



**FINAL**

**Report on  
Development of  
Regional Connection Fees**

**For**

**Dublin San Ramon Services District**

# Table of Contents

<b>INTRODUCTION.....</b>	<b>1</b>
GENERAL BACKGROUND.....	1
PURPOSE.....	1
SCOPE.....	1
DISCLAIMER.....	2
<b>SYSTEM DEVELOPMENT CHARGES.....</b>	<b>3</b>
BASIC METHODOLOGIES.....	3
ASSET VALUATION METHODS.....	4
<i>Original Cost</i> .....	4
<i>Reproduction Cost</i> .....	4
<i>Depreciation</i> .....	5
SYSTEM DEVELOPMENT CHARGE DETERMINATION METHODS.....	5
<i>System Buy-In Method</i> .....	5
<i>Incremental Cost-Pricing Method</i> .....	6
<i>Value-of-Service Method</i> .....	6
LEGAL REQUIREMENTS IN CALIFORNIA.....	6
<i>Assembly Bill 1600</i> .....	6
PROPOSED METHODOLOGY.....	7
<b>APPENDIX A – FIXED ASSET LISTING.....</b>	<b>14</b>
<b>APPENDIX B – DSRSD ENGINEERS REPORT.....</b>	<b>20</b>
<b>APPENDIX C – LAVWMA DESCRIPTION.....</b>	<b>26</b>
<b>APPENDIX D– PROJECTED DUES.....</b>	<b>28</b>
<b>APPENDIX E – CAPITAL IMPROVEMENT PROGRAM.....</b>	<b>29</b>
<b>APPENDIX F – PROJECT COST ALLOCATION POLICY.....</b>	<b>31</b>

## List of Tables

TABLE 1	LIST OF CIP AT FY 2008/09.....	8
TABLE 2	DEVELOPMENT OF REGIONAL CONNECTION FEE.....	10
TABLE 2A	REGIONAL CONNECTION FEE SCHEDULE.....	10
TABLE 3	EXPANSION FUND CAPITAL FINANCING PLAN WITH BUY-IN.....	13



## Introduction

### General Background

Established in 1953, Dublin San Ramon Service District (District) provides municipal services to communities in Contra Costa and Alameda Counties. Services include water, recycled water, and wastewater. With the first wastewater treatment plant in 1961, the District emerged as a regional wastewater treatment provider in the area. Throughout the years the District has expanded to meet the wastewater needs of a growing community. To date, the District owns and operates a 17 million gallon per day (MGD) treatment facility and a collection system of approximately 186 miles of mains. As a regional wastewater provider, the District provides services to roughly 132,000 people in the Cities of Dublin, San Ramon and Pleasanton. Customers include residential, commercial, institutional and industrial.

The District operates as a self-supporting entity. As such, the District's rates and connection fees (system development charges) are developed to provide sufficient levels of revenue to meet all operation and maintenance expenses, debt service requirements, routine annual extensions and replacements, capital improvements, and other specific bond ordinance requirements. Connection fees are developed by allocating capital projects costs to new and existing customers accordingly. It is recognized that there is currently a contract in place with the City of Pleasanton that dictates when and how revenues are to be recovered.

### Purpose

The purpose of this report is to present the findings of Black & Veatch's (Black & Veatch) connection fee analysis for the District's Regional Wastewater Expansion Fund. Specifically, this report establishes a methodology for the development of connection fees that assists in getting new users to pay their fair share of the costs. The proposed connection fees recognize customer costs of service, contractual agreements, and local policy considerations. This study is limited to the regional wastewater system and Black & Veatch has not reviewed any activities associated with water, recycled water and local sewer collection operations.

### Scope

The outcome of a detailed study of the connection fees for the District's regional wastewater expansion fund are presented herein. For purposes of this report, the study period has been defined as the fiscal years beginning July 1, 2010 and ending June 30, 2020. Unless otherwise noted, references in this report to a specific year are for the District's fiscal year ending June 30.

The methodology used in calculating the system development charges is premised on the fact that new customers or developers pay for required system capacity, to the extent that service charges do not support the investment for the required capacity. The study considered the total capital investment value less depreciation, less any outstanding utility debt in excess of available debt service reserves and unused



construction funds, less any applicable grants or funding from non-utility sources, and divided by the facility service capacity. This method is commonly referred to as the buy-in method.

## Disclaimer

In conducting our study, we reviewed the books, records, agreements, capital improvement programs, and customer's projections of the District as we deemed necessary to express our opinion of the District's operating results and projections. While we consider such books, records, documents, and projections to be reliable, Black & Veatch has not verified the accuracy of these documents.

The projections set forth in this report below are intended as "forward-looking statements". In formulating these projections, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized in performing the analyses follows generally accepted practices for such projections. Such assumptions and methodologies are reasonable and appropriate for the purpose for which they are used. While we believe the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that actually occur. Such factors may include the District's ability to execute the capital improvement program as scheduled and within budget, customer growth, and adverse legislative, regulatory or legal decisions affecting the District's ability to manage the system and meet wastewater discharge requirements.



## System Development Charges

Many wastewater utilities assess system development charges to help offset costs for increased system capacity. Generally levied at the time building permits are required, the system development charges are assessed for increased wastewater flows which result from either (1) changes in use of a structure served by an existing connection to the system, or (2) a new connection to the system. For the purposes of this report, both sources of additional wastewater flow are included in the term “new” customer.

System development charges are based on the premise that new customers or developers should pay for required wastewater system capacity, to the extent that water and wastewater service charges do not support the investment for the required capacity. Similar charges are often termed by other utilities as capital recovery fees, development charges, system capacity charges, impact fees, system equity charges, or other names. These charges represent the current demand requirement of each property and are not transferable to any other property located within the service area.

The cost of providing such capacity in wastewater system facilities for new customers can contribute significantly to the need for capital financing and service rates and/or taxes to support the financing. Collection of system development charges to partially or wholly finance new customer capacity requirements can, over time, significantly reduce the amount of financing and the magnitude of rate increases that otherwise might be needed. Ideally, system development charges should generate sufficient revenues to meet future expansion requirements so that existing users are not burdened by the costs of expansion caused by growth in system use by new users.

## Basic Methodologies

System development charges are traditionally assessed to new development to recover the value of system capacity constructed for new customer service. There is no single established method for the determination of system development charges that is both appropriate for all situations and perfectly equitable to all new customers. There are, however, various approaches which are currently recognized and utilized, some to a greater extent than others, by wastewater utilities. These methods can be categorized as follows:

1. **System Buy-In.** System development charges are designed to derive from the new customer an amount per connection equal to the "equity" in the system attributable to similar existing customers. (Note: The word "equity" refers to that portion of system value for which there is no offsetting debt. It does not imply ownership of, or title to, utility facilities.)
2. **Incremental Cost-Pricing.** System development charges are designed to derive from the new customer the marginal, or incremental cost of system expansion associated with new customer growth. This method is based on the premise that new connections to the wastewater system should be responsible for those costs which they cause to be incurred for the most recent or next increment of required system capacity, except as such costs are recovered from user fees or other utility charges.



3. Value of Service. System development charges are based on non-direct cost based considerations such as the fees that other area utilities charge, estimated opportunity or substitute costs, et al. Unlike the system buy-in or incremental cost-pricing methods, this method does not require extensive analyses in valuation and cost determination.

Revenues derived from system development charges are commonly used to offset part or all capital costs to accomplish any of the following objectives:

1. To pay the capital costs of future capacity provided for growth.
2. To provide rate relief to existing system users by recovering that portion of the annual existing and future capacity capital costs associated with growth, including debt service requirements and direct asset purchases from current revenues.
3. To accumulate reserves to finance system improvements and expansions required to meet growth needs.

Since the system buy-in method for developing system development charges requires the selection of a basis for determining plant value, a discussion of asset valuation methods follows.

## **Asset Valuation Methods**

Various methods are employed to estimate the value of utility facilities required to furnish service to new users. The two principal methods commonly used to value a utility's properties are original cost and reproduction cost.

### ***Original Cost***

The principal advantages of the original cost method lie in its relative simplicity and stability, since the recorded costs of tangible property are held constant.

The major criticism levied against original cost valuation pertains to the disregard of changes in the value of money over, which are attributable to inflation and other factors. As evidenced by history, prices have tended to increase rather than to remain constant. Because the value of money varies inversely with changes in price, monetary values in most recent years have exhibited a definite decline; a fact not recognized by the original cost approach. This situation causes further problems when it is realized that most utility systems are developed over time on a piecemeal basis as demanded by service area growth. Consequently, each property addition was paid for with dollars of different purchasing power. When these outlays are added together to obtain a plant value the result can be seriously misleading.

### ***Reproduction Cost***

Changes in the value of the dollar over time, at least as considered by the impact of inflation, can be recognized by reproduction cost property valuation. The reproduction cost represents the cost of duplicating the existing utility facilities at current prices. Unlike the original cost approach, the reproduction cost method recognizes price level changes that may have occurred since plant construction.

The most accurate reproduction cost valuation would involve a physical inventory and appraisal of plant components in terms of their reproduction costs at the time of valuation. However, with original cost records available, a reasonable approximation of reproduction cost plant value can most easily be ascertained by trending historical original costs. This approach employs the use of applicable cost indices



to express actual capital costs experienced by the utility in terms of current dollars. An obvious advantage of the reproduction cost approach is that it gives consideration to changes in the value of money over time.

### ***Depreciation***

Considerations of the current value of utility facilities may also be materially affected by the effects of age and depreciation. Depreciation takes into account the anticipated losses in plant value caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing utility facilities, both the original cost and reproduction cost valuation measures can also be expressed on an original cost less depreciation (OCLD) and a reproduction cost less depreciation (RCLD) basis. These measures are identical to the aforementioned valuation methods, with the exception that accumulated depreciation is computed for each asset account based upon its age or condition, and deducted from the respective total original cost or reproduction cost to determine the OCLD or RCLD measures of plant value.

Recognition of depreciation in establishing value for purposes of system development charge under the system buy-in approach is appropriate in consideration of the fact that, once the new connector has "bought into" the system, he assumes the same status as similar existing customers. This includes assumption of the same responsibilities for future replacement of worn out or obsolete facilities.

## **System Development Charge Determination Methods**

Three methods of developing system development charges which are currently employed by wastewater utilities were introduced in a preceding section of this report. These include the system buy-in, incremental cost-pricing, and value-of-service methods, which are further described in the following paragraphs.

### ***System Buy-In Method***

Under this method, system development charges are based upon the "buy-in" concept that new customers, at the time of connection, should pay an amount per connection equal to the equity in the system attributable to existing customers. To recover this equity, system development charges should be designed to recover the cost or current value of applicable service facility capacity associated with each new customer connection. An appropriate basis for calculating a system development charge would include consideration of the total capital investment value less depreciation, less any outstanding utility debt in excess of available debt service reserves and unused construction funds, less any applicable grants or funding from non-utility sources, divided by the facility service capacity.

As previously discussed, there are two principal methods of determining the value of utility system investment: OCLD and RCLD. Unless the District desires to recover only the historical costs of investment, the RCLD value approach is considered to be the most appropriate valuation method because it recognizes the current value of plant investment.<sup>1</sup> It is noted that under the RCLD method, it is

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<sup>1</sup> Please note that the HDR Report, *Local Connection Fee Study* (2005) uses an RC basis to establish plant investment adjusted further with a 10-year carrying charge.



necessary to revise system development charges periodically to account for construction cost escalation and depreciation. The system buy-in method typically tends to be best suited for application when there is adequate capacity available in existing facilities to serve new customers.

### ***Incremental Cost-Pricing Method***

This method is based on the premise that new system users should be responsible for the value of the latest or next increment of capacity which they cause to be incurred. Accordingly, system development charges would be designed to derive the marginal or incremental cost of system expansion as may be determined by recent construction cost experience or planned future improvements.

In order to determine the true incremental cost of system expansion, it is necessary to conduct a detailed engineering analysis to establish the facilities required to increase the design capacity to a specific level to accommodate additional new customers. Depending upon circumstances, the capacities of existing facilities which are available for new customers and their associated current value (RCLD) may also need to be recognized. The incremental cost of these specific facilities is then divided by the associated capacity provided to determine the incremental unit cost of additional capacity. In deriving system development charges using the incremental cost-pricing method, appropriate reductions in rates should be made to credit any obligation or debt, which will eventually be recovered from future users through the payment of ongoing user fees or other utility charges.

Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities.

### ***Value-of-Service Method***

The value-of-service method is sometimes employed to develop system development charges for utilities. Though often simpler to employ than the system buy-in or incremental cost-pricing methods, it does not typically recognize the direct cost or value of utility facilities required to provide service for the particular utility facilities involved. Rather, under this method, system development charges are based on considerations such as the rates charged by other communities, the cost of service from available alternative facilities, or other similar measures. Because value of service measures are not typically based on the direct costs or value of facilities of the utility actually providing service, this method is not as readily supportable in adversary proceedings.

## **Legal Requirements in California**

Many states have established specific laws regarding the establishment, calculation, and implementation of system development charges. For most states, the primary objective of these laws is to assure that the charges are established in such a manner that they are fair, equitable, and cost-based.

### ***Assembly Bill 1600***

Through Assembly Bill (AB) 1600, the District has broad authority to impose system development charges on its users for capital facilities. The main limitation of that authority is that fees on new developments must have a rationale nexus to the needs created by, and the benefits accruing to that development. In 1988, the California Legislature added sections to the Government Code that codified





constitutional and decisional law related to fees imposed on new developments. AB 1600 enacted Government Code §66000-§66003 related to developer fees. In general, AB 1600 contains three requirements:

- Local agencies must follow a process set forth in the statutes and establish a nexus between a development project and the public improvement being financed with the fee.
- Local agencies must segregate the fee revenues from the General Fund to avoid commingling of funds.
- If a local agency has unspent or uncommitted developer fees for five years or more, then it must make annual findings describing the continuing need for that money, or it must refund the fees.

Since its original passage in 1988, the California Legislature has added and modified various code sections to further clarify and expand the requirements related to developer fees. In particular, Government Code §66013 contains requirements specific to water and wastewater capacity charges. Specifically, §66013 states that “Notwithstanding any other provision of law, when 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...”. The fundamental issue of this statutory requirement is that a maximum is set for capacity charges – the estimated reasonable cost of providing the service.

The statutory requirements pertaining to capacity charges in California continue to evolve. In 1998, the California Legislature passed Senate Bill (SB) 1760. SB 1760 amends and expands Government Code §66013 to subject capacity charges collected after January 1, 1999 to certain accounting, expenditure, and reporting requirements.

## **Proposed Methodology**

The District has a number of revenue sources that it uses to support its on-going activities. Under the District’s long-range financial plan, it is the District’s policy to fund capital projects through a combination of connection fees, long-term debt, and pay-as-you go monies. New capital projects are primarily funded through connection fees while replacement capital projects are funded through rates. As part of this study, the District requested Black & Veatch to apply the buy-in methodology to its assets to derive a new connection fee schedule. In addition, to maintain some level of consistency and enhance public acceptance, Black & Veatch also paralleled to the extent possible, the approach used in the local collection system connection fee analysis. Consequently, the methodology proposed in the following section is a combination of incremental and buy-in approaches.

In order to arrive at the appropriate facilities cost, Black & Veatch reviewed the District’s fixed asset listing. Starting with the original service date and original cost, the estimated reproduction cost for each in-service asset was calculated. Cost escalation factors used were obtained from Engineering News Record (ENR), and reflect local conditions in the San Francisco Bay Area. To arrive at RCLD, the reproduction cost was multiplied by the estimated remaining service life percentage. The net replacement cost is then, the RCLD plus any additional asset costs placed into service in FY 08/09. By using an ENR index, the connection fee calculation may be updated yearly if desired to more accurately reflect current



construction cost conditions. Additionally, an allowance of \$15,437,125 was added to reflect work in progress for FY 08/09 as shown in Table 1. A summary of the District’s asset listing used for the calculation of the RCLD is provided as *Appendix A*.

**Table 1**  
**List of CIP at FY 2008/09**

Regional Expansion Fund Construction in Progress 2009	
WWTP Secondary Clarifier #3 Trough Repr	22,302.09
On Site Drainage (Sewer Sys Imprmnts)	23,016.80
24-inch RAS Line Replacement	30,363.09
WWTP-Influent Swr Separation & Metering	38,346.27
Photovoltaic System Evaluation	39,942.37
Environmental Services Records Mgt	51,346.48
Struvite Control	54,346.32
DSRSD Regional Biosolids Facility	56,000.00
Cogeneration Engines Conversion	78,379.63
Facultative Sludge Lagoons Imp	105,760.99
District Office Improvements	113,695.29
SCADA System Master Plan	156,129.16
Wide Area Network Communications	190,987.05
Sludge Thickening Improvements	205,279.12
WWTP Odor Reduction Tower Rehab	214,789.01
WWTP Landscaping	256,349.45
WWTP Anaerobic Digester #4	363,096.50
WWTP - Operation Manual and Training	388,003.94
District Facilities Security Project	612,698.83
New Bar Screen	2,128,996.95
WWTP-Emergency Power System	2,720,901.20
WWTP-Maintenance Building	7,586,393.97
<b>Grand - Regional</b>	<b>15,437,124.51</b>

Using information from the District’s Master Plan, the average residential customer uses about 220 gallons per day (gpd). District engineering estimates indicate that the current treatment plant capacity is 49 MGD (peak wet weather flow). See attached Engineers Report (*Appendix B*) on treatment plant capacity. In addition, the cost of the LAVMA pipeline is allocated for purposes of asset recovery and debt service proportioning. The costs for the pipeline are categorized into expansion and pre-expansion expenses. In order to ensure that each entity pays for their increased share of capacity, costs for the LAVWMA expansion have been separated as shown in *Appendix C*.

It is the District’s practice to phase in expansion needs over a fairly long period of time (greater than 5 years). In this manner, the cash flow impact of such improvements can be stabilized. Under the current CIP schedule, the District anticipates full expansion, which will bring the capacity of the treatment system (including disposal) to 17.8 MGD, will begin in FY 09/10, with the majority of the expansion projects occurring after FY 15/16. Following the approach adopted for the local collection system fee, the proposed methodology consists of two parts: a buy-in calculation and an incremental value.

Black & Veatch and District staff determined the number of new DUEs joining the system by reviewing historical number of connections, the respective agencies’ Master Plans, and current capacities. The timing of new connections, which plays a critical part in revenue collection, was determined through



discussions with District and Pleasanton staff. Summarized in *Appendix D* is the projected number of new connections by year for each agency.

Table 2 summarizes the calculation for the residential connection fee. Lines 1 and 2 establish the plant investment made by the District to date. Line 1 represents the RCLD value of the assets as of June 30, 2008. To this amount, construction work in progress (Lines 2) is added to the asset total. However, in order to accurately reflect the District's net equity position, the amount of outstanding principal debt must be subtracted from this total to avoid double counting of assets. This is carried out on Line 3. Finally, in recognition of the fact that the replacement fund balance will be used to finance improvements in the future, this is added into the total to arrive at the net equity investment on Line 5. This total represents the existing system for which new users are "buying into." As such, the net equity amount is divided by the DUEs associated with the current treatment plant capacity to arrive at a unit cost of \$1,820/DUE under the proposed methodology. If the District were to implement a connection fee based solely on the buy-in methodology, then the charge would be \$1,820/DUE. However, to develop a fee that addresses the proposed expansion, the District asked Black & Veatch to examine a combined buy-in/incremental approach.

Thus, the next step in the calculation of the total fee involves determining the incremental cost of adding the expansion projects to reach 17.8 MGD. The District estimates that the total cost of the expansion to be about \$87,767,740 (Line 6). To this amount, a carrying charge allowance (Line 7) is added. This allowance represents essentially interest during construction and is calculated at 5.5 percent interest for 3 years. As shown on Line 8, the total cost of the expansion is approximately \$101,886,240. The DUEs associated with the expansion is simply the difference between the current DUEs and the expansion capacity or 20,444 DUEs. A listing of the District's proposed CIP program may be found in *Appendix E*. Also included as *Appendix F* is the Project Cost Allocation Policy, this policy outlines the District guidelines for determination of the appropriate funding for CIP projects.

In arriving at the regional connection fee, under the proposed methodology, one can either use the weighted average of the buy-in component and the incremental cost or the sum of the two values. Using the weighted average of the two values is recommended when the difference between the values is large. The additive total is used in this analysis to represent the proposed regional connection fee and this approach is consistent with the one used in the derivation of the local connection fee. For the outstanding debt obligations (Bank Debt), the remaining debt service is divided by the incremental DUEs. East Bay Dischargers Authority (EBDA) treats and discharges the wastewater flows from LAVWMA as well as several other east bay agencies. The cost of expanding the capacity of EBDA corresponding to the District and Pleasanton is shown in Line 16. Finally, the administrative costs associated with the CIP (Line 17) and credits for fees already collected (Line 18) and interest income (Line 19) are also proportioned out to the new users. The expansion costs related to increased flows from LAVWMA is paid by LAVWMA; only the share relating specifically to the District and Pleasanton flow is the amount included in this study.

The total regional connection fee is then the sum of Lines 11, and 15-19 as shown on Line 20. For administrative purposes, we recommend using a rounded value. Under the proposed methodology, the buy-in amount that can be transferred to the Replacement Fund is calculated on Line 21.



**Table 2**  
**Development of Regional Connection Fee**

Line No.		BUY-IN & INCREMENTAL APPROACH		
		Total Cost	Applicable DUEs	Unit Cost
		\$	DUE	\$/DUE
	<b>EXISTING</b>			
1	Existing Facilities - RCLD Basis	148,159,067		
2	2009 Cons in Progress	15,437,125		
	Less Outstanding Debt Principal			
3	Bank Debt	18,486,000		
4	Plus Replacement Fund Balance	9,070,836		
5	Net Equity in Existing Facilities	154,181,028	84,918	1,816
	Expansion CIP - Current Value			
6	Buildout Improvements	86,767,740		
	Carrying Charge Allowance			
7	Build out Improvements	15,118,500		
	Total Expansion CIP with Carrying Costs			
8	Build out Improvements	101,886,240		
	<b>COMBINED</b>			
	Total Treatment Plant			
9	Backbone (Buy-In)	154,181,028	84,918	1,816
10	Build out Improvements	101,886,240	20,444	4,984
11	Total Treatment Plant	256,067,268		<b>6,800</b>
	Bank Debt			
12	Outstanding Debt (Principal)	18,486,000		
13	Outstanding Debt (Interest)	4,516,886		
14	Less Bond Reserve	0		
15	Total Debt to New Users	23,002,886	20,444	<b>1,125</b>
16	EBDA Debt	6,888,000	20,444	<b>337</b>
17	OH Allocation & Admin	6,073,742	20,444	<b>297</b>
18	Credit for Expansion Fund Balance	5,719,203	20,444	<b>(280)</b>
19	Interest Income Credit	1,487,500	20,444	<b>(73)</b>
20	<b>Total System (\$/DUE) - Rounded</b>			<b>\$8,210</b>
21	<b>Buy-In Component</b>			<b>\$1,820</b>
	<b>LAVVMA Surcharge</b>			
22	Outstanding Debt (Principal)	71,613,789		
23	Outstanding Debt (Interest)	49,289,469		
24	Less Bond Reserve	(5,734,482)		
25	Total Debt to New Users - Rounded	115,168,776	20,444	<b>5,630</b>
26	<b>Total Regional System (\$/DUE) Rounded</b>			<b>\$13,840</b>



**Table 2a  
Regional Connection Fee Schedule**

			FY 10/11 Charge	
			DSRSD	Pleasanton
			\$/DUE	\$/DUE
<b>Regional Sewer Connection Fee</b>				
Single Family Residential (1 DUE)			8,210	8,210
LAVWMA Surcharge			5,630	5,630
<b>Total SFR Regional Connection Fee</b>			<b>\$13,840</b>	<b>\$13,840</b>
Second Dwelling			3,284	3,284
Second Dwelling LAVWMA Surcharge			2,252	2,252
<b>Total Second Dwelling Connection Fee</b>			<b>\$5,536</b>	<b>\$5,536</b>
All Other Users (based on peak month flow, BOD, and SS loadings)				
<u>Peak Month</u>		<u>Unit</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
Flow		gpd	\$33.37	\$33.37
BOD		lb/day	\$ 1,321.61	\$1,321.61
SS		lb/day	\$ 695.44	\$695.44
LAVWMA Surcharge		gpd	\$ 25.60	\$25.60
gpd = gallons per day				
lb/day = pounds per day				

Finally, in accordance with the Financing Service Agreement and the bond covenants for the LAVWMA pipeline, the remaining outstanding debt service per DUE is calculated. In lines 22 and 23, the outstanding debt service remaining on the LAVWMA bonds by the District and Pleasanton. From this amount, a credit for the bond reserve is made, because it will be used to pay the last bond payment. The net amount is then divided by the combined DUEs for the system. The surcharge for the LAVWMA debt on a per DUE basis to be recovered from new users is shown on Line 25. It is important to note that no new LAVWMA debt has been added to this calculation, though the District does expect that the LAVWMA agency may need to issue new debt to expand the facility.

As a final observation, we note that the connection fees derived in Table 2 and summarized in Table 2a are costs that have not been adjusted to incorporate the requirements of the Financing Service Agreement other than the addition of the LAVWMA debt. Specifically, the calculated connection fees have not been subject to the automatic adjustments required in the Financing Service Agreement to ensure that the cumulative balance in the Expansion Fund meets the 2x and 5x debt service requirements. The terms of the Financing Agreement outline a specific calculation procedure for determining the level of increase necessary to maintain the 2x / 5x debt service requirements. Based on the current levels of DUEs joining the system, no adjustments to the proposed connection fee are anticipated until July 1, 2010 for FY 10/11. Should the rate of new connections be less than projected, the District may be required to increase the connection fee charge sooner in order to meet the 2x / 5x requirement. The capital financing



plan for the planning period is described in more detail in the *Revenue Requirements, Cost-of-Service Analysis and Rate Design Report*. To illustrate the impact that the Financing Agreement requirements have on the proposed connection fees, the capital financing plan for the full planning period, assuming adoption of the Buy-in approach, is presented in Table 3.



**Table 3**  
**Expansion Fund Capital Financing Plan with Buy-In**

Description	FY09/10	FY10/11	FY11/12	FY12/13	FY13/14	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19
<b>Sources</b>										
Connection Fees	1,834,841	3,531,180	5,276,160	8,051,640	10,992,000	10,909,560	21,681,720	23,797,680	25,116,720	25,350,300
Deferred Connection Revenue	615,386	572,736	555,852	514,964	494,470	494,470	419,589	167,138	32,057	28,983
LAVWMA Credits	3,091,925	2,099,423							0	
Interest Income	168,100	147,700	120,600	117,500	132,400	115,800	156,100	156,300	192,200	180,800
<b>Total Sources of Funds</b>	<b>5,710,252</b>	<b>6,351,039</b>	<b>5,952,612</b>	<b>8,684,104</b>	<b>11,618,870</b>	<b>11,519,830</b>	<b>22,257,409</b>	<b>24,121,118</b>	<b>25,340,977</b>	<b>25,560,083</b>
<b>Uses</b>										
Capital Improvement Program	1,170,000	55,000	118,400	70,000	663,800	3,171,286	6,122,465	10,700,240	8,628,510	12,651,000
Capital Carrying charges					107,868	515,334	994,900	1,738,789	1,402,133	2,055,788
<b>Debt Service</b>										
Regional Bank Bond	1,542,725	2,300,289	2,300,289	2,300,289	2,300,289	2,300,289	2,300,289	2,300,289	2,300,289	2,300,289
LAVWMA - Debt Svc (Cont. to JPA)	5,256,592	5,257,465	5,257,012	5,257,240	5,255,602	5,257,001	5,255,425	5,255,804	5,257,708	5,255,391
Transfer to Replacement Fund [1]	252,080	447,180	668,160	1,019,640	1,392,000	1,381,560	2,745,720	3,013,680	3,180,720	3,210,300
Admin Cost and EBDA	81,900	348,250	352,688	349,300	390,866	566,390	772,973	1,093,417	948,396	1,229,970
<b>Total Uses of Funds</b>	<b>8,303,297</b>	<b>8,408,184</b>	<b>8,696,549</b>	<b>8,996,469</b>	<b>10,110,425</b>	<b>13,191,860</b>	<b>18,191,772</b>	<b>24,102,218</b>	<b>21,717,756</b>	<b>26,702,738</b>
<b>Fund Balance</b>										
Net Annual Cash Balance	(2,593,045)	(2,057,145)	(2,743,937)	(312,365)	1,508,446	(1,672,030)	4,065,637	18,900	3,623,221	(1,142,655)
Beginning Fund Balance	19,570,665	16,977,620	14,920,475	12,176,538	11,864,173	13,372,619	11,700,589	15,766,227	15,785,127	19,408,347
Ending Fund Balance	16,977,620	14,920,475	12,176,538	11,864,173	13,372,619	11,700,589	15,766,227	15,785,127	19,408,347	18,265,693
Incremental DUES	137	257	384	586	800	794	1,578	1,732	1,828	1,845
[1] Buy-in Portion of Regional Connection										



## Appendix A – Fixed Asset Listing





**DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES**

Asset Description	Year in Service	Useful Life	In Service Life to 2009	Original Cost	Annual Depr n	ENR Cost Factor	Est. Replacement Cost	ENR Factor	Depreciation to 2009	% Life Remaining In Service	RCLD
Bar screen building, 60" sewer line	2002	60	6	8,000,000	133,333	1.27356	\$ 10,188,471	1.00	1,018,847	90.00%	\$ 9,169,624
Effluent pump	2002	30	6	11,500,000	383,333	1.27356	\$ 14,645,927	1.00	2,929,185	80.00%	\$ 11,716,742
Influent pump, odor control	2000	60	8	9,515,142	158,586	1.30715	\$ 12,437,756	1.00	1,658,368	86.67%	\$ 10,779,389
Admin/Operations/Lab	1995	50	13	3,524,183	70,484	1.48451	\$ 5,231,693	1.00	1,360,240	74.00%	\$ 3,871,453
Aeration tanks, blower building	2000	30	8	11,418,171	380,606	1.30715	\$ 14,925,308	1.00	3,980,082	73.33%	\$ 10,945,226
Chlorine contact chambers, disinfection	1990	60	18	3,618,844	60,314	1.60771	\$ 5,818,054	1.00	1,745,416	70.00%	\$ 4,072,638
Dissolved Air Flotation System, GBT	1990	30	18	3,618,844	120,628	1.60771	\$ 5,818,054	1.00	3,490,833	40.00%	\$ 2,327,222
Digesters, 2 @ 55', 1 @ 70'	1972	60	36	639,762	10,663	4.81597	\$ 13,964,067	1.00	8,378,440	40.00%	\$ 5,585,627
Flow equalization, holding basins, influent diversion/return	1980	80	28	7,426,583	92,832	2.22684	\$ 16,537,837	1.00	5,788,243	65.00%	\$ 10,749,594
Primary sedimentation, grit removal	1980	60	28	3,960,844	66,014	2.22684	\$ 8,820,180	1.00	4,116,084	53.33%	\$ 4,704,096
Facultative Sludge Lagoons/Land Disposal	1998	40	10	3,177,094	79,427	1.42218	\$ 14,457,781	1.00	3,614,445	75.00%	\$ 10,843,336
Secondary sedimentation	1995	60	13	7,531,202	125,520	1.48451	\$ 11,180,163	1.00	2,422,369	78.33%	\$ 8,757,795
Lab and Training facility	1996	50	12	3,524,183	70,484	1.46851	\$ 5,175,309	1.00	1,242,074	76.00%	\$ 3,933,235
Building D	1990	50	18	3,618,844	72,377	1.60771	\$ 5,818,054	1.00	2,094,500	64.00%	\$ 3,723,555
Cogeneration Building (portion of Admin Bldg)	2000	30	8	7,612,114	253,737	1.30715	\$ 9,950,205	1.00	2,653,388	73.33%	\$ 7,296,817
Main Control	2002	40	6	3,000,000	75,000	1.27356	\$ 3,820,677	1.00	573,102	85.00%	\$ 3,247,575
Main Electrical	2002	20	6	8,000,000	400,000	1.27356	\$ 10,188,471	1.00	3,056,541	70.00%	\$ 7,131,930
Site structures and facilities (Yard paving, piping)	2002	40	6	3,000,000	75,000	1.27356	\$ 3,820,677	1.00	573,102	85.00%	\$ 3,247,575
Utilities - 2W, IW, SA, IA, JW, WD	2002	40	6	6,000,000	150,000	1.27356	\$ 7,641,353	1.00	1,146,203	85.00%	\$ 6,495,150
INTER-TEL TELEPHONE SYSTEM	1996	10	12	-	0	1.46851	\$ -	1.00	0	0.00%	\$ -
Hard Suction/Ruber Discharge Hoses	2002	7	6	14,421	2,060	1.27356	\$ 18,366	1.00	15,742	14.29%	\$ 2,624
Refrigerated sampler	1999	7	9	5,748	821	1.42821	\$ 8,209	1.00	10,555	0.00%	\$ -
Refrigerated sampler	1999	7	9	5,748	821	1.42821	\$ 8,209	1.00	10,555	0.00%	\$ -
DLX 5-gas analyzer	2002	7	6	8,049	1,150	1.27356	\$ 10,251	1.00	8,787	14.29%	\$ 1,464
Autoclave, Mod 3870M/1250K47 (bacti sterizr)	2000	7	8	9,996	1,428	1.30715	\$ 13,066	1.00	14,933	0.00%	\$ -
Microscope w/camera	2002	7	6	19,412	2,773	1.27356	\$ 24,722	1.00	21,190	14.29%	\$ 3,532
Gas chromatograph/mass spectrometer	1999	7	9	45,046	6,435	1.42821	\$ 64,335	1.00	82,717	0.00%	\$ -
Gas chromatograph/mass spectrometer	1999	7	9	45,046	6,435	1.42821	\$ 64,335	1.00	82,717	0.00%	\$ -
LABEL MACHINE - LABELIZER PLUS	1996	10	12	5,840	584	1.46851	\$ 8,576	1.00	10,291	0.00%	\$ -
LAB FURNITURE	1996	10	12	19,865	1,987	1.46851	\$ 29,173	1.00	35,007	0.00%	\$ -
Rotary 2-post auto trunk lift	2002	7	6	6,019	860	1.27356	\$ 7,665	1.00	6,570	14.29%	\$ 1,095
Rotary 2-post auto trunk lift	2002	7	6	6,019	860	1.27356	\$ 7,665	1.00	6,570	14.29%	\$ 1,095
E-Z Go Utility Cart XI-881E	2001	7	7	7,947	1,135	1.31580	\$ 10,457	1.00	10,457	0.00%	\$ -
TV Transporter Model 8902-1	2001	7	7	8,878	1,268	1.31580	\$ 11,681	1.00	11,681	0.00%	\$ -
Pipe Trailer	1999	7	9	9,616	1,374	1.42821	\$ 13,734	1.00	17,658	0.00%	\$ -
Modular Space trailer unit 10x24	2000	7	8	11,278	1,611	1.30715	\$ 14,742	1.00	16,848	0.00%	\$ -
Modular Space trailer unit 10x24	2000	7	8	11,278	1,611	1.30715	\$ 14,742	1.00	16,848	0.00%	\$ -
1996 FORD RANGER	1996	20	12	14,906	745	1.46851	\$ 21,890	1.00	13,134	40.00%	\$ 8,756
Ford 1/2 ton pick-up 2002	2002	20	6	16,405	820	1.27356	\$ 20,892	1.00	6,268	70.00%	\$ 14,625
1991 CHEVY FLEETSIDE PICKUP	1990	20	18	16,923	846	1.60771	\$ 27,207	1.00	24,487	10.00%	\$ 2,721
1999 Ford F-150 Pickup	1999	20	9	18,271	914	1.42821	\$ 26,095	1.00	11,743	55.00%	\$ 14,352
1989 GMC PICKUP	1989	20	19	19,000	950	1.64105	\$ 31,180	1.00	29,621	5.00%	\$ 1,559
1999 Ford Van	1999	20	9	19,740	987	1.42821	\$ 28,192	1.00	12,686	55.00%	\$ 15,506
1995 FORD EXPLORER	1995	20	13	23,397	1,170	1.48451	\$ 34,733	1.00	22,577	35.00%	\$ 12,157



DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES

Asset Description	Year in Service	Useful Life	In Service Life to 2009	Original Cost	Annual Dep'n	ENR Cost Factor	Est. Replacement Cost	ENR Factor	Depreciation to 2009	% Life Remaining In Service	RCLD
Ford 3/4 ton pick-up	2002	20	6	24,293	1,215	1.27356	\$ 28,946	1.00	8,684	70.00%	\$ 20,262
MONITORING SYS FOR 21KV ELEC. SYSTEM	2005	25	3	30,966	1,239	1.15046	\$ 30,966	1.00	3,716	88.00%	\$ 27,250
2 DRIVES UNITS CROSS COLLECTORS #2 & 3	2005	15	3	15,617	1,041	1.15046	\$ 15,617	1.00	3,123	80.00%	\$ 12,493
2- GAS EMISSIONS ANALYZER FOR CO-GEN	2005	15	3	15,693	1,046	1.15046	\$ 15,693	1.00	3,139	80.00%	\$ 12,554
2 DRIVE UNITS FOR PRIMARYS 2&3 LONGUITAL	2005	15	3	9,186	612	1.15046	\$ 9,186	1.00	1,837	80.00%	\$ 7,349
WWTP STAGE 4 IMPROVEMENTS	2005	25	3	316,206	12,648	1.15046	\$ 316,206	1.00	37,945	88.00%	\$ 278,261
5 H.P. MIXER FOR FSL (2)	2006	7	2	18,446	2,635	1.06884	\$ 18,446	1.00	5,270	71.43%	\$ 13,176
4" GORMAN SUMP PUMP	2006	7	2	23,094	3,299	1.06884	\$ 23,094	1.00	6,598	71.43%	\$ 16,496
5 H.P. MIXER (2)	2006	7	2	18,446	2,635	1.06884	\$ 18,446	1.00	5,270	71.43%	\$ 13,176
HEAT EXCHANGERS (2)	2006	15	2	12,735	849	1.06884	\$ 12,735	1.00	1,698	86.67%	\$ 11,037
TOUCHSTONE HEAT EXCHANGER	2006	15	2	4,507	300	1.06884	\$ 4,507	1.00	601	86.67%	\$ 3,906
HEAT RECOVERY SILENCER (2)	2006	15	2	40,047	2,670	1.06884	\$ 40,047	1.00	5,340	86.67%	\$ 34,707
6" Tsurumi submersible pump m/n 150b411	2006	7	2	5,764	823	1.06884	\$ 5,764	1.00	1,647	71.43%	\$ 4,117
FSL SURFACE MIXERS (2)	2006	25	2	19,466	779	1.06884	\$ 19,466	1.00	1,557	92.00%	\$ 17,909
FEPS - ELECTRICAL EQUIPMENT	2006	25	2	60,844	2,434	1.06884	\$ 60,844	1.00	4,868	92.00%	\$ 55,976
FEPS - 3W PUMPS 1,2,&3	2006	25	2	133,933	5,357	1.06884	\$ 133,933	1.00	10,715	92.00%	\$ 123,218
FINAL EFFLUENT PUMPS 1,3, & 5	2006	25	2	1,454,131	58,165	1.06884	\$ 1,454,131	1.00	116,331	92.00%	\$ 1,337,801
3W AMIDAN STRAINER 1 & 2	2006	25	2	33,802	1,352	1.06884	\$ 33,802	1.00	2,704	92.00%	\$ 31,098
EFFLUENT PUMP ADJ FREQ DRIVES(3)	2006	25	2	191,333	7,653	1.06884	\$ 191,333	1.00	15,307	92.00%	\$ 176,026
3W PUMP ADJ FREQ DRIVE (3)	2006	25	2	76,533	3,061	1.06884	\$ 76,533	1.00	6,123	92.00%	\$ 70,411
MOTOR CONTROL CTR G1 & G2	2006	25	2	382,666	15,307	1.06884	\$ 382,666	1.00	30,613	92.00%	\$ 352,053
BLG G ANALYZER EQUIPMENT	2006	10	2	40,754	4,075	1.06884	\$ 40,754	1.00	8,151	80.00%	\$ 32,603
BLDG G LOW VOLTAGE SWITCHGEAR	2006	25	2	573,999	22,960	1.06884	\$ 573,999	1.00	45,920	92.00%	\$ 528,079
HB4 DIVERSION STRUCTURE	2006	25	2	486,973	19,479	1.06884	\$ 486,973	1.00	38,958	92.00%	\$ 448,015
21KV ELECTRICAL SYSTEM	2006	25	2	697,090	27,884	1.06884	\$ 697,090	1.00	55,767	92.00%	\$ 641,323
GRITWASHER/CLASSIFIERS (2)	2006	25	2	219,190	8,768	1.06884	\$ 219,190	1.00	17,535	92.00%	\$ 201,655
CISCO 4507 (FOX081800AY)	2006	7	2	11,918	1,703	1.06884	\$ 11,918	1.00	3,405	71.43%	\$ 8,513
CISCO 4507 (FOX0818009Y)	2006	7	2	10,905	1,558	1.06884	\$ 10,905	1.00	3,116	71.43%	\$ 7,789
FILE SERVER DISTRICT OFFICE	2006	5	2	3,009	602	1.06884	\$ 3,009	1.00	1,204	60.00%	\$ 1,806
WAN FIBER OPTIC CABLE 24 STRAND	2006	25	2	73,815	2,953	1.06884	\$ 73,815	1.00	5,905	92.00%	\$ 67,909
FLEET SERVICES SOFTWARE	2006	5	2	2,371	474	1.06884	\$ 2,371	1.00	948	60.00%	\$ 1,423
VERSATILE IMAGING UPGRADE	2006	5	2	5,355	1,071	1.06884	\$ 5,355	1.00	2,142	60.00%	\$ 3,213
2006 FORD F-150, 4X4, SUPER	2006	7	2	6,837	977	1.06884	\$ 6,837	1.00	1,953	71.43%	\$ 4,884
FUJITSU FI-5750C COLOR SCANNER	2006	5	2	1,877	375	1.06884	\$ 1,877	1.00	751	60.00%	\$ 1,126
2006 FORD F-250 (UNIT #21)	2006	7	2	17,600	2,514	1.06884	\$ 17,600	1.00	5,029	71.43%	\$ 12,571
21 KV PARTIAL DISCHARGE SENSORS (3)	2006	10	2	33,653	3,365	1.06884	\$ 33,653	1.00	6,731	80.00%	\$ 26,922
OS-SPECTRA CONNECT WIRELESS RADIO	2006	5	2	11,883	2,377	1.06884	\$ 11,883	1.00	4,753	60.00%	\$ 7,130
FINAL EFFLUENT PUMP STATION	2006	50	2	788,410	15,768	1.06884	\$ 788,410	1.00	31,536	96.00%	\$ 756,873
FEPS & BLDG G - ELECTRICAL	2006	50	2	258,937	5,179	1.06884	\$ 258,937	1.00	10,357	96.00%	\$ 248,580
MCC/SAMPLE BLDG G	2006	50	2	531,522	10,630	1.06884	\$ 531,522	1.00	21,261	96.00%	\$ 510,261
BLDG G HVAC	2006	10	2	49,747	4,975	1.06884	\$ 49,747	1.00	9,949	80.00%	\$ 39,797



**DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES**

Asset Description	Year in Service	Useful Life	In Service Life to 2009	Original Cost	Annual Dep'n	ENR Cost Factor	Est. Replacement Cost	ENR Factor	Depreciation to 2009	% Life Remaining In Service	RCLD
SODIUM HYPOCHLORITE BLDG	2006	50	2	649,664	12,993	1.06884	\$ 649,664	1.00	25,987	96.00%	\$ 623,677
FEPS SITE GRADING & PAVING	2006	50	2	585,279	11,706	1.06884	\$ 585,279	1.00	23,411	96.00%	\$ 561,868
2001 USED GENIE Z-45/25 R/T DF.	2006	7	2	17,618	2,517	1.06884	\$ 17,618	1.00	5,034	71.43%	\$ 12,584
AUTOCLAVE	2006	7	2	5,254	751	1.06884	\$ 5,254	1.00	1,501	71.43%	\$ 3,753
LABORATORY GLASSWARE WASHER - CIP	2006	7	2	10,183	1,455	1.06884	\$ 10,183	1.00	2,910	71.43%	\$ 7,274
12 TON TILT-BED TRAILER (FA2079) UNIT	2006	7	2	7,665	1,095	1.06884	\$ 7,665	1.00	2,190	71.43%	\$ 5,475
SJ241734 DAVIT HOIST(2)	2006	7	2	3,291	470	1.06884	\$ 3,291	1.00	940	71.43%	\$ 2,350
SJ241734 DAVIT HOIST(2)	2006	7	2	3,273	468	1.06884	\$ 3,273	1.00	935	71.43%	\$ 2,338
5 TON AC UNIT COMPUTER RM	2006	10	2	5,396	540	1.06884	\$ 5,396	1.00	1,079	80.00%	\$ 4,317
CHLOROVAC CHEMICAL INDUCTION UNIT	2007	7	1	7,341	1,049	1.06613	\$ 7,341	1.00	1,049	85.71%	\$ 6,292
RT ANGLE GEARBOX FOR PRIMARY #2	2007	15	1	8,523	568	1.06613	\$ 8,523	1.00	568	93.33%	\$ 7,955
SECONDARY EFFLUENT PUMPS 2-6	2007	25	1	1,945,164	77,807	1.06613	\$ 1,945,164	1.00	77,807	96.00%	\$ 1,867,358
ELECTRICAL & CONTROL BLDG #1	2007	25	1	661,108	26,444	1.06613	\$ 661,108	1.00	26,444	96.00%	\$ 634,663
HOLDING BASIN #4	2007	25	1	131,629	5,265	1.06613	\$ 131,629	1.00	5,265	96.00%	\$ 126,364
BUILDING REMODEL - DO	2007	50	1	10,640	213	1.06613	\$ 10,640	1.00	213	98.00%	\$ 10,427
HB4 EFFLUENT PUMP STATION	2007	50	1	2,282,679	45,654	1.06613	\$ 2,282,679	1.00	45,654	98.00%	\$ 2,237,026
CHAIN LINK FENCE W/ BARBWIRE	2007	20	1	9,175	459	1.06613	\$ 9,175	1.00	459	95.00%	\$ 8,716
GC/MSD CHEMSTATION HDW/SOFTWARE	2007	7	1	6,229	890	1.06613	\$ 6,229	1.00	890	85.71%	\$ 5,339
JET 36" VERTICAL BANDSAW	2007	7	1	7,596	1,085	1.06613	\$ 7,596	1.00	1,085	85.71%	\$ 6,511
QUAD CONDUIT BENDER/ACCESSORIES	2007	10	1	4,795	479	1.06613	\$ 4,795	1.00	479	90.00%	\$ 4,315
MOTOROLA PTP600 CONNECT RADIO LINK	2007	5	1	11,883	2,377	1.06613	\$ 11,883	1.00	2,377	80.00%	\$ 9,506
INTELLITIME SOFTWARE	2007	7	1	10,896	1,557	1.06613	\$ 10,896	1.00	1,557	85.71%	\$ 9,340
GRIT REMOVAL PUMP	2008	7	0	6,275	896	0.99530	\$ 6,275	1.00	0	100.00%	\$ 6,275
GRIT REMOVAL PUMP	2008	7	0	6,275	896	0.99530	\$ 6,275	1.00	0	100.00%	\$ 6,275
CERLIC BB2 W/ ITX SUSPENDED SOLID SENSOR	2008	7	0	6,929	990	0.99530	\$ 6,929	1.00	0	100.00%	\$ 6,929
CERLIC BB2 W/ ITX SUSPENDED SOLID SENSOR	2008	7	0	6,929	990	0.99530	\$ 6,929	1.00	0	100.00%	\$ 6,929
GRIT REMOVAL WEMCO PUMP	2008	7	0	10,698	1,528	0.99530	\$ 10,698	1.00	0	100.00%	\$ 10,698
INFLUENT CHANNEL BLOWER	2008	7	0	5,111	730	0.99530	\$ 5,111	1.00	0	100.00%	\$ 5,111
ODOR CONTROL SYSTEM	2008	7	0	13,196	1,885	0.99530	\$ 13,196	1.00	0	100.00%	\$ 13,196
DAFT BOTTOM PUMP	2008	7	0	10,777	1,540	0.99530	\$ 10,777	1.00	0	100.00%	\$ 10,777
INFLUENT CHANNEL BLOWER	2008	7	0	5,111	730	0.99530	\$ 5,111	1.00	0	100.00%	\$ 5,111
DSL - NEW 5 HP PUMPS(3)	2008	25	0	39,538	1,582	0.99530	\$ 39,538	1.00	0	100.00%	\$ 39,538
WTP FUEL CELL - 8" WTR LINE	2008	50	0	158,858	3,177	0.99530	\$ 158,858	1.00	0	100.00%	\$ 158,858
WTP FUEL CELL - GAS PIPING	2008	50	0	63,543	1,271	0.99530	\$ 63,543	1.00	0	100.00%	\$ 63,543
DIGESTER GAS TREATMENT SYSTEM	2008	25	0	654,691	26,188	0.99530	\$ 654,691	1.00	0	100.00%	\$ 654,691
HEAT RECOVERY SYSTEM	2008	25	0	63,543	2,542	0.99530	\$ 63,543	1.00	0	100.00%	\$ 63,543
4" NATURAL GAS LINE FROM STONERIDGE	2008	50	0	119,461	2,389	0.99530	\$ 119,461	1.00	0	100.00%	\$ 119,461
HYPOCHLORITE DOSING UNIT	2008	7	0	7,959	1,137	0.99530	\$ 7,959	1.00	0	100.00%	\$ 7,959
4 - 24" MAGNETIC FLOWMETERS	2008	10	0	90,000	9,000	0.99530	\$ 90,000	1.00	0	100.00%	\$ 90,000
WWTP SECONDARY CLARIFIER #2 REHAB	2008	25	0	957,069	38,283	0.99530	\$ 957,069	1.00	0	100.00%	\$ 957,069



**DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES**

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REROOF DISTRICT OFFICE	2008	20	0	13,983	699	0.99530	\$ 13,983	1.00	0	100.00%	\$ 13,983
RAIN GUTTERS - DISTRICT OFFICE	2008	20	0	7,832	392	0.99530	\$ 7,832	1.00	0	100.00%	\$ 7,832
WWTP LIBRARY SHELVING	2008	7	0	48,734	6,962	0.99530	\$ 48,734	1.00	0	100.00%	\$ 48,734
FSL - LANDSCAPING	2008	15	0	483,841	32,256	0.99530	\$ 483,841	1.00	0	100.00%	\$ 483,841
FSL - FENCING	2008	20	0	119,983	5,999	0.99530	\$ 119,983	1.00	0	100.00%	\$ 119,983
FSL - EDDIE AND ARTWORK	2008	15	0	145,791	9,719	0.99530	\$ 145,791	1.00	0	100.00%	\$ 145,791
FSL - SIGNAGE	2008	15	0	50,565	3,371	0.99530	\$ 50,565	1.00	0	100.00%	\$ 50,565
FSL - LANDSCAPE IRRIGATION	2008	15	0	540,746	36,050	0.99530	\$ 540,746	1.00	0	100.00%	\$ 540,746
FSL - PAVING	2008	25	0	75,815	3,033	0.99530	\$ 75,815	1.00	0	100.00%	\$ 75,815
FENCING	2008	15	0	12,709	847	0.99530	\$ 12,709	1.00	0	100.00%	\$ 12,709
FLUKE T120 TERMAL IMAGER	2008	7	0	4,164	595	0.99530	\$ 4,164	1.00	0	100.00%	\$ 4,164
PORTABLE 8" TRASH PUMP	2008	7	0	34,000	4,857	0.99530	\$ 34,000	1.00	0	100.00%	\$ 34,000
PAINT BOOTH	2008	7	0	18,000	2,571	0.99530	\$ 18,000	1.00	0	100.00%	\$ 18,000
VARIOUS TOOLS PURCHASED LAVVMA	2008	3	0	8,000	2,667	0.99530	\$ 8,000	1.00	0	100.00%	\$ 8,000
ION CHROMATOGRAPHY SYSTEM	2008	7	0	43,776	6,254	0.99530	\$ 43,776	1.00	0	100.00%	\$ 43,776
PERFORMANCE MGT SOFTWARE	2008	5	0	22,924	4,585	0.99530	\$ 22,924	1.00	0	100.00%	\$ 22,924
EDEN CASS MODULE	2008	5	0	4,303	861	0.99530	\$ 4,303	1.00	0	100.00%	\$ 4,303
EDEN FINANCIAL SYSTEM SOFTWARE	2008	5	0	177,833	35,567	0.99530	\$ 177,833	1.00	0	100.00%	\$ 177,833
LABWORKS ES LIMS	2008	5	0	28,112	5,622	0.99530	\$ 28,112	1.00	0	100.00%	\$ 28,112
GBA MASTER SOFTWARE	2008	5	0	13,606	2,721	0.99530	\$ 13,606	1.00	0	100.00%	\$ 13,606
TAYLOR DUNN ELECT CART B248	2008	7	0	9,780	1,397	0.99530	\$ 9,780	1.00	0	100.00%	\$ 9,780
2004 FORD F350 W/ UTILITY BOX	2008	7	0	13,525	1,932	0.99530	\$ 13,525	1.00	0	100.00%	\$ 13,525
1998 VOLVO WATER TRUCK	2008	7	0	31,000	4,429	0.99530	\$ 31,000	1.00	0	100.00%	\$ 31,000
2005 FORD F150 W/EXT CAB	2008	7	0	12,625	1,804	0.99530	\$ 12,625	1.00	0	100.00%	\$ 12,625
TRAILER MOUNTED VALVE TURNER	2008	7	0	23,000	3,286	0.99530	\$ 23,000	1.00	0	100.00%	\$ 23,000
2008 FORD F-150 CREW CAB #96	2008	7	0	12,154	1,736	0.99530	\$ 12,154	1.00	0	100.00%	\$ 12,154
TAYLOR DUNN 4 WHEEL ELEC CART	2008	7	0	20,239	2,891	0.99530	\$ 20,239	1.00	0	100.00%	\$ 20,239
24" RAS PIPELINE REPAIR	2009	10	0	97,765	9,776	1.00000	\$ 97,765	1.00	0	100.00%	\$ 97,765
PVC DUPLEX BASKET FOR CO-GEN	2009	7	0	5,581	797	1.00000	\$ 5,581	1.00	0	100.00%	\$ 5,581
TWO (2) HOUSE FSL SURFACE AERATORS	2009	15	0	27,833	1,856	1.00000	\$ 27,833	1.00	0	100.00%	\$ 27,833
REHAB EFFLUENT PUMP #5	2009	15	0	25,863	1,724	1.00000	\$ 25,863	1.00	0	100.00%	\$ 25,863
SEAL HOLDING BASINS #1 & #2	2009	10	0	45,826	4,583	1.00000	\$ 45,826	1.00	0	100.00%	\$ 45,826
GAS BOOSTER COMPRESSOR	2009	8	0	10,934	1,367	1.00000	\$ 10,934	1.00	0	100.00%	\$ 10,934
GROUNDWATER MONITORING WELLS(8)	2009	50	0	62,878	1,258	1.00000	\$ 62,878	1.00	0	100.00%	\$ 62,878
HVAC CO-GEN CONTROL ROOM	2009	10	0	13,868	1,387	1.00000	\$ 13,868	1.00	0	100.00%	\$ 13,868
OFFICE REMODEL - OPERATIONS WWTP	2009	20	0	23,285	1,164	1.00000	\$ 23,285	1.00	0	100.00%	\$ 23,285
5973A MSD HARDWARE UPGRADE	2009	7	0	12,780	1,826	1.00000	\$ 12,780	1.00	0	100.00%	\$ 12,780
POWER EDGE SCADA SERVER	2009	7	0	7,081	1,012	1.00000	\$ 7,081	1.00	0	100.00%	\$ 7,081
SCADA HISTORIAN AND WEB PORTAL	2009	7	0	20,603	2,943	1.00000	\$ 20,603	1.00	0	100.00%	\$ 20,603
EMC CX4-120 SAN PRIMARY	2009	7	0	36,466	5,209	1.00000	\$ 36,466	1.00	0	100.00%	\$ 36,466



DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES

Asset Description	Year in Service	Useful Life	In Service Life to 2009	Original Cost	Annual Depr n	ENR Cost Factor	Est. Replacement Cost	ENR Factor	Depreciation to 2009	% Life Remaining In Service	RCLD
EMC CX4-120 SAN SECONDARY	2009	7	0	10,206	1,458	1.00000	\$ 10,206	1.00	0	100.00%	\$ 10,206
VMWARE PROMOTIONAL MIDSIZE ACCEL KIT	2009	7	0	8,640	1,234	1.00000	\$ 8,640	1.00	0	100.00%	\$ 8,640
NATIONAL 8-TON CRANE TRUCK	2009	7	0	52,274	7,468	1.00000	\$ 52,274	1.00	0	100.00%	\$ 52,274
USED MODEL 580 BACKHOE	2009	7	0	43,233	6,176	1.00000	\$ 43,233	1.00	0	100.00%	\$ 43,233
70FT 8" STORM DRAIN @ DLD	2009	50	0	10,524	210	1.00000	\$ 10,524	1.00	0	100.00%	\$ 10,524
APOGEE HVAC SYS UPGRADE	2004	10	4	36,135	3,614	1.18318	\$ 36,135	1.00	14,454	60.00%	\$ 21,681
SHELVING IN VAULT	2004	7	4	5,860	837	1.18318	\$ 5,860	1.00	3,349	42.86%	\$ 2,512
15HP, 460V COMPRESSOR	2004	15	4	7,803	520	1.18318	\$ 7,803	1.00	2,081	73.33%	\$ 5,722
METROTECH GEN 2 LINE LOCATOR	2004	5	4	3,718	744	1.18318	\$ 3,718	1.00	2,975	20.00%	\$ 744
800FT 3/4" CLEANING HOSE W/NOZZLE	2004	5	4	4,416	883	1.18318	\$ 4,416	1.00	3,532	20.00%	\$ 883
PAN AND TILT CAMERA (ARIES SINGLE)	2004	3	4	15,696	5,232	1.18318	\$ 15,696	1.00	20,928	0.00%	\$ -
MOD. & INSTALL CAMERA - TV TRUCK	2004	3	4	5,629	1,876	1.18318	\$ 5,629	1.00	7,505	0.00%	\$ -
MODULAR DAVIT ARM W/PORTABLE BASE	2004	10	4	3,670	367	1.18318	\$ 3,670	1.00	1,468	60.00%	\$ 2,202
50' CABLE W/EMERG RETRIEVAL WINCH	2004	10	4	3,760	376	1.18318	\$ 3,760	1.00	1,504	60.00%	\$ 2,256
SPECTROPHOTOMETER	2004	7	4	2,937	420	1.18318	\$ 2,937	1.00	1,679	42.86%	\$ 1,259
NANOPURE WATER PURIFIER	2004	7	4	3,851	550	1.18318	\$ 3,851	1.00	2,201	42.86%	\$ 1,651
MULTIPARAMETER SYSTEM	2004	7	4	2,946	421	1.18318	\$ 2,946	1.00	1,683	42.86%	\$ 1,263
HYDRAULIC HOSE CRIMPING SYSTEM	2004	10	4	9,243	924	1.18318	\$ 9,243	1.00	3,697	60.00%	\$ 5,546
BEARING ANALYZER	2004	10	4	7,051	705	1.18318	\$ 7,051	1.00	2,820	60.00%	\$ 4,231
3 - AIR STARTERS CO-GEN ENGINE	2004	10	4	8,908	891	1.18318	\$ 8,908	1.00	3,563	60.00%	\$ 5,345
HEAT EXCHANGER MDL F1010	2004	15	4	8,657	577	1.18318	\$ 8,657	1.00	2,308	73.33%	\$ 6,348
HEAT EXCHANGER MODEL F804	2004	15	4	3,848	257	1.18318	\$ 3,848	1.00	1,026	73.33%	\$ 2,822
HEAT EXCHANGE CONTROL & VALVES	2004	15	4	7,183	479	1.18318	\$ 7,183	1.00	1,916	73.33%	\$ 5,268
THERMOTECH COOLER	2004	15	4	19,485	1,299	1.18318	\$ 19,485	1.00	5,196	73.33%	\$ 14,289
FSL RETURN VALVE REPLACEMENT	2004	25	4	55,375	2,215	1.18318	\$ 55,375	1.00	8,860	84.00%	\$ 46,515
PUMP MD006-12 FOR RAS HYPO	2004	3	4	2,878	959	1.18318	\$ 2,878	1.00	3,838	0.00%	\$ -
PUMP MD006-12 FOR RAS HYPO	2004	3	4	2,878	959	1.18318	\$ 2,878	1.00	3,838	0.00%	\$ -
PUMP MD006-12 FOR RAS HYPO	2004	3	4	2,878	959	1.18318	\$ 2,878	1.00	3,838	0.00%	\$ -
FLYGT SUMPS PUMP	2004	10	4	3,233	323	1.18318	\$ 3,233	1.00	1,293	60.00%	\$ 1,940
PY300 SUMP PUMP 24" HYPO PUMP ROOM	2004	3	4	3,415	1,138	1.18318	\$ 3,415	1.00	4,554	0.00%	\$ -
PY300 SUMP PUMP 52" HYPO TANK ROOM	2004	3	4	3,654	1,218	1.18318	\$ 3,654	1.00	4,872	0.00%	\$ -
FLYGT SUMPS PUMP	2004	10	4	3,233	323	1.18318	\$ 3,233	1.00	1,293	60.00%	\$ 1,940
CAUSTIC SODA PUMP	2004	5	4	3,758	752	1.18318	\$ 3,758	1.00	3,007	20.00%	\$ 752
Fuel Cell	2009	10	0	2,300,000	230,000	1.00000	\$ 2,300,000	1.00	0	100.00%	\$ 2,300,000
<b>Totals</b>				<b>129,414,234</b>	<b>3,866,754</b>		<b>201,324,388</b>	<b>199</b>	<b>53,236,671</b>		<b>148,159,067</b>



## Appendix B – DSRSD Engineers Report

### ANALYSIS OF CURRENT AND PROJECTED REGIONAL WASTEWATER TREATMENT PLANT FLOWS

David A. Requa, District Engineering Engineer

April 2010

The purpose of this analysis is to evaluate the wastewater flows required to be treated at the Regional Wastewater Treatment Plant (WWTP) when the General Plans of the three cities served by the District reach build out. The result of this study provides the basis to update required capital improvement projects to meet the needs of future customers of the District.

### **BACKGROUND**

The District is a member of the Livermore Amador Valley Water Management Agency (LAVWMA) a Joint Powers Authority (JPA) along with the cities of Pleasanton and Livermore. The JPA owns and operates pump stations and pipelines to transport wastewater effluent from the valley to San Francisco Bay for disposal. In 1997, the JPA was amended to provide for the expansion of the disposal system and to set influent wastewater limits for the three member entities.

Since the JPA amendment, the District has use the influent limit which is 20.7 million gallons per day (mgd) for the District and Pleasanton combined, as the basis of capital improvement planning (CIP) and determination of regional connection fees. During the preparation of a regional connection fee study in 2008, the approach was modified to use the General Plan buildout of the 3 cities served by the District which was estimated to be 17.8 mgd at the time. To support the connection fee study, staff reduced the total cost of the CIP for regional expansion to approximate the cost reduction from 20.7 to 17.9 mgd. However, the CIP document was not revised.

In December of 2009, the District Board of Directors reviewed the policy issue of the proper basis for CIP and regional connection fee planning. The Board adopted use of the buildout of the General Plans. A modified CIP document has now been prepared<sup>2</sup> to reflect the Board policy.

### **EXISTING TREATMENT CAPACITY**

A major Stage 4 expansion of the WWTP was completed in 2003. As required by the Regional Water Quality Control Board, upon completion of the expansion, the WWTP was stress tested to document the

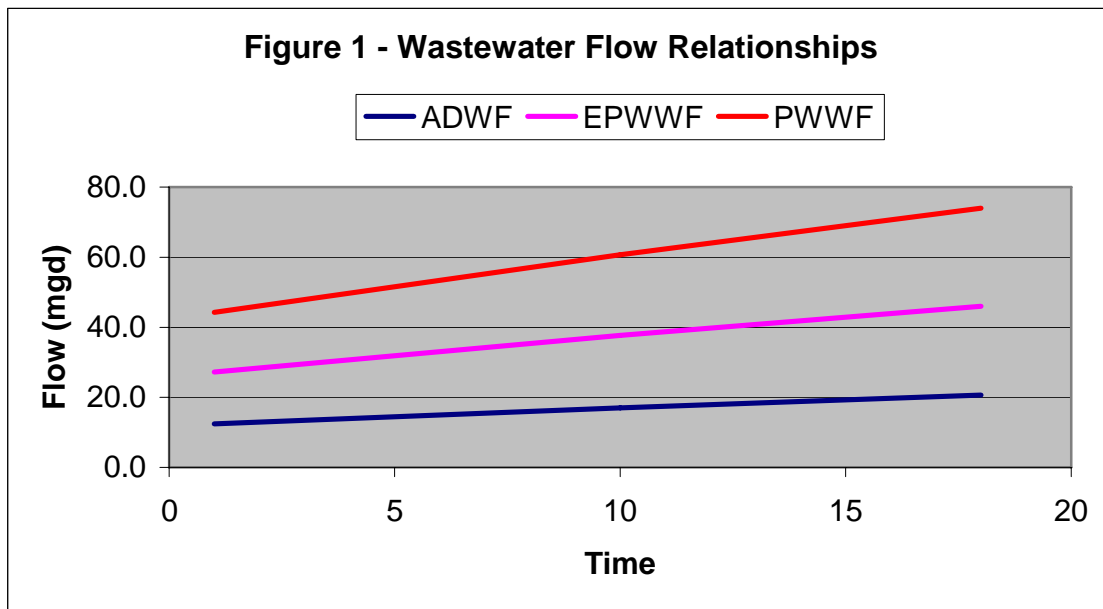
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<sup>2</sup> “CIP Process Capacity Review”; Whitley Burchett & Associates; May 2009.



actual capacity of the facility. The WWTP has to have adequate capacity to treat both average dry weather flow (ADWF) and peak wet weather flow (PWWF). The documented ADWF<sup>3</sup> capacity is 17.0 million gallons per day (mgd) and the documented PWWF<sup>4</sup> capacity is 49.0 mgd. The ADWF and PWWF capacities of the treatment facility do not match. This situation resulted because of budget concerns; some process units planned for inclusion in the Stage 4 project were eliminated before the project was advertised for bid. Therefore, major capital investments are required to expand elements of the WWTP to accommodate the existing ADWF capacity of 17.0 mgd.

Historically, equalized peak wet weather flow (EPWWF) has also been a WWTP capacity rating parameter. At an ADWF capacity of 17.0 mgd, the EPWWF is 37.7 mgd. The relationship between the three flow conditions is shown in Figure 1.



Flow equalization to achieve an EPWWF has been utilized only through the secondary system after primary treatment. Prior to the Stage 4 project, effluent from the primary clarifiers could be diverted into storage basin no. 1 and then returned for treatment after the wastewater flow subsides. Because of odor control concerns<sup>5</sup> and with the construction of primary clarifier no. 4 during the Stage 4 expansion, the ability to equalize primary effluent was eliminated. Therefore, current plant capacity is defined by an ADWF of 17.0 mgd and a PWWF of 37.7 mgd as equalization is no longer available. A temporary project is planned to allow raw wastewater to back up in holding basin no. 2 during extremely high storm flows to accommodate the ADWF and PWWF mismatch until such time the PWWF capacity through the secondary system can be increased.

<sup>3</sup> “Plant Process Capacity: Dry Weather Capacity”; Brown and Caldwell; December 2004.

<sup>4</sup> “Wet Weather Capacity Study”; Brown and Caldwell; May 2005.

<sup>5</sup> “Odor Control Master Plan”; CH2M Hill; May 1999.

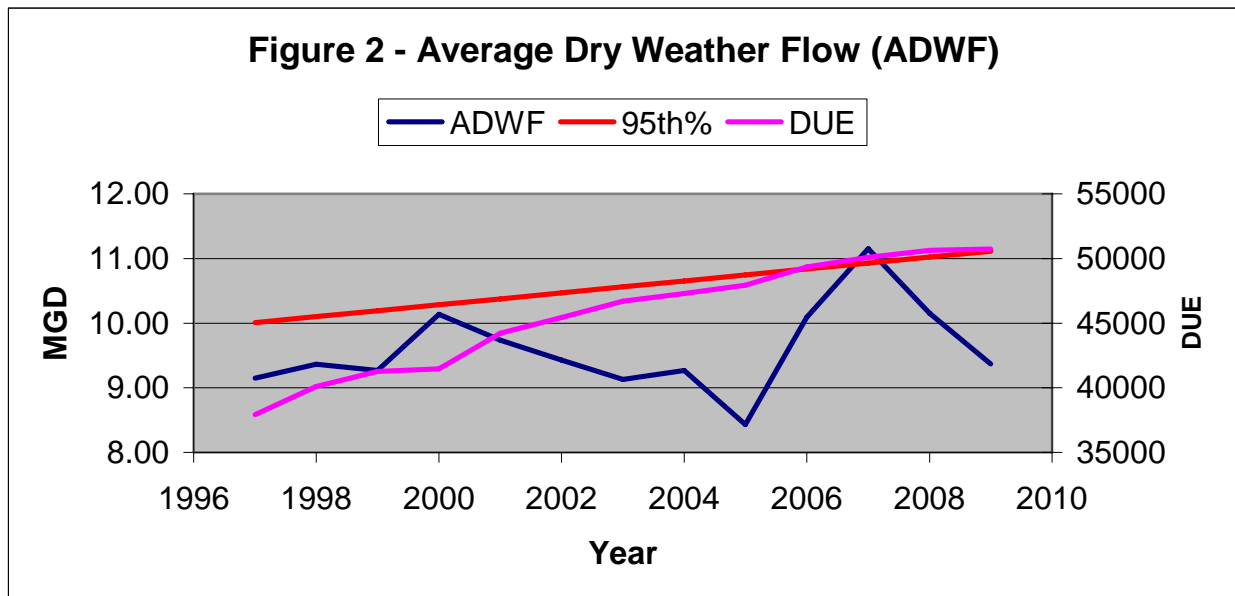


## CURRENT ADWF

Wastewater flows are highly variable from year to year for a variety of reasons including: climatic conditions; vacancy rates; the economy; and flow meter performance. Flow metering at the WWTP is particularly challenging because of the number of flow meters required to determine the WWTP influent flow. Projects are in progress to reduce the number of meters that have to work accurately simultaneously to measure flow from 9 to 4<sup>6</sup>.

The District has to plan to treat all the wastewater that could possibly enter the plant a result of current development. Because of the highly variable nature of wastewater flow from year to year, a generally accepted practice to evaluate flow over a period of time is to envelop the data within the 95<sup>th</sup> confidence level line.

Shown in Figure 2 is the ADWF from 1997 to 2009. Also shown on the figure is the “least squares” fit 95<sup>th</sup> percentile trend line.



Based upon the data in Figure 2, the ADWF in 2009 for planning purposes is 11 mgd. To confirm the growth trend over the time period is reasonable, the new connections sold, measured as dwelling units equivalent (DUE), over the same period are also shown on Figure 2. Considering that all the new connections sold are not yet occupied the correlation between the flow trend line increase and the increase in number of DUEs is good.

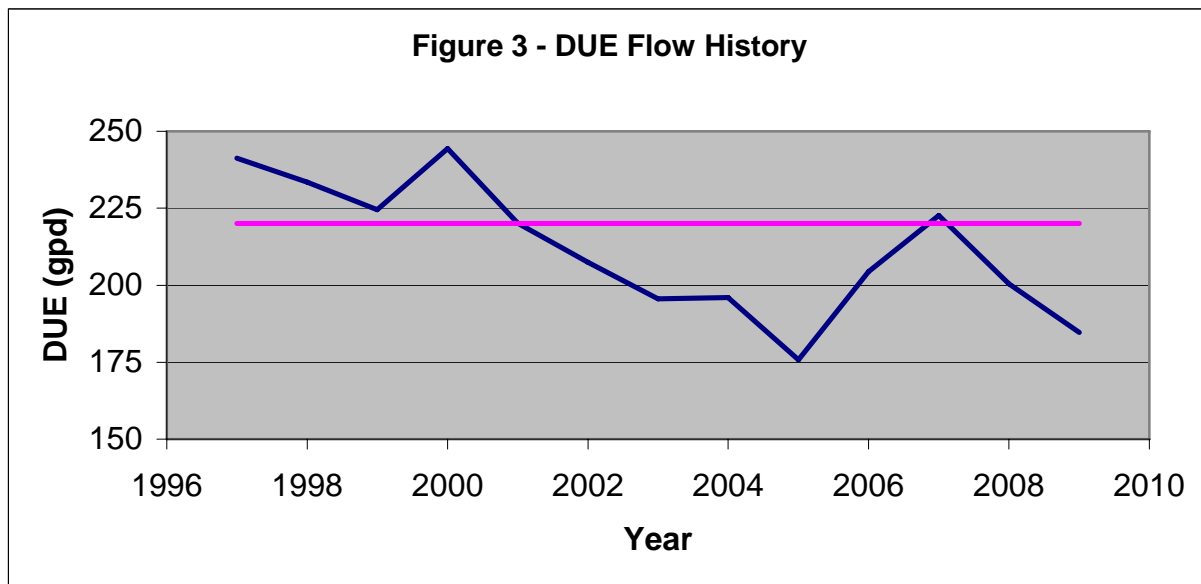
<sup>6</sup> “Influent Wastewater Metering Report”; Whitley Burchett & Associates; January 2000.





Surveys have shown that District-wide in the commercial sector, under utilization of capacity may exceed 20% in normal times; in the current economic situation, under utilization is undoubtedly higher<sup>7</sup>. In addition, the last two years has been drought years with upwards of 16% water conservation which translates to some reduction in wastewater flow. The District must reserve treatment capacity for existing customers that purchased capacity but is not currently using the capacity. An under utilization of 20% under current conditions is reasonable or the current ADWF that the District is required to accommodate is 13.1 mgd.

Currently, the District uses 220 gallons per day (gpd) per DUE to convert DUE to flow. Shown in Figure 3 is the annual average gpd per DUE from 1997 to 2009. In the most recent years, the unit flow has been less than 220 gpd which is to be expected because of the sudden economic downturn, the current drought conditions and a large number of DUEs that have been purchased that are not yet flowing. Because of these reasons, 220 gpd for a DUE is still a valid conversion for estimating future flow.



Not only must the District treat all the wastewater that may reach the WWTP from connected customers, an adequate portion of the WWTP capacity has to be reserved for customers that have purchased capacity but have not yet connected to the system. As of January 1, 2010, the number of DUEs sold but not connected is approximately 1,000. This is equivalent to another 0.2 mgd of plant capacity that is already allocated. Therefore, as of January 1, 2010, the existing plant flow for projection purposes is 13.3 mgd.

### FUTURE AVERAGE DRY WEATHER FLOW (ADWF)

<sup>7</sup> "Sewer Allocation Analysis"; Andrew Cussen and Rhodora Biagtan; September 2007.



The ultimate capacity of the WWTP is established by the buildout of the General Plans of San Ramon<sup>8</sup>, Dublin<sup>9</sup> and Pleasanton<sup>10</sup>, the three cities the District serves. The number of existing DUEs, buildout DUEs, and future DUEs for each city is shown in Table 1. The future DUEs are 20,493. Based upon a conversion factor of 220 gpd, the future wastewater flow is estimated to be 4.5 mgd.

**Table 1 – Dwelling Unit Equivalent (DUE)**

<b>City</b>	<b>Jan 1, 2010</b>	<b>Buildout</b>	<b>Future</b>
San Ramon	6,465	6,498	33
Dublin	23,518	39,176	15,658
Pleasanton	<u>34,491</u>	<u>39,244</u>	<u>4,753</u>
TOTAL	64,474	84,918	20,444

Adding both the potential flow from existing customers and the flow from future customers the anticipated buildout ADWF is 17.8 mgd (13.3 mgd plus 4.5 mgd).

### **FUTURE PEAK WET WEATHER FLOW (PWWF)**

The second key aspect of WWTP capacity is the PWWF that has to be treated. PWWF is the result of groundwater (infiltration) and rain water (inflow) entering the collection system. During the later rainy period of the year when groundwater is highest, the I/I component of wastewater is also the highest. Historical PWWF has exceeded 35 mgd. Based upon collection system storm flow monitoring, the estimated PWWF that may occur at a 20-year return frequency and with an ADWF of 11.2 mgd is 40.0 mgd.<sup>11</sup> As a result, a major capital investment in the WWTP is required to utilize the existing 17.0 mgd ADWF.

The relationship between ADWF and PWWF was shown previously in Figure 1. Currently, PWWF is 3.6 times ADWF. Over time, this ratio will tend to increase with the aging of the collection system. However, because of higher density development, there will be more DUEs per mile of sewer which will tend to reduce this ratio. For planning purposes, a ratio of 3.6 will be maintained based upon the

<sup>8</sup> “A General Plan for the Future, San Ramon 2020”; Dyett & Bhatia, Urban Regional Planners; March 2002.

<sup>9</sup> “City of Dublin General Plan”; City of Dublin Community Development Department; January 2010.

<sup>10</sup> City of Pleasanton Planning Department data; February 2010.



assumption the two factors affecting future PWWF will balance. For a planned ADWF of 17.8 mgd, the planned PWWF is 64.0 mgd.

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<sup>11</sup> “Wastewater Collection System Master Plan Update”; MWH; June 2005.



## Appendix C – LAVWMA Description

### LAVWMA

Livermore Amador Valley Water Management (the Agency) is a joint powers agency that was formed in 1974 by a joint exercise of powers agreement between the cities of Pleasanton and Livermore and the Dublin San Ramon Services District. The Agency has implemented a water quality management program involving wastewater disposal. The Agency operates an export pipeline connecting with the East Bay Dischargers Authority's system and discharges treated wastewater, through a deepwater outfall, into San Francisco Bay. The Agency currently has an Amended and Restated Joint Exercise of Powers Agreement dated September 10, 1997, among the members. This agreement, among other things, sets forth capacity limitations and capacity rights of each member as well as cost-sharing procedures for debt service and fixed operating costs related to capacity rights and variable operating costs related to actual use of the export facilities.

The Dublin San Ramon Services District (District) is one of the three participants in LAVWMA. The other two participants are the Cities of Livermore and Pleasanton, each also having a one-third representation in LAVWMA's Board of Directors, composed of two representatives from each participating agency. The LAVWMA's Board of Directors approves LAVWMA's annual budget, which is prepared by LAVWMA's general manager. The Agency charges its members for project costs in proportion to their rights to the Agency's capacity.

The District contracts with the City of Pleasanton ("City") to provide wastewater treatment and disposal. The District establishes user charges for these wastewater services. The City then establishes those same charges in its service area and remits the charges they collect to the District on a monthly basis. A portion of the user charge is for the services provided by LAVWMA. LAVWMA bills the District for both the District's and Pleasanton's share of these costs (which includes both operations and debt service). Financial statements for the Authority may be obtained from LAVWMA, 623 West Myrick Court, Clayton, California 94517.

LAVWMA has \$131,160,000 in outstanding debt at June 30, 2009. The District is obligated to pay debt service totaling \$94,620,045 or \$6.9 million per year.

The total debt service represents both the District's share and the City of Pleasanton's share based upon a contractual agreement whereby the City collects rates and fees and remits them to the District. The debt has been allocated between expansion and replacement funds based on the work that was performed on the system. The detail allocation of the debt is as follows.



<b>LAVWMA DEBT History and Allocations</b>				
Original Debt		\$ 142,385,000		
Principal Payments		\$ 11,225,000		
Current Balance		\$ 131,160,000		Ties to LAVWMA FS at 6/30/09
<i>Allocation between Replacement and Expansion</i>				
		<b>Replacement Component</b>		<b>Expansion Component</b>
		<b>29.21%</b>		<b>70.79%</b>
		\$ 38,311,836		\$ 92,848,164
Livermore allocation	<b>39.95%</b>	15,305,578	<b>22.87%</b>	21,234,375
DSRSD/Pleasanton allocation	<b>60.05%</b>	23,006,258	<b>77.13%</b>	<b>\$ 71,613,789</b>
Interest				49,289,469
Total Principal and Interest				120,903,258



## Appendix D– Projected DUEs

New Connections by Year												
Fiscal Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
New Connections - Dublin	118	143	224	386	550	544	1,327	1,476	1,578	1,595	1,616	
New Connections - South San Ramon	2	14	10	0	0	0	1	6	0	0	0	
New Connections - Pleasanton	75	100	150	200	250	250	250	250	250	250	300	
<b>Total Regional Connections</b>	<b>195</b>	<b>257</b>	<b>384</b>	<b>586</b>	<b>800</b>	<b>794</b>	<b>1,578</b>	<b>1,732</b>	<b>1,828</b>	<b>1,845</b>	<b>1,916</b>	
New Connections by Year												
Fiscal Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Future	Total
New Connections - Dublin	1,167	912	912	594	566	541	446	200	113	113	537	15,658
New Connections - South San Ramon	0	0	0	0	0	0	0	0	0	0	0	33
New Connections - Pleasanton	300	300	250	250	250	250	250	250	200	128	0	4,753
<b>Total Regional Connections</b>	<b>1,467</b>	<b>1,212</b>	<b>1,162</b>	<b>844</b>	<b>816</b>	<b>791</b>	<b>696</b>	<b>450</b>	<b>313</b>	<b>241</b>	<b>537</b>	<b>20,444</b>



## Appendix E – Capital Improvement Program

DUBLIN SAN RAMON - REGIONAL SEWER UTILITY							
SUMMARY OF THE CAPITAL IMPROVEMENT PROJECTS FOR THE EXPANSION FUND							
CAPITAL IMPROVEMENT PROJECTS	EXPANSION	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
<b>Regional Sewer Expansion (Fund 320)</b>							
WWTP Anaerobic Digester #4							
WWTP Master Plan							170,000
New Fuel Cell							1,286
FOG Receiving Station							
Facultative Sludge Lagoon #5							
WWTP-Emergency Power for DPD							
Secondary Wet Weather Expansion						500,000	3,000,000
Primary Sedimentation Expansion & Improvements							
Regional Biosolids			55,000				
Sludge Dewatering							
LAVWMA Storage							
Influent Sewer Separation (East Amador Lift)							
On-site Sewer Expansion						163,800	
Feric Chloride							
Septic Tank Haulers				88,400			
Landscaping				30,000	70,000		
Primary Clarifier Covers							
Aeration covers							
Headworks Bio-filter							
<b>Water Replacement (Fund 610)</b>							
Administration Building Expansion							
<b>Total Capital Improvement Projects</b>		<b>\$0</b>	<b>\$55,000</b>	<b>\$118,400</b>	<b>\$70,000</b>	<b>\$663,800</b>	<b>\$3,171,286</b>



**DUBLIN SAN RAMON SERVICE DISTRICT  
REGIONAL CONNECTION FEES**

CAPITAL IMPROVEMENT PROJECTS	EXPANSION	FY 2016	FY 2017	FY 2018	FY 2019	Future	Total
<b>Regional Sewer Expansion (Fund 320)</b>							
WWTP Anaerobic Digester #4		3,574,983	2,875,908	508,910			6,959,800
WWTP Master Plan		170,000					340,000
New Fuel Cell		10,284	219,830				231,400
FOG Receiving Station						558,740	558,740
Facultative Sludge Lagoon #5		167,198	1,354,302				1,521,500
WWTP-Emergency Power for DPD			600,000	2,400,000	1,726,000		4,726,000
Secondary Wet Weather Expansion						4,872,500	8,372,500
Primary Sedimentation Expansion & Improvements				600,000	2,200,000	5,122,000	7,922,000
Regional Biosolids		1,400,000	2,000,000				3,455,000
Sludge Dewatering		200,000	2,000,000	5,000,000	8,525,000		15,725,000
LAVWMA Storage						29,750,000	29,750,000
Influent Sewer Separation (East Amador Lift)			460,200				460,200
On-site Sewer Expansion							163,800
Feric Chloride				119,600			119,600
Septic Tank Haulers							88,400
Landscaping						3,488,000	3,588,000
Primary Clarifier Covers		400,000	640,000				1,040,000
Aeration covers					200,000	294,000	494,000
Headworks Bio-filter						501,800	501,800
<b>Water Replacement (Fund 610)</b>							
Administration Building Expansion		200,000	550,000				750,000
<b>Total Capital Improvement Projects</b>		<b>\$6,122,465</b>	<b>\$10,700,240</b>	<b>\$8,628,510</b>	<b>\$12,651,000</b>	<b>\$44,587,040</b>	<b>\$86,767,740</b>





## Appendix F – Project Cost Allocation Policy



RESOLUTION NO. 57-09

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING POLICY ON PROJECT COST ALLOCATION

WHEREAS, the District undertakes projects to provide capacity for future customers or to replace and enhance existing facilities; and

WHEREAS, the District desires to allocate project cost in proportion to the benefits that accrue to existing and future consumers of each enterprise of the District; and

WHEREAS, the District operates three enterprises: water, local sewer, and regional sewer; and

WHEREAS, each enterprise has two funds that support projects in that enterprise; an Expansion Fund to provide facilities for future customers and a Replacement and Improvement Fund to maintain and enhance existing facilities; and

WHEREAS, many projects relate to more than one enterprise and/or more than one fund.

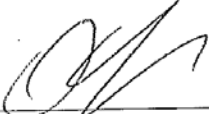
NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE DUBLIN SAN RAMON SERVICES DISTRICT; a public agency in the Counties of Alameda and Contra Costa, California, that the attached policy entitled Project Cost Allocation (Exhibit A) is hereby adopted by the Board of Directors of the Dublin San Ramon Services District.

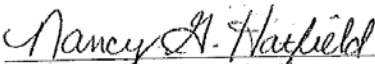
ADOPTED by the Board of Directors of the Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its Regular Meeting held on the 20<sup>th</sup> day of October 2009, and passed by the following vote:

AYES: 5 – Directors Jeffrey G. Hansen, Georgean M. Vonheeder-Leopold, Richard M. Halket, D. L. (Pat) Howard, Daniel J. Scannell

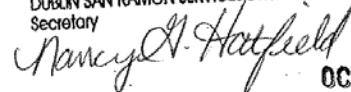
NOES: 0

ABSENT: 0

  
Daniel J. Scannell, President

ATTEST:   
Nancy G. Hatfield, District Secretary

CERTIFIED AS A TRUE AND CORRECT COPY OF  
THE ORIGINAL ON FILE IN THE OFFICE OF  
DUBLIN SAN RAMON SERVICES DISTRICT  
Secretary



OCT 22 2009

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Exhibit A



# POLICY

## Dublin San Ramon Services District

<b>Policy No.:</b>		<b>Type of Policy:</b>	Finance
<b>Policy Title:</b>	Project Cost Allocation		
<b>Policy Description:</b>	Basis for determining how the cost of projects should be allocated between funds		
<b>Approval Date:</b>		<b>Last Review Date:</b>	2009
<b>Approval Resolution No.:</b>		<b>Next Review Date:</b>	2013
<b>Rescinded Resolution No.:</b>	N/A	<b>Rescinded Resolution Date:</b>	N/A

It is the policy of the Board of Directors of Dublin San Ramon Services District:

To allocate project costs in proportion to the benefits that accrue to existing and future customers of each enterprise of the District. In carrying out this policy and depending on the nature of the project, allocation of a project cost may be to more than one enterprise and/or to more than one fund within the enterprise. Procedures for implementing this policy shall be developed and administered by the General Manager to reflect the following guidelines:

1. Project costs are to be equitably allocated to the enterprise (water, local sewer, and regional sewer) in proportion to the benefits derived by that enterprise from the project.
2. Project costs are to be equitably allocated within each enterprise in proportion to the benefits derived by each customer class in proportion to the benefits derived from the project. Projects that provide facilities and capacity to accommodate future customers shall be allocated to expansion funds. Projects that replace and/or enhance an existing facility shall be allocated to replacement and improvement funds.
3. The basis for the allocation of benefits for each capital project shall be documented in the project budget approved by the Board and is to be equitably based upon parameters identifiable to the benefits received. The types of allocations may be Flow based, Product based, Employee based or Customer based. Examples of parameters that are identifiable to the benefit of a project are:



DSRSD Policy

Page 2 of 2

Policy No.:

Policy Title: Project Cost Allocation

- a. Flow based – Example: new biosolids dewatering technology will be installed at the Wastewater Treatment Plant to accommodate 10 mgd of current flow and an additional 6 mgd of future flow – split 62.5%/37.5% replacement/expansion.
  - b. Product based – Example: A new generator may be installed to use excess gas available from the anaerobic digesters as a fuel supply; the excess originates as 500 cubic feet per day digester gas from existing users (replacement and improvement funds) and 9,500 cubic feet per day from future users (expansion funds) – split 5%/95% Regional replacement/expansion.
  - c. Employee based – Example: A new maintenance facility to accommodate 8 existing staff (replacement and improvement funds) and 3 staff that will be added as the District grows (expansion funds). – split 72.7%/27.3% to replacement/expansion in the appropriate enterprise or enterprises.
  - d. Customer Based – Example: A project to support the general administration of the District and/or that provide a general benefit to all customers of the District-split based upon the number of customers served by each enterprise.
4. If the above guidelines do not represent an equitable allocation of costs due to the specific circumstances associated with that project, the General Manager may propose an alternative allocation methodology for the Board's consideration.
  5. All project allocations shall be approved by the Board at the time it approves and/or modifies project budgets.

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