Dublin San Ramon Services District

Water, wastewater, recycled water

DUBLIN SAN RAMON SERVICES DISTRICT

LOCAL & REGIONAL WASTEWATER CAPACITY RESERVE FEE UPDATE

November 13, 2018

FINAL REPORT

HF&H Consultants, LLC

DUBLIN SAN RAMON SERVICES DISTRICT
7051 Dublin Blvd.
Dublin, CA 94568-3018

2018 LOCAL AND REGIONAL WASTEWATER CAPACITY RESERVE FEE STUDY

FINAL REPORT

November 13, 2018

HF&H CONSULTANTS, LLC
201 North Civic Drive, Suite 230
Walnut Creek, CA 94596

HF&H CONSULTANTS, LLC
Managing Tomorrow's Resources Today

201 North Civic Drive, Suite 230
Walnut Creek, California 94596
Tel: (925) 977-6950
Fax: (925) 977-6955
hfh-consultants.com

Robert D. Hilton, Emeritus
John W. Farnkopf, PE
Laith B. Ezzet, CMC
Richard J. Simonson, CMC
Marva M. Sheehan, CPA
Robert C. Hilton, CMC

November 13, 2018

Ms. Carol Atwood, Administrative Services Manager
Ms. Judy Zavadil, Engineering Services Manager
Dublin San Ramon Services District
7051 Dublin Blvd.
Dublin, CA 94568-3018

Subject: 2018 Local and Regional Wastewater Capacity Reserve Fee Study

Dear Ms. Atwood and Ms. Zavadil:

HF&H Consultants, LLC (HF&H) is pleased to submit this capacity reserve fee report to the Dublin San Ramon Services District (District). The report updates the District's local and regional capacity reserve fees based on the current value of current capacity in the District's wastewater system, as well as expanded capacity, that benefits new connections to the system. The report describes the background, approach, and calculation of each capacity reserve fee.

Very truly yours,

HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President
Richard J. Simonson, C.M.C., Vice President

TABLE OF CONTENTS

TABLE OF FIGURES

APPENDIX

ACRONYMS

CIP	Capital Improvement Plan
BOD	Biochemical Oxygen Demand
DUE	Dwelling Unit Equivalent
ENR CCI	*Engineering News Record* Construction Cost Index
FY	Fiscal Year
GPD	Gallons per Day
LAVWMA	Livermore Amador Valley Water Management Agency
PAYGo	Pay-As-You-Go, a form of capital financing derived from equity and reserves as opposed to from borrowed funds
RCN	Replacement Cost New
TSS	Total Suspended Solids

I. INTRODUCTION

BACKGROUND

HF&H Consultants (HF&H) was retained to update the Dublin San Ramon Services District's (District's) local and regional wastewater capacity reserve fees. The local capacity reserve fee is a one-time charge to new or expanded connections to the District's wastewater collection system. The regional capacity reserve fee is a one-time charge to new or expanded connections that flow to the District's wastewater treatment plant for processing before being discharged to the Livermore Amador Valley Water Management Agency (LAVWMA).

The District's wastewater collection system serves the City of Dublin, portions of the City of San Ramon, the Parks Reserve Forces Training Area (Camp Parks) and the Alameda County Santa Rita Jail. The wastewater collection system includes approximately 207 miles of sanitary sewers from 4 to 48 inches in diameter and two lift stations.

The District provides wastewater treatment services to the collection system, as well as the City of Pleasanton by contract. The District's regional wastewater treatment facility has a current treatment capacity of 17.00 million gallons per day (MGD) and, in 2017, received an average daily flow of 11.01 MGD.

Local and regional capacity reserve fees were last studied in 2010 and have been adjusted annually by the change in the construction cost index for the San Francisco area, since adoption. **Figure I-1** summarizes the current capacity reserve fees.

Figure I-1. Current Local and Regional Capacity Reserve Fees

Customer Type	Local		Regional	
Residential				
Single Family	$1,969	per Dwelling Unit	$15,501	per Dwelling Unit
Accessory Dwelling Unit	$2.00	per sq ft	$10.00	per sq ft
Condominiums	$1,477	per Dwelling Unit	$11,626	per Dwelling Unit
Apartments	$1,298	per Dwelling Unit	$10,215	per Dwelling Unit
Non-Residential [a]				
Flow	$8.95	per gpd	$65.71	per gpd
BOD			$1,588.64	per lb/day
SS			$835.95	per lb/day

[a] Estimated flows, Biochemical Oxygen Demands (BOD), and Suspended Solids (SS) are used to calculate fees for each individual commercial and industrial customer.

STUDY OBJECTIVES

Publicly-owned wastewater system's assets are typically paid for by the contributions of existing customers through rates, charges, and taxes. In service areas that incorporate new or expanding customers, the infrastructure developed by previous customers is generally extended towards the service of these new or expanding customers. Existing customers' investment in the existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. To further economic equity among new and existing customers, in turn, new connectors will typically buy-in to the existing and pre-funded facilities, effectively putting them on par with existing customers. In other words, the new users are buying into the existing system through a payment for the portion of facilities that have already been constructed in advance of new development. In addition, current facilities may be expanded, or new facilities may be constructed to accommodate new or expanding customers.

Key objectives of the study include:

- Provide independent review of the District's current local and regional capacity reserve fees;
- Develop an appropriate approach/methodology for updating the District's capacity reserve fees;
- Develop updated capacity reserve fees that:
    - Determine the value of the facilities that provide capacity for growth, from existing facilities and future expansion.
    - Equitably recover such value from new connections;
    - Are consistent with industry-standard practices and methodologies;
    - Comply with government code.

LEGAL FRAMEWORK

Capacity fees are required to ensure that development pays its fair share of the costs associated with providing system capacity, both existing capacity and additional capacity built specifically for growth. Capacity fees are a type of development impact fee that public agencies may impose as a condition of development under the authority of California Government Code Section 66000 *et seq.*, the Mitigation Fee Act. The Act requires that "those fees or charges shall not exceed the estimated reasonable cost of providing the service"[1]. Because the Act does not prescribe a formula or procedure for determining "the estimated reasonable cost," it is the responsibility of the local agency to employ a method that yields a reasonable result.

[1] Mitigation Fee Act Section 66013(a).

The courts generally regard fees as being reasonable if they are not capricious, arbitrary, or discriminatory. Fees are capricious if there is no factual basis for the underlying data used to make the calculations. Fees are arbitrary if there is no logical rationale for choosing among alternatives. Fees are discriminatory if they disproportionately allocate costs to one class of service at the expense of another class.

This report updates the District's local (collection services) and regional (treatment services) capacity reserve fees. The following sections provide summaries of the approach and resulting fees.

II. APPROACH

The purpose of this report is to document that the conditions have been met to establish that the District's capacity reserve fees recover the reasonable cost of providing capacity. This approach is the same for both the local wastewater collection and the regional wastewater treatment capacity reserve fee calculations.

ANALYTICAL APPROACH

Three steps are required to determine the reasonable costs that can be recovered with connection fees: (1) facilities that benefit growth must be identified, (2) the value of those facilities must be derived, and (3) the capacity provided by those facilities must be determined. The approach used in this report to address each of these steps is described below.

In establishing capacity fees, there are three generally accepted methods, as discussed in the American Water Works Association M-1 Manual:

- **Buy-in Method.** The buy-in method is based on the value of the existing system's capacity. This method is typically used when the existing system has remaining capacity to serve new development now and into the future.
- **Incremental Cost Method.** The incremental cost method is based on the value or cost to expand the existing system's capacity. This method is typically used when the existing system has limited or no capacity to serve new development.
- **Combined Method.** The combined approach is based on a blended value of both the existing and expanded system's capacity. This method is typically used where some capacity is available in parts of the existing system and new or incremental capacity will need to be built in other parts to serve new development at some point in the future.

The District has historically used the combined method for calculating its Capacity Reserve Fees. This capacity reserve fee update will continue to use the combined method as the District's existing system has some capacity still available to serve growth and has identified specific expansion-related capital projects, or portions of projects, that will be done in the future in order to accommodate new connections.

Buy-in Component Approach

For the buy-in component of the fees, the value of District's current system will be determined and then be divided by the total number of existing dwelling unit equivalents, which will determine the unit cost of capacity. In this way, the buy-in component of the fee is the average cost paid by today's connections, if no additional expansion to the system were required. There is currently capacity available to new

connections to join the system. In order to join the system, new connections need to pay the average cost so that they are at the same level of capital participation as existing connections and thereby have fully reimbursed existing customers so that all connections have borne an equivalent cost.

Value of the Current System (Buy-in Component)

The value of the current system is the numerator in determining the unit cost of capacity for the buy-in component. This value should reflect the original cost of constructing the facilities plus any subsequent costs incurred by rate payers to maintain the facilities so that they are capable of providing capacity for growth, when and if it occurs. A reasonable approach to determining this value is referred to as "replacement cost new" (RCN) by utility valuation specialists. RCN value represents the cost to construct capacity today. The incremental difference between the original cost and the RCN is presumed to recover the cost of maintenance, although no exacting calculation has been made of the amount of maintenance that has ensued since the original construction. By maintaining facilities, the capacity for both existing users and growth maintains its ability to provide service. Rate payers have no choice but to maintain not only the capacity they are using but also the unused capacity for growth. Rate payers are entitled to recover costs from growth for having maintained growth's share of capacity. Such a calculation would be very difficult particularly if no data are available. However, for purposes of cost recovery the incremental difference is deemed to be a reasonable proxy.

Contributed capital from developers such as in-tract facilities, typically 8-inch and 10-inch wastewater collection pipes, are excluded as they do not provide system-wide capacity. In-tract facilities are facilities constructed by developers specifically for the benefit of subdivisions without any additional capacity for other connections. Data are often not available to estimate exactly how much capital was contributed by developers. However, reasonable estimates can be made to minimize how much contributed capital is included in the fee calculation so that double counting is avoided. For this analysis, to recognize developer contributions and to avoid double counting, the value of collection pipelines with a diameter of 10" or less have been excluded.

Capacity of Current System (Buy-in Component)

The capacity of the current system is the denominator in determining the unit cost of capacity. The current number of connections is converted to a standard connection referred to as a Dwelling Unit Equivalent (DUE). A DUE relates multi-family and commercial connections to an equivalent single family residential connection based on the ratio of the customer's estimated daily water use and strength of sewage discharge compared to that of a single family residence.

Buy-in Component Unit Cost of Capacity

Dividing the value of the current system facilities by the number of DUEs served determines the buy-in component of the District's current local and regional systems. In effect, the buy-in component represents the unit cost associated with the capacity that rate payers have already funded. By paying this unit cost, each future connection attains the same level of capital participation in the facilities as an existing rate payer.

Incremental Component Approach (Expansion Component)

For the incremental component of the fees, the value of the expanded-capacity projects will be determined and divided by the number of additional DUEs until build-out. Capital improvements that expand system capacity to serve existing and future customers will be included proportionally to the percentage of the cost specifically required for expansion of the system. The portion of such capital improvement projects to serve existing customers are not included and will be primarily covered by rates from current customers.

Cost of the Incremental Facilities (Expansion Component)

The cost of the expansion-related facilities needed to accommodate growth is the numerator in determining the unit cost of capacity for the expansion component of the local and regional capacity reserve fees. The value of expansion-related projects for the local collection system is based on the capital improvement program, presented in current dollars, included in the District's 2018 Wastewater Collection System Master Plan being prepared by West Yost Associates concurrently with this study. The value of expansion-related projects, for the regional wastewater treatment facility, is based on the District's capital improvement program included in the District's 2017 Wastewater Treatment and Biosolids Facilities Master Plan prepared by West Yost and Associates and HDR, and recently updated by staff and West Yost.

The capital improvement programs used in this study include all projects through build-out, currently estimated to be 2031.

Capacity of Incremental Facilities (Expansion Component)

The capacity provided by the expansion projects is the denominator in determining the unit cost of capacity. The estimated DUEs through buildout are currently estimated to be 7,023 DUEs to connect to the District's local wastewater collection system and 9,033 DUEs to connect to the District's regional wastewater treatment system.

Expansion Component Unit Cost of Capacity

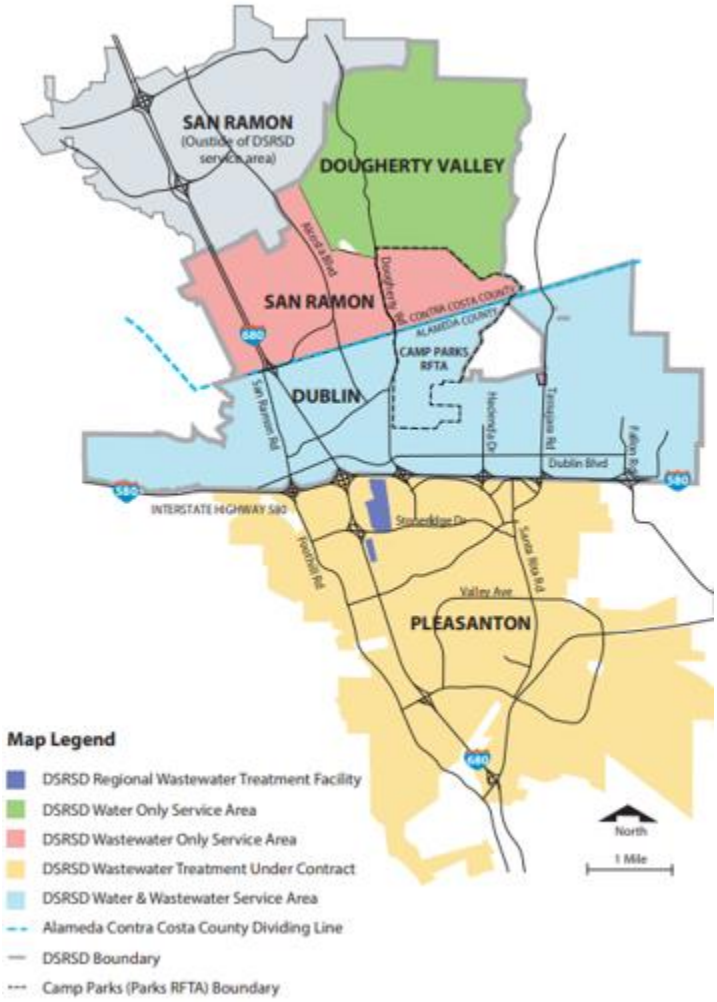
Dividing the value of the new facilities by the number of DUEs served determines the expansion component of the District's current local and regional systems. The expansion component represents what new or expanded connections should pay for the cost of additional capacity and expansions necessary to serve the new or expanded development.

The buy-in and expansion components will then be combined to determine the total local and regional capacity reserve fees.

III. CAPACITY RESERVE FEE CALCULATION – LOCAL

This section of the report presents the key assumptions in the calculation of the District's local wastewater collection capacity reserve fees. The calculation of the District's fees is based upon District specific accounting and planning information to provide wastewater collection service to the City of Dublin in Alameda County (blue area of **Figure III-1**), and the southern portion of the City of San Ramon in Contra Costa County (red area of Figure III-1). Wastewater collection service to the northern portion of San Ramon and the Dougherty Valley is provided by the Central Contra Costa Sanitary District. The District's wastewater service area includes Camp Parks and Alameda County's Santa Rita Jail facilities.

Figure III-1. DSRSD Service Area Map



Wastewater generated in the local collection system is conveyed to the District's wastewater treatment plant (WWTP) located south of Stoneridge Drive in Pleasanton, which also treats flows from the City of Pleasanton, under contract. Wastewater effluent is discharged to the Livermore Amador Valley Water Management Agency (LAVWMA) effluent disposal facilities for conveyance and discharge to San Francisco Bay.

Because not all wastewater treatment customers utilize the District's wastewater collection service (e.g., Pleasanton), separate local and regional capacity reserve fees are calculated. This section details the calculations for the local capacity reserve fee. See Section IV of this report for the details of the regional capacity reserve fee calculation.

BUY-IN COMPONENT

Value of Existing System

The first step is determining the value of the existing system. In order to join the system, new connections pay equitable costs to be at an equitable level of capital participation as existing connections and ensure that all connections have borne an equivalent cost.

The District's local wastewater collection system includes approximately 207 miles of sanitary sewers, from 4 to 48 inches in diameter, and two lift stations. One lift station is on Dublin Boulevard and the other is at South Terracina Drive and Croak Road in Dublin. The lift station located at South Terracina Drive has been excluded from this analysis as the lift station was built by a developer.

Other facilities used in the provision of wastewater collection services include the District administration office at 7051 Dublin Boulevard in Dublin and a field operations administrative office at 7035 Commerce Circle in Pleasanton.

The determination of reasonable costs begins by determining the net equity current customer have in the existing facilities described above.

Wastewater Collection Pipelines

The District's 207 miles of sanitary sewer pipelines were valued based on current constructions costs. Unit costs (dollar per linear foot) of construction costs were applied to an inventory of the pipelines to determine the RCN value. The unit costs were derived from the District's asset management program, which uses several sources to determine values: actual costs from recent replacements, capital improvement project costs, and project cost data developed by another third-party consultant working with District staff. Once the base construction costs were determined, "soft costs" were added for design and construction management (e.g., administration, engineering, and legal) and a 30% contingency for estimate uncertainties. **Figure III-2** summarizes the value of these pipelines. To recognize developer in-tract contributions, and to avoid double counting, the value of collection pipelines with a diameter of 10" or less have been excluded.

Figure III-2. Wastewater Collection Pipelines - RCN

Pipeline Diameter	Replacement Cost New
4"	$37,830
6"	$4,837,755
8"	$216,953,949
10"	$21,997,378
12"	$14,089,768
15"	$8,443,576
18"	$3,965,907
21"	$1,121,166
24"	$8,754,287
27"	$3,592,162
30"	$3,150,042
33"	$1,884,654
36"	$17,524,458
39"	$3,846,635
42"	$5,564,359
Total	$315,763,926
Less 10" dia. and smaller	($243,826,912)
RCN of District-funded pipelines	$71,937,014

Other Facilities

The replacement cost for the Dublin Boulevard lift station is based on the actual June 2018 cost to construct the lift station.

The replacement cost for the District's administration office at 7051 Dublin Boulevard in Dublin and field operations administrative office at 7035 Commerce Circle in Pleasanton are based on valuations determined by the California Sanitation Risk Management Authority. Insured value serves as a readily accessible proxy for RCN value based on construction costs. The respective offices provide support not only to local wastewater collection activities, but also to the District's other activities (i.e., regional wastewater treatment, water, and recycled water services); therefore, 15% of the total value of the administration buildings, which is the local wastewater collection asset value as a percentage of total District assets was used in the study.

Fund Reserves

Lastly, we have added the minimum replacement fund reserve balance to recognize the contribution current ratepayers have made to maintain a healthy reserve balance which adds value to the system. Both existing and new or expanded connections customers will benefit from the reserves, therefore, new or expanded connections should contribute their fair share in order to establish equity in the reserves. The District's minimum reserve

balance is calculated at two times the average annual CIP expense in the District's 10-year CIP budget. The District's actual reserve balance at fiscal year end June 30, 2018 was higher than the minimum target balance. The balance fluctuates above and below the target during the year as projects are worked on and expenses incurred. To be conservative, we have assumed the minimum reserves balance instead of the higher year-end balance.

The net equity in the District's existing local wastewater collection system is summarized in **Figure III-3**.

Figure III-3. RCN of Existing Local Wastewater Collection System

Local Wastewater Collection System Assets	Replacement Cost New
Equity in Existing Assets	
Pipelines	$71,937,014
Lift Station @ Dublin Blvd.	$987,500
Administration Buildings	$1,810,064
	$74,734,578
Replacement Fund Mininum Balance	$2,414,650
Net Equity in Existing System	$77,149,228

Capacity in the Existing System

The next step in determining the buy-in component is to determine the current used capacity of the system. Dividing the value of the system by the capacity will provide a unit cost for the buy-in component of the capacity reserve fee. The current used capacity of the existing local wastewater collection system is 36,778 DUEs, which was provided by District staff, and based on 220 gallons per day of wastewater discharge by the average single family customer.

Local Buy-in Component Calculation

The value of the local wastewater collection system (**Figure III-3)** serves as the cost basis for the buy-in component of the local capacity reserve fee. The buy-in component is determined by dividing the net equity current connections have in the existing system **(Figure III-2)** by the total current used capacity in the system, 36,778 DUEs**.** The derivation of the buy-in component of $2,098 per DUE is shown in **Figure III-4**.

A detailed listing of the inventory of the lift stations and administration buildings, and their respective insured values, is included in **Appendix A**.

Figure III-4. Local Buy-in Component Calculation

	Replacement Cost New	Current DUEs	Unit Cost $/DUE
Equity in Existing Assets			
Pipelines	$71,937,014	36,778	$1,956
Lift Station @ Dublin Blvd.	$987,500	36,778	$27
Administration Buildings	$1,810,064	36,778	$49
Subtotal	$74,734,578	36,778	$2,032
Replacement Fund Mininum Balance	$2,414,650	36,778	$66
Net Equity in Existing System	$77,149,228	36,778	$2,098

EXPANSION COMPONENT

Value of Future Facilities

The next step is to determine the value of future growth-related capital improvements necessary to accommodate new or expanded connection through the District's planned build-out.

The District maintains an annual capital improvement plan (CIP) that addresses necessary capital improvement projects to maintain the current system in good working order, as well as projects needed to expand the collection system capacity through build-out. Recommended growth-related capital improvements and their respective percentages which are expansion-related are shown in **Figure III-5**. The total project costs are based on the updated valuations included in the 2018 Local Wastewater Collection System Master Plan being prepared by West Yost concurrently with this study. The allocated costs reflect only the proportionate share of the total costs of the project that are expansion related. All capital improvement projects will be funded on a PAYGo basis, no debt will be issued.

Figure III-5. Local Wastewater Expansion-Related CIP

Project Description	Year	Expansion-related %	Allocated Cost (2018$)
Corporation Yard and Administrative Facilities	2018	5%	$12,500
Field Operations Facility Security Systems Improvements	2018	5%	$2,500
Wastewater Collection System Master Plan	2018	75%	$513,750
Doughery Road Utilities	2018	5%	$5,580
Village Pkwy - South of Dublin Blvd Sewer	2023	100%	$2,832,000
Dublin Blvd - Amador Plaza Rd. to Village Pkwy Sewer	2023	100%	$820,000
East Dublin	2023	100%	$1,311,500
Dublin Trunk Relief Sewer	2027+	100%	$6,745,000
Total			$12,242,830

Fund Reserves

Next, we subtract the expansion fund reserve balance (as of June 30, 2018) to recognize the revenue that has already been contributed by developers towards the remaining capital projects necessary to accommodate the growth. The fund reserves include a $4.2 million interfund loan repayment from the local replacement fund.

Figure III-6 summarizes the net growth-related capital projects necessary to provide service to the projected future users.

Figure III-6. Local Wastewater Expansion-Related CIP (net of reserve balance)

Component	$ Value
Expansion Component	
(2018 through build-out)	
PAYGo-funded CIP	$12,242,830
Less: Expansion Fund Reserve Balance	($11,792,965)
Subtotal, Expansion Component	$449,865

Incremental Capacity

The next step in determining the expansion component is to determine the incremental capacity provided by the growth-related capital improvement projects identified in **Figure III-4**. Dividing the cost of growth-related projects by the additional capacity the projects will provide determines the unit cost for the expansion component of the capacity reserve fee. The current capacity of the existing local wastewater collection system is 36,778 DUEs and District staff currently estimates there will be 43,801 DUEs at total build-out of the District's service area by 2031; therefore, the additional capacity provided by the expansion-related projects is 7,023 DUEs.

Figure III-7. Determination of Growth-related DUEs

Year	DUEs	Additional DUEs
2018	36,778	
2019	37,845	1,067
2020	38,548	703
2021	39,081	533
2022	39,743	662
2023	40,126	383
2024	40,491	365
2025	40,846	355
2026	41,306	460
2027	41,946	640
2028	42,674	728
2029	43,364	690
2030	43,696	332
2031	43,801	105
Total Additional DUEs		**7,023**

Local Expansion Component Calculation

The expansion component is determined by dividing the net replacement cost new of the expansion-related capital improvement costs **(Figure III-5)** by the additional capacity provided, 7,023 DUEs**.** The derivation of the expansion component of $64 per DUE is shown in **Figure III-8**.

Figure III-8. Local Expansion Component Calculation

	Replacement Cost New	Additional DUEs	Unit Cost $/DUE
Capital Improvement Program			
(2018 through build-out)			
PAYGo-funded	$12,242,830	7,023	$1,743
Debt-funded	$0	7,023	
Subtotal	$12,242,830	7,023	$1,743
Less: Expansion Fund Reserve Balance	($11,792,965)	7,023	($1,679)
Subtotal, Expansion Component	$449,865	7,023	$64

LOCAL CAPACITY RESERVE FEE CALCULATION

We add together the buy-in component and expansion-component, as shown in **Figure III-9**, to arrive at the proposed local capacity reserve fee of $2,162 per DUE.

Figure III-9. Local Capacity Reserve Fee Calculation ($ per DUE)

Component	$/DUE
Buy-in Component	$2,098
Expansion Component	$64
Local Capacity Reserve Fee	$2,162

Figure III-10 compares the proposed local capacity reserve fee to the current fees, by customer class, followed by descriptions of how the fees were determined for each customer class.

Figure III-10. Current and Proposed Local Capacity Reserve Fees

Customer Class	Current	Proposed
Residential		
Single Family	$1,969 per DU	$2,162 per DU
Condominiums	$1,477 per DU	$1,622 per DU
Apartments	$1,298 per DU	$1,427 per DU
Accessory Dwelling Unit	$2.00 per sq ft	$1.38 per sq ft
Non-Residential	$8.95 per gpd	$9.83 per gpd

Single Family Residential

A single family connection is charged 1.00 DUE or $2,162 per connection.

Multi Family Residential

Condominium connections are charged 0.75 DUEs or $1,622 per dwelling unit ($2,162 x 0.75 DUEs) based on an estimated 165 gpd and apartment connections are charged 0.66 DUEs or $1,427 per dwelling unit ($2,162 x 0.66 DUEs) based on an estimated 145 gpd, which is consistent with the current fee structure and recent evaluations by District staff.

Reduced fees for multi family dwelling units is fairly common in the industry as multi family dwelling units discharge less wastewater than single family dwellings. On average, multi family dwelling units are smaller and have fewer persons per household than single family dwellings, thus resulting in less wastewater to be collected and transported through the District's wastewater collection system.

Non-Residential

Non-residential commercial customers are charged based on their estimated daily flow on a dollar per gallon basis and was calculated by dividing the $2,162 fee per DUE by the average single family flow of 220 gpd.

Accessory Dwelling Units

The passage of SB 1069 in 2016 amended Section 65852.2 of the California Government Code. Section 65852.2(g)(2)(B) now requires:

> *Consistent with Section 66013, the connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its size or the number of its plumbing fixtures, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.*

In order to comply with this new law, the District added a separate charge for accessory dwelling units based on a per square foot basis. The charge is based on the District's 2008 Second Unit Wastewater Generation Study, which found that second units, or accessory dwelling units, have an average square footage of 625 square feet and an average discharge of 88 gallons per day. Thus, accessory dwelling units are $1.38 per square foot based on 0.40 DUEs (average discharge of 88 gpd ÷ 220 gpd) and an average size of an accessory dwelling unit of 625 square feet ($2,162 x 0.40 DUEs ÷ 625 sq. ft.), which is consistent with the current fee structure and recent evaluations by District staff. Past practice was to round such calculation to the nearest $1. However, we are recommending use of significant figures, which results in a reduction in the rate per square foot for accessory dwelling units compared to the current rate.

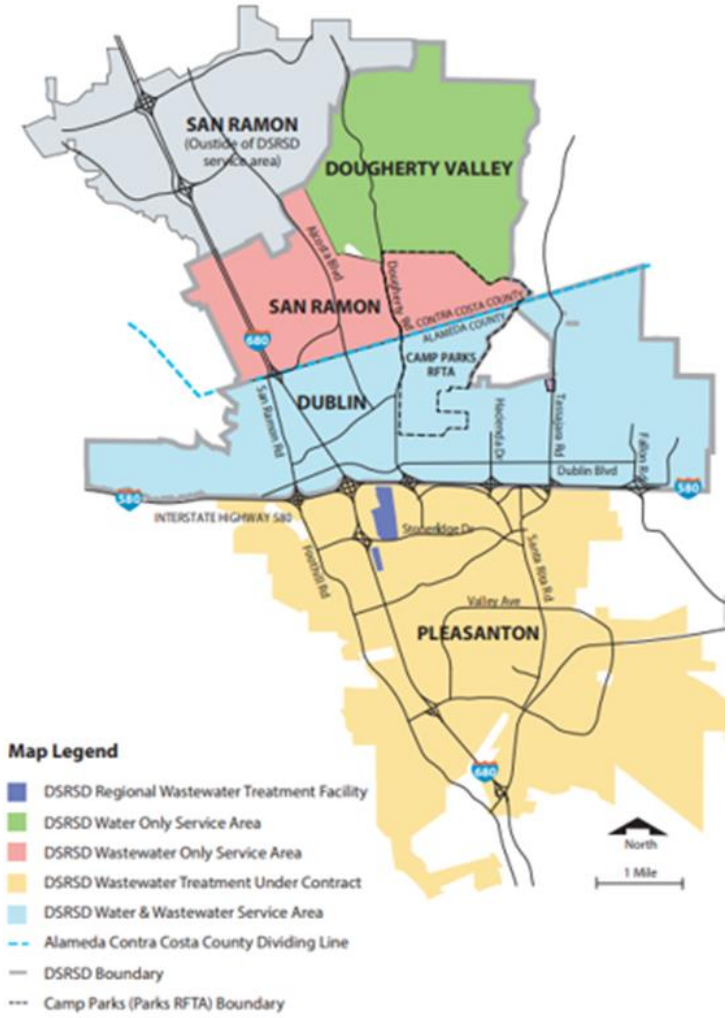
IMPLEMENTATION

It is our opinion that the local wastewater capacity reserve fees developed in this report are reasonable for the forthcoming year. In order to maintain the fees in current dollars going forward, we recommend that the District annually update the fees by the percentage change in the Engineering News Record Construction Cost Index (ENR CCI), San Francisco Bay Area, beginning July 1, 2020. In addition, we recommend that the District conduct a new connection fee study every five years or whenever a new facilities master plan is prepared.

IV. CAPACITY RESERVE FEE CALCULATION – REGIONAL

This section of the report presents the key assumptions in the calculation of the District's regional wastewater treatment capacity reserve fees. The calculation of the District's fees is based upon District specific accounting and planning information to treat wastewater flowing into the District's wastewater treatment plant (WWTP) located south of Stoneridge Drive in Pleasanton. Inflows to the WWTP come from the District's local wastewater collection system in southern San Ramon and Dublin (red and blue areas of **Figure IV-1,** respectively), as well as flows from the City of Pleasanton, under contract (yellow area of **Figure IV-1**). Wastewater effluent is discharged to the Livermore Amador Valley Water Management Agency (LAVWMA) effluent disposal facilities for conveyance and discharge to the San Francisco Bay.

Figure IV-1. DSRSD Service Area Map



This section of the report details the calculation of the regional wastewater treatment capacity reserve fee charged to new or expanding connections.

BUY-IN COMPONENT

Value of Existing System

The first step in calculating the regional wastewater treatment capacity reserve fee is determining the value of the existing wastewater treatment system. In order to join the system, new and expanded, connections need to pay the equitable average costs so that they are at the same level of capital participation as existing connections, so that all connections have borne an equivalent cost.

The current capacity of the District's WWTP is currently 17.00 MGD and serves approximately 160,000 people. The WWTP comprises two different sites: the main site is approximately 22 acres and located south of Stoneridge Drive and east of Interstate Highway 680 and a Dedicated Land Disposal (DLD) site located across Stoneridge Drive from the main WWTP.

In addition, LAWWMA export facilities and the District's administration office at 7051 Dublin Boulevard are also included in the provision of regional wastewater treatment services. 54% of the total value of the administration office, which is the regional wastewater treatment asset value as a percentage of total District assets was used in the study.

The determination of reasonable costs begins by determining the net equity current customer have in the existing facilities described above.

WWTP Facilities and Equipment

The RCN for facilities and equipment is based on the District's asset management system where the base unit costs are derived from the District's asset management program, which uses several sources to determine the value: actual costs from recent replacements, capital improvement project costs, and project cost data developed by another third-party consultant working with District staff. Once the base construction costs are determined, "soft costs" were added for design and construction management (e.g., administration, engineering, and legal) and a 30% contingency for estimate uncertainties.

Buildings – Operations and Administration

The replacement cost for the District's administration office at 7051 Dublin Boulevard in Dublin is based on insured value, as determined by CSRMA/Alliant in their valuation dated January 2018. Insured value serves as a readily accessible proxy for RCN value based on construction costs. The District office provides support not only to the regional wastewater treatment activities, but also to the District's other activities (i.e., local wastewater collection, water, and recycled water services); therefore, we have included

54% of the total value of the District office, which is the regional wastewater treatment asset value as a percentage of total District assets. The District's field operations administrative office does not provide any support to the District's wastewater treatment services; therefore, none of the field office costs have been allocated to the regional wastewater treatment capacity reserve fee.

A detailed listing of the inventory of regional facilities and the administration office, and their respective insured values, are included in **Appendix B**.

Regional Wastewater Treatment Pipelines

The District's process pipelines within the wastewater treatment plant were valued based on current construction costs. Unit costs of construction were applied to an inventory of the pipelines to determine their RCN value. The unit costs include all costs, such as construction costs and overheads for design and construction management. **Figure IV-2** summarizes the value of these pipelines.

Figure IV-2. Regional Wastewater Treatment Pipelines - RCN

Pipeline Diameter	Replacement Cost New
<=8"	$8,372,618
10"	$45,794
12"	$1,091,075
14"	$545,930
15"	$321,504
16"	$275,099
18"	$195,524
24"	$639,779
30"	$339,046
36"	$123,197
42"	$4,963,893
48"	$1,435,282
54"	$1,215,781
Total	$19,564,519

DSRSD and City of Pleasanton Equity in LAVWMA Facilities

The District, the City of Pleasanton, and the City of Livermore are member agencies in LAVWMA. LAVWMA facilities (i.e., export pipeline, dechlorination facility, and pump station) export wastewater effluent from the District's WWTP and the City of Livermore's WWTP. The value of the LAVWMA infrastructure was calculated by escalating the original construction costs, in their current fixed asset listing, to current year costs using the Engineering News Record Construction Cost Index (year-to-date average through October 2018) and only includes the combined member equity for the District and the

City of Pleasanton (69.90%), for joint-use facilities. The other 30.10%, for joint-use facilities, is allocated to the City of Livermore and not part of this calculation. There are other LAVWMA assets that are wholly used by the District and the City of Pleasanton, such assets are allocated 100% to the District and the City of Pleasanton. To avoid double counting, the calculated value excludes outstanding debt service on expansion-related assets included in the LAVWMA fixed asset listing.

A copy of the inventory of the LAVWMA assets, and their respective RCN, is included in **Appendix C**.

Fund Reserves

Lastly, we have added the minimum wastewater treatment replacement fund reserve balance to recognize the contribution current ratepayers have made to maintain a healthy reserve balance which adds value to the system. Both existing and new or expanded connections customers will benefit from the reserves, therefore, new or expanded connections should contribute their fair share in order to establish equity in the reserves. The District's minimum reserve balance is calculated at two times the average annual CIP in the District's 10-year CIP budget. The District's actual reserve balance at fiscal year end June 30, 2018 was higher than the minimum target balance. The balance fluctuates above and below the target during the year as projects are worked on and bills are paid. To be conservative, we have assumed the minimum reserves balance instead of the higher year-end balance.

The net equity in the District's existing regional wastewater treatment system is summarized in **Figure IV-3**.

Figure IV-3. RCN of Existing Regional Wastewater Treatment System

	Replacement Cost New
Equity in Existing DSRSD Assets	
WTTP Facilities/Equipment	$81,453,770
Buildings - Operations	$45,581,496
Building - Admininstration	$3,434,013
Pipelines	$19,564,519
Subtotal	$150,033,798
Equity in Existing LAVWMA Assets	$87,210,355
Replacement Fund Mininum Balance	$9,628,454
Net Equity in Existing System	$246,872,607

Capacity in the Existing System

The next step in determining the buy-in component is to determine the current used capacity of the system. Dividing the value of the system by the capacity will provide a unit cost for the buy-in component of the capacity reserve fee. The current used capacity of the existing regional wastewater treatment system is 70,296 DUEs.

Regional Buy-in Component Calculation

The value of the regional wastewater treatment system (**Figure IV-3)** serves as the cost basis for the buy-in component of the regional capacity reserve fee. The buy-in component is determined by dividing the net equity current connections have in the existing wastewater treatment system **(Figure IV-3)** by the total capacity in the system currently being used, 70,296 DUEs**.** The derivation of the buy-in component of $3,512 per DUE is shown in **Figure IV-4**.

Figure IV-4. Regional Buy-in Component Calculation

	Replacement Cost New	Current DUEs	Unit Cost $/DUE
Equity in Existing DSRSD Assets			
WTTP Equipment	$81,453,770	70,296	$1,159
Buildings - Operations	$45,581,496	70,296	$648
Building - Administration	$3,434,013	70,296	$49
Pipelines	$19,564,519	70,296	$278
Subtotal	$150,033,798	70,296	$2,134
Equity in Existing LAVWMA Assets	$87,210,355	70,296	$1,241
Replacement Fund Mininum Balance	$9,628,454	70,296	$137
Net Equity in Existing System	$246,872,607	70,296	$3,512

EXPANSION COMPONENT

Value of Future Facilities

The next step is to determine the value of future growth-related capital projects to the wastewater treatment system necessary to accommodate new or expanded connection through the District's planned build-out.

DSRSD Facilities

The District updates its capital improvement plan every two years. The plan addresses necessary capital improvement projects to maintain the current system in good working order, as well as projects needed to expand the treatment system capacity through build-out. Recommended growth-related capital improvements projects and their respective percentages which are expansion-related are shown in **Figure IV-5**. The total project costs

are based on the updated valuations included in the 2017 Wastewater Treatment and Biosolids Facilities Master Plan prepared by West Yost, in association with HDR. The allocated costs reflect only the proportionate share of the total costs of the project that are expansion related. All capital expansion projects will be funded on a PAYGo basis, no debt will be issued.

Figure IV-5. Regional Wastewater Treatment Expansion-Related CIP

Project Description	Year(s)	Expansion-related %	Allocated Cost (2018$)
DSRSD Participation in Regional Biosolids Facility Project	2018-2019, 2027+	100%	$171,054
Anaerobic Digester No. 4	2018	89%	$8,453,919
Bio-Gas Treatment System Improvements	2018-2021	67%	$2,666,600
Primary Sedimentation Expansion and Improvements	2018-2019	85%	$18,360,000
WWF Capacity and Chlorine ContAct Tank Dewatering	2019	15%	$67,500
Biosolids Dewatering Facility	2019-2020, 2027+	100%	$26,545,000
Alum Addition	2019	25%	$200,000
Emergency Power for Distribution Panel-D	2027+	100%	$5,560,000
Cover Primary Clarifiers	2024	100%	$4,964,000
Cover Settled Sewage Channel and Selector	2023	100%	$2,358,000
Nutrient Removal	2027+	20%	$8,556,000
WWTP/Biosolids Master Plan	2018	85%	$21,250
WWTP/Biosolids Master Plan	2023	85%	$850,000
Total			$78,773,323

LAVWMA Facilities

The LAVWMA export pipeline which delivers wastewater effluent from the District's WWTP was funded through the issuance of a revenue bond, which will be paid off in 2032. The District and Pleasanton's share of the total outstanding principal and interest as of fiscal year ended June 2018, is $80,961,661, of which 74.66% is expansion-related based on the work that was performed on the system.

Cash Reserves and other Credits

Next, we subtract the expansion fund reserve balance from the District's financial statements (for fiscal year ending June 30, 2018), to recognize the revenue that has already been contributed by growth towards the remaining PAYGo capital expansion projects and LAVWMA debt service payments. Note: the reserve balance for the PAYGO capital projects is net of a $3,741,668 payment to reflect an advanced payment made to satisfy the outstanding principal and interest due to the East Bay Discharges Authority (EBDA), which is responsible for treating and discharging the wastewater flows from LAVWMA. This final payment was made subsequent to June 30, 2018.

Lastly, the RCN of the DSRSD portion of the expansion component was reduced by $801,000 to reflect the value of advance sale capacity permits from an agreement between the City of Pleasanton and the District. The revenue foregone from this agreement must be recouped in some way to preserve the integrity of the regional wastewater treatment expansion fund. As such, the District's regional wastewater treatment operating fund is obligated to transfer $890,000 to the expansion fund to pay for the remaining costs, in equal amounts over a ten-year period. The first transfer was made earlier this year and is reflected in the expansion fund reserve balance. The remaining nine payments (totaling $801,000) has been included as a credit to reflect the payments that will be received between now and full buildout.

Figure IV-6 summarizes the net growth-related capital projects necessary to provide service to the projected future users, based on the valuations described above.

Figure IV-6. Regional Expansion-Related Costs
(net of reserves & other credits)

Components	$ Value
DSRSD Capital Improvements	
(2018 through build-out)	
PAYGo-funded CIP	$78,773,323
Less: Advance Capacity Sale Permits	($801,000)
Less: Expansion Fund Reserve Balance (for PAYGo)	($43,361,648)
Subtotal	$34,610,675
LAVWMA Capital Improvements (Debt-funded)	
Outstanding Principal and Interest	$60,445,976
Less: Expansion Fund Reserve Balance (for Debt)	($6,007,221)
Subtotal	$54,438,755
Total Expansion Component	$89,049,430

Incremental Capacity

The next step in determining the expansion component is to determine the incremental capacity provided by the capital improvement projects identified in **Figure IV-5**. Dividing the cost of the expansion-related CIP by the additional capacity the projects will provide, determines the unit cost for the expansion component of the capacity reserve fee. The capacity of the existing regional wastewater treatment system currently being used is 70,296 DUEs and District staff currently estimates there will be 79,329 DUEs at total build-out of the District's service area by 2031; therefore, the additional capacity provided by the expansion-related projects is 9,033 DUEs.

Figure IV-7. Determination of Growth-related DUEs

Fiscal Year	Dublin	South San Ramon	Pleasanton	Total
Current	27,432	6,480	36,384	70,296
Future				
2019	1,067	0	120	823
2020	703	0	100	633
2021	533	0	100	762
2022	662	0	150	533
2023	383	0	235	600
2024	365	0	235	590
2025	355	0	235	695
2026	460	0	235	875
2027	640	0	150	878
2028	728	0	150	840
2029	690	0	100	432
2030	332	0	100	205
2031	105	0	100	205
Subtotal, Future DUEs	7,023	0	2,010	9,033
Total DUEs at Buildout	34,455	6,480	38,394	79,329

Regional Expansion Component Calculation

The expansion component is determined by dividing the net replacement cost new of the expansion-related capital expansion costs **(Figure IV-5)** by the additional capacity provided, 9,033 DUEs**.** The derivation of the expansion component of $9,858 per DUE is shown in **Figure IV-8**.

Figure IV-8. Regional Expansion Component Calculation

Components	$ Value	Additional DUEs	Unit Cost $/DUE
DSRSD Capital Improvements			
(2018 through build-out)			
PAYGo-funded CIP	$78,773,323	9,033	$8,721
Less: Advance Capacity Sale Permits	($801,000)	9,033	($89)
Less: Expansion Fund Reserve Balance (for PAYGo)	($43,361,648)	9,033	($4,800)
Subtotal	$34,610,675	9,033	$3,832
LAVWMA Capital Improvements (Debt-funded)			
Outstanding Principal and Interest	$60,445,976	9,033	$6,692
Less: Expansion Fund Reserve Balance (for Debt)	($6,007,221)	9,033	($665)
Subtotal	$54,438,755	9,033	$6,027
Total Expansion Component	$89,049,430	9,033	$9,858

REGIONAL CAPACITY RESERVE FEE CALCULATION

We add together the buy-in component and expansion-component, as shown in **Figure IV-9**, to arrive at the proposed regional capacity reserve fee of $13,371 per DUE.

Figure IV-9. Regional Capacity Reserve Fee Calculation ($ per DUE)

Component	$/DUE
Buy-in Component	$3,512
Expansion Component - DSRSD	$3,832
Expansion Component - LAVWMA	$6,027
Regional Capacity Reserve Fee	$13,371

Figure IV-10 compares the proposed regional capacity reserve fee to the current fees, by customer class, followed by descriptions of how the fees were determined for each customer class.

Figure IV-10. Current and Proposed Regional Capacity Reserve Fees

Customer Class	Current		Proposed	
Residential				
Single Family	$15,501	per DU	$13,371	per DU
Condominiums	$11,626	per DU	$10,028	per DU
Apartments	$10,215	per DU	$8,824	per DU
Accessory Dwelling Unit	$10.00	per sq ft	$8.56	per sq ft
Non-Residential				
Flow	$65.71	per gpd	$56.68	per gpd
BOD	$1,588.64	per lb/day	$1,370.26	per lb/day
SS	$835.95	per lb/day	$721.04	per lb/day

Single Family Residential

A single family connection is charged 1.00 DUE or $13,371 per connection.

Multi Family Residential

Condominium connections are charged 0.75 DUEs or $10,028 per dwelling unit ($13,371 x 0.75 DUEs) based on an estimated 165 gpd and apartment connections are charged 0.66 DUEs or $8,824 per dwelling unit ($13,371 x 0.66 DUEs) based on an estimated 145 gpd, which is consistent with the current fee structure and recent observations by District staff. Reduced fees for multi family dwelling units is fairly common in the industry as multi family dwelling units discharge less wastewater than single family dwellings. On average, multi family dwelling units are smaller and have fewer persons per household than single family dwellings, thus resulting in less wastewater to be collected and transported through the District's wastewater collection system.

Non-Residential

Commercial customers are a less homogenous class of customers, the volume and strength of wastewater can vary considerably from one customer to the next. The regional capacity reserve fee for commercial customers shall be calculated based on the customer's estimated daily sewer flow, and strength of flow, at the rates shown in **Figure IV-9**. The flow and strength rates were derived by using the same assumptions for flow and strength of the wastewater discharged from a single family home (i.e., one DUE): 220 gpd of wastewater discharge; 240 mg/L of Biochemical Oxygen Demand (BOD); and, 240 mg/L of Total Suspended Solids (TSS). These assumptions were used to set the prior capacity fees, are typical of industry norms, and are being used again to maintain consistency.

Accessory Dwelling Units

The passage of SB 1069 in 2016 amended Section 65852.2 of the California Government Code. Section 65852.2(g)(2)(B) now requires:

> *Consistent with Section 66013, the connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its size or the number of its plumbing fixtures, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.*

In order to comply with this new law, the District added a separate charge for accessory dwelling units based on a per square foot basis. The charge is based on the District's 2008 Second Unit Wastewater Generation Study, which finds that second units, or accessory dwelling units, have an average square footage of 625 square feet and an average discharge of 88 gallons per day. Thus, accessory dwelling units are $8.56 per square foot based on 0.40 DUEs (average discharge of 88 gpd ÷ 220 gpd) and an average size of an accessory dwelling unit of 625 square feet ($13,371 x 0.40 DUEs ÷ 625 sq. ft.), which is consistent with the current fee structure and recent observations by District staff. However, past practice was to round such calculation to the nearest $1. We are recommending use of significant figures.

IMPLEMENTATION

It is our opinion that the regional wastewater capacity reserve fees developed in this report are reasonable for the forthcoming year. In order to maintain the fees in current dollars going forward, we recommend that the District annually update the fees by the percentage change in the Engineering News Record Construction Cost Index (ENR CCI), San Francisco Bay Area, beginning July 1, 2020. In addition, we recommend that the District conduct a new connection fee study every five years or whenever a new facilities master plan is prepared.

Appendix A: Local Facilities Inventory

Dublin San Ramon Service District
Wastewater Capacity Reserve Fee - Local
Fixed Asset Listing - Facilities

OPERATIONS

Facility Name	Facility Location	Installation Date	Replacement Cost	Notes
Lift Station #1	Dublin Boulevard, Dublin	June 2018	$ 987,500	Replaced/Relocated in June 2018 (actual cost used as basis for replacement cost)
Lift Station #2	S. Terracina Drive @ Croak Road, Dublin	January 2014	$ 987,500	This lift station was built by the developer, and is maintained by the District. Replacement cost should be omitted from the fee analysis
		Total:	$ 1,975,000	
		Less Developer Contributed:	$ (987,500)	Lift Station #2
		Net Facilities - Operations	**$ 987,500**	to Figure III-3

ADMINISTRATION

Facility Name	Facility Location	Installation Date	Total CSRMA Valuation	$ Alloc to Local	Notes
District Administration Offices	7051 Dublin Boulevard, Dublin	1990	$ 6,359,283	$ 953,892	Local portion = 15%. 85% allocated to Regional (54%) and Water (31%) Funds
Field Operations Department Administrative Office	7035 Commerce Circle, Pleasanton	1997	$ 5,707,813	$ 856,172	Local portion = 15%. 85% allocated to Water Fund
		Total Facilities - Adminstrative		**$ 1,810,064**	to Figure III-3

Appendix B: Regional Facilities Inventory

Dublin San Ramon Service District
Wastewater Capacity Reserve Fee - Regional
Fixed Asset Listing - Facilities

OPERATIONS

Building ID (Lucity)	Building Name	Year Built	Square Footage	Year Appraised	Real Property Value	Personal Property	Total	Source/Comments:
WWTP - A	A- Operations Building	1961	16,472	2005	$5,246,452	$1,525,861	$6,772,313	CSRMA - Includes Lab and Cogen
WWTP - B	B - Blower Building	1961	4,410	2005	$772,694	$4,717,109	$5,489,803	CSRMA
WWTP - C	C- Bar Screen Building	2000	6,608	2005	$2,610,772	$1,837,065	$4,447,837	CSRMA
WWTP - CP	CP - Maintenance Carport	2009	2,000	2005	$52,464	$0	$52,464	CSRMA
WWTP - D	D - MCC D Building	1985	3,036	2005	$1,026,481	$192,070	$1,218,551	CSRMA
WWTP - E	E - EALS/MCC Building	1968	324	1968	$97,241	$88,829	$186,070	CSRMA
WWTP - F	F- Hypochlorite Storage/MCC F Building	1991	2,135	2005	$622,922	$154,075	$776,997	CSRMA
WWTP - G	G - Sample Station/MCC Building	2004	1,107	2005	$311,013	$172,001	$483,014	CSRMA
WWTP - H	H - Grit/MCC H Building	1985	2,184	2005	$1,350,348	$521,489	$1,871,837	CSRMA
WWTP - I	I - Odor Reduction Tower (ORT)	1985	271	2005	$882,379	$4,014	$886,393	CSRMA
WWTP - J	J - 750 Genset Building	2005	288	2005	$81,146	$286,669	$367,815	CSRMA
WWTP - K	K - Air Compressor/MCC K Building	1985	672	2005	$215,903	$47,382	$263,285	CSRMA
WWTP - L	L - MCC L White House	2000	100	n/a			$60,000	Assumption $600/sf
WWTP - M	M - MCC M	2005	1,008	2005	$141,983	$229,337	$371,320	CSRMA
WWTP - N	N - MCC N	2005	1,008	2005	$141,983	$229,337	$371,320	CSRMA
WWTP - O - DERWA	O - Comp/Chem Building	2005	858	2005	$189,391	$57,333	$246,724	CSRMA - DERWA ASSET
WWTP - P - DERWA	P - UV Control Building	2005	1,868	2005	$945,832	$573,338	$1,519,170	CSRMA - DERWA ASSET
WWTP - Q	Q - Fleet Maintenance Building	1989	3,000	2005	$396,812	$65,094	$461,906	CSRMA
WWTP - R	R - Microfiltration UV Building		10,000				$6,000,000	Assumption $600/sf
WWTP - S	S - Maintenance Building	2009	12,250	2005	$5,813,129	$0	$5,813,129	CSRMA
WWTP - T	T - Maintenance Shop	2009	7,200	2005	$3,414,060	$0	$3,414,060	CSRMA
30-610-5850-BDG-01	Dissolved Air Flow Thickener Building (DAFT)	1985	3,017	2005	$980,538	$800,013	$1,780,551	CSRMA
n/a	Headworks - Screen Room	1961	1,908	2005	$1,113,398	$0	$1,113,398	CSRMA
n/a	Headwords - Raw Sewage Pump Room	1961	1,421	2005	$828,628	$331,857	$1,160,485	CSRMA
n/a	Headworks - Equipment Gallery	1961	1,740	2005	$1,015,361	$408,895	$1,424,256	CSRMA
n/a	Vactor Receiving Station				$310,800		$310,800	Assumption $600/sf
n/a	Mixed Liquor Distribution Structure	1985	917	2005	$276,117	$5,327	$281,444	CSRMA
n/a	Influent Waste Diversion Structure	2004	581	2005	$169,294	$33,154	$202,448	CSRMA
	TOTAL				$29,007,141	$12,280,249	$47,347,390	

Less: DERWA assets		
O - Comp/Chem Building	($246,724)	
P - UV Control Building	($1,519,170)	
Net Facilities - Operations	**$45,581,496**	to Figure IV-3

ADMINISTRATION

Facility Name	Facility Location	Installation Date	Total CSRMA Valuation	$ Alloc to Regional	Notes
District Administration Offices	7051 Dublin Boulevard, Dublin	1990	$6,359,283	$3,434,013	Regional portion = 54%. 46% allocated to Local (15%) and Water (31%) Funds
Field Operations Department Administrative Office	7035 Commerce Circle, Pleasanton	1997	$5,707,813	$0	Regional portion = 0%; Field Ops Admin office only allocated to Local and Water
		Total Facilities - Adminstrative		**$3,434,013**	to Figure IV-3

Appendix C: LAVWMA Asset Inventory

LAVWMA
Fixed Asset Schedule

DESCRIPTION	Class	Year	Life	Final 2017	Accum. Depr.	Book Value 2017	Additions	Depr FY2018	Accum. Depr.	ENR Cost Factor	Estimated Replacement Cost	DSRSD Member Equity (RCN)	Pleasanton Member Equity (RCN)	Combined Member Equity (RCN)
Operations & Maint														
Intangibles	Int		33	10,000,000	6,060,605	3,939,395		303,030	6,363,635					
Total				10,000,000	6,060,605	3,939,395		303,030	6,363,635					
Joint Use Facilities												34.95%	34.95%	69.90%
Export Pump Station & Reservoirs	ps	1980	25	3,000,000	3,000,000	-		-	3,000,000	2.7545	$ 8,263,474.73	$ 2,888,084.42	$ 2,888,084.42	$ 5,776,168.84
Export Pump Station (rehab & expa	ps	2003	25	10,091,798	5,651,407	4,440,391		403,672	6,055,079	1.5461	$ 15,603,270.07	$ 5,453,342.89	$ 5,453,342.89	$ 10,906,685.78
Export Pump Station (24" flowmete	ps	2013	25	27,320	4,372	22,948	-	1,093	5,465	1.1458	$ 31,303.37	$ 10,940.53	$ 10,940.53	$ 21,881.05
San Leandro Sample Station (15kw	ps	2015	20	14,024	1,753	12,271		701	2,454	1.0788	$ 15,129.07	$ 5,287.61	$ 5,287.61	$ 10,575.22
Basin #2 Exit Gate replacement	ps	2015	20	39,069	4,883	34,186		1,953	6,836	1.0788	$ 42,147.58	$ 14,730.58	$ 14,730.58	$ 29,461.16
Basin #3 Exit Gate replacement	ps	2015	20	52,161	6,520	45,641		2,608	9,128	1.0788	$ 56,271.21	$ 19,666.79	$ 19,666.79	$ 39,333.57
Pump #3 Repair	ps	2015	10	82,242	20,560	61,682		8,224	28,784	1.0788	$ 88,722.55	$ 31,008.53	$ 31,008.53	$ 62,017.06
Spare 2300 VAC Breaker	ps	2016	10	20,301	3,045	17,256		2,030	5,075	1.0472	$ 21,259.14	$ 7,430.07	$ 7,430.07	$ 14,860.14
Medium Voltage Cable replacemer	ps	2017	50	591,051	5,911	585,140		11,821	17,732	1.0192	$ 602,423.84	$ 210,547.13	$ 210,547.13	$ 421,094.26
Actuator 72" valve	ps	2017	25	13,238	265	12,973		530	795	1.0192	$ 13,492.72	$ 4,715.71	$ 4,715.71	$ 9,431.41
Street Light replacement	ps	2018	25				21,632	433	433	1.0000	$ 21,632.00	$ 7,560.38	$ 7,560.38	$ 15,120.77
Breaker replacement	ps	2018	10				20,209	1,010	1,010	1.0000	$ 20,209.00	$ 7,063.05	$ 7,063.05	$ 14,126.09
Pump Rebuild #8	ps	2018	10				13,707	685	685	1.0000	$ 13,707.00	$ 4,790.60	$ 4,790.60	$ 9,581.19
Pump Rebuild #10	ps	2018	10				13,965	698	698	1.0000	$ 13,965.00	$ 4,880.77	$ 4,880.77	$ 9,761.54
Fiber Optic Cable	ps	2018	25				32,000	640	640	1.0000	$ 32,000.00	$ 11,184.00	$ 11,184.00	$ 22,368.00
Total				13,931,204	8,698,716	5,232,488	101,513	436,098	9,134,814					
Storage Reservoirs (expansion)	ef	1988	25	2,000,000	2,000,000	-		-	2,000,000	2.1008	$ 4,201,587.48	$ 1,468,454.82	$ 1,468,454.82	$ 2,936,909.65
Total				2,000,000	2,000,000	-	-	-	2,000,000					
Pipelines														
Combined Interceptor	ef	1977	50	39,100	31,280	7,820		782	32,062	3.5293	$ 137,993.91	$ 48,228.87	$ 48,228.87	$ 96,457.74
Export Pipeline	pipes	1996	50	3,741,500	1,571,430	2,170,070		74,830	1,646,260	1.8165	$ 6,796,344.70	$ 2,375,322.47	$ 2,375,322.47	$ 4,750,644.94
Export Pipeline	pipes	2007	50	108,269,544	12,992,346	95,277,198		2,165,391	15,157,737	1.3240	$ 143,348,351.43	$ 50,100,248.82	$ 50,100,248.82	$ 100,200,497.65
Western Term Pipe	pipes	2011	50	6,096,825	731,622	5,365,203		121,937	853,559	1.1838	$ 7,217,245.78	$ 2,522,427.40	$ 2,522,427.40	$ 5,044,854.80
Replacement AR Valves (10)	pipes	2015	20	116,440	14,555	101,885		5,822	20,377	1.0788	$ 125,615.30	$ 43,902.55	$ 43,902.55	$ 87,805.09
70'x70' manhole cover	pipes	2015	50	11,765	588	11,177		235	823	1.0788	$ 12,692.06	$ 4,435.88	$ 4,435.88	$ 8,871.75
Total				118,275,174	15,341,821	102,933,353	-	2,368,997	17,710,818					
Total Joint Use Facilities				134,206,378	26,040,537	108,165,841	101,513	2,805,095	28,845,632					
Dual use Facilities												50.00%	50.00%	100.00%
DSRSD-Pton interceptor	ef	1977	50	378,000	302,400	75,600		7,560	309,960	3.5293	$ 1,334,058.73	$ 667,029.37	$ 667,029.37	$ 1,334,058.73
Total Dual Use Facilities				378,000	302,400	75,600	-	7,560	309,960					
Sole Use Facilities												0.00%	0.00%	0.00%
Livermore Interceptor	ef	1977	50	3,350,400	2,680,320	670,080		67,008	2,747,328	3.5293	$ 11,824,418.99	-	-	$ -
Livermore Pump Station	ps	2009	25	4,867,342	1,168,164	3,699,178		194,694	1,362,858	1.2367	$ 6,019,288.33	-	-	$ -
Total Sole Use Facilities				8,217,742	3,848,484	4,369,258	-	261,702	4,110,186					
Grand Total				152,802,120	36,252,026	116,550,094	101,513	3,377,387	39,629,413		**$ 205,856,603.98**	**$ 65,911,283.22**	**$ 65,911,283.22**	**$ 131,822,566.45**
									113,274,220					
Debt Service 2011 LAVWMA Bonds (Outstanding Principal)												45.71%	31.77%	Expansion Only
									25.94%			**(20,392,242)**	**(14,173,299)**	**(44,612,211)**

RCN value using LAVWMA Asset List $ 87,210,355.41
to Figure IV-3