water Connection Per DUE	\$ 49,090	\$ 50,560	\$ 52,070	\$ 53,640	\$ 55,250
Dougherty Valley Water Connection Per DUE	\$ 47,100	\$ 48,510	\$ 49,970	\$ 51,470	\$ 53,010
Annual Construction Cost Inflation, Per Engineering News Record (1)	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2017	1.81	1.86	1.92	1.97	2.03

1. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

FINANCIAL PLAN EXPANSION PROGRAM - FUND 130	Projected								
	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	FY 2035/36
Beginning Year Fund Balance	\$ (40,919,719)	\$ (38,332,413)	\$ (61,209,027)	\$ (33,070,876)	\$ (10,568,719)	\$ (6,344,609)	\$ 590,317	\$ 6,640,515	\$ 9,528,351
Sources of Funds									
Connection Fees - Dougherty Valley (1)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Connection Fees - Zone 7 (1)	61,161,438	61,642,372	49,357,704	28,948,875	8,082,941	8,325,151	8,575,087	8,832,750	9,098,138
25.0 Percent Bond Cover Credit from DWR for SBA Project	4,109,340	4,337,458	4,327,277	2,260,796	2,271,965	2,269,169	1,660,666	1,662,490	1,661,000
Interest Income (2)	-	-	-	-	-	-	11,806	132,810	190,567
Other	-	-	-	-	-	-	-	-	-
Total Sources of Funds	\$ 65,270,778	\$ 65,979,829	\$ 53,684,981	\$ 31,209,671	\$ 10,354,906	\$ 10,594,320	\$ 10,247,560	\$ 10,628,050	\$ 10,949,705
<i>Projected DUEs - Dougherty Valley</i>	0	0	0	0	0	0	0	0	0
<i>Projected DUEs - DSRD, Livermore, Pleasanton with Growth Cycling</i>	1,645	1,610	1,251	713	193	193	193	193	193
<i>Projected DUEs - Total</i>	1,645	1,610	1,251	713	193	193	193	193	193
Uses of Funds									
Discretionary Project Expenditures (3)	\$ 37,117,157	\$ 63,191,453	\$ 8,147,425	\$ 132,352	\$ 204,094	\$ 140,412	\$ 646,263	\$ 4,166,705	\$ 180,611
Discretionary Project Expenditures - New Debt Credit	-	-	-	-	-	-	-	-	-
Discretionary Project Expenditures - Reduction	-	-	-	-	-	-	-	-	-
Fourth Contractors Share of SBA Payments (4)	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Use of Sinking Fund Balance	-	-	-	-	(2,454,052)	(2,454,052)	(2,454,052)	(2,454,052)	(2,454,052)
Fixed Cost of Water Entitlement	-	-	-	-	-	-	-	-	-
SBA Enlargement Financing Payments (4)	17,349,830	17,309,108	9,043,184	9,087,861	9,076,675	6,642,664	6,649,959	6,644,000	-
Use of Sinking Fund Balance	-	-	-	(5,916,636)	(5,916,636)	(5,916,636)	(5,916,636)	(5,916,636)	-
Groundwater In-Lieu Banking Program (Cawelo) (4)	1,303,575	1,307,400	1,309,200	1,308,975	1,311,725	1,312,225	1,310,475	1,311,475	-
Semitropic Water Storage District Payments (4)	49,178	49,178	49,178	49,178	49,178	49,178	49,178	49,178	49,178
Building Lease Payment (4)	-	-	-	-	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-	-	-	-	-
Administration Fee (5)	611,614	616,424	493,577	289,489	80,829	83,252	85,751	88,327	90,981
Contingencies	692,117	712,880	734,267	756,295	778,984	802,353	826,424	851,217	876,753
Sinking Fund Contributions	2,560,000	2,670,000	2,770,000	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-
Total Uses of Water Funds	\$ 62,683,472	\$ 88,856,443	\$ 25,546,831	\$ 8,707,513	\$ 6,130,796	\$ 3,659,395	\$ 4,197,362	\$ 7,740,213	\$ 1,743,471
Annual Contribution To/From Reserves	\$ 2,587,306	\$ (22,876,614)	\$ 28,138,150	\$ 22,502,158	\$ 4,224,110	\$ 6,934,925	\$ 6,050,198	\$ 2,887,836	\$ 9,206,233
Year End Fund Balance	\$ (38,332,413)	\$ (61,209,027)	\$ (33,070,876)	\$ (10,568,719)	\$ (6,344,609)	\$ 590,317	\$ 6,640,515	\$ 9,528,351	\$ 18,734,584
Minimum Fund Balance	\$ 12,999,411	\$ 8,040,937	\$ 8,067,609	\$ 8,062,547	\$ 6,602,440	\$ 6,605,767	\$ 6,602,792	\$ 1,829,507	\$ -
<i>Annual Interest Earnings Rate (6)</i>	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Sinking Fund: Beginning Balance (7)	\$ 33,853,443	\$ 36,413,443	\$ 39,083,443	\$ 41,853,443	\$ 35,936,807	\$ 27,566,118	\$ 19,195,430	\$ 10,824,741	\$ 2,454,052
Building Sinking Fund									
Beginning Year Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions	-	-	-	-	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-	-	-	-	-
Ending Building Sinking Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SBA Sinking Fund									
Beginning Year Fund Balance	\$ 24,213,181	\$ 25,933,181	\$ 27,723,181	\$ 29,583,181	\$ 23,666,545	\$ 17,749,909	\$ 11,833,272	\$ 5,916,636	\$ -
Contributions	1,720,000	1,790,000	1,860,000	-	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	(5,916,636)	(5,916,636)	(5,916,636)	(5,916,636)	(5,916,636)	-
Ending SBA Sinking Fund Balance	\$ 25,933,181	\$ 27,723,181	\$ 29,583,181	\$ 23,666,545	\$ 17,749,909	\$ 11,833,272	\$ 5,916,636	\$ -	\$ -
FC Share Sinking Fund									
Beginning Year Fund Balance	\$ 9,640,262	\$ 10,480,262	\$ 11,360,262	\$ 12,270,262	\$ 12,270,262	\$ 9,816,210	\$ 7,362,157	\$ 4,908,105	\$ 2,454,052
Contributions	840,000	880,000	910,000	-	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	(2,454,052)	(2,454,052)	(2,454,052)	(2,454,052)	(2,454,052)
Ending FC Share Sinking Fund Balance	\$ 10,480,262	\$ 11,360,262	\$ 12,270,262	\$ 12,270,262	\$ 9,816,210	\$ 7,362,157	\$ 4,908,105	\$ 2,454,052	\$ -
Sinking Fund: Ending Balance	\$ 36,413,443	\$ 39,083,443	\$ 41,853,443	\$ 35,936,807	\$ 27,566,118	\$ 19,195,430	\$ 10,824,741	\$ 2,454,052	\$ -

FINANCIAL PLAN EXPANSION PROGRAM - FUND 130	Projected				
	FY 2036/37	FY 2037/38	FY 2038/39	FY 2039/40	FY 2040/41
Beginning Year Fund Balance	\$ 18,734,584	\$ 25,859,163	\$ 34,810,159	\$ 44,275,554	\$ 54,103,920
Sources of Funds					
Connection Fees - Dougherty Valley (1)	\$ -	\$ -	\$ -	\$ -	\$ -
Connection Fees - Zone 7 (1)	9,371,252	9,652,092	9,940,658	10,239,268	10,547,149
25.0 Percent Bond Cover Credit from DWR for SBA Project	-	-	-	-	-
Interest Income (2)	374,692	517,183	696,203	885,511	1,082,078
Other	-	-	-	-	-
Total Sources of Funds	\$ 9,745,943	\$ 10,169,275	\$ 10,636,861	\$ 11,124,779	\$ 11,629,227
<i>Projected DUEs - Dougherty Valley</i>	0	0	0	0	0
<i>Projected DUEs - DSRD, Livermore, Pleasanton with Growth Cycling</i>	193	193	193	193	193
<i>Projected DUEs - Total</i>	193	193	193	193	193
Uses of Funds					
Discretionary Project Expenditures (3)	\$ 1,624,597	\$ 191,610	\$ 114,008	\$ 207,227	\$ 44,721
Discretionary Project Expenditures - New Debt Credit	-	-	-	-	-
Discretionary Project Expenditures - Reduction	-	-	-	-	-
Fourth Contractors Share of SBA Payments (4)	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Fixed Cost of Water Entitlement	-	-	-	-	-
SBA Enlargement Financing Payments (4)	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Groundwater In-Lieu Banking Program (Cawelo) (4)	-	-	-	-	-
Semitropic Water Storage District Payments (4)	-	-	-	-	-
Building Lease Payment (4)	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Administration Fee (5)	93,713	96,521	99,407	102,393	105,471
Contingencies	903,056	930,147	958,052	986,793	1,016,397
Sinking Fund Contributions	-	-	-	-	-
New Debt Service	-	-	-	-	-
Total Uses of Water Funds	\$ 2,621,365	\$ 1,218,279	\$ 1,171,466	\$ 1,296,413	\$ 1,166,590
Annual Contribution To/From Reserves	\$ 7,124,578	\$ 8,950,997	\$ 9,465,395	\$ 9,828,366	\$ 10,462,637
Year End Fund Balance	\$ 25,859,163	\$ 34,810,159	\$ 44,275,554	\$ 54,103,920	\$ 64,566,557
Minimum Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Annual Interest Earnings Rate (6)</i>	2.00%	2.00%	2.00%	2.00%	2.00%
Sinking Fund: Beginning Balance (7)	\$ -	\$ -	\$ -	\$ -	\$ -
Building Sinking Fund					
Beginning Year Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Ending Building Sinking Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
SBA Sinking Fund					
Beginning Year Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Ending SBA Sinking Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
FC Share Sinking Fund					
Beginning Year Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions	-	-	-	-	-
Use of Sinking Fund Balance	-	-	-	-	-
Ending FC Share Sinking Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -
Sinking Fund: Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -

WATER CONNECTION FEES BASED ON METER SIZE:

Meter Size	Dwelling Unit Equivalent (DUE) Displacement-Type	Proposed Updated Connection Fee Per Displacement Meter	Current Connection Fee Per Displacement Meter
ZONE 7			
5/8 Inch	1.00	\$27,180	\$25,320
DOUGHERTY VALLEY			
5/8 Inch	1.00	\$26,080	\$23,430

ALAMEDA ZONE 7 WATER AGENCY
 Water Connection Fee Update
 Fee Calculation (in Current Year Dollars)

Exhibit 7

Per-Unit Based Rate	
Total New DUEs	24,533
Expansion Program Costs	
Capital Improvement Projects	
Buildings & Grounds	\$ 1,648,419
Groundwater Basin Management	-
Program Management	1,366,500
Regulatory Compliance	-
Transmission & Distribution	31,096,200
Water Supply & Conveyance (1)	242,131,916
Water Treatment Facilities	125,248,193
Wells	107,760,000
Discretionary Project Expenditures - Reduction	-
Subtotal - CIP	\$ 509,251,228
Sinking Fund Contributions & Program Contingencies	
FC Share Sinking Fund	\$ 10,063,573
SBA Sinking Fund	20,529,036
Building Sinking Fund	1,560,400
Contingencies	12,500,000
Subtotal - Sinking Fund Contributions & Program Contingencies	\$ 44,653,009
Total - Expansion Program Costs	\$ 553,904,237
Other	
Administration Fee (2)	8,344,949
Subtotal - Other	\$ 8,344,949
Debt Service Payments through Buildout	
SBA Enlargement Financing Payments (3)	\$ 249,781,993
Groundwater In-Lieu Banking Program (Cawelo) (3)	24,784,006
Semitropic Water Storage District Payments (3)	983,560
Subtotal - Debt Service	\$ 275,549,560
Total Expenses	\$ 837,798,745
Sinking Fund - Use of Accumulated Funds	
FC Share Sinking Fund	\$ (12,270,262)
SBA Sinking Fund	(29,583,181)
Building Sinking Fund	(4,063,222)
Subtotal - Use of Accumulated Sinking Funds	\$ (45,916,665)
Beginning Cash	(55,681,392)
25% Bond Credit	(66,466,810)
Net Expansion Program Expenses	669,733,878
Calculated Fee	27,290.00
<i>Calculated Fee Based on Incremental Growth</i>	<i>\$ 27,290</i>
Adjusted Fee Based on Financial Plan	\$ 27,180

Adjusted fee less than maximum calculated fee: TRUE

1. Includes Fixed Cost of Water Entitlement & Fourth Contractors Share of the SBA (Capital Costs; Only the Transportation Capital and Water System Revenue Bond Surcharge portions are included in Fund 130.).
2. Calculated at 1.0 percent of connection fee revenue; paid to Retailers for collection of connection fees.
3. Expenses are considered non-discretionary. Excluding Cawelo & Semitropic, Sinking Funds are used to pay the obligation in future years.

APPENDIX B – Connection Fee Ordinance No. FC 72-1

ORDINANCE NO. FC 72-1, AS AMENDED BY
ORDINANCES FC 77-2; FC 86-136; AND FC O-91-68

AN ORDINANCE ADOPTED PURSUANT TO SECTION 12.1 OF THE
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ACT
IMPOSING A WATER CONNECTION CHARGE IN ZONE NO. 7

The Board of Supervisors of the Alameda County Flood Control and Water Conservation District do ordain as follows:

SECTION I

Declaration of Findings. The Board of Supervisors of Alameda County Flood Control and Water Conservation District has determined the necessity to make improvements to the Zone No. 7 water supply system. The District is empowered, pursuant to Section 12.1 of the Alameda County Flood Control and Water Conservation District Act, to prescribe and collect charges for water delivery and treatment facilities furnished or to be furnished within a zone of the District.

This Board does hereby find that continual improvement to the Zone No. 7 water supply system would be for the benefit of Zone No. 7 residents and property owners to meet increasing demands on the water supply system, to enhance the quality of water, to minimize harm from water shortages, to improve operational flexibility of the system, and to improve the reliability of water service, and that the public interest, necessity, convenience and general welfare of the residents and property owners of Zone No. 7 require the institution, construction and maintenance of said improvements. Revenues now available to the Zone will not be fully adequate to construct and maintain additional required facilities without substantial water or tax rate increases. In order to apportion more fairly the costs of new facilities on the basis of benefits conferred upon the property within the area, the charges hereinbelow indicated are hereby established on all new connections to any water system which is directly connected to the Zone No. 7 water supply system, to be utilized to accomplish proposed improvement in the water treatment and delivery system.

(Amended by Ord. FC 77-2)

SECTION II

Definitions. The definitions contained in this article shall govern the construction of this Ordinance unless required otherwise by context.

1. "District" means the Alameda County Flood Control and Water Conservation District.
2. "Board" means the Board of Supervisors of Alameda County Flood Control and Water Conservation District.
3. "Zone" means the Zone No. 7 of the Alameda County Flood Control and Water Conservation District.
4. "Zone Board" means the Board of Directors of Zone No. 7 of Alameda County Flood Control and Water Conservation District.
5. "Water supply system" means any combination of facilities that is capable of furnishing treated water service.
6. "New connection" means any new metered water service that will furnish water from a water supply system that is directly connected to the Zone No. 7 water supply system, including but not limited to water services that are part of any new development to be constructed.
7. "New development" means any improvement, building or buildings constructed subsequent to the effective date of this Ordinance.

(Amended by Ord. FC O-91-68)

SECTION III

Water Service Connection Charge Schedule. A basic charge of \$830.00 shall be multiplied by the fee factor indicated in the following schedule for each new connection to the water supply system subject to this Ordinance.

<u>Fee Factor</u>	<u>Meter Size</u>
5/8"	1.0
3/4"	1.5
1" (See Section VI. 1 below)	2.5
1-1/2"	5.0
2"	8.0

The determination of fee factors is based upon the recommended maximum rate for continuous operations in accordance with the American Water Works Association Standard C700-90

for Cold Water Meters-Displacement Type, Bronze Main Case. Fee factors for meters of special capacities and sizes other than those indicated in the above schedule shall be determined by the Zone. The administrative method for setting fee factors for meters of special capacities and sizes in effect on July 17, 1991, shall remain in effect through June 30, 1992. On July 1, 1992, new fee factors for meters of special capacities and sizes using a method that utilizes the recommended maximum rate for continuous operations shall go into effect.

For increasing the meter size or capacity on any existing connection, a charge shall be imposed equal to the product of the basic charge in effect at the time the meter exchange is requested and the difference in the fee factor between the new meter and the existing meter.

There shall be no refund of charges paid for decreasing the meter size or capacity.

(Amended by Ord. FC 0-91-68)

SECTION IV

Disposition of Charges. All charges collected under the provision of this Ordinance, and a portion of water sales revenues as deemed appropriate by the Zone Board, shall be deposited with the Treasurer of the District, said funds to be designated "Zone 7 Water Facilities Fund." Said funds shall be utilized for the accomplishment of proposed improvements to the Zone No. 7 water supply system, and shall be expended for administration, land acquisition, construction, engineering, repair, maintenance and operation, or reimbursement or retirement of bonded indebtedness incurred for same, in whole or in part, of the water supply facilities within Zone No. 7. Provided, however, that said funds shall not be utilized for the retirement of bonded indebtedness on Zone No. 7 projects incurred prior to January 18, 1972.

(Amended by Ord. FC 77-2)

SECTION V

Collection of Charges. Charges provided for herein shall be collected by the Zone, or the appropriate City Building Official if the improvement is located within an incorporated city, prior to the issuance of a building permit or a use permit for such improvement. In cases where permits are not required, payment of charges shall be made to the Zone or appropriate City Building Official prior to installation of a new connection. Collection by the appropriate City Building Official shall be

authorized by agreement between the affected city and District, said agreement to be approved by Zone Board and forwarded to Board for execution, following execution of said agreement by city.
(Amended by Ord. FC 77-2)

SECTION VI

Exemptions.

1. No charge shall be collected for separate private fire service connections. Combined domestic and fire service connections shall be subject to the connection charge based on the meter size for the combined system, except the basic charge shall be collected for combined systems, up to a maximum one-inch (1") meter size, for single family and duplex housing units with fire sprinkler systems approved by the appropriate fire department and installed in accordance with applicable building requirements.

2. No charge shall be collected for future connections of any existing building or buildings to a water supply system that is directly connected to the Zone No. 7 water supply system if the building or buildings are occupied and supplied by an independent water supply system on or before January 18, 1972. This exemption shall become null and void effective July 1, 1992.
(Amended by Ord. FC O-91-68)

SECTION VII

Review of Water Connection Charge. The water connection charge provided for hereinabove, its manner of collection and disposition shall be subject to periodic review and modification at the discretion of the Zone Board.

SECTION VIII

Severability. If any section, sub-section, paragraph, sub-paragraph, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this Ordinance; and the Board declares that this Ordinance and each section, sub-section, paragraph,

sub-paragraph, sentence, clause and phrase thereof would have been adopted irrespective of the fact that one or more of such section, sub-section, paragraph, sub-paragraph, sentence clause or phrase be declared invalid or unconstitutional.

SECTION IX

Opinions and Determinations. Where this Ordinance provides for action to be based upon the opinion, judgment, approval, review or determination of the Zone Board, it is not intended to be and shall never be construed as permitting such opinion, judgment, approval, review or determination to be arbitrary, capricious or unreasonable.

SECTION X

Payment Before Effective Date. Nothing in this Ordinance shall prohibit payment of charges provided for herein prior to the effective date of this Ordinance. The funds so collected shall be applied in the same manner and for the same purposes as those required for collections after the effective date of this Ordinance.

SECTION XI

Contest of Charges. For purposes of this Ordinance, the Zone Board shall act as hearing Board in any contest of charges imposed under this Ordinance, and said Zone Board shall notice and conduct full and fair hearings consistent with due process and base its decision upon competent evidence. Said Zone Board shall adopt reasonable rules and regulations for the conduct of its affairs under this Ordinance. Appeals from the decision of the Zone Board shall be to the Board of Supervisors of Alameda County Flood Control and Water Conservation District, and shall be a hearing de novo upon the issues of the appeal. Notice of appeal from the decision of the Zone Board shall be made within 30 days of any final determination by Zone Board.

SECTION XII

Effective Date. This Ordinance is an urgency ordinance necessary for the preservation of the public peace, health, safety and welfare and shall go into effect immediately upon the date of adoption thereof, to wit January 18, 1972. The facts constituting such necessity are that failure of a recent bond election and resultant shortage of funds for improvement or expansion of necessary water treatment and delivery facilities has resulted in a projected need for water rationing in the Livermore-Amador Valley Area due to an increasingly heavy burden on existing facilities following a steady increase in population and residential construction in that Area. The proposed charges to be imposed pursuant to this Ordinance will be applied toward the construction of the needed facilities. Before the expiration of fifteen (15) days after the passage of this Ordinance it shall be published once with the names of members voting for and against the same in The Inter-City Express, a newspaper published in the said County of Alameda.

Adopted by the Board of Supervisors of the Alameda County Flood Control and Water Conservation District on this 18th day of January, 1972, by the following called vote:

AYES: Supervisors Bort, Cooper, Murphy, Razeto and Chairman Hannon - 5

NOES: Supervisors None

EXCUSED: Supervisors None

Chairman of the Board of Supervisors of the
Alameda County Flood Control and Water
Conservation District

ATTEST:

Clerk of the Board of Supervisors of
the Alameda County Flood Control and
Water Conservation District

APPENDIX C – Amendment No. 1 to Contract between Zone 7 Water Agency and Dublin San Ramon Services District for Municipal Water Supply

**AMENDMENT NO. 1 TO CONTRACT BETWEEN ZONE 7 WATER AGENCY AND
DUBLIN SAN RAMON SERVICES DISTRICT FOR A MUNICIPAL &
INDUSTRIAL WATER SUPPLY**

This Amendment No. 1 to Contract Between Zone 7 Water Agency and Dublin San Ramon Services District for a Municipal & Industrial Water Supply (the "**Amendment**") is entered into as of 2/7/2000, 1998, (the "**Effective Date**") by and between ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, commonly known as the Zone 7 Water Agency ("**Zone 7**"), and DUBLIN SAN RAMON SERVICES DISTRICT ("**Contractor**").

RECITALS

A. Zone 7 and Contractor have entered into that certain Contract between Zone 7 of Alameda Flood Control and Water Conservation District and Dublin San Ramon Services District for a Municipal & Industrial Water Supply, dated as of August 23, 1994 (the "**Water Supply Contract**"). Pursuant to and as more fully set forth in the Water Supply Contract, Zone 7 has agreed to furnish and provide to Contractor, and Contractor agreed to purchase and accept, a water supply for municipal and industrial uses.

B. Pursuant to Section 6 of the Water Supply Contract, Contractor has requested Zone 7's approval of an expansion of Contractor's "Service Area" under the Water Supply Contract to include approximately 4,400 acres of real property located outside of the boundaries of Zone 7 as shown on **Figure 1** attached hereto (the "**Dougherty Valley Service Area**"). The County of Contra Costa has adopted plans and permits authorizing the development, within the Dougherty Valley Service Area, of a mixed-use community including up to 9784 residential dwelling units and associated commercial, civic and other uses. Contra Costa County's plans designate Contractor as the primary provider of treated water to the Dougherty Valley Service Area and the owners of property of said Area, Windemere Ranch Partners ("**Windemere**") and Shapell Industries, Inc. ("**Shapell**"), have requested Contractor to provide such service.

C. The property in the Dougherty Valley Service Area owned by Windemere has been annexed to Contractor and is within Contractor's sphere of influence; the property in the Dougherty Valley Service Area owned by Shapell is within Contractor's sphere of influence.

D. On September 13, 1994, Contractor and the Berrenda Mesa Water District ("**BMWD**") entered into an agreement for Contractor to purchase BMWD rights for 7,000 acre-feet of firm water entitlement from State Water Project for use in the Dougherty Valley Service Area with an option to purchase an additional 5,000 acre-feet.

E. Instead of using the aforementioned agreement between Contractor and BMWD for the water supply for Dougherty Valley Service Area, Zone 7 is concurrently herewith entering into an agreement with BMWD ("the Water Purchase Agreement") to purchase 7,000 acre feet annually of firm water entitlement from the State Water Project (the "**Water Entitlement**") to

provide water for the Dougherty Valley Service Area. Concurrently with this agreement, Contractor and BMWD are terminating their Water Purchase Agreement, dated September 13, 1994, with the exception of the provision of that agreement providing Contractor with an option to purchase 5,000 acre-feet of water from BMWD.

F. Zone 7 concurrently herewith is entering into an agreement with the Semitropic Water Storage District ("**Semitropic**") pursuant to which Semitropic will agree to store water for Zone 7 so that Zone 7 may supplement the water available from the Water Entitlement to maintain the reliability of the service to the Dougherty Valley Service Area and enhance Zone 7's ability to serve its existing customers and future customers within Zone 7.

G. Zone 7 and Contractor desire to amend the Water Supply Contract to expand Contractor's service area and to establish certain terms and conditions pursuant to which Zone 7 will furnish and provide water to Contractor for delivery to the Dougherty Valley Service Area.

AMENDMENT NO. 1 TO THE WATER SUPPLY CONTRACT

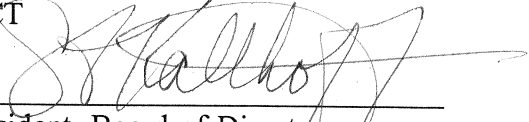
NOW, THEREFORE, Zone 7 and Contractor hereby mutually agree to amend the Water Supply Contract as follows:

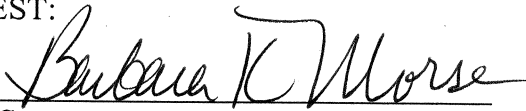
1. Contractor's Service Area. The Dougherty Valley Service Area, as delineated in Figure 1, is hereby added to the Contractor's Service Area as defined in and pursuant to Section 6 of the Water Supply Contract.
2. Special Provisions for Water Supplied to Contractor for Use in the Dougherty Valley Service Area. Those certain terms and conditions described more fully in **Appendix 1**, attached hereto, are hereby appended to and incorporated into the Water Supply Contract and shall govern the provision of services to the Dougherty Valley Service Area.
3. Ratification of Water Supply Contract. Except as modified by this Amendment, the Water Supply Contract and all provisions contained therein shall remain unchanged.
4. Counterparts. This Amendment may be executed in one or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same document.
5. Effective Date. This amendment shall not become effective until the close of escrow pursuant to the Water Service Escrow Agreement entered into concurrently herewith.
6. Interpretation. To the extent any provisions of this Amendment and/or **Appendix 1** are inconsistent with any provisions of the Water Supply Contract, the provisions of this Amendment and/or **Appendix 1** shall control with respect to the Dougherty Valley Service Area. Otherwise, the terms of the Water Supply Contract, as amended by this Amendment, shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment has been executed as of the day and year first above written.

ZONE 7:

ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By: 
Its: President, Board of Directors

ATTEST:
By: 
Its: Secretary

APPROVED AS TO FORM:

DOUGLAS HICKLING
COUNTY COUNSEL

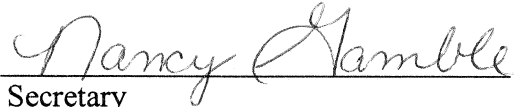
By: 
Deputy County Counsel

Contractor:

DUBLIN SAN RAMON SERVICES DISTRICT

By: 
Its: President, Board of Directors

ATTEST:

By: 
Its: Secretary

APPROVED AS TO FORM:

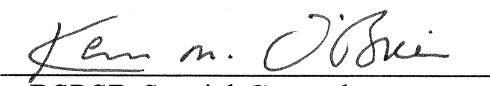
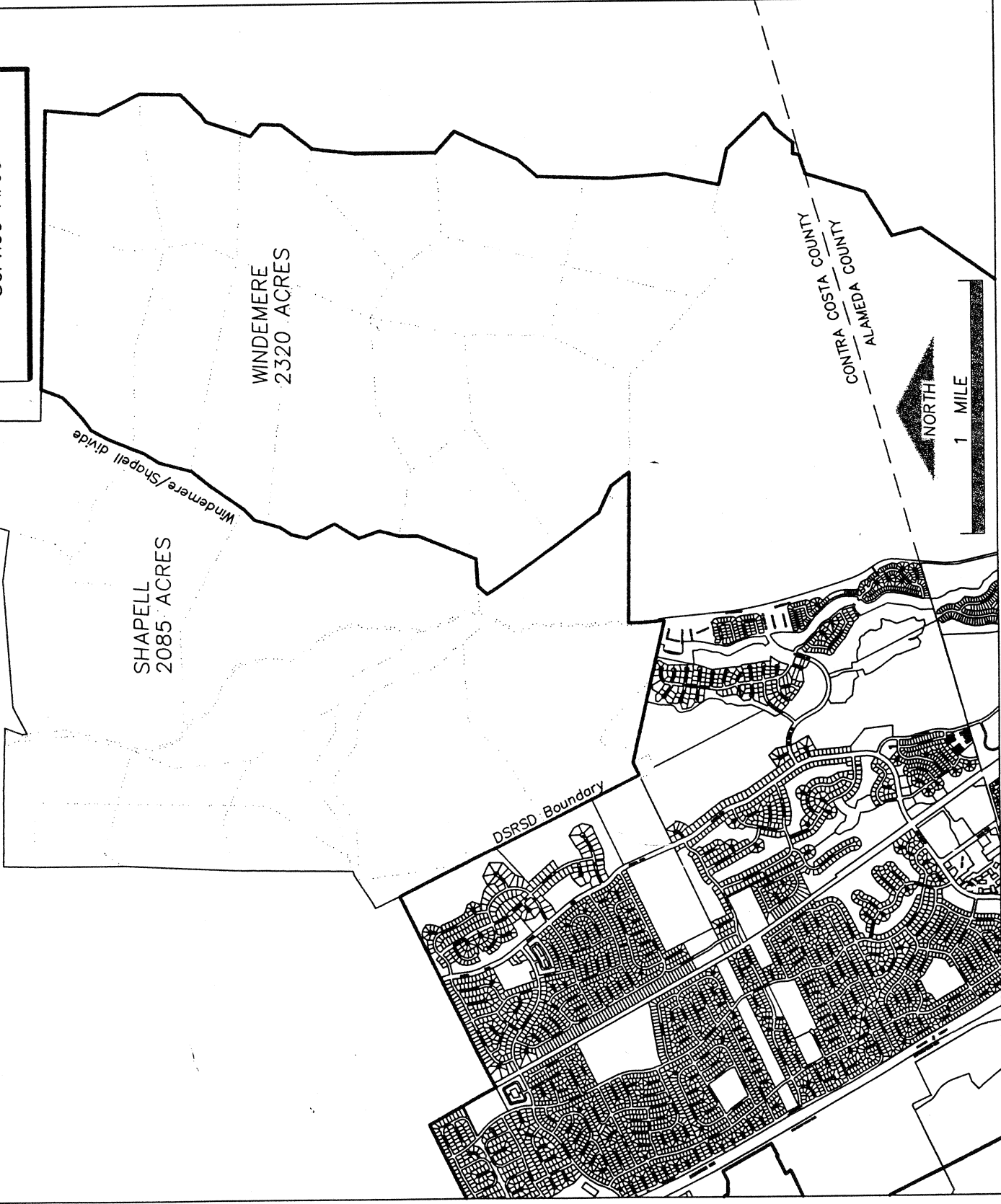
By: 
DSRSD Special Counsel

Figure 1
Map of Dougherty Valley
Service Area



APPENDIX I

SPECIAL PROVISIONS FOR WATER SUPPLIED TO CONTRACTOR FOR USE IN THE DOUGHERTY VALLEY SERVICE AREA

A. DEFINITIONS

"Adjustment Index" for the year in which the adjustment is being made shall mean a fraction, the numerator of which is the Construction Costs Index, 20-City Average, published by the Engineering News Record (the "Construction Costs Index") of the calendar year immediately preceding the calendar year when the adjustment is being made, and the denominator of which shall be 5,858.3 (20-City Average as of December 1997). If publication of the Construction Cost Index ceases or if the basis for the index is substantially modified, Zone 7 and Contractor shall mutually agree on an alternative index.

"Amendment" shall mean this Amendment No. 1 to the Water Supply Contract.

"Annual Water Supply Report" shall mean that certain annual report required to be delivered by Contractor to Zone 7 pursuant to Section C of this Appendix.

"Dougherty Valley Service Area" shall mean, as delineated in Figure 1 of the Amendment, that geographic area added to Contractor's Service Area under the Water Supply Contract pursuant to this Amendment

"Dougherty Valley Service Area Allotment" equals the Water Entitlement multiplied by a factor based on the Department of Water Resources' latest estimate of long-term State Water Project annual yield, as determined and used by Zone 7 for water supply planning purposes. This factor is currently 75%. The factor will be the same for water conveyed to DSRSD for delivery to the Dougherty Valley Service Area as it will be for State Water Project water being delivered within Zone 7's boundaries. Zone 7 and Contractor recognize that the long-term State Water Project yield is based on hydrological records and applicable regulatory requirements that are subject to change over time. Zone 7 will meet and confer with Contractor prior to changing the yield estimate. The current Dougherty Valley Service Area Allotment is: 7,000 acre feet (the Water Entitlement, defined below) x .75 (the current factor for the long-term State Water Project yield) = 5,250 acre feet per year.

"DWR" shall mean State of California Department of Water Resources.

"DWR/Zone 7 Agreement" shall mean the Contract between the State of California Department of Water Resources and Alameda County Flood Control and Water

Conservation District for a Water Supply for Zone No. 7, dated November 21, 1961, as amended.

"DWR/Zone 7 Amendment No. 19" shall mean the amendment to the DWR/Zone 7 Agreement whereby DWR agrees to convey the Water Entitlement to Zone 7.

"New Connection" shall mean any new metered water service within the Dougherty Valley Service Area that will furnish water from a water supply system that is connected to the Zone 7 water supply system or to the Livermore-Amador Valley Main Groundwater Basin (as defined in the Water Supply Contract), including but not limited to water services that are part of any new development to be constructed.

"Semitropic" shall mean the following public entities: Semitropic Water Storage District, Semitropic Improvement District, Buttonwillow Improvement District and the Pond-Poso Improvement District of the Semitropic Water Storage District, collectively.

"Semitropic Agreement" shall mean the agreement between Zone 7 and Semitropic, entered concurrently herewith, whereby Semitropic agrees to provide groundwater storage space for Zone 7's use.

"Tax Override Charges" shall mean those certain State Water Project expenses that Zone 7 pays for through an ad valorem tax levied on property owners within Zone 7 (denoted as "Flood Zone 7 State Water" on the property tax bill) as authorized under Section 36 of the California Water Code, Appendix 55 ("the District Act") and other applicable state laws. Zone 7 currently determines the Tax Override Charges based on the following State Water Project charges as invoiced by DWR: 1) Water System Revenue Bond Surcharge; 2) Capital Cost Component -- Transportation Charge; 3) Minimum Operating Maintenance, Power and Replacement Component -- Transportation Charge; and 4) Off-Aqueduct Power Facilities. Zone 7 may include other DWR charges as Tax Override Charges in accordance with applicable law, as long as such other charges are prospective in nature and charged as Tax Override Charges on property owners within Zone 7.

"Water Connection Charge Program" shall mean Zone 7's Water Connection Charge Program, as updated from time to time.

"Water Entitlement" shall mean that certain 7,000 acre feet of firm water entitlements that Zone 7 has agreed to purchase concurrently herewith from the Berrenda Mesa Water District ("BMWD") as set forth in the Water Purchase Agreement.

"Water Purchase Agreement" shall mean that certain agreement between Zone 7 and BMWD pursuant to which Zone 7 has agreed concurrently herewith to purchase, and BMWD agreed to sell, the Water Entitlement.

B. DELIVERY

1. Water Supply. Subject to, and as set forth in, the terms and conditions of this Amendment, Zone 7 shall provide Contractor with a supply of treated water for the Dougherty Valley Service Area.
2. Preliminary Water Delivery Schedule. Section 10 of the Water Supply Contract requires Contractor, on an annual basis, to submit to Zone 7 a preliminary water delivery schedule indicating the quantity of water anticipated by Contractor to be required for Contractor's service area during each month of the succeeding five (5) calendar years. Each such preliminary water delivery schedule shall hereafter include a separate itemization of water anticipated by Contractor to be required for the Dougherty Valley Service Area during such five-year period and be accompanied by the "**Annual Water Supply Report**" described in Section C below.
3. Review and Approval by Zone 7. Zone 7 shall review the Preliminary Water Delivery Schedule in accordance with Section 10 of the Water Supply Contract. Zone 7 may only revise or disapprove contractor's delivery request for the Dougherty Valley Service Area for the reasons set forth in Sections 12 (Peak Demands), 13 (Curtailed Delivery During Maintenance Periods), 14 (Availability of Water), or 15 (Suspension of Service) of the Water Supply Contract, or as described in Section B4, B5 and D1 below.
4. Limitations on Deliveries. Notwithstanding any other provision of this Amendment, Zone 7 shall have no obligation under this Amendment, in any year, to deliver water to the Dougherty Valley Service Area in excess of the Dougherty Valley Service Area Allotment.
5. Shortfalls. If a delivery schedule submitted to Zone 7 for the Dougherty Valley Service Area pursuant to paragraph B.2 above exceeds the Dougherty Valley Service Area Allotment for any year covered by the preliminary water delivery schedule, Zone 7 shall immediately deliver notice to Contractor of the shortfall, and Contractor, shall either (i) use its best efforts to secure additional water supplies adequate to eliminate such projected shortfall prior to its occurrence, or (ii) submit a revised delivery schedule that does not result in a shortfall. Zone 7 is under no obligation pursuant to this Amendment to seek additional water supplies for the Dougherty Valley Service Area if Contractor's request exceeds the Dougherty Valley Service Area Allotment in any year. Zone 7 shall use its best efforts to facilitate the transfer and use of any additional water supplies obtained through the efforts of the Contractor.

C. REPORTS

1. Annual Water Supply Report. Contractor shall measure and report to Zone 7 annually on treated water usage within the Dougherty Valley Service Area. Contractor's annual report to Zone 7 (the "Annual Water Supply Report") shall include a description of, among other things, (i) water deliveries by month for the past year; (ii) number and size of current service connections; and (iii) number and size of New Connections established over the preceding

year. The measurement and recordation of such water deliveries shall be subject to the same provisions for inspection and testing of meters and instrumentation by Zone 7 as is provided to Contractor in Section 8 of the Water Supply Contract. The Annual Water Supply Report shall be prepared and submitted by Contractor in a form acceptable to Zone 7 and due by March 1 of the following year.

2. Monthly Water Delivery Report. Section 11 of the Water Supply Contract requires Contractor to report to Zone 7 on or before the tenth day of each month the total volume, in acre-feet, of groundwater extracted from the Main Basin and any water obtained from "Other Sources" (as defined in the Water Supply Contract) for the preceding month. This report shall be expanded to include water supplied by Contractor to the Dougherty Valley Service Area from all sources during such preceding month, based on all metered flows to the Dougherty Valley Service Area (the "**Monthly Water Delivery Report**").

D. PAYMENTS

1. Treated Water Rate. Contractor shall pay Zone 7 for water delivered by Zone 7 to Contractor for the Dougherty Valley Service Area in accordance with the provisions of Section D of the Water Supply Contract. If any payments required under the provisions of Section D of this Appendix are not received by the due date, Contractor shall be subject to suspension of service and the accrual of interest as provided in the Water Supply Contract under Sections 15 and 28 respectively. Zone 7 shall not be obligated to provide water for any demands resulting from New Connections for which Contractor has not made Water Connection Payments or Facility Use Payments pursuant to Sections D.2 and D.3, below.

2. Water Connection Payments. Contractor shall make payments to Zone 7 to compensate Zone 7 for the Dougherty Valley Service Area's share of Zone 7's Capital Expansion Program. For each New Connection in the Dougherty Valley Service Area, Contractor shall pay Zone 7 an amount, established by the Zone 7 Board by resolution, to Zone 7's Capital Expansion Program. The amount due for each New Connection will equal the connection charges within the Zone 7 boundaries less the sums included in the Zone 7 connection charge for obtaining additional water entitlements and additional storage, as Contractor has already provided the Water Entitlement and storage for the Dougherty Valley Service Area. Payments to Zone 7 shall be due within 30 days from the date upon which the building permit for the property receiving the New Connection was issued or 30 days from the date that the New Connection is made, whichever is earlier.

3. Facility Use Payments. Contractor agrees to compensate Zone 7 for use of Zone 7's existing facilities in providing water to the Dougherty Valley Service Area. Contractor shall make payments to Zone 7, hereinafter referred to as Facility Use Payments, as Contractor permits New Connections in the Dougherty Valley Service Area. The Facility Use Payments shall be \$1,850 per New Connection of the basic connection size, 5/8" meter. The amount of said Facility Use Payments are based on the pro rata share of the current value of Zone

7's capital assets. The Facility Use Payments for New Connections of other sizes shall be adjusted by the "fee factor" contained in the Zone 7 Water Connection Charge Ordinance, Section III.

Zone 7 shall adjust the Facility Use Payments at the times specified in this section by multiplying \$1,850 by the Adjustment Index. The first adjustment to the Facility Use Payments shall go into effect no earlier than five years following issuance of the first building permit for development in the Dougherty Valley Service Area. Subsequent adjustments shall occur at five (5) year intervals thereafter. Payments to Zone 7 under this section shall be collected in the same manner and be due at the same time as payments due under Section D.2 (above).

4. Capital Expansion Water Facilities. Zone 7 shall keep Contractor apprised of Zone 7's progress in developing and constructing any capital water facilities that are necessary to provide service to Contractor for ultimate use in the Dougherty Valley Service Area. If Contractor determines, and Zone 7 concurs, that capital facilities required by Zone 7 to provide water to Contractor pursuant to this Amendment will not be available in time for Zone 7 to make requested deliveries under this Amendment, Contractor may elect to design and construct such capital facilities, and Zone 7 will reduce future connection payments pursuant to Paragraph D.2 (above) by the costs incurred by Contractor.

5. Surcharge for Water Service for Dougherty Valley Service Area. Contractor shall pay Zone 7 a surcharge for water service for the Dougherty Valley Service Area to compensate Zone 7 for additional State Water Project charges incurred by Zone 7 as a result of providing water to the Dougherty Valley Service Area. The surcharge shall equal the Dougherty Valley Service Area's proportionate share of the total Tax Override Charges, calculated as follows: (6,080 (the estimated amount of water entitlement necessary to supply the Dougherty Valley Service Area with 4,560 acre-feet of water per year given a State Water Project long-term yield of 75%)/Zone 7's total State Water Project entitlement) multiplied by the total Tax Override Charges.

$$\frac{\left(\frac{4,560}{\left(\frac{1}{\text{factor used to determine SWP long-term yield}} \right)} \right)}{\text{Zone 7's Total State Water Project entitlement (in acre-feet)}} \times \left(\frac{\text{Total Tax Override Charges}}{\text{Override Charges}} \right) = \text{Annual surcharge per this paragraph}$$

Zone 7 receives a statement of charges from DWR on or about July 1st of the preceding calendar year for which the charges are payable. Zone 7 shall invoice the Contractor on or

about September 1st preceding the November 1st for which the surcharge shall be due. DWR may make subsequent adjustments to its statement of charges. Accordingly, Zone 7 will make revisions to said invoice by issuing an additional invoice or refund as appropriate.

If, at some future date, the Dougherty Valley Service Area is annexed to Zone 7 and Zone 7 levies the Tax Override Charges directly on Contractor's customers in the Dougherty Valley Service Area, the aforementioned surcharge shall automatically terminate and be of no further force and effect.

6. Other Charges. Zone 7 and Contractor acknowledge and agree that from time to time there may arise a need for the imposition of additional payments to ensure that the Dougherty Valley Service Area bears all costs associated with the provision of treated water thereto under this Amendment. However, Zone 7 shall not impose upon Contractor any payments or charges not imposed upon Zone 7's Other Contractors for any purposes other than to recover costs associated with delivering water to the Dougherty Valley Service Area pursuant to this Amendment.

E. ALTERNATIVE DELIVERY METHODS

If a court of competent jurisdiction determines, in a judgment that cannot be appealed, that Zone 7 cannot participate in water delivery to the Dougherty Valley Service Area pursuant to the terms of this Amendment, Zone 7 and Contractor agree to use their best efforts to negotiate a contract, pursuant to which Zone 7 can convey water to Contractor for service to the Dougherty Valley Service Area. To limit the possibility of any interruption of service to the Dougherty Valley Service Area, either Zone 7 or Contractor may request such negotiations to commence prior to the conclusion of any such litigation. Zone 7 and Contractor agree to negotiate the contract in accordance with the principles listed below:

1. Insofar as possible, the contract shall contain all of the same terms and condition as this Amendment, except that Zone 7 would transfer to Contractor (i) ownership the 6,080 acre-feet of water entitlement, (ii) the Zone 7's rights and obligations pursuant to the Semitropic Water Storage District contract, (iii) water in storage in Semitropic, (iv) Zone 7's interest in any security instrument relating to the provision of water to the Dougherty Valley Service Area and (v) any remaining funds paid to Zone 7 by Contractor for the purpose of Zone 7 making payments to Semitropic.
2. Upon such transfer, Contractor would become solely responsible for all costs and other obligations associated with the entitlements, storage rights and service to the Dougherty Valley Service Area.
3. The parties agree to cooperate in good faith to obtain all administrative and regulatory approvals necessary for the transfer, and Contractor would pay all costs incurred by both parties in executing such a transfer.
4. Contractor would contract with Zone 7 to provide the services of water wheeling, treatment, seasonal storage and distribution through the Zone 7 system at a mutually agreeable price.
5. Contractor would not increase its use of the Main Groundwater Basin in excess of 1,400 AF of seasonal storage without the prior approval of Zone 7.
6. Contractor, upon consulting with Zone 7, would have the authority to determine the size of Semitropic Storage required for service to the Dougherty Valley Service Area.
7. Zone 7 would administer the DWR State Water Project contracts on behalf of DSRSD, as well as operations and conveyance of Semitropic Storage and the Water Entitlements.
8. Contractor will neither seek to materially alter its contractual relationship with Zone 7 nor terminate its Water Supply Contract with Zone 7 for the purposes of becoming an independent water purveyor for 30 years or until the specific termination date

contained in the existing Water Supply Contract between Zone 7 and DSRSD, whichever is longer.