



Montara Water and Sanitary District

Serving the Community of Montara and Moss Beach

P.O. Box 370131
8888 Cabrillo Hwy
Montara, CA 94037-0131
t: 650.728.3545 • f: 650.728.8556

To sensitively manage the natural resources entrusted to our care, to provide the people of Montara - Moss Beach with reliable, high – quality water, wastewater, and trash disposal at an equitable price, and to ensure the fiscal and environmental vitality of the district for future generations. Be open to providing other services desired by our community.

AGENDA

District Board of Directors

8888 Cabrillo Highway
Montara, California 94037

June 1, 2017 at 7:30 p.m.

CALL TO ORDER

ROLL CALL

PRESIDENT'S STATEMENT

ORAL COMMENTS (Items other than those on the agenda)

PUBLIC HEARING

1. [Review and Possible Action Concerning Adoption of a Revised Master Fee Schedule.](#)
2. [Review and Possible Action Concerning Resolution Overruling Protests and Confirming Reports on Sewer Service Charges, Delinquent Sewer Service Charges, Delinquent Refuse Collection Charges and Delinquent Water Charges for FY 2016-2017.](#)

CONSENT AGENDA

1. [Approve Minutes for Meeting on March 16, 2017.](#)
2. [Approve Financial Statements for April 2017.](#)
3. Approve Warrants for June 1, 2017.
4. [SAM Flow Report for April 2017.](#)

5. [Monthly Review of Current Investment Portfolio.](#)
6. [Connection Permit Applications Received.](#)
7. [Monthly Water Production Report for April 2017.](#)
8. [Rain Report.](#)
9. [Solar Energy Report.](#)
10. [Monthly Public Agency Retirement Service Report for March 2017](#)

OLD BUSINESS

1. [Review and Possible Action Concerning Sewer Authority Mid-Coastside Fiscal Year 2017-2018 Budget.](#)
2. [Review and Possible Action Concerning Fiscal Year 2017-2018 Water and Sewer Budgets and Capital Improvement Programs.](#)
3. [Review and Possible Action Concerning 2017 District Water Master Plan Update.](#)

NEW BUSINESS REPORTS

1. Sewer Authority Mid-Coastside Meetings (Boyd)
2. MidCoast Community Council Meeting (Slater-Carter)
3. CSDA Report (Slater-Carter)
4. CCWD, NCCWD Committee Report (Harvey, Huber)
5. Attorney's Report (Schricker)
6. Directors' Reports
7. General Manager's Report (Heldmaier)

FUTURE AGENDAS CONVENE IN CLOSED SESSION

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION

(Government Code §54956.9(d))

Name of case: Claim of J. Cockrel

CONFERENCE WITH REAL PROPERTY NEGOTIATORS

(Gov't. C. §54956.8)

Property: Caltrans Montara Right of Way.

Agency Negotiators: General Manager, District Counsel

Negotiating Party: Caltrans

Under Negotiation: To be determined.

ADJOURNMENT

PARTICIPATION BY TELECONFERENCE

The following Director will participate by teleconference in all or a portion of the meeting of the Board, including Closed Session, from the following locations:

Director Kathryn Slater-Carter – Royal Hamilton Amateur Dinghy Club, Mangroville, 25 Pomander Road, Paget, PG05, Bermuda

Directors participating by teleconference shall post a copy of the Agenda at a location available to the public in the vicinity of the place of their participation. Members of the public will be allowed to participate in open portions of the meeting at the teleconference site(s). All votes taken during a teleconferenced meeting shall be by roll call.

The District has a curfew of 11:00 p.m. for all meetings. The meeting may be extended for one hour by vote of the Board.

NOTE: In accordance with the Government Code, members of the public may address the Board on specific agenda items when that matter is discussed by the Board. Any other items of interest that is within the subject matter jurisdiction of the District may be addressed during the Oral Comments portion of the meeting. Upon request, this agenda will be made available in appropriate alternative formats to persons with a disability. Request for a disability-related modification or an accommodation in order to participate in the public meeting should be made at (650) 728-3545. Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available in the District Clerk's office during normal business hours. Such documents may also be available on the District's web site (www.mwsd.montara.org) subject to staff's ability to post the documents before the meeting.



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager 

**SUBJECT: Review and Possible Action Concerning
Adoption of a Revised Master Fee Schedule.**

Every year the Board adopts a Master Fee Schedule which contains updates to most charges and fees including the Water and Sewer connection charges. Staff has updated the connection charges and service fees based on the cost of construction and the consumer price index.

The new Water Rates and Sewer Service Charges are also included in the proposed Master Fee Schedule.

The following are the major changes from the prior year:

- The Sewer Service Charge rate is suggested to be set at tonight's meeting to increase by 2.88% from \$41.73 to \$42.93. With this increase the District reaches the maximum allowable amount under the currently set prop 218 limit. The limit of \$42.93 was set in 2010 and was anticipated to be reached in 2013. The increase is necessary to fund necessary capital improvements and increased SAM assessments.
- The Water Rates are set at the established annual prop 218 level for the coming Fiscal Year with an increase of 3% over the current Fiscal Year. The increase is necessary to fund future capital improvements, increased debt service, and building capital reserves.
- Connection Charges and other construction related fees have been increased by 3.39% in accordance with the California Construction Cost Index. The Application Fees and other Miscellaneous Fees that depend on District staff for review have been increased by 3.79% in accordance with the U.S. Bureau of Labor's Consumer Price Index (All Urban Consumers – SF-Bay).

RECOMMENDATION:

Open the public hearing, consider relevant public testimony, close the public hearing, and adopt *Ordinance No.*_____. *Ordinance of the Montara Water and Sanitary District Restating and Amending Master Fee Schedule.*

Attachments

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

WHEREAS, the Montara Water and Sanitary District Code (“Code”) includes regulations governing connections to and use of the District’s water and sewerage facilities, the construction, operation and maintenance thereof and for the establishment and collection of all fees and charges pertaining thereto; and

WHEREAS, the Code further provides for the establishment and collection of monthly rates to be charged for the collection, removal, and disposal of refuse and for recycling services performed by the District’s franchisee under agreement with the District; and

WHEREAS, the Code provides that such fees and charges may be set forth in a Master Fee Schedule; and

WHEREAS, periodically such fees and charges are reviewed and adjusted to conform to the costs corresponding to the services, commodities and facilities to which they pertain; and

WHEREAS, the fees and charges pertaining to water and sewer services and facilities set forth herein and for the collection, removal, and disposal of refuse for all occupied premises (except agricultural premises) and recycling services within the District do not exceed the corresponding maximum amounts heretofore approved in accordance with the requirements of law including, to the extent applicable, the provisions of Section 6 of Article XIII D of the California Constitution (enacted by Proposition 218, November 6, 1996 Statewide election); and

WHEREAS, the fees and charges pertaining to water and sewer services and facilities set forth herein are amended; and

WHEREAS, the fees and charges pertaining to the collection, removal, and disposal of refuse for all occupied premises (except agricultural premises) and recycling services are hereby restated, having heretofore been established by ordinance duly adopted; and

WHEREAS, notice was published twice in the Half Moon Bay Review, a newspaper of general circulation within the District, giving notice of public hearing to consider adoption of revised fees or charges effective July 1, 2017 for water and sewer services and facilities as set forth herein;

WHEREAS, all persons present at the aforesaid hearing interested in the adoption of the revised fees or charges herein set forth were heard or given the opportunity to be heard on the matter of said adoption and this Board considered all statements so made or documents pertaining thereto presented at the hearing;

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

NOW, THEREFORE, THE BOARD OF THE MONTARA WATER AND
SANITARY DISTRICT, A PUBLIC AGENCY IN THE COUNTY OF SAN MATEO,
CALIFORNIA, DOES ORDAIN AS FOLLOWS:

SECTION 1. The following provisions of the Master Fee Schedule are hereby
amended to read as follows:

SEWER SERVICE CHARGE RATES

The annual sewer service charge for property occupancy uses corresponding to the
categories specified hereinafter, shall be, and is hereby established as an amount
equal to the applicable rate hereinafter specified times the cubic feet of water
consumption attributable to such property per annum divided by one hundred
(MWSD Code §4-2.100).

| <u>Classification</u> | <u>Rate/HCF*</u> | <u>Minimum Charge</u> |
|-------------------------|------------------|-----------------------|
| Residential | \$42.93 | \$686.91 |
| Restaurants | \$77.87 | \$1,245.92 |
| Motels | \$46.16 | \$738.60 |
| Offices | \$37.94 | \$607.07 |
| General Commercial | \$41.11 | \$657.77 |
| All other Commercial | \$44.73 | \$715.72 |
| Schools | \$38.63 | \$618.10 |
| Hospitals | \$43.19 | \$691.02 |

*Hundred cubic feet

Upon new connection to the District's sewerage system, the applicant shall pay the
pro-rated amount of sewer service charges for the remainder of the fiscal year in
which connection is made based upon the average annual sewer service charge of
all users within the applicant's user classification.

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

(MWSD Code §4-2.100(f))

SECTION 2. The following provisions of the Master Fee Schedule are hereby amended to read as follows:

| <u>Description of Fee*</u> | <u>Fee</u> |
|---|-----------------------------------|
| Sewer Connection Permit (MWSD Code §3-9.500) | \$24,913.00 |
| Fixture Unit Charge (MWSD Code §3-9.500) | \$997.00 |
| Fixture Unit Charge – addition of Fixture Units to, or within, an existing building, structure, or portion thereof (MWSD Code §3-9.500) | \$498.50 |
| Sewer Connection Permit for Conversion from Septic System to Sewerage System (MWSD Code §§3-4.800, 3-9.500) | \$15,827.00 |
| Fixture Unit Charge—Conversion from Septic System to Sewerage System (MWSD Code §§3-4.800, 3-9.500) | \$633.00 |
| Sewer Connection Permit for Second Dwelling Units—Fixture Unit Charge (MWSD Code §3-10.200) | \$633.00 |
| Connection Permit Administrative Fee (MWSD Code §3-9.600,) | Actual Cost (\$505.00 minimum) |
| Connection Permit Inspection Fee (MWSD Code §3-9.600,) | Actual Cost (\$477.00 minimum) |
| Remodel Permit Fee (MWSD Code §3-9.500) | Actual Cost (\$354.00 minimum) |
| Private Sewer System Permit (MWSD Code §3-4.200,) | Actual Cost (\$163.00 minimum) |

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

| | |
|--|---|
| Private Sewer System Deposit for Hydrologic Investigation (MWSD Code §3-4.1200 (c)) | Actual Cost (\$2,819.00 minimum) |
| Connection Permit Administrative Fee - Subdivisions & Commercial Units (MWSD Code §3-9.600,) | Actual Cost (\$505.00 minimum) |
| Connection Permit Inspection Fee - Subdivisions & Commercial Units (MWSD Code §3-9.600,) | Actual Cost (\$477.00 minimum) |
| Administrative Fee for Reimbursement Agreement (MWSD Code §3-9.500) | Actual Cost (\$505.00 minimum) |
| Administrative Fee for Main Line Extension Agreement (MWSD Code §3-9.500) | Actual Cost (\$505.00 minimum) |
| Connection Fee to Connect to Interceptor (MWSD Code §3-9.500) | Prorata share of current value of interceptor |
| Miscellaneous Inspection Fee (MWSD Code §3-9.500) | Actual Cost (\$477.00 minimum) |
| Second Unit Connection Fee - Studio Unit (10 fixture units) (MWSD Code §3-10.200) | \$9,967.00 |
| Second Unit Connection Fee - One Bedroom Unit (11 fixture units) (MWSD Code §3-10.200)) | \$10,965.00 |
| Second Unit Connection Fee - Additional Fixture Units (MWSD Code §3-10.200) | \$997.00 |
| Second Unit Permit Application Fee (MWSD Code §3-10.400) | Actual Cost (\$505.00 minimum) |

O R D I N A N C E N O. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

Developer Service Fee: \$2,737.00 minimum deposit against which all District costs to process application are charged.
(MWSD Code §§5-3.102, 5-3.210)

Administrative Charge for Processing \$44.00 per account
Collection of Delinquent Refuse and Water
Charges On Tax Roll
(MWSD Code §1-5.200)

Charge to Photocopy Documents \$1.45 per page for first four pages; \$0.37 for each page over four.

Charge for Failure to Obtain Permit Double amount of Permit Fee,
(MWSD Code §1-5.200) minimum (actual collection costs, if in excess of minimum)

*Where minimums or deposits are specified, no District services will be provided when the estimated costs to complete the services exceed the minimum paid or when the deposit has been exhausted unless and until an amount equal to the estimated cost for completion has been deposited with the District. Balances remaining upon completion of services will be refunded.

SECTION 3. The following provisions of the Master Fee Schedule are hereby amended to read as follows:

(a) WATER QUANTITY AND METER SERVICE CHARGES
(MWSD Code §§ 5-5.102, 103)

| <u>Rate Components</u> | <u>Rate**</u> |
|------------------------|-----------------|
| Tier 1 0 to 6 HCF* | \$8.12 per HCF |
| Tier 2 7 – 13 HCF | \$10.83 per HCF |
| Tier 3 14 – 27 HCF | \$13.54 per HCF |
| Tier 4 over 27 HCF | \$18.96 per HCF |
| | |

O R D I N A N C E N O. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

| | |
|--|--------------------|
| Meter Service Charge-5/8" (standard residential size) | \$27.96 per month |
| Meter Service Charge-3/4" | \$30.76 per month |
| Meter Service Charge-1" | \$39.15 per month |
| Meter Service Charge-1 ½" | \$50.33 per month |
| Meter Service Charge-2" | \$81.09 per month |
| Meter Service Charge-3" | \$307.59 per month |
| Meter Service Charge-4" | \$391.48 per month |

*HCF=Hundred Cubic Feet (1 cubic foot ≈ 7.4805 gal.; 1 HCF = 748 gal.)

(b) FIRE PROTECTION WATER SYSTEM CHARGES

Private Fire Protection Service Per Meter Per Month:
(MWSD Code §5-5.106)

| | |
|-------------------------------|---------|
| 4-inch connection or smaller: | \$16.87 |
| 6-inch connection: | \$23.93 |
| 8-inch connection: | \$31.88 |
| 10-inch connection: | \$67.18 |
| 12-inch connection: | \$93.76 |

Private Fire Protection Administrative Fee:* \$505.00 minimum
(MWSD Code §5-3.208)

| | |
|--|---|
| Installation of Private Fire Protection Service from Meter to District Main:* (MWSD Code §5-5.204) | Cost invoiced to District by contractor; estimated cost to be deposited |
|--|---|

| | |
|---|-------------|
| Private Fire Protection Connection Charge (3/4" to 5/8" meter): | \$5,106.00 |
| Private Fire Protection Connection Charge (1" meter): | \$8,528.00 |
| Private Fire Protection Connection Charge (1½ " meter): | \$17,002.00 |
| Private Fire Protection Connection Charge (2" meter): | \$27,215.00 |
| Private Fire Protection Connection Charge (3" meter): | \$51,058.00 |
| Private Fire Protection Connection Charge (4" meter): | \$85,119.00 |

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ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

Private Fire Protection Connection Charge (6" meter): \$141,885.00
Private Fire Protection Connection Charge (8" meter): \$236,525.00
Private Fire Protection Connection Charge (10" meter): \$394,284.00
(MWSD Code §5-3.208)

Private Fire Protection Inspection Fee* \$477.00
(MWSD Code §5-3.210)

(c) WATER SYSTEM CONNECTION METER CHARGES (MWSD Code §§5-3.204, 5-3.205)

Charge determined by District's cost of purchase corresponding to meter size.

(d) WATER SYSTEM CONNECTION CAPACITY CHARGES (MWSD Code §5-3.312)

| | |
|--|--------------|
| 5/8 x 3/4 inch meter | \$16,262.00 |
| 3/4 inch meter | \$17,889.00 |
| 1 inch meter | \$22,766.00 |
| 1-1/2 inch meter | \$29,275.00 |
| 2 inch meter | \$47,159.00 |
| 3 inch meter | \$178,879.00 |
| 4 inch meter | \$227,666.00 |
| Above 4 inch meter: charge determined by General Manager Based on estimated water usage | |

(e) MISCELLANEOUS WATER SYSTEM SERVICE FEES:*

Check not honored by bank: \$29.00
(MWSD Code §§1-5.200, 5-5.122)

Poor credit history deposit: Twice estimated first payment
(MWSD Code §§1-5.200, 5-3.210)

Reconnection Charge due to Non-Payment: \$70.00
(MWSD Code §§5-3.210, 5-5.120)

Developer Service Fee: \$2,737.00 minimum deposit against which all
District costs to process application are charged.
(MWSD Code §§5-3.102, 5-3.210)

Hydrant Meter Deposit: \$1,237.00 against which water use charged.
(MWSD Code §5-4.227)

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ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

| | |
|---|------------------|
| Hydrant Test Fee (MWSD Code §§5-3.208, 5-5.202) | \$552.25 |
| Connection Administrative Fee minimum deposit applied to actual hourly costs to process application (MWSD Code §§5-3.202, 5-3.203) | \$505.00 |
| Connection Inspection Fee (MWSD Code §5-3.210) | \$477.00 |
| Connection construction cost deposit applied to actual cost (MWSD Code §§5-3.202, 5-3.203) | \$2,737.00 |
| Service Charge for Posting Door Tag for Delinquent Account: customer per incident. (MWSD Code §§1-5.200, 5-3.210) | \$32.00 per |
| Credit for Customer paying bill using ACH: (MWSD Code §5-3.200) | \$3.21 per bill. |
| Service Charge for Unauthorized Use of Fire Hydrant: incident plus actual water used plus damages. (MWSD Code §5-5.202) | \$146.00 per |
| Service Charge for Cross Connection Control Device Test: tested device. (MWSD Code §5-6.400) | \$110.00 per |

*Where minimums or deposits are specified, no District services will be provided when the estimated costs to complete the services exceed the minimum paid or when the deposit has been exhausted unless and until an amount equal to the estimated cost for completion has been deposited with the District. Balances remaining upon completion of services will be refunded.

SECTION 4. The following provisions of the Master Fee Schedule are hereby restated:

The monthly rates to be charged by the District's Franchisee for the collection, removal, and disposal of refuse for all occupied premises (except agricultural

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

premises) and recycling services within the District commencing on January 1, 2017 and until thereafter revised are:
(MWSD Code §2-7.100)

RESIDENTIAL

1. Weekly collection, single container placed in front of premises, wet and dry garbage ("first can service") in wheeled carts:
 - a. Container limits: volume - 20 gals. (3/10 cu yd), weight 40 lbs, per mo charge \$23.02
 - b. Container limits: volume - 32 gals (1/4 cu yd), weight 60 lbs, per mo charge \$28.31
 - c. Container limits: volume - 64 gals (1/2 cu yd), weight 100 lbs, per mo charge \$93.01

2. Special Services (charges added to above, basic changes):
 - a. Container placed at side or rear of dwelling - per container \$7.07
 - b. Container not placed at specified collection point and return call required- per container \$14.42
 - c. Extra 30 gallon bag with collection (excludes 20 gallon cart service), per bag \$7.64
 - d. Special collections combined with regular service, including collections for brush, yard clippings, boxes, etc. estimate

3. Bulky goods dropoff service four times a year within Montara District limits including greenwaste and motor oil in Recology-provided bottles only inc. w/service

4. Weekly commingled recyclable materials collection (64 gallon wheeled cart) inc. w/service

5. Every other week greenwaste (yard trimmings, etc.) collection, limited to four (4) thirty gallon containers - customers own containers inc. w/service

6. Bulky goods curbside collection service, limited to four (4) times a year One item up to 200 lbs or 5-30 gallon bags inc. w/service

7. Dropoff at Recycling yard in Pacifica of motor oil, latex paint, unpainted lumber, large pieces of metal, styrofoam, e-waste, large white goods, furniture, mattresses, large amounts of recyclable materials inc. w/service

8. Christmas trees free of charge thru January 31st of each year inc. w/service
 - a. After January 31st charge is \$20 per tree for removal \$20.00

MULTIFAMILY, COMMERCIAL AND INDUSTRIAL SERVICE

ORDINANCE NO. ____

ORDINANCE OF THE MONTARA WATER AND SANITARY DISTRICT RESTATING AND AMENDING MASTER FEE SCHEDULE

1. Service to restaurants, hotels, cafes, apartment houses, stores and similar places of business, factories, schools and institutions, wet and dry garbage-container limits: volume - 30 gal. cans (1/4 cu. Yd), weight - 75 lbs

a. Regular collections:

1-64 gallon collection once per week \$111.69

1-96 gallon collection once per week \$182.77

b. Additional 64 or 96 gallon commercial carts picked up more than once a week will be original charge times the number of pickups Will vary by size

2. Commercial Container Rental:

a. 1 cubic yard box - per mo. \$50.81

b. 2 cubic yard box - per mo. \$65.88

3. Commercial Container Collections:

a. 1 cubic yard box - per collection \$42.94

b. 2 cubic yard box - per collection \$85.43

4. Compacted Commercial Container Service:

a. 1 cubic yard box - per collection \$83.81

b. 2 cubic yard box - per collection \$169.30

5. Recyclable material collection up to five times a week inc. w/service

DEBRIS BOX SERVICE

7, 14, 20 and 30 yard containers

a. Container rental, delivery and pickup charge \$337.54

b. \$67 per ton confirmed by disposal site weight slip Tonnage based

SPECIAL PROVISIONS

1. Financial hardship rate for weekly collection for single container placed in front of premises, wet and dry garbage 30 gallon can (PGE CARE PROGRAM) 15% reduction \$24.11

ORDINANCE NO. ____

**ORDINANCE OF THE MONTARA WATER AND
SANITARY DISTRICT RESTATING AND AMENDING
MASTER FEE SCHEDULE**

SECTION 5. All ordinances or portions thereof in conflict herewith shall be, and hereby are, repealed to the extent of such conflict.

SECTION 6. Upon adoption, this ordinance shall be entered in the minutes of the Board and posted in three (3) places in the District and shall become effective immediately upon the expiration of one week following said posting.

President, Montara Water and Sanitary District

COUNTERSIGNED:

Secretary, Montara Water and Sanitary District

* * *

I HEREBY CERTIFY that the foregoing Ordinance No. ____ was duly and regularly adopted and passed by the Board of the Montara Water and Sanitary District, San Mateo County, California, at a Regular meeting thereof held on the 1st day of June 2017, by the following vote:

AYES, Directors

NOES, Directors:

ABSENT, Directors:

Secretary, Montara Water and Sanitary District

MWSD Master Fee Schedule
Cost Increases
June 2017

| Fee | 2016 Adjusted Fee | 2017 CCI | 2017 CPI | 2017 Adjusted Fee |
|--|-------------------|----------|----------|-------------------|
| Sewer Connection Permit | \$24,096 | 1.0339 | | \$24,913 |
| Fixture Unit Charge | \$964.00 | | | \$997 |
| Sewer Connection Permit--Paid Sewer Svc Chg | \$15,308 | 1.0339 | | \$15,827 |
| Fixture Unit Charge--Sewer Service Paid | \$612.00 | | | \$633 |
| Connection Permit Administrative Fee | \$487 | | 1.0379 | \$505 |
| Connection Permit Inspection Fee | \$460 | | 1.0379 | \$477 |
| Remodel Permit Fee | \$341 | | 1.0379 | \$354 |
| Second Unit Connection Fee--Studio | \$9,640 | 1.0339 | | \$9,967 |
| Second Unit Connection Fee--One Bedroom | \$10,605 | 1.0339 | | \$10,965 |
| Second Unit Permit Application | \$201 | | 1.0379 | \$209 |
| Private Sewer System Permit | \$157 | | 1.0379 | \$163 |
| Private Sewer Hydrologic Investigation | \$2,727 | 1.0339 | | \$2,819 |
| Administrative Charge for Processing Del. Trash | \$42 | | 1.0379 | \$44 |
| Charge for copying documents -FirstFour Pages | \$1.40 | | 1.0379 | \$1.45 |
| Additional Pages | \$0.36 | | 1.0379 | \$0.37 |
| WATER CHARGES | | | | |
| Miscellaneous Service Fees: | | | | |
| Check Not Honored by Bank | \$28 | | 1.0379 | \$29 |
| Reconnection Fee due to non-payment | \$67 | | 1.0379 | \$70 |
| Engineering Review Fee | \$2,637 | | 1.0379 | \$2,737 |
| Hydrant Meter Deposit | \$1,192 | | 1.0379 | \$1,237 |
| Service Charge for Posting Door Tag for Delinq. Acct | \$31 | | 1.0379 | \$32 |
| Service Charge for Unauthorized Use of Fire Hydrant | \$141 | | 1.0379 | \$146 |
| Cross Connection Control Device Test | \$106 | | 1.0379 | \$110 |
| Fixture Unit Count | \$106 | | 1.0379 | \$110 |
| Private Fire Protection Connection Charge: | | | | |
| 3/4" to 5/8" meter: | \$4,939 | 1.0339 | | \$5,106 |
| 1" meter | \$8,248 | 1.0339 | | \$8,528 |
| 1 1/2" meter | \$16,445 | 1.0339 | | \$17,002 |
| 2" meter | \$26,323 | 1.0339 | | \$27,215 |
| 3" meter | \$49,384 | 1.0339 | | \$51,058 |
| 4" meter | \$82,328 | 1.0339 | | \$85,119 |
| 6" meter | \$137,233 | 1.0339 | | \$141,885 |
| 8" meter | \$228,770 | 1.0339 | | \$236,525 |
| 10" meter | \$381,356 | 1.0339 | | \$394,284 |
| Water System Connection Capacity Charge: | | | | |
| 5/8" x 3/4" meter | \$15,729 | 1.0339 | | \$16,262 |
| 3/4" meter | \$17,302 | 1.0339 | | \$17,889 |
| 1" meter | \$22,020 | 1.0339 | | \$22,766 |
| 1-1/2" meter | \$28,315 | 1.0339 | | \$29,275 |
| 2" meter | \$45,613 | 1.0339 | | \$47,159 |
| 3" meter | \$173,014 | 1.0339 | | \$178,879 |
| 4" meter | \$220,201 | 1.0339 | | \$227,666 |
| Connection Permit Administrative Fee | \$487 | | 1.0379 | \$505 |
| Connection Permit Inspection Fee | \$463 | | 1.0379 | \$481 |
| California Cost of Construction Increase | | | | |
| | Apr-16 | 6249 | | |
| | Apr-17 | 6461 | 3.39% | |
| US Bur. Of Labor All Urban Consumers-SF Bay | | | | |
| | Apr-16 | 264.565 | | |
| | Apr-17 | 274.589 | 3.79% | |

MWSD Master Fee Schedule
Cost Increases
June 2017

| Fee | 2016 Adjusted Fee | 2017 CCI | 2017 CPI | 2017 Adjusted Fee |
|--|-------------------|----------|----------|-------------------|
| Sewer Connection Permit | \$24,096 | 1.0339 | | \$24,913 |
| Fixture Unit Charge | \$964.00 | | | \$997 |
| Sewer Connection Permit--Paid Sewer Svc Chg | \$15,308 | 1.0339 | | \$15,827 |
| Fixture Unit Charge--Sewer Service Paid | \$612.00 | | | \$633 |
| Connection Permit Administrative Fee | \$487 | | 1.0379 | \$505 |
| Connection Permit Inspection Fee | \$460 | | 1.0379 | \$477 |
| Remodel Permit Fee | \$341 | | 1.0379 | \$354 |
| Second Unit Connection Fee--Studio | \$9,640 | 1.0339 | | \$9,967 |
| Second Unit Connection Fee--One Bedroom | \$10,605 | 1.0339 | | \$10,965 |
| Second Unit Permit Application | \$201 | | 1.0379 | \$209 |
| Private Sewer System Permit | \$157 | | 1.0379 | \$163 |
| Private Sewer Hydrologic Investigation | \$2,727 | 1.0339 | | \$2,819 |
| Administrative Charge for Processing Del. Trash | \$42 | | 1.0379 | \$44 |
| Charge for copying documents -FirstFour Pages | \$1.40 | | 1.0379 | \$1.45 |
| Additional Pages | \$0.36 | | 1.0379 | \$0.37 |
| WATER CHARGES | | | | |
| Miscellaneous Service Fees: | | | | |
| Check Not Honored by Bank | \$28 | | 1.0379 | \$29 |
| Reconnection Fee due to non-payment | \$67 | | 1.0379 | \$70 |
| Engineering Review Fee | \$2,637 | | 1.0379 | \$2,737 |
| Hydrant Meter Deposit | \$1,192 | | 1.0379 | \$1,237 |
| Service Charge for Posting Door Tag for Delinq. Acct | \$31 | | 1.0379 | \$32 |
| Service Charge for Unauthorized Use of Fire Hydrant | \$141 | | 1.0379 | \$146 |
| Cross Connection Control Device Test | \$106 | | 1.0379 | \$110 |
| Fixture Unit Count | \$106 | | 1.0379 | \$110 |
| Private Fire Protection Connection Charge: | | | | |
| 3/4" to 5/8" meter: | \$4,939 | 1.0339 | | \$5,106 |
| 1" meter | \$8,248 | 1.0339 | | \$8,528 |
| 1 1/2" meter | \$16,445 | 1.0339 | | \$17,002 |
| 2" meter | \$26,323 | 1.0339 | | \$27,215 |
| 3" meter | \$49,384 | 1.0339 | | \$51,058 |
| 4" meter | \$82,328 | 1.0339 | | \$85,119 |
| 6" meter | \$137,233 | 1.0339 | | \$141,885 |
| 8" meter | \$228,770 | 1.0339 | | \$236,525 |
| 10" meter | \$381,356 | 1.0339 | | \$394,284 |
| Water System Connection Capacity Charge: | | | | |
| 5/8" x 3/4" meter | \$15,729 | 1.0339 | | \$16,262 |
| 3/4" meter | \$17,302 | 1.0339 | | \$17,889 |
| 1" meter | \$22,020 | 1.0339 | | \$22,766 |
| 1-1/2" meter | \$28,315 | 1.0339 | | \$29,275 |
| 2" meter | \$45,613 | 1.0339 | | \$47,159 |
| 3" meter | \$173,014 | 1.0339 | | \$178,879 |
| 4" meter | \$220,201 | 1.0339 | | \$227,666 |
| Connection Permit Administrative Fee | \$487 | | 1.0379 | \$505 |
| Connection Permit Inspection Fee | \$463 | | 1.0379 | \$481 |
| California Cost of Construction Increase | | | | |
| | Apr-16 | 6249 | | |
| | Apr-17 | 6461 | 3.39% | |
| US Bur. Of Labor All Urban Consumers-SF Bay | | | | |
| | Apr-16 | 264.565 | | |
| | Apr-17 | 274.589 | 3.79% | |

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CPI-All Urban Consumers (Current Series)

Series Id: CUURA422SA0, CUUSA422SA0

Not Seasonally Adjusted

Series Title: All items in San Francisco-Oakland-San Jose, CA, all urban consumers, not seasonally adjusted

Area: San Francisco-Oakland-San Jose, CA

Item: All items

Base Period: 1982-84=100

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| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual | HALF1 | HALF2 |
|------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|---------|---------|---------|
| 2007 | | 213.688 | | 215.842 | | 216.123 | | 216.240 | | 217.949 | | 218.485 | 216.048 | 214.736 | 217.361 |
| 2008 | | 219.612 | | 222.074 | | 225.181 | | 225.411 | | 225.824 | | 218.528 | 222.767 | 221.730 | 223.804 |
| 2009 | | 222.166 | | 223.854 | | 225.692 | | 225.801 | | 226.051 | | 224.239 | 224.395 | 223.305 | 225.484 |
| 2010 | | 226.145 | | 227.697 | | 228.110 | | 227.954 | | 228.107 | | 227.658 | 227.469 | 226.994 | 227.944 |
| 2011 | | 229.981 | | 234.121 | | 233.646 | | 234.608 | | 235.331 | | 234.327 | 233.390 | 232.082 | 234.698 |
| 2012 | | 236.880 | | 238.985 | | 239.806 | | 241.170 | | 242.834 | | 239.533 | 239.650 | 238.099 | 241.201 |
| 2013 | | 242.677 | | 244.675 | | 245.935 | | 246.072 | | 246.617 | | 245.711 | 245.023 | 243.894 | 246.152 |
| 2014 | | 248.615 | | 251.495 | | 253.317 | | 253.354 | | 254.503 | | 252.273 | 251.985 | 250.507 | 253.463 |
| 2015 | | 254.910 | | 257.622 | | 259.117 | | 259.917 | | 261.019 | | 260.289 | 258.572 | 256.723 | 260.421 |
| 2016 | | 262.600 | | 264.565 | | 266.041 | | 267.853 | | 270.306 | | 269.483 | 266.344 | 263.911 | 268.777 |
| 2017 | | 271.626 | | 274.589 | | | | | | | | | | | |

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California Construction Cost Index (CCCI)

| Month | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
|------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| January | 6373 | 6106 | 6073 | 5898 | 5774 | 5683 | 5592 | 5260 | 5309 | 4983 | 4869 | 4620 |
| February | 6373 | 6132 | 6077 | 5896 | 5782 | 5683 | 5624 | 5262 | 5295 | 4983 | 4868 | 4603 |
| March | 6373 | 6248 | 6069 | 5953 | 5777 | 5738 | 5627 | 5268 | 5298 | 4999 | 4871 | 4597 |
| April | 6461 | 6249 | 6062 | 5956 | 5786 | 5740 | 5636 | 5270 | 5296 | 5004 | 4872 | 4600 |
| May | 6455 | 6240 | 6069 | 5957 | 5796 | 5755 | 5637 | 5378 | 5288 | 5023 | 4886 | 4599 |
| June | | 6238 | 6055 | 5961 | 5802 | 5754 | 5643 | 5394 | 5276 | 5065 | 4842 | 4593 |
| July | | 6245 | 6055 | 5959 | 5804 | 5750 | 5654 | 5401 | 5263 | 5135 | 4849 | 4609 |
| August | | 6244 | 6055 | 5959 | 5801 | 5778 | 5667 | 5401 | 5265 | 5142 | 4851 | 4616 |
| September | | 6267 | 6113 | 5959 | 5802 | 5777 | 5668 | 5381 | 5264 | 5194 | 4942 | 4619 |
| October | | 6343 | 6114 | 5969 | 5911 | 5780 | 5675 | 5591 | 5259 | 5393 | 4943 | 4867 |
| November | | 6344 | 6109 | 5981 | 5903 | 5779 | 5680 | 5599 | 5259 | 5375 | 4978 | 4891 |
| December | | 6373 | 6108 | 5977 | 5901 | 5768 | 5680 | 5596 | 5262 | 5322 | 4981 | 4877 |
| Annual % * | | 4.4% | 2.2% | 1.3% | 2.3% | 1.5% | 1.5% | 6.3% | -1.1% | 6.8% | 2.1% | 5.4% |

The California Construction Cost Index is developed based upon Building Cost Index (BCI) cost indices for San Francisco and Los Angeles produced by Engineering News Record (ENR) and reported in the second issue each month for the previous month. This table is updated at the end of each month.

The ENR BCI reports cost trends for specific construction trade labor and materials in the California marketplace.

* Annual Percentage is calculated from December to December.

This page last updated: 5/11/17

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Board of the Montara Water and Sanitary District proposes to adopt an ordinance revising the Master Fee Schedule. This document contains most of the fees levied by the District including the Sewer and Water Service Charges and Sewer and Water Connection Permit fees. The District proposes to update all of these fees in accordance with inflationary increases occurring since the last update. The Board shall consider adoption of this ordinance at a meeting of the Board as follows:

DATE: June 1, 2017

TIME: 7:30 p.m., or as soon thereafter as the matter may be considered


PLACE: District Board Chambers
8888 Cabrillo Highway
Montara, CA 94037
(www.mwsd.montara.com)



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager 

SUBJECT: Review and Possible Action Concerning Resolution Overruling Protests and Confirming Reports on Sewer Service Charges, Delinquent Sewer Service Charges, Delinquent Refuse Collection Charges and Delinquent Water Charges for FY 2017-2018.

The Health and Safety Code requires that in order for sewer service charges to be placed on the property tax roll a public hearing must be held. The proposed Sewer Service Charge rate is set at \$42.93. The Code also provides for collection of delinquent water service and refuse collection charges under the tax roll. The District has adopted ordinances enabling collection of the sewer service and delinquent water and refuse collection charges under the property tax roll.

The attached notices regarding collection of the foregoing charges and delinquent charges were published in the HMB Review. The Board must now hold a public hearing at which time everyone is given the opportunity to speak regarding their proposed charges. Once the public hearing is held, the Board may then adopt the attached resolution that confirms the final charges, including any Board-directed changes, for the coming fiscal year.

RECOMMENDATION:

Open the public hearing, allow pertinent public testimony, close the public hearing, and adopt RESOLUTION NO. _____, *Resolution of the Montara Water and Sanitary District Overruling Protests and Confirming Reports on Sewer Service Charges for Fiscal Year 2017-2018 and Delinquent Sewer Service, Refuse Collection and Water Service Charges for Fiscal Year 2016-2017, Certifying List of Lots or Parcels of Land and Corresponding Charges Against Said Lots or Parcels and Directing Transmittal of Said Certified List and Charges to County Controller for Entry on the Current Assessment Roll.*

Attachments (some attachments provided at meeting)

RESOLUTION NO. _____

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT OVERRULING PROTESTS, CONFIRMING REPORTS ON SEWER SERVICE CHARGES FOR FISCAL YEAR 2017-2018 AND DELINQUENT REFUSE COLLECTION AND WATER SERVICE CHARGES FOR FISCAL YEAR 2016-2017, CERTIFYING LIST OF LOTS OR PARCELS OF LAND AND CORRESPONDING CHARGES AGAINST SAID LOTS OR PARCELS AND DIRECTING TRANSMITTAL OF SAID CERTIFIED LIST AND CHARGES TO COUNTY CONTROLLER FOR ENTRY ON THE CURRENT ASSESSMENT ROLL

WHEREAS, a written Report containing a description of each parcel of real property that shall receive sewerage services and facilities from the District and the amount of the service charge for each such parcel for Fiscal Year 2017-2018 was prepared and filed with the Secretary of the District; and

WHEREAS, a written Report containing a description of each parcel of real property receiving refuse collection and recycling services from the District for which charges are delinquent and the amount of such delinquency for each designated parcel for Fiscal Year 2016-2017 was prepared and filed with the District Secretary; and

WHEREAS, a written Report containing a description of each parcel of real property receiving water services and facilities from the District for which charges are delinquent and the amount of such delinquency for each designated parcel for Fiscal Year 2016-2017 was prepared and filed with the Secretary of the District; and

WHEREAS, hearing was set for consideration of the Reports on Sewer Service Charges for Fiscal Year July 1, 2017 - June 30, 2018, Delinquent Refuse Collection Charges and Delinquent Water Service Charges for Fiscal Year July 1, 2016 - June 30, 2017 for the purpose of collecting said charges on the assessment roll of the County of San Mateo pursuant to Sections 5470 through 5473.11 of the California Health and Safety Code; and

WHEREAS, notice was given of the date, time and place of the above-mentioned hearing in accordance with the provisions of said Code; and

WHEREAS, said matter came on regularly for hearing as so noticed; and

WHEREAS, such written protests or other written communications objecting to the aforesaid Reports, or any of them, or any matter therein contained, that were submitted were considered by this Board at said hearing

RESOLUTION NO. _____

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT OVERRULING PROTESTS, CONFIRMING REPORTS ON SEWER SERVICE CHARGES FOR FISCAL YEAR 2017-2018 AND DELINQUENT REFUSE COLLECTION AND WATER SERVICE CHARGES FOR FISCAL YEAR 2016-2017, CERTIFYING LIST OF LOTS OR PARCELS OF LAND AND CORRESPONDING CHARGES AGAINST SAID LOTS OR PARCELS AND DIRECTING TRANSMITTAL OF SAID CERTIFIED LIST AND CHARGES TO COUNTY CONTROLLER FOR ENTRY ON THE CURRENT ASSESSMENT ROLL

and all persons present and desiring to be heard were given the opportunity to be heard;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF THE MONTARA WATER AND SANITARY DISTRICT, A PUBLIC AGENCY IN THE COUNTY OF SAN MATEO, CALIFORNIA, AS FOLLOWS:

1. Objections to, and protests against, the above-described Reports of Sewer Service Charges for Fiscal Year 2017-2018 and Delinquent Refuse Collection Charges and Delinquent Water Service Charges, respectively, for fiscal year 2016-2017 proposed for collection on the assessment roll of the County of San Mateo were not made by owners of a majority of the separate parcels of property described in each of said Reports against which such charges for the corresponding services and facilities provided by the District were fixed.

2. Any and all objections to, and protests against, said Reports of Sewer Service Charges, Delinquent Refuse Collection Charges and Delinquent Water Service Charges have been heard and considered by this Board and said objections and protests shall be, and each of them is, hereby overruled.

3. Said Reports of Sewer Service Charges, Delinquent Refuse Collection Charges and Delinquent Water Service Charges are hereby adopted in full without revision, change, reduction, or modification of any charge specified therein for entry of said charges on the assessment roll, and the list of the lots or parcels of land as they appear on the current assessment roll subject to such charges and the amounts of the installments of such charges and the interest to be entered against such lots or parcels on the assessment roll are hereby certified.

4. The Secretary of the District is hereby authorized and directed to file with the County Controller of the County of San Mateo, on or before the 30th day of July 2017, copies of the above-described Reports, or a document combining said Reports, upon each of which, or upon the combined Report, shall be

RESOLUTION NO. _____

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT OVERRULING PROTESTS, CONFIRMING REPORTS ON SEWER SERVICE CHARGES FOR FISCAL YEAR 2017-2018 AND DELINQUENT REFUSE COLLECTION AND WATER SERVICE CHARGES FOR FISCAL YEAR 2016-2017, CERTIFYING LIST OF LOTS OR PARCELS OF LAND AND CORRESPONDING CHARGES AGAINST SAID LOTS OR PARCELS AND DIRECTING TRANSMITTAL OF SAID CERTIFIED LIST AND CHARGES TO COUNTY CONTROLLER FOR ENTRY ON THE CURRENT ASSESSMENT ROLL

endorsed over his or her signature a statement that each such Report had been finally adopted by the Board of the Montara Water and Sanitary District.

5. The County Controller of the County of San Mateo shall, upon receipt of said Reports or the document combining said Reports, enter the amounts of the charges therein described against the corresponding lots or parcels of real property therein described, as said lots or parcels appear on the current assessment roll, and the County Treasurer/Tax Collector shall include the amounts of the installments of such charges and the interest on bills for taxes levied against the said respective lots and parcels of land.

President, Montara Water and Sanitary District

COUNTERSIGNED:

Secretary, Montara Water and Sanitary District

RESOLUTION NO. _____

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT OVERRULING PROTESTS, CONFIRMING REPORTS ON SEWER SERVICE CHARGES FOR FISCAL YEAR 2017-2018 AND DELINQUENT REFUSE COLLECTION AND WATER SERVICE CHARGES FOR FISCAL YEAR 2016-2017, CERTIFYING LIST OF LOTS OR PARCELS OF LAND AND CORRESPONDING CHARGES AGAINST SAID LOTS OR PARCELS AND DIRECTING TRANSMITTAL OF SAID CERTIFIED LIST AND CHARGES TO COUNTY CONTROLLER FOR ENTRY ON THE CURRENT ASSESSMENT ROLL

* * * *

I HEREBY CERTIFY that the foregoing Resolution No. _____ was duly and regularly adopted and passed by the Board of the Montara Water and Sanitary District, County of San Mateo, California, at a regular meeting thereof held on the 1st day of June 2017, by the following vote:

AYES, Directors:

NOES, Directors:

ABSENT, Directors:

Secretary, Montara Water and Sanitary District

NOTICE OF FILING REPORT ON COLLECTION OF SEWER SERVICE CHARGES AND DELINQUENT SEWER, WATER AND REFUSE COLLECTION SERVICE CHARGES ON THE TAX ROLL FOR FISCAL YEAR 2017-2018 AND OF PUBLIC HEARING THEREON

(MONTARA WATER AND SANITARY DISTRICT)

NOTICE IS HEREBY GIVEN that the General Manager of the Montara Water and Sanitary District, a public entity in the County of San Mateo, California, has filed with the District Secretary the Report On the Collection of Sewer Service Charges and Delinquent Water, Sewer Service and Refuse Collection Charges for Fiscal Year July 1, 2017 – June 30, 2018 required under California Health and Safety Code Sections 5470 and 5473 for the collection of such charges on the tax roll. The Report contains a description of each parcel of real property receiving water, sewer and refuse collection services and facilities from or through the District and the amount of the delinquent charges pertaining thereto. The Report is on file at the District Administrative Offices at the address appearing below.

NOTICE IS HEREBY FURTHER GIVEN that the District Board will hold a public hearing on the question of approval of the Report and the charges therein specified on and at the following date, time and place:

Date: June 1, 2017;
Time: 7:30 p.m., or as soon thereafter as the matter may be heard;
Place: Boardroom
District Administrative Offices
Montara Water and Sanitary District
8888 Cabrillo Highway (State Route 1)
Montara, California

Upon the conclusion of the hearing the District Board may adopt, revise, change, reduce or modify any charge or overrule any or all objections and shall make its determination upon each charge or delinquent charge as described in the Report, which determination shall be final.

/s/
General Manager



MONTARA WATER & SANITARY
DISTRICT

BOARD OF DIRECTORS MEETING
March 16, 2017

MINUTES

REGULAR SESSION BEGAN AT 7:30 p.m.

CALL TO ORDER

ROLL CALL

Directors Present: Slater-Carter, Boyd, Wilson, Harvey and Huber

Directors Absent: None

Staff Present: General Manager, Clemens Heldmaier,
District Clerk, Judy Gromm

Others Present: District Counsel, Dave Schricker
District Water Engineer, Tanya Yurovsky
District Financial Advisor, Alex Handlers
District Accountant, Peter Medina

PRESIDENT'S STATEMENT – None

ORAL COMMENTS - None

CONSENT AGENDA

1. Approve Minutes for January 19, 2017.
2. Approve Financial Statements for December 2016 and January 2017.
3. Approve Warrants for March 1, 2017.
4. SAM flow Report for January 2017.
5. Monthly Review of Current Investment Portfolio.
6. Connection Permit Applications Received.
7. Monthly Water Production Report for January 2017.
8. Rain Report.
9. Solar Energy Report.
10. Monthly Public Agency Retirement Service Report for 2016.

Director Carter-Slater moved to approve the Consent Agenda. Director Boyd seconded the motion.

All Directors were in favor and the motion passed unanimously 5 – 0.

OLD BUSINESS – None

Director Wilson addressed the public regarding the agenda tonight explaining there are a couple of logistics. One is at 10:40 p.m., we have to be out of here. So we have to finish the meeting at 10:40 p.m. This is a school regulation – hard 11 p.m. curfew -- so to allow people to get their stuff, their water, get their things and have the doors closed at 11 p.m.

So we have two agenda items that are probably the reason most of you are here tonight. We are going to be splitting the process. The first agenda item -- items we are going to be talking about, updating the well policy and how we are going to update that and then the second agenda item is possible action concerning a connection fee study update and it is very important we keep these items separated as we discuss them.

We are going to ask that if you wish to speak to the Board that you fill out the signature slips which are where -- right there on the table -- and then if there are any questions that you wish to have, there will be time for that. We are going to ask that you could actually write them down for us, so we have records of the questions – this will help how we manage a study of the future.

The way we are going to do this is we are going to let the Staff present and then from that we will allow the audience to give comment and we will bring it back to the Board for further discussion and possible action.

NEW BUSINESS –

1. Review and Possible Action Concerning Amendment to the District's Code providing for Well Conversions.

General Manager Heldmaier reported at the January 19 meeting this year, the Board adopted an ordinance that amended the code and we created a financing program for well owners that are eligible to connect or like to connect and we are going a little bit farther in some more detail for the folks that haven't had the chance to review that policy yet. But in short, it allows well owners to connect without the burden of having to pay connection fees up front and other associated fees. So with the adoption of the ordinance, we actually had a full house at the last meeting and many well owners raised concerns about the language in the code that essentially requires a connection to the system and we now have worked on this problem and thought through this problem essentially going back to the that we understand there may have been some very good reasons at the time to put this into the Code. We are now seeing that maybe it was not well thought through – how actually this would be implemented when water is available and this can be

seen because our code requires connections – however, policy, the resolution that was adopted at a later time really tells staff not to enforce this policy – not to enforce this code – but instead – process applications as they are sent to the District from the planning agencies. So with that there is a discrepancy between the Local Coastal Program, between the County policies and our policy. And what we have here in front of us is now a draft ordinance that District Counsel prepared that really states that the connection to the system should be voluntary. And there are some caveats with that – for example – we don't want to compete with the function that the San Mateo County Health Department has regulating those wells –for example – we had a house that was condemned due to a failing well – we would see the need – we would see this as a need for mandatory connection. So with that, again, the intent here is to bring District's policy in line with the Local Coastal Program with County policy and with that I am going to hand this discussion to the Board. Staff recommendation is to adopt the proposed ordinance.

Director Wilson: With the Board's pleasure, Dave, I wonder if you would like to speak to the public – you did the language of the ordinance.

District Counsel, Dave Schrick: As we discussed at the last meeting, the code as it presently reads, does not strictly conform to the policy established by the Board by resolution and likewise provisions of the Local Coastal Program so the amendment tonight is simply to bring the code into alignment with the policy established by the Board with regard to well conversions. This essentially is to recognize that the only mandatory well conversions are ones that the county health officer who is also the District's health officer condemns a well for failure to meet health standards. Or when the County building permit or other entitlement requires a conversion. This could occur where an existing building is being remodeled to the point where 50 percent of its value, then the county will attach a condition to the building permit that the property connect to the water system. Then the other occasion is under our code that some owners who at the time they connected to the sewer system were required to enter into an agreement to connect to the water system when the system is available for that usage. So there are some outstanding agreements that would provide for connections based upon the sewer connection. And then the other conversions are voluntarily and that was discussed at last month's meeting.

Director Wilson opened the meeting up to the public for comments and requested they fill out and hand in speaker slips.

Chris Thollaug, a Montara resident asked to make a quick comment. Clemens referenced a conflict with the LCP. There is no conflict with the LCP. The MWSD Code went further than the LCP in that to require a connection is more stringent than "may" connect. The LCP says you "may" connect. The LCP also says you may connect in the rural residential. The District has gone beyond that as well. In the Public Works Plan, there is a restriction put in place between the MWSD and the Coastal Commission that there will be no new connections and no new main extensions in the rural residential. So, I think we are kind of scaling it back to what

the LCP says in the case of mandatory connections vs. “may” connect. And I would just like to say that this is a really good change. It’s much appreciated in the community. I think Dave has done a good job of crafting something that is straightforward and does not conflict with the provisions for mandatory connection that is required by the County in the case of a large remodel or new construction. So I appreciate the change.

Larry de Young, a Montara resident also appreciates the change very much and is very happy to see it. My only other comment about the LCP is there is – back to the urban area, the urban zone. The LCP defines an urban zone that consists of – what we call the urban area and the rural residential district. The MWSD code has no such decimation. It only talks about the urban area not the urban zone. So according to the LCP – and here I am saying – I live right on the border of the rural residential – so I would appreciate having at least the opportunity, if I wanted to connect – that opportunity is in the LCP. It’s not in your code. Because the LCP again – urban zone – you talk about urban area.

District Counsel, Dave Schricker noted the latest amendment to the LCP introduced the notion of zone but it also speaks in terms of the area and definitionally we are still dealing with the urban area or the urban residential area. Introduction to term zone is a bit confusing I think. The District Code uses the term area which is consistent with the LCP.

Larry de Young stated he agrees with you that it is very confusing but what I am saying is that the LCP grants the permission for water connections in rural residential area. Your code does not do that.

District Counsel, Dave Schricker reported the LCP governs the County and our code does not determine land use as the County does so the District takes applications from the County. The County is the agency that determines that availability or the – whether property is within the urban area or the urban residential area. Yes. If a property within the urban residential – may well be qualifying.....

Larry de Young interrupted stating Mr. Schricker was confusing him even more now. There is no such thing as urban residential. All I am saying is since you want to have reconciliation between the LCP and your code, you might want to take a look at this specific area. That is all I am saying.

There were no more comments and Director Wilson asked for comments from the Board.

Director Slater-Carter: No I don’t have any comment.

Director Boyd: No comment, but to say that Dave has done very nice work.

Director Huber: I have two. One is that I read this several times – and I think I know what the intent of it is – is there any way to make this language easier to

read? That's sort of one. The other one is that it doesn't say anything in this about the urban area or urban rural boundary. And so, to Mr. DeYoung's comments does that basically allow us to have the door open that if this is decided in the LCP that rural residential connection could be made? Does this enable us to do it?

General Manager, Clemens Heldmaier: There is more than the LCP and the District Code. The actual provision to serve outside – as Chris just mentioned is in the Public Works Plan. The Public Works Plan essentially coming down from the Coastal Commission.

District Counsel, Dave Schricker: It is really not for us to make a jurisdictional determination. It comes from the County.

Director Huber: But this allows us to conform to that by the way this is written.

District Counsel, Dave Schricker: The General Manger is correct. There is a distinction between what the Public Works Plan speaks to as opposed to the Local Coastal Program. Public Works Plan speaks in terms of the urban area.

General Manager, Clemens Heldmaier: Yes. Public works plan speaks in terms of urban area as it is defined in the new LCP and the urban area is clearly defined in the new LCP as the urban area without the rural area.

Director Wilson: Okay, I don't know what we can do about the legalese. I think part of it is just the requirement in conforming the language unfortunately. I think if I am hearing this correctly, can I have a motion please.

Director Boyd moved to adopt the ordinance of the Montara Water and Sanitary District amending section 5-3-103 of the MWSD Code relating to owner initiated conversion of water service from private wells to the district's water system ordinance next in order. Director Huber seconded the motion.

All Directors were in favor and the motion passed unanimously 5-0.

2. Review and Possible Action Concerning a Connection Fee Study

General Manager Heldmaier: reported we go back to the January 19 meeting at which there was a lot of concern raised about the cost to connect to the District – to connect to the District's water system. The cost is calculated in a connection fee study and then applied and the District connection fee study which was done in 2011. In 2010 this Board repealed the moratorium so in 2011, there was in conjunction with the repeal of the moratorium for the fist time a chance at connection to the Montara water system and with that we asked for a study from Bartle Wells that determined the connection fee.

Now the connection fee study itself is really based on the District's Master Plan. Master Plan is what larger agencies call an urban water management plan. We are not required to file such a plan. Other agencies are required to update those

every five years. Again, we are not falling under these requirements. However, we have always operated with such a plan. We call it a Master Plan. So from the beginning on, this agency had a Master Plan in place. This is the document where we are looking over really the next mid-term to see where do we want to take this agency? What is the status quo right now and how do we plan to this? So this is really a major planning document for this agency.

Our recommendation is to update first this water Master Plan and with that the connection fee study as well. At the January 19 meeting – we actually provided some information about our connection fee and how this is calculated. It was a fairly 10,000 foot overview.

There are a lot of requirements that go along with a Master Plan with a connection fee study along with being a public agency. We have actually two presentations tonight to conclude this staff presentation. Our first presentation is going to come from SRT Consultants. I am going to ask Tanya to tell us a little bit about what a Master Plan is and what does staff really think and what we want to do in this regard in updating the Master Plan. Next, we hand it over to Alex with a presentation that is more geared toward the connection fee study.

Staff recommendation to authorize the General Manager to initiate the following studies and provide reports to the Board at the May 4, 2017 Board Meeting:

1. 2017 Water Master Plan Update, and
2. 2017 Water Connection Fee Update

District Water Engineer, Tanya Yurovsky: Based on the results of the previous meeting, we have been asked to talk about what a Master Plan is? What the District has accomplished since the last Master Plan in 2011 and just give a little brief overview of public financing vs. private financing. We are going to talk about the water system retrospective, the financing, what that update would do, what a capital program is, and the water capacity charge update, how that comes about and then, Alex will take over with the financial details.

The District acquired the water system in 2003 from a private water company. And since then implemented significant improvements. There is a handout from 2011 Master Plan presentation that shows what the District has accomplished between 2003 and 2011 and I am going to focus on what the District has accomplished between 2011 and now. The key is the district has addressed existing system deficiencies and for the first time, is actually selling water connections.

The District built two school house tanks -- brand new. I don't know if any of you remember the Franken tank that was there before and was the highlight of the Cal AM System. There was a half million gallon tank built on the Alta Vista site that belongs to the District. The District acquired the Pillar Ridge Community Park water system is a big accomplishment. There was upgrades to the major operation of the brains of this system, how this system operates. We have rehabilitated controls at the treatment plant. There is a major replacement area -- rehabilitation of different distribution means and valve stations. The district has

been doing this in a smart way. So every time there is a repair, they go about it by upgrading the system when there is a chance to do so.

So in summary, there have been significant improvements implemented to the system since 2010. And I am saying 2010 because 2011 Master Plan covers everything through 2010.

And now it is time to update the Master Plan again and develop a new connection charge. Now I just want to step back a little bit and talk about private utility vs. public utility. The District is a special district governed by the Board of Directors that you see here – elected by you. And it is a public entity. And it is not a private business. It doesn't make profit. It doesn't prepare profit and loss statements and things like that. There was a bit of confusion I heard at the last Board Meeting so I just wanted to point that out. Prior to 2003, the District's water system was owned by an investor-owned utility and we are going to talk about that in a moment.

So as I said, public utilities does not make profit and the rates and are other charges are determined by the Board that serves at your pleasure and with the sole goal of protecting your rates. Private investor owned utility companies use revenue to recover all the costs, pay property taxes, pay income taxes and earn a return on investment for their shareholders. The revenue – this organization – this utility collects has to cover all costs of operation, maintenance, and capital improvements required to deliver safe potable water to the customers, to you. Each utility revenue requirements are unique to that utility. And for utility to truly be self-sustaining, the actually cost or providing cost -- service -- must be recovered. And that is real important to know because it is an enterprise. The cost – there is no money coming from anywhere else. This is a truly a self sustaining utility.

So again a little bit about the revenue. We outlined the public utility approach and the investor utility approach -- and you can see that only similarity here is in operating expenses. Both need to recover operating expense. But then the public utility covers capital improvements, it makes debt service payments if anything is financed through debt and it has to maintain reserves. An investor owned utility, yes they do have operating expenses but they also have worry about depreciation and amortization, they pay income and property taxes and they have to have earned return on investment otherwise they won't be in business.

Connection Fees. Also important distinction. Public utilities charge connection fees to new customers to provide funding for projects that benefit new development – solely new development – and this is to relieve the burden from existing customers. In other words to protect the existing rate payers from paying the capital improvements are not for them. Investor owned utilities don't collect connection fees. They can't. There is no legal – venue – to do so. So the burden is carried by all the ratepayers.

Now about the Master Plan. What the Master Plan does is assesses the current situation of the water system. It is basically a status report. The state of the water system. Then we also project the future demands based on the Local Coastal

Program. And we assess needs for capital improvements. And that Master Plan serves as a guiding document for future policy and management decisions. It is a very important water system document.

The Master Plan develops two things that come out of the Master Plan. One is the new customers CIP which is Capital Improvement Program geared towards – what do we need to build to serve additional customers? That is a new customer CIP. It is capital projects, equipment projects, capital improvements purchases that are needed to provide service to additional customers.

It also provides schedule and a budget for implementation. CIP is a plan. It is not a cast in stone something. It is a plan that is subject to adjustment. The District would adjust it each year because say for example, all of a sudden, we have a line at the door and 200 people apply for service. There is a big difference between that and four people applying for service in the case of 2011 on average. Some projects may have to be accelerated or if there is only four people or two people, two residences, then the project can be slowed down. And then as a result of the CIP development, the water capacity charge update will be happening – that is the cost to recover the cost of facilities needed for new customers. The issue here is to equitably allocate cost to future customers. Make sure there is space for growth but existing customers are protected. Otherwise, the rates will be paying for the future and that is wrong and I'm sure the attorney here will help me explain about the legal situation is on this case.

I wanted to give you a little bit of information – you don't have it all yet – we just – need authorization from the Board to start on the Master Plan but since the Coastal Commission is part of the Public Works Plan, certification requires us to submit any reports to them every single drop of water that has been pumped here, provided to the customers and distributed. We have some information to share with the public and the Board. The total annual water production is just a bit over 100 million gallons per year for MWSD which equals to about 300,000 gallons a day. What that means is that is a production of the water sources. It is not capacity. It is production and the reason why that is an important distinction is a capacity water source is a theoretical number. The system only produces what you guys demand from it. So the per capita water demand is calculated on average – this is over the past ten years – at 55 gallons per capita per day which means that every person uses on average in Montara and Moss Beach communities 55 gallons per day of water. It is very low. You guys are very good at conserving water. The lowest that I know is in San Francisco where no one has lawns and landscaping is at 42. For the area outside the strictly urban environment, 55 is a very good number. That is why the District has been awarded the Silicon Valley Conservation Award for the low water usage.

What this table represents is the total population estimated based on the 2010 census date. The average annual growth is in the LCP at 1 percent which hasn't been the case lately but we have to use for planning purposes those numbers and that shows you the projected demand daily and the maximum demand on the

system through 2050. This is just to show how we calculate the demands for future.

The other concept that the Coastal Commission insisted on doing and this is in the throws of coming out of the moratorium and starting to release new connections, they wanted to make sure the District will never run out of water again, and of course the Board was very interested in that as well so we are operating in this concept of reliable capacity which is taking the largest source of service, it is a very conservative analysis and showing that this is a reliable supply.

The next column is the demand and the difference is what you have to sell access for new customers. As you can see from this table and I would like to urge everyone to understand these numbers are preliminary and they might change some, somewhat slightly. So somewhere in 2050, 35 years from now, we are seeing a deficit but not sooner than that. But again, this is based on solely on LCP policies of 1 percent growth and the 80,000 gallons per day are set aside and deducted from here to satisfy the LCP priority connections which are certain recreational uses, agricultural uses, low income housing, things that the District cannot sell this amount of water without satisfying those connections unless the LCP changes.

The supply available currently, again preliminary numbers, both for existing developments, this is well owners and new development. For the District, its new customers anyway are about 132 gallons a day of reliable supply and 107,000 of drought safe supply. That is even a more conservative number than the supply cut in half. This is very conservative. Again, very conservative number. The District's sources are more drought resistant than we have seen in greater Bay Area because you have local sources there that are plentiful.

But we are still considering because of the severe drought that we have just experienced and basically sound water utility management to be very careful about distributing water supply.

Connection availability. We estimate 188 private wells that operate inside the urban rural boundary and are eligible to connect to the district water system. Now what eligibility means -- I think I need to repeat that -- is mandated by the Coastal Commission in the Public Works Plan. That was certified by the Coastal Commission for the District. It is kind of like our own LCP. So while LCP governs always, but there is another document that the District is mandatory to comply with and those people are eligible to connect.

So connecting all eligible private wells may require from the District to advance CIP projects and this is consistent with what I said before. If all these well owners all of a sudden decide that they want to connect, we haven't see that but if they do, then we have to accelerate capital improvements.

The General Manager mentioned, the Master Plan is a living document that updated between five to ten years depending on how this system changes and it

results in the new customer CIP development. The CIP identifies projects that are needed to ensure safe reliable water service for years to come for the new customers and protect existing customers. And they usually as was said before scheduled according to future needs and available funding and that means we have to make projections on when we anticipate customers coming on board. For example, in a previous Master Plan, we said okay – 15 well owners – just as a planning number – fifteen well owners per year will come in and connect to the system. Well, that didn't happen. Only four people connected on average to the system. But as far as the system is concerned, the system doesn't care if it's a well owner or completely new residence. It is the same, it is a new customer. I think that is kind of important to remember as well.

The CIP how do we go about identifying projects? We look at the system and look at the deficiency analysis for example and give you a simple example, during the private ownership, the system was allowed to operate on water mains that were somewhat – less than 2 inches in diameter. And that is, first of all, unacceptable and secondly is deficient. We look at things like that. They are pretty much all eliminated now. The district upgraded most of the significant mains to six or eight inch diameter but that is one of the deficiencies we are looking at.

We expect and assess the existing infrastructure. We interview operators. They actually keep a log of leaks and look at facilities that need to be upgraded. In first order vs. later. Depending on a leak history. I will look at redundancy for earthquake and other disaster response in that lots last by not least, hydraulic monitoring of the distribution system to see where soft spots are. Where we need expansion or upgrade. So examples of CIP projects, the Booster pump station upgrade, the distribution system upgrade as I said, replacements which higher figure diameter mains –various wells the pumps need to be upgraded to pump into the system that is serving more customers and always develop additional supply reliability. That is always on the horizon because we do not want ever to run out of water. As conservative as the analysis is we always look at future sources. Telemetry needs to be upgraded. That helps the system operate efficiently and not lose water. SCADA same thing. SCADA is supervisor in control of system. SCADA actually operates the facility. It is the brains of the system. And treatment upgrades if necessary.

What will show in the CIP probably in May if the Board authorizes it today, we will show the system deficiencies and how due to new customer demand, only include improvements necessary to serve new customers and this CIP is complementary to the existing customer CIP the district updates every year.

A copy of this presentation is attached to the minutes.

General Manager, Clemens Heldmaier: Just to summarize here really quick, I think what we are really looking at is two major changes since the last Master Plan update and with that also we are thinking in the concept of capacity charges now. But two major changes here have happened. The first one is that we inherited the system in 2003 that was in need of repairs, it was in shambles, it was not working.

And we are going and this now applies also to the past six years, through a very rapid change, so we now brought this system in the past decade up to a state of the art system. We have a wonderful water system now in place. So I don't think it's going to be difficult to find another system that morphed from extreme deficiencies, having a surplus, and being monitored in such a short time. So that needs to be included in the Master Plan and with that, second, major change is the repeal of the moratorium and the capability of adding customers. So with that, I would like to hand it over now to Alex and his presentation.

Director Wilson: We will take questions after both these presentations.

District Financial Advisor, Alex Handlers: I'm Alex Handlers with Bartel Wells Associates. We have worked with the District for many years, before my time, was another principal of the firm that worked for the District for many years and did the prior study. We are financial advisory firm that works with many water waste around the Bay Area and around the state.

So I am going to talk a little about the water capacity charges kind of coming off of what Tanya was talking about. Maybe the next slide a quick summary, what are capacity charges, what are the legal requirements, the current fees. Quick run down on the multi-year payment program that the District recently adopted. I will keep it real brief there. I am going to veer off to the slightly-related topic. Just talking about how some of the district's assets were financed with general obligation bonds back in 2003 and some other debt. Talk a little about the historical rates and then come back again and talk about some key principles for capacity charges and where we would go from here.

So the next slide – what are capacity charges? The District – sometimes people call them connection fees – they are called water fee connection capacity charges. These are the one time charges that new connections or expanded connections pay when they connect to the water system to fund their share of infrastructure and assets that benefits new development. So it could be when a new customer connects, or it could be an existing home or building that wants to double in size and increase its water demand, the charge would be applied, based on the increased water demand to make sure that the infrastructure needed to support that demand was funded by the new charge.

Next slide. Legal requirements – Development impact fees are covered by government code 66000. There is a section in there 66013 that deals specifically with water and sewer capacity charges. And there are a few key points. It is not a huge piece of legislation. But a few key points are (1). The charge cannot exceed the estimated reasonable cost of providing the service for which the fee is imposed. Unless there is a 2/3 vote overriding that but that is in an extreme rarity. The code says the charge can recover costs for capacity in existing facilities or new facilities that will need to be built to serve new development and also doesn't have to be facilities. It can be for other assets such as water rights, things of that nature. The code doesn't give any specific method for calculating connection fees so there are different approaches used in the industry but over all the bottom line is

they identify what are the costs benefitting new development and what is the capacity associated with those facilities to come up with a proportionate cost that would be paid by new connections.

There are also some other accounting requirements I won't go into. Another section 66016 details the procedures for adopting the fees like most district legislation, you have to hold a public hearing. People have put on file with the District to receive notices about rates and charges have to be noticed at least fourteen days in advance of the public hearing. Sometimes there is no one that has done that. We have some communities that developers always put a charge on file so they would get notified. And the action can only be taken by an ordinance or resolution as it always has been.

Current fees as Clemens already mentioned, those were developed in 2011. They were based on the 2011 water Master Plan associated capital program and as Tanya mentioned the capital projects of that Plan were carefully broken out to what is needed for existing customers and what is needed to serve new demands to make sure the fee did not recover costs for facilities benefitting existing customers.

One another thing about that last slide, at the time, it was thought there would be approximately 621 new single family homes or equivalent connections going forward and it was determined there was about 8 million or so projects needed to serve them, so it was very simple division -- 8.8 million over 621 service equivalents equals \$14,000 and change per new single family or equivalent connection. Those fees have been adjusted each year by the engineering news record construction cost index keep up with cost inflation. The money is kept in a separate fund. So all that needs to be revised.

The Multi-year fee payment program was meant for a real unique group of customers that this District has folks who during the moratorium weren't allowed to connect to the District system due to water supply, liability issues, they had to put in wells. So when they were building their property, getting the loans and things to do that, they weren't allowed to connect to the District. They had to fund wells. The District has received some complaints from folks they would like to connect to the District's water supply but there is a big up front cost in doing that inhibits them from doing so so the District came up which I felt was a good program of having a multi year payment program so they could spread their cost with a capacity charge and some other related charges spread it over ten years, put it on the annual property tax rolls, and the District even said hey we will waive any interest payments if you do it so far through December 31 2017.

We talked about it is not just these capacity charges or connection fees that a customer has to pay when they connect to the system. That is just the cost of buying into the facilities, existing in future facilities and benefit new development. On top of that there is also administrative, engineering, inspection fees that have to be incurred. I think the way it works, people put down a deposit for the actual cost of service that is applied against that deposit for a typical basic new water connection. It's about \$3,600 for a new water connection that also has a fire

service connection, a private fire service connection. It is a little bit higher and is also service installation, meter costs. Because you have to make a connection from the water main to the property. You have to put a pipe line that taps to the water main. Brings it to the meter box. The meter gets installed, the customer has to fund that as well and my understanding, please correct me if I am wrong, the District has a list of kind of accredited contractors out there and it is a competitive bidding process. The low bid wins and the customer pays and everything is done up to the correct standards that need to be incurred. So there is basically there types of connections that the District deals with. One is just a basic water connection. For example if there is a well owner out there – already has his water supply for the well – wants to switch to the District, they just want water supply, they would just pay this basic water connection and the fee could total over \$20,000 when all is said and through. This estimate is \$23,000 for a typical connection. Some homes just want a fire connection. Maybe they already have a water connection and now they are going to be doing a remodel and want to put in sprinklers or may be a well owner, historically the District said we can't give you water supply but we are going to be here if you need emergency fire protection if your well si ever out and you connect for fire service only and there are a number of well owners who did that. And then what is more apt I think going forward if it is a new home being built with under the new plumbing code standards they have to have fire sprinklers so they would be required to pay the combined fee which could total in the \$30,000 range. So it is not insignificant.

How are assets in the District funded? When the District took over the system in 2003, there was a vote whether the community wanted to do that. It passed with an 82% voter approval rate which also authorized the financing to acquire the system and make those initial critical improvements to bring the system up to snuff so it could actually serve people in a safe and reliable way. So the District issued general obligation bonds back in 2003. Those funded the system and initial improvements. They didn't fund everything because there are a lot of other improvements that the District has needed to construct and still needs to construct to serve existing and future customers in an appropriate way and meet all the current standards and do it with safety and reliability. So the GO bonds didn't fund everything. Fast forward to 2012, interest rates were lower. The GO bonds were at a point where they could be refunded for savings and the Distrito ok advantage of that. Not only refunded GO bonds but initially authorized for \$10 million. The District didn't take all of the money out on the first go around. There was still some remaining and the District opted to take that out when they were doing the refunded. So when they did the refunding, they not only reduce the debt service payments which resulted in lower tax assessments they were also able to generate new money for capital improvements.

On the next slide, these GO bonds are secured by ad valorem property taxes and all property within the District under California, under Prop 13, once a customer buys property and has assessed value I think two percent each year maximum so I think there is some protection there form keeping these tax rates from going up. In fact, we have seen the tax rates go down over the years. Historically I mentioned there were some initially promissory notes to do the initial financing in 2003. The

general obligation bonds kicked in. They refunded those temporary interim financing that was initially incurred to get things going. The GO bonds had an interest rate of 4.55 percent for 25 years which was good at the time. But those were refunded in 2012 at an average rate of 2.4 percent. So that is a very low rate roughly inflation. And term was not extended. The term only has 16 years to go when those bonds were done. Now we are looking at eleven more years of payments on the GO payments will be completely gone. I already mentioned they generated a lot of savings. Some of that savings was used to fund new projects for the District. Additional funds and broader authorization.

In addition to the GO bonds, the next slide shows what the tax assessment rates are on the property. Initially it was \$1.60 per thousand dollars for assessed valuation and as the assessed valuation, the District has increased over time and has, I think, every year here the tax rate has gone down and also the District re-did the bonds, 2012, that led to lower rates as well. So this is just kind of a projection of what is going on over time with the tax rates so we think the payments are going to be going down for folks in future years as they have been as new folks connect and as the assessed values increase. We need to develop a vacant property at this new assessed value that is built in there.

The next slide talks about other debt that the District has incurred to help finance capital projects. There was a planning loan from the State revolving fund, loan program, this is the subsidized financing program that offers funds at very low rates. The District got \$500,000 at the interest rate of two per cent. You know, some people don't like debt but this is pretty much free money because it is at the same cost as inflation.

In 2014, the District was awarded \$2 -- almost \$3 --million State revolving fund loan. 2.28% for 20 years. Again that is a fantastic rate. That is the rate of the State's general obligation bond rate so the District has done a good job of getting these subsidized funding sources.

And then the District also had an outstanding lease agreement for water meters, and for other, I guess, related energy conservation items but mostly the water meters. That was issued in 2006 originally at 4.56 per cent for twenty years for payment terms. Well, when you have a low outstanding issue, sometimes, it doesn't make financial sense to refund it because the cost of refunding will have outweighed the savings. And that is actually the case for that outstanding lease.

However, back in 2012, 2013, the lease was able to be renegotiated by almost threatening that we were going to bid it out and go to market and they are going to lose the lease. The company agreed to re-negotiate at a rate of 2.95 percent. So the District has done a good job when it has issued financing to keep the rates as low as possible.

Moving on, when the District was looking at taking over the water system, there were some projections made, you know, not only do we want to take this back to improve the quality but is this determined it would actually save the District and the

local community quite a bit of funds in terms of lower rates and lower costs in the long run so a couple of years ago we did an analysis looking back to the beginning – hey -- did it really come to fruition – what has happened since the District acquired the water system. And this slides is a little convoluted. One slide had a bunch of prior presentations but the red line there was showing what was *proposed* water service charges from CalAm based on their Master Plan and their general rate case and they had shown – yes -- they would have to make some substantial investments in the system as well and they were going to skyrocket rates over a number of years to do that. When the District took over the system, there is the orange line there that shows the prior projection of what the bill would be if the district took it over, not only funded its operations with rates but also funded the acquisition and initial improvements of the system with the GO bonds. So that is the orange line. That is total cost for the GO bonds and the water rates. What was projected. The GO bonds, payments for most folks are now lower than what they had been projected to be because the assessed values have increased. In terms of the water service charges, the prior projection was the green line – this is going back 15+ years where the green line projected what would be the typical bills paid by a typical home. The blue line shows what the actual bills have been and it has pretty close to that projected line, actually has been little bit lower.

So that was just a little detour. Getting back to connection fees or capacity charges, some of the key principles that would be embodied in a connection fee update. Not all of them. One -- most agencies have this as a key factor that growth pays its own way. That nobody subsidizes anyone else. Ratepayers shouldn't subsidize growth nor should growth subsidize rate payers. What the capacity charges funded by new connections shouldn't be paying for facilities that are to the benefit of the existing folks. In some case, there is an asset that might benefit both existing and future customers so each pays its own share.

Next point, kind of alluded to there, the cost of capacity charges should only recover costs for the proportionate share of the assets that benefit new development and that is going to be based on the New Mater Plan and it is going to identify what are the capital improvement needs for both existing and growth. Separate those out. And the connection fees will be based only on what benefits growth. And importantly, as people brought up at this last meeting, this fee should not be funding anything that was funded by the GO bonds. Anything that was funded by GO bonds is back out of the calculation.

I talked about how the District has some other debt issues out there which have funded projects. So there are different ways of handling – what if some debt was used to finance some facilities that are benefiting growth? When the new customer connects to the system, now they are becoming a ratepayer. They are going to be paying some of those charges and they shouldn't have to double count. So there are different ways of dealing with debt. One is just ignoring it, not including the interest that has been paid on debt, just making sure that when the new fees are calculated, it is just the cost calculated by the facility or what is occasionally done, accounting or debt by adding in the prior interest payments that have been incurred which are costs just as much as nuts and bolts of the system

are concrete but also backing out the unpaid principles. We will be taking a look at some of these different alternatives and approaches as if a new fee is going to be developed.

On the next slide, at the last meeting, we heard various concerns and issues. There are a lot of people alarmed about potential for being forced to connect to the system. They had a well -- which is not the case -- But one of them was -- the new connections provide economies of scale to the whole system. And there is truth to that when a new customer connects, they are now paying the same rate as everyone else -- yet the District has a lot of fixed costs. So the District is getting all the new service charges but only a portion of that is being spent on new operating expenses for electricity, chemicals, whatever. So there is a marginal benefit that comes in from there so I think that the notion was that maybe -- we can take that marginal benefit and use it to reduce the capacity fees. And there are different legitimate perspectives on this I want to point out. That is one perspective.

Yes, there are some new revenues. You can use them -- potentially might not be legal -- but the concept is you reduce the connection fees to try to incentivize more folks to growth. On one hand that might not be legally allowable in Prop 218, In Prop 218 rates can only be used for costs that benefit the existing ratepayers. This is evolving law on Prop 218 involving understanding of that and I will defer to the District's legal counsel if there are any questions on that. But the other side of the coin is, there are some economies of scale of new customers but should the benefits of that economies of scale go only to the new customers who are connecting in terms of reducing their fees? Or should those benefits accrue to all the ratepayers as they would have in the big picture. And from the ratepayer perspective, they would be better off if the economies of scale benefited everyone proportionally including the existing ratepayers and I also point out who really benefits from the economies of scale -- from one perspective, there are some economies of scale of growth occurring but from the other perspective, it is the new customer who is really the big beneficiary in the economies of scale because they are joining a mature system with a lot of ratepayers already. If they are joining a new system with only a few hundred connections, the costs of operations would be a lot higher. So I think in general, most agencies come to the conclusion that the economies of scale benefit everyone proportionally and used to benefit one group or the other. The other thing is that the capacity charges should be based on new demands placed on the system. I know last time there was talk hey maybe there would be different fees for well owners and not well owners. From our perspective it is all the same. Whether you are a well conversion or a vacation piece of property being developed you are putting new demands on the system requiring certain facilities to serve that demand and that is what the fee is based on. They generally should be consistent. Shouldn't be treating new types of demand differently.

All of this is predicated on the Master Plan. That really is the fundamental document that identifies what needs to be constructed. What is for growth? What is for existing customers and it also in doing this it may change what the capacity is that the District has to serve. People have done a great job conserving here so

maybe the existing water system has some more capacities to serve grown. It is part of the analysis that is going to be done. All of the components that go in to the fee are going to change the level of new capacity available for growth, the projects that are being identified and the cost allocations for existing in growth. Coming out of that would be pretty simple I think for us to update the capacity fees as I say there are different alternatives, approaches and details and there as well that we can go over. And insure that there is nothing in the capacity charge that is recovering for a cost that was funded by GO bonds. Either the original GO bonds or the additional 1.5 million that was taken out in 2012-13.

Another final point, I think it was Dwight who brought this up at the end of the meeting – hey wait a minute, if we are going to do new fees, we are going to charge someone now for capacity charge and then we are going to come out with fees that are lower that the potential exists for the District can say hey we don't want to overcharge anyone. We could refund you the difference to make sure that during the period while we are calculating these new fees, you didn't get stuck getting paid – we don't know if the new fee will be higher or lower. We were having some conversations behind the scenes – well wait a minute – we are going to give them a lower fee. We are also going to make them pay a higher fee. If it goes up, I doubt the district would want to do that. But I thought it was an interesting comment to make. So I think going forward from there the first step is doing the Master Plan, then the capacity charge to follow soon there after or be done concurrently. And I think that concludes what we were going to cover and I'm going to turn it back over to the board.

A copy of this presentation is attached to the minutes.

General Manager, Clemens Heldmaier: Staff recommends to now move forward with the capacity charge update.

Director Wilson: I think what we will do is ask for public feedback and again for those who wish to provide feedback through the recorder to the Board I will need one of these (speaker forms). And we are ready for comment. So what we are going to ask for, if you have questions that you are raising, we are okay with you asking it but we are gong to ask you when you are done with your oral presentations to write the questions for us because we will be most likely using this as feedback for the Plan that is being developed for the next Board meeting.

Les Bowman: Hi there. I want to thank the Board and consultants and counsel for the attention to the issue of the economies of scale issue and I agree that the Prop 218 issue is significant and may need to be addressed. But my point in raising the economies of scale was and it's just been reinforced tonight by the Board's earlier action, absent a mandate by the County, it's hard to pull well owners into the system. But pulling well owners into the system would benefit the system as a whole. And so you know, you are left with needing to entice well owners into the system. Maybe if there is a lot of growth, you don't need to do that. The system will grow through new development. But absent that, I do think that it's going to be a challenge to convince well owners to hook up given the cost

of doing that. And so the reason that I raised the issue about the economies of scale goes to the point of CAN you use rate revenue to somehow entice well owners into the system. You know – that it would behoove the Board to think further about that issue. Thank you.

Larry de Young: I would like to thank the Board for getting into this deep level of detail which I think is very helpful. I also want to point out that since the 19th meeting – I think we went through it with 20 wells to 188 wells. And we are probably as Les just said going to be even lower than that because it's not a very attractive proposition. So two things I would suggest – I would ask the Board to do: one is figure how many damn wells we have in the area and two, do a little marketing survey and find out how many want to connect and under what conditions they would connect. If you really want to entice somebody to connect, it would be nice to know what their inflection points were. So one – let's get some accurate numbers and two, let's find out a projection of how many people are likely to convert from wells to your system. Thanks.

Chris Thollaug. So I guess where I would like to start is the 2011 Bartle Wells Study relied heavily on an estimate from the District Engineer and Staff to determine how many new connections there would be over the study period. They arrived at 600. And that included every single well. So I am curious – what your methodology was and what we will do differently to come up with a new number that is a little more accurate. Now we are off by an order of magnitude here. And much of the capital improvement lists that was supposedly for new connections has already been expended. So we are in a situation where we have 1/10th maybe of the new connections – and you are plowing through \$8.8 million of improvements. Who pays for the un-utilized capacity? This is analogous to what happened with the sewer plan expansion when I was on this Board. The expansion was to be funded 100% by undeveloped property. That was challenged legally and successfully. So the capacity went forward but amount of new construction was – that required to bring total hydraulic capacity to build out. And the result was that we got a lot of rusting equipment that never is going to be utilized that we paid for at that point in time in anticipation of having new connections. My question is: What did we do with that?

This raises another issue for me which it's one thing to say that \$8.8 million is just for new connections, but the reality is that it's not that clean. When you have a new main extension, there is benefit to everybody that is on that main. It isn't just the new connections. When you have new reliable capacity, that benefits the entire District, the fact that you don't have to invest in a water treatment plant for the airport wells – you have superb water now coming out of Alta Vista is a benefit to the current users as well. So I am happy that you are doing an update but I'd like to make sure is that you really reach out to the community and engage the community in looking at what kind of methodology works for us. I think Bartle Wells did a fine job of applying the methodology that is very standard, well understood. With Stan's legal scrutiny, it didn't work for us. And we have the further complication of wells. I appreciate the comment that you want to try and treat everyone the same but when I look at this District, a couple things I'm struck

by. One is the amount of debt that we are carrying now for having made that rapid turnaround that Clemens referred to. I think it is a wonderful turnaround. It cost a bundle and we are paying for it along with those of us who are paying the GO Bonds as well. So the point I'd like to have you consider is – and you started down that route – when you are looking – looking – at what's the debt? What portion of that GO Bond refinance was used for improvements -- granted – we had a very poor system when we acquired it – but part of those initial Bonds were used for improvements. I sent Clemens a letter. I asked it to be put out here but the Board members have it – the audience doesn't – and I can make it available – but what I was stuck by was how little of the capital assets were really financed by anything other than debt and that we owe that debt. We have a current value of the water system of \$19 million dollars. That is as of the last audit. General obligation bond says everyone in the community – including the well owners – are paying \$11 million dollars. \$4 million dollars of other long term obligation which I read as low interest loans that were advantageous but we still have got to pay this debt off. So someone that is connecting and paying a portion of what you folks think is the proper amount that is needed to additionally serve them. They are stepping in and on their bill part of the operating cost is that debt service so not only are they paying in cash, up front, a portion of what is determined that they need to pay to increase the capacity, they are paying the portion that everybody else is paying because it's debt.

It isn't that you own it outright. What we are signing on for us to get water and pay your debt. So I think that is something that we can certainly look at and should be factored in as a differentiator. And I am still struggling with how do you do that? Well, because the folks that have been paying the GO Bonds that are related to the property – you've got people with undeveloped property who are paying for less on that GO bond. When they get a connection to build a house, the assessed valuation goes up proportional adjustment – they are paying more than on the GO Bonds so there is nothing that is going to make it possible for everyone to be treated equally. But, I think that the intent of the Board is to treat people as equitably as you can and I would just ask you to engage in that study session we talked about and make sure that we are really considering all these different groups.

Thank you.

Yumi Son: Hi. Not most of you know me but I just bought a piece of land on Date Street and I guess am publicly in the minority because I am the only one building there. So this is my first meeting. I didn't really know what to expect. I do hear everybody out but I must say I am a little bit confused about what the real purpose is here. Because I understand you guys built a new water system and sewage and for some reason you guys have forecasted that everybody would be on this great system you guys built. I am being told that the water is great. Probably the best in the state and for some reason, people who have wells don't want to get on and as a developer I must question myself. Is there something wrong with the water? I understand it's also very expensive. But does it even justify the cost of it to connect? Current residents don't seem to want to even get on. So for me, okay, I

think I am about to pay a big amount of money for water and sewage and also fire services and I must say I am a bit concerned if this is a good investment or not during the timing in presentation I saw pictures of a system I'm not sure if its finished or still work in progress. Am I paying for something that's done? So there are a lot of questions. Because for me, I am looking at those pictures. It looks like its partially finished and I am about to invest in something that you guys carried on \$19 million in debt for. So I just want to know where you guys are all going with this. Because it seems like it is going in so many directions and for a new property investor, it's kind of scary what you guys are doing.

Director Wilson: Thank you. I would recommend that you spend some time with Clemens. There is a lot of history here. You guys are totally right. We took this water district over. I can assure that many of the pictures you saw of progress are complete.

Director Slater-Carter: And I would love to sit down with you over coffee and fill you in on the history of the water district.

Director Boyd: And our community turns the tap and water comes out all day every day and all night every night. We have a system that is functioning extremely well.

Director Slater-Carter: And that didn't happen when my children were babies. I could turn on the faucet in the summer and have no water for days at a time.

Director Boyd: Before we took over the system, one of the tanks was dangerously low and we had people going around the community to stop your outdoor watering. I actually stood there shoulder to shoulder with a guy from CalAm, the investor owned utility. That is how we got to know each other going out in the community and saying please don't have any access water use today.

Katherine Slater-Carter: And don't flush your toilets unless you have to.

Scott Boyd: We haven't had that situation since. It is an operating system and it is operating extremely well.

Yumi Son: Well, Clemens did give me a lot of history already on this. But you guys are trying to get a lot more new connections. People are resisting. So for me in my mind, shouldn't the focus be on trying to pay off the debt?

Director Wilson: I think what we are trying to do now is ensure that the rates being charged to well owners and existing issues connection fees and Master Plan. Which ultimately drives our decisions about how we invest in the future.

I am going to pull this to the Board and open up to the Board discussion. Starting with Bill.

Director Huber: OK. The thing in this whole process that keeps playing in my mind is who are the stakeholders in this right now? Really we are talking about well owners. I moved to Moss Beach in 1990. Lived in Pacifica before that. Water rates were pretty low, very reliable. No real issues. I moved to Moss Beach and I was shocked. Something I never even thought about was – wait a second – I might lose my homeowners insurance because we don't have proper water capacity for fire and stuff like this. I think I felt like most of the people did in the District that we were in a really bad place here. The pump, the private utility is looking only at short term gain so they aren't re-investing in the system properly. The PUC when I sat here at meetings right in this room – they were no match for the attorneys for Citizens Utility and were not looking out for the best interests of this community at all. And so I -- like many of you -- were very much in favor of taking this over and voting for having a public enterprise instead of a private utility. But that community that voted for this included the – not just people that were already on the system – not just people that were in the urban zone – but was everybody within the District that included a lot of people on the other side of the urban boundary -- people that owned wells that had no expectation at that time that they would be able to hook up to the system. You also had people that had a requirement that they had to -- if water was available and stuff like this. So that in the end it seemed to me that everybody that was a property owner within the Montara Sanitary District which then became the Montara and Water and Sanitary District really had a stake in the system whether you voted for it. They were taking on a large general obligation bond. They would also be paying property taxes of which part of it would go to the District and so then you get into – and they also had a requirement in some cases, not all, but in some cases where they would have to – when water did become available would have to abandon the well and go on the public system.. It is only a guess that those people that knew that they would have to connect to the system did it sort of begrudgingly. The only way I can put a house on my property is to put in a well. I am going to have to pay for this well. There will be a lot of costs involved in it. I am going to have to – some point in the future -- abandon that well. That's okay. It is something I think – you sign a contract, you agree to it, but then – but part of that was – I believe to be the understanding that when water did become available and you did have to connect to the system, you were a stakeholder. You would be able to connect to the system without having an enormous expense in doing so.

That was 2003 when this happened. This rate study didn't come out until 2011. And so this \$15,000 more or less water capacity charge for 5/8th connection was something – if I am not mistaken – and I may be – that was totally unknown to the well owner at the time that they made the – took on the obligation -- in building a new house that they would have to abandon that well. So to turn around now and to well owners say – you have to pay a \$15,000 fee to be able to connect to the system, of which you really were a stakeholder from the beginning because you were paying on the general obligation bonds and when it got refinanced in 2012, it was real clear that some of those were going for improvements. The other thing is that you are paying on property taxes that were going towards it. And finally the fact is that when you improve the property, all of those went up a lot. You pay way more than the general obligation bond on property taxes going forward.

Then we go to – who does this really benefit? So I look at this – recently constructed 100,000 gallon school house --take no. one provides essential water service for fire protection. Something that benefits all those in the system. Not just new connections. The same is true of the 100,000 gallons school house tank No. 2 and because of its size it is certainly true of the 500,000 gallon Alta Vista tank that that provides the needed fire protection reserve and that is something that benefits every single person in this District. Its not just new connections and the rehabilitation of multiple supply sources also benefits everybody. Not just new users. The acquisition of the Pillar Ridge manufacturing home park water system for \$1.00 is good for the entire community. Its not just – doesn't benefit in my day any way shape or form the new connections – it was referred to as being a benefit for new connections. The rehabilitation of key controls at the Alta Visa Water treatment plant insures save water for all. That is not just for new connections. And the supervisory control and data acquisition system known as SCADA makes it possible to manage the entire system. These are the brains so you can turn on the water, turn off water, turn on pumps, turn off pumps and all from a central location. So that is not just a benefit for new users. It's a benefit for everybody. And so that the core principle to me underlying this whole thing is that every property owner, every person, who paid on this general obligation bond is paid into property taxes has skin in the game and should be treated as such. And should not be treated as some kind of new user that does not have any apparent rights to make a connection.

Director Harvey: I want to respond to that. But before I do that, when I came here in '84, I was one of the founding members of the Moss Beach Montara Water improvement association where we initiated this process of buying out the system, getting rid of – Citizens Unities which became CalAm – and 82% or 81% of the people on the wells, off wells, in the rural district, everyone voted for this bond. And it has been very successful. I am a property owner in Monterey County. CalAm still has, still owns CalAm – the water district in Monterey County, Carmel, Monterey, Sun City, etc. The will be increasing their rates by 25% coming up. They are going to be increasing the 21% increase figure after that. So, we have a good system here – as Clemens said – it has been completely rebuilt. It was the worst system in this state. Now it is one of the best systems in the state. You are coming in at a good time – a lot – most of these projects are done. – A lot of them have been done. There are more projects that have to be done that are being worked on. It is a good system. I just want to respond to Bill – we are not going to make a decision tonight – on the connection fee. We are here to get information. And I really appreciate the input that everyone has given. You know, it is extremely valuable to me. We are going to be looking at this. We are going to be considering Bill's comments. We are considering Bartle Wells and Tanya's – we are going to be considering the other board members comments. We are here to find out what is going on. Maybe we will get more information. We need to get more information – to find out how many people – as Chris suggested – how many people may want to – and at what cost they want to connect. We need more information. So we are not making any decision tonight but we really appreciate the information. I am not going to make bullying statements about what the connection fee should or

shouldn't be or who should be responsible. I am here to just to find out what is going on and get further information myself.

Director Boyd: Thank you, Jim. I am interested in gathering information, seeing what we get with the updates. It has been awhile since we went into this. I remember when we were putting together the Master Plan, putting together the rate study, the information we began to work with at that point -- we still had the moratorium. We were getting ready to lift it. We were working with the Coastal Commission to get to the point where they were satisfied, the state water to make sure they were satisfied that we had what it would take to do this. To do it well. They were very concerned that what we were doing was going to be something that we could sustain going forward. They never want a water agency to sell a water connection that they can't stand behind for the rest of time. So, if you are gonna say to someone -- yes, we have one. We can have it. You have to really stand behind it. So we spent quite a lot of time -- I keep looking at time, we spent so much time looking at what it would take to be certain that we had the information that would allow us to stand safely on an assertion about how much water was reliably available even in a sustained drought for the entire community but plus whoever would join. So at the time, we had the information that we had; we have more information now. Conditions have changed a bit. So it is a great time to do a refresh. I am looking forward to that. And see where the data takes us. I will remind us that its not just people on wells, it's people like Yumi who are buying properties to do new development and it's not all single residential. We all know there are some plans for other significant projects and regardless of how you feel about them, if they are in our District and they build, we all want them to pay their fare share. So this has to -- what we are doing in terms of looking vastly at capacity increases and connection charges all have to take into account all of the different kinds of new capacity demand that we will be looking at. So Thank you all for being here.

Director Slater-Carter: I did want to answer about the number of wells. For those of you who know me, you know I have been working on this since 1994. When the county had no records and only they have not much in their records even now. When I last tried to get a map or a list of existing wells, they couldn't give it to me. They didn't have it in their computer system. And one fellow who worked for an environmental health got so frustrated, he just couldn't speak. He was so upset that the County's record-keeping was so insufficient at that point in time. I worked on the Local Coastal Program update. And one of the things that happened between our first plan and the new one is the County has done a count of the buildable lots and they made a decision on the fact that 25 by 100 is buildable. So the number that you cited Chris is not just wells in the area. It is also the buildable lots without wells. And that means that is part of the equation not to mention the two potential hotels we have going and other things. So it is not -- it will be very interesting to see the calculations on this.

I agree with Jim and I agree with Scott and to be fully upfront, like Chris, I live in the rural residential area. I am on a well. And I voted for the bond because at the point in time in 2003, there was no discernable water pressure in the fire hydrant closest

to our house. I had zero fire protection. There was no fire protection within the lane where the fire district could lay out the hoses. I now have protection and adequate pressure and capacity but as Tanya will tell you, many of these improvements have been based upon what we will need in the future rather than you just can't build a half of a 500,000 tank. You have to do it all at once. One of the reasons we have such an abundance of sewer capacity is our water rates on a per person per household per day have gone down significantly. We have put in water conserving toilets, showers, washing machines, dishwashers and even shower heads. So our water use has gone down. That hadn't been calculated when the sewer plant was planned. And so you can't always look forward with 20-20 vision. You have to use the numbers that are in the history to do the planning. Had we built the sewer plant with a smaller capacity and people hadn't stopped using more water, we would be in a terrible position. So it is always relying on what you know about the community and what your engineers can predict and frankly given that the standards have changed our sewer plants can handle these huge wet weather flows that we had and had we had the smaller sewer plant we wouldn't have been able to. So there are pluses and minuses. I do want to thank Tanya and Alex. I think the new study will be fascinating to see what has changed and I look forward to seeing them.

Director Wilson. Okay. There is not a whole lot that I can add to that. We do have a letter from Chris that we all have and we can make it public and on the website and I believe I – what I am hearing is that we need to have a motion that authorizes the General Manager to initiate the following the studies a 2017 water Master Plan update and 2017 water connection fee update. So if it is the pleasure of the board can we have a motion?

Director Slater-Carter moved to authorize the General Manager to initiate the following studies and provide reports to the Board at the May 4, 2017 Board meeting:

1. 2017 Water Master Plan Update, and
2. 2017 Water Connection Fee Update

Director Harvey seconded the motion.

All Board members were in favor and the motion passed unanimously 5 – 0.

3. Review and Possible Action Concerning Fiscal Year End Budget and Actual Review.

General Manager Heldmaier reported with the completion of the District's fiscal year end June 30, 2016 audit, District staff would like to present a comprehensive review of operations as compared to the adopted June 30, 2016 budget. This process will assist District staff with the up-coming budget preparation for fiscal year 2017-2018. Mr. Heldmaier handed the floor to District Accountant Peter Medina for his report.

Peter Medina: Thank you Clemens. Thank you Board Members for having me do this presentation. As Clemens said this is the second year that we have done this

presentation. So we analyze it so at the end of the year how did it actually shake out. Where were our projections over all – to – from our projections – to actual figures that were audited by the District's independent auditors, VTD, that audit took place in October - I believe – August, September, the report actually we released as unqualified, unmodified opinion in October/November time frame accepted by the Board with no management comments were noted on that as well so in turn the audit was very clean. Now we are putting together based on not having any adjustments from that perspective and seeing how these all line up with our budgeted numbers. I have prepared the worksheets in the same format that we in the finance committee as before and management look at the yearly budget on a cash basis more or less. Because if you look at the traditional revenues and expenditures, they don't tell the full story of the actual dollars coming in and the actual dollars going out. They don't take into account capital projects that are being expended, they also don't take into account debt funds and in this case, 1516 – SRF funds which were used to build a first cost by the district. It doesn't take that into account. So to look at it in this perspective it says okay, these would be the balance sheet items which don't get captured. So we bring them in to really get the full picture of how do we actually perform. The Board has been presented the material – so in the past we would go line item by line item. Eyes would glaze over sometimes as well. So I would like to open it up to the Board, for any line item in particular, or in the executive summary as well. In the cash flow budget which we prepared also, if you were to go back into pages seven and eight, this is kind of a neat graphic which gives us the perspective from year to year. From both the sewer enterprise and the water enterprise which gives – just a point of time – how do we do one year over the next? And so with that, I would like to open up to any questions that the Board may have.

Director Wilson: So as a summary compared to last year can you give us a one paragraph summary of our income and expenses based on what we are budgeting?

Peter Medina. Over all, positive. For the water enterprise it was benefitted by the SRF reimbursements, in terms of operations, I look at as far as how did we perform in both sewer and water? All positives in the end, they all go towards funding power reserves which for the water side are the ones that were traditionally underfunded. The sewer side has traditionally been doing very well. So for the water side, if we keep up, we try to model our budget from the Bartle Wells water rate study that it reports that we have, we consistently except for two years ago when we didn't quite go with what was suggested for the District. We since then modeled it from that. So we are always a little bit below but we keep up.

General Manager, Clemens Heldmaier: Finally we need to check with this because this agenda item as well as the next agenda item, there is an additional staff recommendation for those. Really and that is besides the receipt of the report, we would like to really turn those over to the Finance Committee. This is for us essentially important tools to create the new budget. So there is two purposes (a) we want you guys to see these reports, receive these reports but at the end we want to use these reports and have the finance committee go through them in detail and then we would like to use these reports to create the budget.

Peter Medina: Typically we don't do these together but for a number of reasons, we are doing that at the same time this year.

Director Huber: I am actually in favor of Clemens suggestion that it go to Katherine and myself so we can take more detail. I did look for it in preparation of the meeting tonight. As you can imagine, I had a number of things that I did want to bring up but none of them seem to be critical or urgent or alarming so that Katherine, between you and me, we can have a community meeting and review these more in depth.

Director Slater-Carter: Absolutely and I think we have – we should wait for the SAM budget because there are going to be some possible increases and given what is going on with Half Moon Bay right now and SAM , there may be increases that are greater than we anticipate. So I think – these numbers look pretty good to me actually. I was pleased to see that property tax had gone up and things – costs have gone down – but that's always good news when you get more income and lower costs. And huge thanks to Clemens and the crew for keeping this District in such good shape in terms of costs and so on. We do need to do this fairly soon, Bill.

4. Review and Possible Action Concerning Mid-Year Budget Review.

General Manager Heldmaier reported to allow the Board and public to be as well informed as possible regarding the District's financial reporting; a number of steps have been taken over the past 3 years. The Funds Balance Sheet and Revenue & Expenditures Budget vs. Actual line items were renamed and grouped with the intent to make the reports understandable for everyone in the District. In Addition a 12 month Revenue & Expenditures Budget vs. actual was introduced as well as an executive summary that highlight's variances in the Budget line items.

Peter Medina, District Accountant has prepared documents that illustrate the comparison of the District's financial position for the period ended December 31, 2016.

Peter Medina: The mid-year budget review is the mid-way point. I look at it as seeing how we are tracking but it really does lead the mind-set into going into the fiscal year 17-18 budget.

The fiscal year end, just that snapshot, I think it is important just because it was reviewed and audited by the auditors, you know, that was good. Those are good numbers.

Going forward, we want to know okay what blips outside of the 16-17 budget that we prepared this time last year when into effect 7/1/16. How are we doing? How are we tracking revenue that we project to come in and how are we tracking in terms of the outflows, money flowing out the door. And I said if you were to look at the first three pages of this -- that middle column -- that percentage to date, most all

of them are in the 50% range so I said – so I say overall – outside of that – both on the revenue and on the expenditure side. I don't like to see the expenditure side go too low either because – we didn't hit what we thought and all of the rates are predicated off of those expenditures as well so to see those go low, I don't want to see that I really want to see – when we go through this we have – we put your best foot forward – we know some things or a lot of things to us are unknown, but the major drivers with help from our consultant SRT as well as Bartle Wells, we know the CIP portion is going to be – was expected on the water side and Nute on the sewer side, that is one of the major drivers which frames are all over budget. We know what the debt is going to be. We know what we would like the water coming in to be. We have very accurate for the sewer service charge coming in. The property tax is one thing that has more or less stayed steady except for the ERAF portion which we don't budget for because we don't know what is going to come in. When it does come in great, but we are always happy about that but we don't know. So -- personnel costs – are the other major portion of what the District budgets for. SAM costs as well for the sewer side. That is really the major component outside of CIP which really drives that budget. So, like I said, looking at this, seeing how we have done mid-way through the year and then saying now we know what we know. What is going to happen the next – at this point – three months – let's try and get a good projection of where we see ourselves operating in within 17-18 constraints.

Director Wilson: Any discussion from the Board on this?

Director Huber: I just actually have one real quick question. As I have said before we do most of this at the finance committee, the one that caught my attention and I just want to review real quick.

Water cap: Total expenditure 528,000 and change. 85% of budget. And that is for the 7th Street service line and the 4th Street main replacement. Is – are we – targets or something to talk about in that? Is that front-loaded?

General Manager, Clemens Heldmaier: The main improvement project for this fiscal year is completed. There are other costs that will be wrapped into this capital improvement category. For example, if we have a main line failure . . . and we decide instead of repairing that main line – to replace that section – will roll these costs into this CIP.

Director Huber: But it is not that you are overly concerned about the fact that we have already spent the 85%?

General Manager, Clemens Heldmaier: No it is because it is due to the main – taking capital improvement project for this fiscal year was completed in the first half.

Director Wilson: Suggests this goes to the Finance Committee for further review.

5. Review and Possible Action Concerning Nomination of Representative on the CSDA Board of Directors.

General Manager Heldmaier reported: The California Special Districts Association (CSDA) is conducting a call for nominations for Seat C for the 2018-2020 term and fill vacancy for remainder of Term A, which expires 2018. Our district is part of Region 3 which includes the greater Bay area (from Mendocino to Monterey Counties). A board member is expected to attend all Board meetings, usually eight per year, but is reimbursed for travel by CSDA. Any independent special district with current membership in CSDA is eligible to designate one person, such as a board member or managerial employee, for election as a director of CSDA. A copy of the District's resolution or minute action must accompany the nomination form. The deadline for receiving nominations is May 19, 2017.

CSDA will mail ballots on June 2. The ballots must be received by CSDA on August 4, 2017 and successful candidates will be notified before August 8.

In the past, Director Slater-Carter has expressed interest in serving on the CSDA Board, therefore staff prepared an according resolution. Any Director serving on the MWSD Board is eligible to serve on the CSDA Board as well.

Director Wilson: Any discussion.

Director Slater-Carter: I would be honored to receive the nomination.

Director Boyd Moved to nominate Director Slater-Carter for Seat C for the 2018-2020 term and fill vacancy for the remainder of Term A, which expires in 2018. Director Huber seconded the motion.

All Board members were in favor and the motion passed unanimously 5 – 0.

6. Review and Possible Action Concerning Cancellation of Next Regular Scheduled Meeting April 6, 2017.

General Manager Heldmaier reported he will be out of the office from March 27th through April 14, 2017.

Director Wilson: Due to the vacations scheduled in April for the Board, unless there is objection, I am recommending the next meeting be held on May 4th.

All Board members were in agreement.

Reports:

1. Sewer Authority Mid-Coastside (Boyd/Slater-Carter) Director Boyd reported he has been looking forward to this. OK, one of the big pieces of work that we do is actually done with the sewer authority and I am being a little more verbose for our community member here. So the sewer authority is made up of MWSD, Granada Community Services District and the City of Half Moon Bay. Everything gets collected and taken down to the plant in Half Moon Bay. Two of us, Katherine and I sit on the board with four others. Two each from the other two agencies. So

Monday night, we got together. We received our audited financial statement. It did report the auditor presenting it was very happy for us. Had some interesting recommendations. Slightly different format than we are used to but it was good and I was especially pleased that the tone and tenor of the meeting from the auditor was very upbeat. It was good. And it was particularly good because we have a new manager and a new auditor and that is always an opportunity to a bumpy ride but it turned out to be pretty good. So that is – the big news is no news.

We had a couple of weekend sessions of the Board in workshops for putting together the strategic plan along with a number of interviews between our strategic planner and facilitator and all the members of the Board plus managers and others who have a long-standing interest in the working of SAM. And we had a presentation on and accepted the strategic plan document. So I heard you all have the SAM packet to look through it. Pretty good stuff. Not in final form. Martin Rauch, the facilitator is going to make a few little edits but it is very readable right now and I think it is remarkable that the three agencies are able to find that much common ground.

But you remember what we went through with Martin doing something similar and the experience to us was very familiar. But you all spend that much time together and you wind up finding a whole of common ground. So we were doing that. It is a real milestone for the sewer authority.

One simple piece of business – we had a conveyor – mechanical failure – so we are ordering \$37,000 replacement part. It has been ordered. It will be manufactured and shipped to us.

Probably the biggest item and one I want to make sure that we are all aware of – right near Magellan, we had a substantial leak. And this was one where the intertie pipeline system had developed a hole. On the east side of Highway One the pipeline runs down the East side and right near that dry gully which is actually a creek –It wouldn't be a creek if there weren't all the eucalyptus trees. But flow was found in that and there shouldn't have been flow even with the rains. Even with the rains it shouldn't have been what they were seeing. Turns out there was a hole underground that was leaking the liquid was finding its way out that way. Thankfully we had staff who was going swimming in the area and noticed that things weren't quite right. Investigated and I really want to commend our Sewer Authority staff because nobody else noticed this. And if it weren't for people who knew what to look for – but by the time it got down that gully – it just looked like storm run-off. It didn't look bad and it didn't smell all that bad. It was just – so really a great job by SAM staff. Finding it and getting it addressed. Every now and then, I am very sad that this happened but I am really grateful for the team that we have. Just the right people to jump on it

Director Slater-Carter: And it took every single SAM crew member working on that to stop the leak and the good news was that the bypass system that Scott insisted on years ago worked perfectly. They were able to put a bypass linkage in

so they were stopping all the flow that was going past the eruption. So it was very exciting.

Director Boyd: I don't want to take credit for that. It was Tanya's engineering work and a fine recommendation when it was presented. I was happy to fight for it I'm really glad we got it in.

So this led to an item on SAM agenda Monday night. We discussed this and we gave out a contract to SRT to do the design and engineering work for repairs along that portion of the IPS – intertie pipeline system. This is something that we have been wanting to do for a long time. We have had difficulty in convincing HMB to come along with us to spend the money to properly maintain the interlight pipeline system. HMB joined right in this time and we are grateful that we are at a place now where they are doing this. It still feels a little tense but we are doing the things that we need to do. Should have done it previously. But glad to be getting on it now.

Director Slater-Carter: So we are going to be seeing – we will have to pay for it – so we will see extra costs in our budget.

Director Boyd: The next item that came up was whether or not to replace our software for managing the mapping of the ground work that we do. This is something that has been talked about for a while. Talked about amongst the engineers and the managers. Surprisingly Half Moon Bay raised some objections. These were new objections. Came as news to our staff. We will figure out what is going on with that. But it is one thing I will tell you is that our \$19,000 contract on the existing software means that we would have a two and a half year payoff on the new software because the annual \$4,000 maintenance plus the initial cut-over costs for acquisition systems would net out under three years. Given that the staff pretty much hates the existing system and kind of likes the new system, we are hoping that we can get everybody else on the same page.

Director Slater-Carter: And I believe Montara you looked at it Clemens. And you were very satisfied with it and think it would be a positive change. So – but Half Moon Bay couldn't really speak to what their objections were. Granada had no objections.

Director Boyd: I just looked it up on the internet to learn about why it is so hard to use. And I couldn't find it at all. Which I'm not used to for software packages.

Director Boyd: So, I should also mention as an aside, we have long had conversation at SAM quarters for as long as I have been involved with whether or not the individual agencies would be responsible for cleaning and televising their own lines. It has been a topic of some great discussion the past few years I would say. Three four years probably. Actually a heated discussion topic of the past year or so. On something that our General Manager Beverlie has been very active engaged on trying to understand and rise to meet the needs that the individual agencies are concerned about. Our agency has been one of those. We had issues

last year for example that only about half of our lines had been cleaned at a point where most of them should have been. I have to say SAM got on it. Got that job done. There is a little surprising to find out that the city of Half Moon Bay went to West Bay Sanitary unbeknownst to us and are partners and our manger at SAM and others who typically would be in that loop and requested a bid for line cleaning for the City. I mention this because as Katherine telegraphed – this could have some significant impact on our budget for SAM. If Half Moon Bay withdraws, we will be looking at – what do you with the staff? What do you do with the equipment? Do our costs for cleaning go up? How much would we absorb? What on earth would we do? Half Moon Bay and Granada are our partners in contract and we want to make sure we have these conversations and don't want to be surprised and do something in a big hurry. But we may be surprised and have to do something in a big hurry. So we are trying to get on top of that and see if we can have conversations so they won't surprise us.

- 2. MidCoast Community Council Meeting (Slater-Carter): None
- 3. CSDA Report (Slater-Carter) None
- 4. CCSD, NCCSD Committee Report (Harvey, Huber) – None
- 5. Attorney's Report (Schricker) – None
- 6. Directors Report – None
- 7. General Manager's Report – None

FUTURE AGENDAS –

REGULAR MEETING ENDED AT 9:48 P.M.

Respectfully Submitted,

Signed _____
Secretary

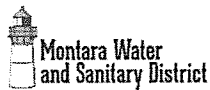
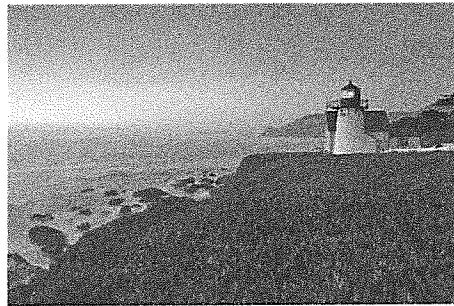
Approved on the 1st, June 2017

Signed _____
President

Montara Water and Sanitary District

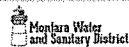
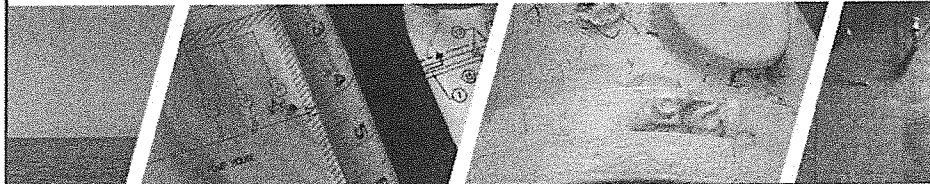
Water System

March 16, 2017
Board Meeting



Presentation Overview

- ❖ Water System Retrospective
- ❖ Utility Financing
- ❖ 2017 Master Plan Update
- ❖ 2017 Capital Improvements Program (CIP)



Water System Retrospective

Water System Acquisition and Improvements

- MWSD acquired water system in 2003.
- MWSD implemented significant system-wide improvement projects in the past nearly 14 years.
- MWSD addressed existing system deficiencies and started adding new water customers.

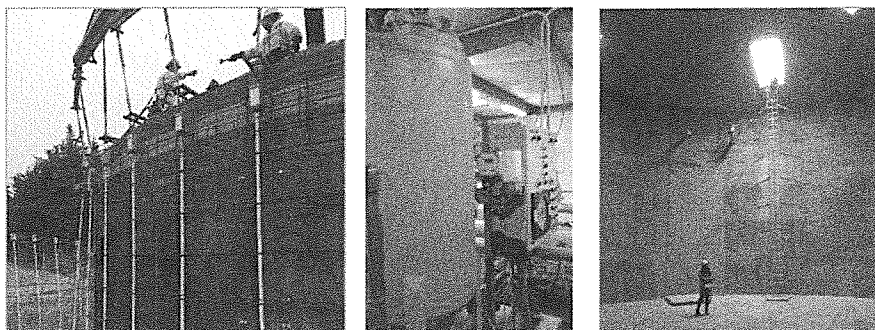
Water System Retrospective

Major Capital Improvements since 2010

- New 100,000-gallon Schoolhouse Tank No. 1
- New 100,000-gallon Schoolhouse Tank No. 2



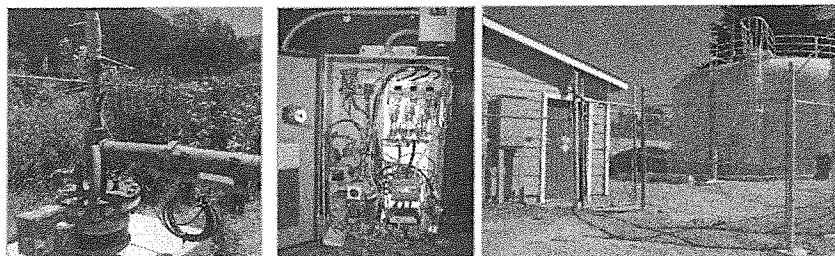
Water System Retrospective



Major Capital Improvements since 2010

- New 500,000-gallon Alta Vista Tank No. 2
- Acquisition of the Pillar Ridge Manufactured Home Park Water System

Water System Retrospective



Major Capital Improvements since 2010

- SCADA Upgrades
- Rehabilitation of key controls elements at the Alta Vista Water Treatment Plant
- Replacement and rehabilitation of multiple distribution system mains, valve stations, and other appurtenances

Water System Retrospective

Summary

- MWSD implemented significant improvements to the water system since 2010.

Next steps include the development of a:

- 2017 Water Master Plan Update,
- 2017 Water Connection Charge Update.

Utility Financing

Public vs. Private Utility – Background

- MWSD is a special district governed by the Board of Directors elected by the voters.
- The District is a publicly-owned entity and is NOT a private business.
- Prior to 2003, the Water System was owned and operated by an investor-owned utility company.

Utility Financing

Public vs. Private Utility – Background

- **Public utilities** do not make profit and rates and other charges are determined by the elected governing body.
- **Private investor-owned utility** companies utilize water sales' revenue (rates) to recover all their costs and earn a return on investment.

Utility Financing

Utility Revenue

- Utility revenue must cover costs of operations, maintenance, and capital improvements required to deliver safe potable water to customers.
- Each utility revenue requirements are unique to that utility.
- For a utility to be truly self-sustaining, the actual cost of providing services must be recovered.

Utility Financing

Public vs. Private Utility – Revenue

- **Public Utility Approach** = Cash Needs, including:
 - Operating Expenses
 - Capital Improvements
 - Debt Service Payments
 - Reserves
- **Investor-Owned Utility Approach** includes:
 - Operating Expenses
 - Depreciation and Amortization
 - Income and Property Taxes
 - Return on Investment

Utility Financing

Public vs. Private Utility – Connection Fees

- **Public Utility:**
 - Connection fees charged to new customers provide funding for projects that benefit new development – to relief the burden to existing ratepayers.
- **Investor-Owned Utility:**
 - Required for pay for the facilities themselves to be paid for by all ratepayers.

Master Plan Purpose & Approach

2017 Master Plan Update will:

- Assess current water supply and demand.
- Project the future demands based on the San Mateo County Local Coastal Program.
- Assess the needs for capital improvements.
- Act as the guiding document for future policy and management decisions.

2017 Master Plan Update Outcomes

New Customer CIP Update:

- Identifies capital projects and equipment purchases needed, and
- Provides a schedule and budget for the implementation.

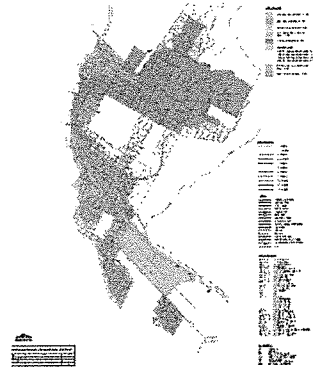
Water Capacity Charge Update to:

- Recover the cost of facilities needed for new service connections, and
- Equitably allocate costs to existing and future customers.

Supply & Demand Overview

Production Data Summary – 2004-2015 Averages

- Total Annual Water Production:
➤ 102 million gallons per year
- Total Annual Water Production:
➤ 298,576 gallons per day
- Per Capita Water Demand:
➤ 55 gallons per capita per day



Preliminary Demand Analysis

Future Population Demands *

| Year | Total Population | Average Annual Growth Rate | Projected Average Daily Demand | Projected Maximum Daily Demand |
|------|------------------|----------------------------|--------------------------------|--------------------------------|
| | <i>Persons</i> | <i>%</i> | <i>gpd**</i> | <i>gpd</i> |
| 2015 | 6,187 | - | 340,285 | 545,036 |
| 2020 | 6,503 | 1 | 353,375 | 572,874 |
| 2030 | 7,183 | 1 | 386,210 | 632,777 |
| 2040 | 7,934 | 1 | 420,860 | 698,936 |
| 2050 | 8,865 | 1 | 459,140 | 772,142 |

* Based on 2010 US Census data, MWSD records, the San Mateo County Local Coastal Program

** gpd = gallons per day

Reliable Supply vs. Projected Demand

Preliminary Summary of Results

| Year | Total Reliable Supply | Projected Maximum Daily Demand | Excess or Deficit Supply * |
|------|-----------------------|--------------------------------|----------------------------|
| | <i>gpd</i> | <i>gpd</i> | <i>gpd</i> |
| 2015 | 758,880 | 545,036 | 213,844 |
| 2020 | 758,880 | 572,874 | 186,006 |
| 2030 | 758,880 | 632,777 | 126,103 |
| 2040 | 758,880 | 698,936 | 59,944 |
| 2050 | 758,880 | 772,142 | -13,262 |

* Includes 80,959 gallons per day (gpd) set aside for LCP priority connections

Preliminary Summary of Results

Existing Supply and Connection Availability

- Supply available to connect new customers, both the existing development (well owners) and new development:
 - 132,885 gpd of reliable supply
 - 107,955 gpd of drought-safe supply

Preliminary Summary of Results

Existing Supply and Connection Availability

- An estimated **188 private wells** operate inside the urban/rural boundary and are eligible to connect to the District's water system
- Connecting all eligible private wells may require the District to advance CIP projects sooner

Capital Improvements Program (CIP)

- **Water Master Plan** is a living document revised every 5 to 10 years.
- **Water Master Plan** results in a New Customer CIP Development.
- A **CIP** identifies and prioritizes projects that are necessary to ensure a safe and reliable water service for years to come.
- **CIP Projects** usually scheduled according to future needs and available funding.

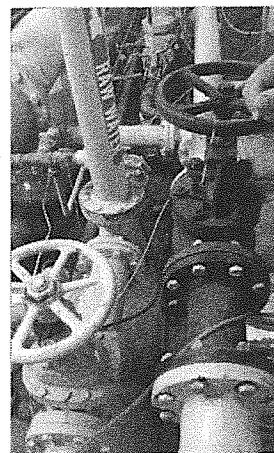
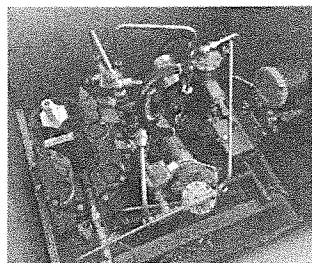
Capital Improvements Program (CIP)

CIP Projects are identified in different ways:

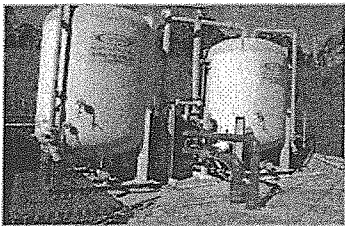
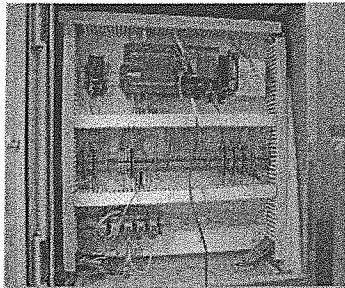
- System Review/Deficiency Analysis
- Infrastructure Inspection and Assessment
- Staff Interviews
- Redundancy Review
- Hydraulic Computer Modeling – Distribution System Analysis

Examples of CIP Projects

- Booster Pump Station Upgrade
- Distribution System Upgrades
- Various Wells Pump Upgrades
- Develop Additional Supply Reliability



Examples of CIP Projects



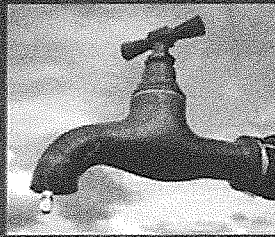
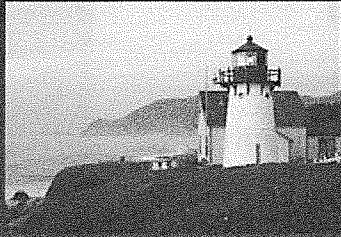
- Telemetry Upgrades
- SCADA Upgrades
- Treatment Upgrades

Capital Improvements Program

2017 MWSD New Customer CIP

- The **2017 New Customer CIP** will:
 - Be developed based on system deficiencies due to new customer demand.
 - Only include improvements necessary to serve new customers.
 - Be complementary to the annually updated Existing Customer CIP, which addresses existing system rehabilitation needs.

Montara Water & Sanitary District



Water Capacity Charges

March 16, 2017



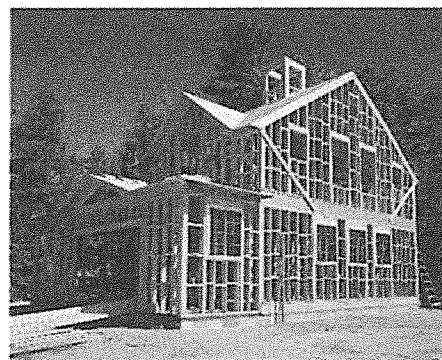
BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS



Montara Water
and Sanitary District

Presentation Overview

- Capacity Charges
- Legal Requirements
- Current Fees
- Multi-Year Payment Program
- GO Bond & Debt History
- Historical Rates
- Key Principles for Updated Fee
- Capacity Charge Update



Capacity Charges

- ▶ One-time charges paid by new or expanded connections to the District's water system
- ▶ Levied to recover costs for capacity in infrastructure & assets that benefit new development
- ▶ Can be collected from new connections or redevelopment that increases demand
- ▶ District's water capacity charge is termed "Water System Connection Capacity Charge"



Legal Requirements

- ▶ Development impact fees are governed by California Government Code Section 66000 *et. seq.*, (AB1600)
- ▶ Section 66013 governs water & sewer capacity charges
 - Charge "shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed" (Unless obtain 2/3 voter approval)
 - Capacity charge can recover costs for:
 - "public facilities in existence at the time a charge is imposed"
 - "new facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged"
 - "supply or capacity contracts for rights or entitlements, real property interests, and entitlements or other rights involving capital expenses"
- ▶ Code does not detail any specific method for fee calculation; a variety of methods may be used to determine an appropriate charge

Legal Requirements

- ▶ **Section 66013 also identifies some accounting requirements for capacity charge revenues, notably that:**
 - Revenues cannot be co-mingled with other District revenues
 - Revenues must be used solely for the purpose for which the fee was imposed
 - Certain info must be made available within 180 days after the end of each fiscal year
- ▶ **Section 66016 details the process for adopting a new charge:**
 - District "shall hold at least one open and public meeting, at which oral or written presentations can be made"
 - Notice the meeting must be mailed at least 14 days prior to any interested party who has filed a written request to receive such notices
 - At least 10 days prior to the meeting, the local agency shall make available to the public data regarding the fee calculation
 - Any action shall be taken only by ordinance or resolution

Current Capacity Charges

- ▶ Current fees based on BWA Water Capacity Charge Study, April 2011
- ▶ In 2011, SRT updated the Water System Master Plan and associated Capital Improvement Program (CIP)
- ▶ CIP allocated costs to existing customers and growth
 - Identified cost of improvements benefitting approximately the next 621 equivalent connections
 - Project costs excluded cost recovery for facilities funded by GO Bonds
 - Projects costs allocated to growth = \$8.81 million
- ▶ Capacity Charge = $\$8.81\text{M} / 621 = \$14,187$ per new meter equivalent
 - Connection fees adjusted annually based on Engineering News-Record Construction Cost Index (SF Bay Area)
 - Current Capacity Charge for a 5/8" x 3/4" Meter = \$15,729
- ▶ Revenues deposited into separate fund & used exclusively for eligible projects



Multi-Year Fee Payment Program

- ▶ Program applicable to existing development currently served by private wells
- ▶ Eligible costs include all fees due to District as part of connection process
 - *Mainline extensions not eligible; must be paid in full, up front*
- ▶ Multi-year payment program:
 - Term of repayment: Up to 10 years (customer's choice)
 - Interest rate: 2%, waived for conversions through Dec-31, 2017
 - Customer can opt to any amount up to 100% of eligible fees
 - Customer can pay off the balance without penalty anytime
- ▶ Fees are collected on the property tax rolls subject to an Agreement between District and each participant
- ▶ Balance due upon a) property sale, b) title transfer (excluding transfer for financing)



Total Fees for New Connections

| | Basic Water Connection | Fire Service Connection | Wtr & Fire Svc Connection |
|---|------------------------|-------------------------|---------------------------|
| Water Capacity Charge (5/8"x3/4" Meter) | 15,729 | 4,939 | 20,668 |
| Admin, Engineering & Inspection Fees* | 3,584 | 3,584 | 4,531 |
| Service Installation & Meter Cost** | 4,000 | 4,000 | 5,000 |
| Estimated Total | 23,313 | 12,523 | 30,199 |

* Deposit required, actual fees may vary

** Estimate of typical cost, actual costs may vary

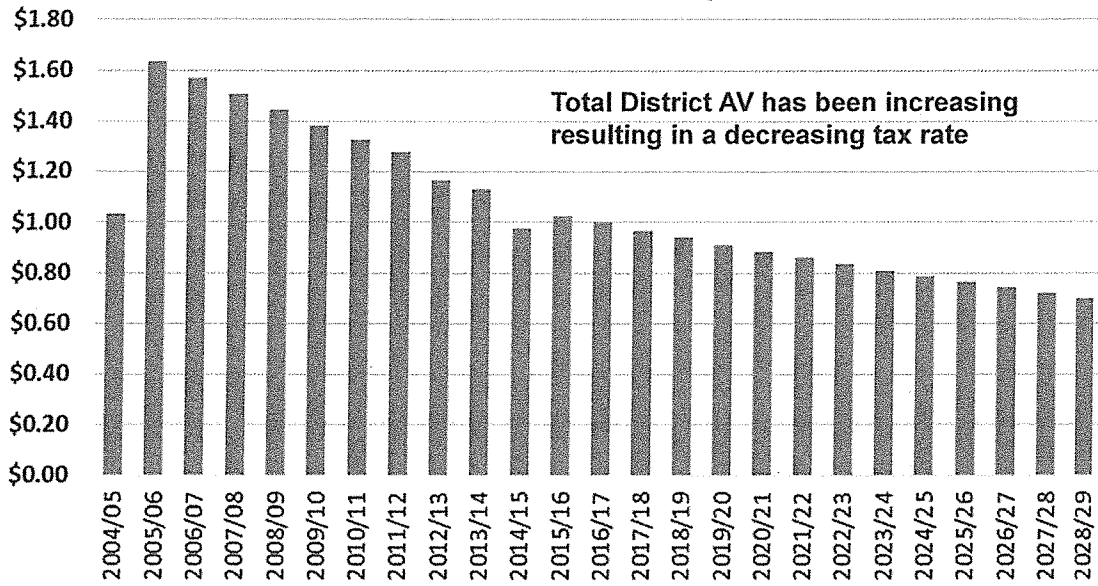
GO Bond History

- ▶ District issued General Obligation (GO) Bonds to acquire water system in 2003 pursuant to a proposition approved by 82% of voters
- ▶ GO Bonds financed system acquisition and funded high-priority capital improvements needed to address major system deficiencies
 - Additional capital improvements needed to serve a) existing customers & b) growth have been and will be funded by a) rates and b) capacity charges, respectively
- ▶ GO Bonds refunded in 2012 to generate savings for all taxpayers & provide \$1.5 million of prior voter-approved funding for capital needs
 - Reduced tax assessment rate
 - Reduced capital funding requirements from rates

General Obligation Bonds

- ▶ Secured by ad valorem property taxes
- ▶ 2002 General Obligation Promissory Notes (refunded)
 - \$2,750,000 Interest Rate: 2.00% Term: 5 years Annual Debt Svc: \$55,000
 - Interim financing for preliminary costs related to water system acquisition
 - Refunded by 2003 GO Bonds
- ▶ 2003 General Obligation Bonds (refunded)
 - \$17,500,000 Avg Rate: 4.55% Term: 25 years Avg debt service: \$1,180,000
 - Financed water system acquisition & high-priority capital improvements
 - Refunded by 2012 GO Bonds
- ▶ 2012 General Obligation Bonds (outstanding)
 - \$15,635,000 Avg Rate: 2.40% Term: 16 yrs (thru 2028) Avg debt svc: \$1,150,000
 - Refinanced 2012 GO Bonds for savings & generated \$1.5 million for capital needs
 - Refi portion generated \$2.77 million gross savings, 16.1% present value savings

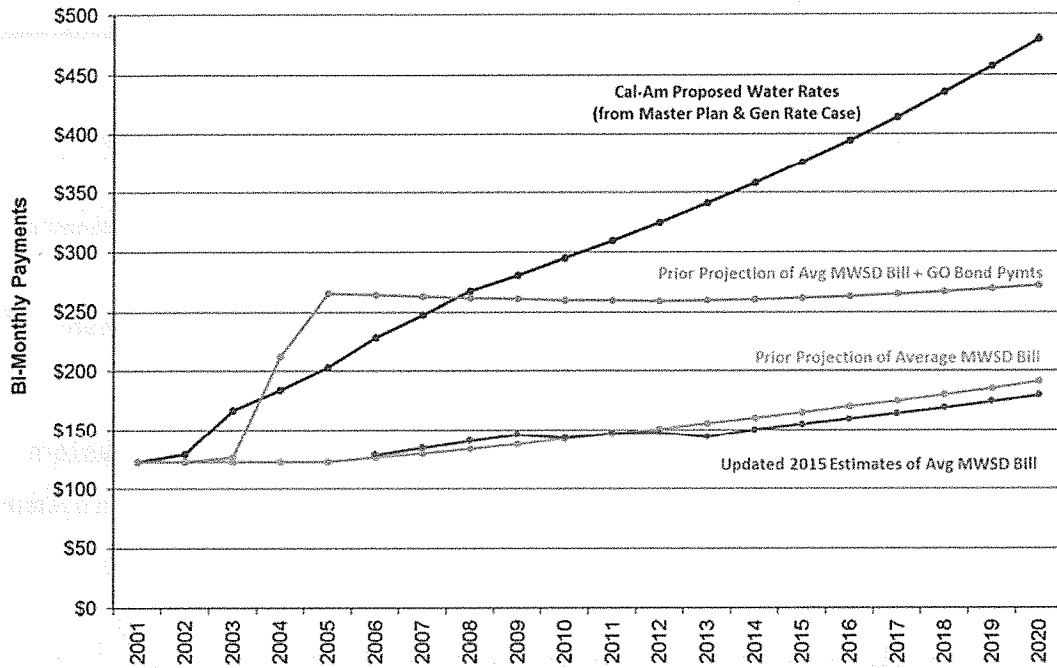
Montara Water & Sanitary District Estimated GO Bond Tax Rate per \$1,000 AV



Water Enterprise Debt

- Debt secured by water system net revenues
- 2012 State Revolving Fund Planning Loan
 - Up to \$500,000 Interest Rate: 2.09% Term: 5 years Annual Debt Svc: \$107,000
 - Planning-related costs for water system improvements (initially for Airport water treatment plant)
- 2014 State Revolving Fund Loan
 - \$2,920,000 Interest Rate: 2.28% Term: 20 years Annual Debt Svc: \$185,000
 - Helped finance Alta Vista Tank
- Lease/Purchase Agreement (Citibank/PNC) *50% Water & 50% Sewer*
 - 2006 Issue: \$1,854,443 Rate: 4.56% Term: 20 years Avg debt svc: \$161,500
 - 2013 renegotiated interest rate to 2.95% Avg debt svc: \$144,900
 - Reduced rate generated \$174,000 gross savings, 7.64% present value savings
 - Financed water meters/energy conservation

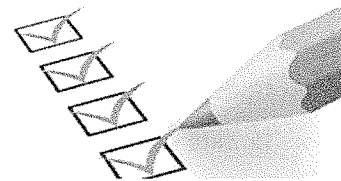
Comparison of Prior Rate Projections vs. Updated 2015 Estimates
Cal-Am Proposed Rates vs. MWSD Average Bills & GO Bond Taxes
Bi-Monthly Payments for an Average Single Family Home



Since 2001, average single family residential water use has declined from approximately 16 hcf to 11.5 hcf per month.

Principles for Capacity Charges

- ▶ **Growth pays its own way**
 - Growth shouldn't subsidize ratepayers
 - And ratepayers shouldn't subsidize growth
- ▶ **Capacity charges should:**
 - Recover costs for the proportionate share of existing and future infrastructure and assets benefitting new development
 - CIP costs and allocations to be based on updated Water System Master Plan
 - Exclude cost-recovery for facilities funded by GO Bonds
- ▶ **Cost recovery options for growth-related facilities financed by debt**
 - Exclude debt: Fee based solely on cost & capacity of facilities benefitting growth
 - Account for debt: Add in prior interest payments, but back out outstanding principal



Concerns/Issues

- ▶ **New connections provide economies of scale**
 - Revenues from new ratepayers exceed the marginal cost of providing service
 - Giving break to new connections shifts burden to ratepayers
 - May not be legally allowable as rates are subject to substantive provisions of Proposition 218
 - Economies of scale should benefit everyone...not just new connections
 - New connections are the biggest beneficiaries of economies of scale as they are joining a greater number of existing ratepayers

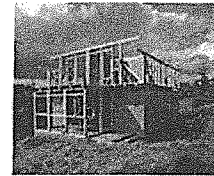
- ▶ **Capacity charge should be based on new demand placed on the system**
 - Well conversions and development of vacant land both place new demand on system
 - Capacity charge should be consistent, regardless of source of new demand

Capacity Charge Update

- ▶ **SRT would first update the Water System Master Plan**
 - Update CIP and cost allocations to existing customers vs growth
 - Update capacity available for growth with capital improvements

- ▶ **Subsequently, BWA would update water capacity charges**
 - Based on updated Water System Master Plan
 - Can evaluate fee alternatives
 - Updated charge will exclude any cost recovery for GO Bond-funded projects

- ▶ **For capacity charges paid in interim, District can consider a potential refund if fees are reduced**
 - But if fee increases, would customer be correspondingly responsible for funding any increase?



Chris Thollaug

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(650) 400-0482 cthollaug@gmail.com



Board of Directors
Montara Water and Sanitary District
8888 Cabrillo Hwy
Montara, CA 94037

Dear Directors,

I've developed an Excel file with two worksheets I'd like to have available for use at tomorrow's study session. I've attached the printouts as PDFs, and am providing the Excel file as an attachment to this email.

The first worksheet, titled Revenue Projection, MWSD Projected Conversions, calculates incremental connection charge and water-bill revenues under various scenarios:

- Scenario 1: Calculation of revenues using the connections projected by district staff and the district engineer and provided to Bartle Wells for their 2011 Water Capacity Charge Study. I've estimated the year-over-year annual increases at 2.1% (the historical average for the period 2011-2017), and projected increases at that rate for the balance of the Bartle-Wells study period. Projected revenue, \$16.6m.
- Scenario 2: Same source, projected revenues that would have been received if the connections projected through 2016 by the BW study had in fact occurred, together with projected water-bill revenues through the end of the study period (2025). Projected revenue, \$8.3m.
- Scenario 3: An estimate of the new-connection revenues. I've estimated those connections at 4 per year, however I would like to have this updated with actuals if those numbers are readily available. Projected revenue, less than \$1m, a small fraction of the revenues projected by the Bartle Wells study.
- Scenario 4: Projection of well conversions under the financing incentive approved by the board. The projection reflects my belief that there will be very little demand from well owners to convert, unless they have serious equipment problems or a failing well. Projected revenues, \$1.3m.
- Scenario 5: Projection of well conversions under an incentive which waives the water connection charge for a fixed period, in this example, 3 years. I've projected 66 well conversions, which is approximately one third of the wells inside the urban/rural boundary (per the Public Works Plan, new connections outside the urban/rural boundary are prohibited).
- Scenario 6: A blank for any additional projection you'd like to consider.

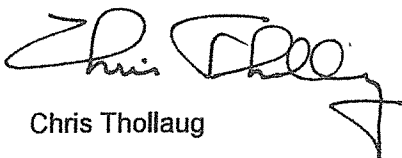
All the scenarios are set up with variables that allow modification for any pricing and connection circumstances you'd like to consider in the study session.

The second, titled Current Value of MWSD Capital Assets Paid Through Water Charges, uses debt and asset numbers from the 2015-2016 audit to calculate the present value of assets (acquisition cost less accumulated depreciation) paid by water customers. Using the audit figures, that number is \$3.3m, 17% of current asset value or approx. \$2,000 per connection.

In addition to working with these numbers, at the study session I'd like to review the status of the \$8.8 million capital improvement plan for new connections included in the 2011 Bartle Wells study, as well as the basis for the district engineer's determination that each project is 100% for future new water customers.

Please make this letter and attachments available to study session participants.

Best regards,



Chris Thollaug

Revenue Projection, MWSD Projected Conversions

Projected Annual Increase: 2.1% both capacity charges & water bills

Scenario 1: Bartle Wells New Customer CIP & Water Capacity Charge Study, 2011 – Projection of Connections (Table 1, page 6)

Revenues assuming the number of new connections projected by district staff and engineer for the Bartle Wells. That projection assumed all wells would convert to the water system. Also assumes 100% of new connections are 5/8 x 3/4 meters, rather than the 97.77% assumed by the BW study.

| Year: | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---------------------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Capacity Charge: | \$14,187 | \$14,485 | \$14,789 | \$15,100 | \$15,417 | \$15,729 | \$16,059 | \$16,397 | \$16,741 | \$17,092 | \$17,451 | \$17,818 | \$18,192 | \$18,574 | \$18,964 | |
| Average Water Bill: | \$90 | \$92 | \$94 | \$96 | \$98 | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | |
| New connections: | 20 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 20 | 20 | 20 | 20 | 600 |
| Connection Fees: | \$283,740 | \$724,250 | \$739,459 | \$754,988 | \$770,843 | \$786,450 | \$802,965 | \$819,828 | \$837,044 | \$854,622 | \$872,569 | \$890,907 | \$909,650 | \$928,781 | \$948,292 | \$9,717,720 |
| Water Bills: | 21,600 | 77,280 | 135,360 | 195,840 | 258,720 | 324,000 | 391,680 | 461,760 | 534,240 | 609,120 | 686,400 | 725,760 | 766,080 | 807,360 | 849,600 | 6,844,800 |
| Total receipts: | \$305,340 | \$801,530 | \$874,819 | \$950,828 | \$1,029,563 | \$1,110,450 | \$1,194,645 | \$1,281,588 | \$1,371,284 | \$1,463,742 | \$1,558,969 | \$1,082,117 | \$1,129,921 | \$1,178,841 | \$1,228,882 | \$16,562,520 |

Scenario 2: Bartle Wells Projection, 2011 through 2016

Revenues from the new connections projected by the Bartle Wells report for the period 2011-2016, including water billing through the end of the study period.

| Year: | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---------------------|-----------|-----------|-----------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|
| Capacity Charge: | \$14,187 | \$14,485 | \$14,789 | \$15,100 | \$15,417 | \$15,741 | | | | | | | | | | |
| Average Water Bill: | \$90 | \$92 | \$94 | \$96 | \$98 | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | |
| New connections: | 20 | 50 | 50 | 50 | 50 | 50 | | | | | | | | | | 270 |
| Connection Fees: | \$283,740 | \$724,250 | \$739,459 | \$754,988 | \$770,843 | \$787,030 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$4,060,310 |
| Water Bills: | 21,600 | 77,280 | 135,360 | 195,840 | 258,720 | 324,000 | 330,480 | 336,960 | 343,440 | 349,920 | 356,400 | 362,880 | 369,360 | 375,840 | 382,320 | 4,220,400 |
| Total receipts: | \$305,340 | \$801,530 | \$874,819 | \$950,828 | \$1,029,563 | \$1,111,030 | \$330,480 | \$336,960 | \$343,440 | \$349,920 | \$356,400 | \$362,880 | \$369,360 | \$375,840 | \$382,320 | \$8,280,710 |

Scenario 3: 2011-2016 Actual New Connections (estimate, needs update to numbers highlighted below)

Revenues from actual new connections, 2011-2016, including water billing through the end of the study period.

| Year: | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Capacity Charge: | \$14,187 | \$14,485 | \$14,789 | \$15,100 | \$15,417 | \$15,741 | \$16,071 | \$16,409 | \$16,753 | \$17,105 | \$17,464 | \$17,831 | \$18,205 | \$18,588 | \$18,978 | |
| Average Water Bill: | \$90 | \$92 | \$94 | \$96 | \$98 | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | |
| New connections: | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | | | 24 |
| Connection Fees: | \$56,748 | \$57,940 | \$59,157 | \$60,399 | \$61,667 | \$62,962 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$358,874 |
| Water Bills: | 4,320 | 8,832 | 13,536 | 18,432 | 23,520 | 28,800 | 29,376 | 29,952 | 30,528 | 31,104 | 31,680 | 32,256 | 32,832 | 33,408 | 33,984 | 382,560 |
| Total receipts: | \$61,068 | \$66,772 | \$72,693 | \$78,831 | \$85,187 | \$91,762 | \$29,376 | \$29,952 | \$30,528 | \$31,104 | \$31,680 | \$32,256 | \$32,832 | \$33,408 | \$33,984 | \$741,434 |

Revenue Projection, MWSD Projected Conversions

Projected Annual Increase: 2.1% both capacity charges & water bills

Scenario 4: Projection of Well Conversions under Financing Incentive Ordinance as approved by the Board, and non-enforcement of "shall connect" provision of MWSD Code section 5-3.103

Financing incentive implements a payment schedule and waives interest for property owners that elect to convert within the first year. Water Capacity Charge revenues are shown when earned, rather than when received. Assumption is that incentive is insufficient to motivate well owners who are not experiencing problems with well output and/or equipment.

| Year: | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | Total |
|---------------------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-------------|
| Capacity Charge: | \$15,729 | \$16,059 | \$16,396 | \$16,741 | \$17,092 | \$17,451 | \$17,818 | \$18,192 | \$18,574 | \$18,964 | \$19,362 | \$19,769 | \$20,184 | \$20,608 | \$21,040 | |
| Average Water Bill: | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | \$120 | \$123 | \$126 | \$129 | \$132 | |
| Well conversions: | 6 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 42 |
| Connection Fees: | \$94,374 | \$96,354 | \$98,377 | \$33,481 | \$34,184 | \$34,902 | \$35,635 | \$36,383 | \$37,147 | \$37,928 | \$38,724 | \$39,537 | \$40,367 | \$41,215 | \$42,081 | \$740,691 |
| Water Bills: | 7,200 | 14,688 | 22,464 | 25,440 | 28,512 | 31,680 | 34,944 | 38,304 | 41,760 | 45,312 | 48,960 | 53,136 | 57,456 | 61,920 | 66,528 | 578,304 |
| Total receipts: | \$101,574 | \$111,042 | \$120,841 | \$58,921 | \$62,696 | \$66,582 | \$70,579 | \$74,687 | \$78,907 | \$83,240 | \$87,684 | \$92,673 | \$97,823 | \$103,135 | \$108,609 | \$1,318,995 |

Scenario 5: Projection of Connections under a policy of waiving the Water Capacity Charge for well owners abandoning their wells. Incentive would be for a fixed period, then revert to full fee

Waiving water connection charge is a much more substantive incentive, and the assumption is more well owners would choose to convert. The incentive is proposed for a finite period—in this example, 3 years. Note that 1/3rd of the estimated 314 wells are outside the urban/rural boundary, and per the Public Works Plan may not be served as the PWP prohibits new connections outside the urban/rural boundary. This example assumes 1/3rd of the wells inside the urban/rural boundary opt to convert to the water system.

| Year: | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | Total | |
|---------------------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|
| Capacity Charge: | \$0 | \$0 | \$0 | \$33,482 | \$34,185 | \$34,903 | \$35,636 | \$36,384 | \$37,148 | \$37,929 | \$38,725 | \$39,538 | \$40,369 | \$41,216 | \$42,082 | \$451,597 | |
| Average Water Bill: | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | \$120 | \$123 | \$126 | \$129 | \$132 | | |
| Well conversions: | 22 | 22 | 22 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 90 | |
| Connection Fees: | \$0 | \$0 | \$0 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$82,368 | \$740,691 |
| Water Bills: | 26,400 | 53,856 | 82,368 | 86,496 | 90,720 | 95,040 | 99,456 | 103,968 | 108,576 | 113,280 | 118,080 | 123,984 | 130,032 | 136,224 | 142,560 | 1,511,040 | |
| Total receipts: | \$26,400 | \$53,856 | \$82,368 | \$119,978 | \$124,905 | \$129,943 | \$135,092 | \$140,352 | \$145,724 | \$151,209 | \$156,805 | \$163,522 | \$170,401 | \$177,440 | \$184,642 | \$1,962,637 | |

Scenario 6:

[comments]

| Year: | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | Total |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| Capacity Charge: | \$15,729 | \$16,059 | \$16,396 | \$16,741 | \$17,092 | \$17,451 | \$17,818 | \$18,192 | \$18,574 | \$18,964 | \$19,362 | \$19,769 | \$20,184 | \$20,608 | \$21,040 | |
| Average Water Bill: | \$100 | \$102 | \$104 | \$106 | \$108 | \$110 | \$112 | \$114 | \$116 | \$118 | \$120 | \$123 | \$126 | \$129 | \$132 | |
| Well conversions: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Connection Fees: | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Water Bills: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total receipts: | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

Current Value of MWSD Capital Assets Paid Through Water Charges

| Present Value, Capital Assets* | Capital Assets at Acquisition Cost: | \$28,031,592 | % of Asset |
|---|---|---------------------|----------------------|
| | Accumulated Depreciation | (\$8,896,821) | <u>Current Value</u> |
| | Current value of water-system assets: | <u>\$19,134,771</u> | 100% |
| | | | |
| Debit Financing* | General Obligation Bonds (less current portion): | \$11,426,755 | 60% |
| | Other Long-Term Obligations (less current portion): | <u>\$4,392,206</u> | 23% |
| | Current long-term debt: | <u>\$15,818,961</u> | 83% |
| | Current Value of Capital Assets Paid Through Water Charges: | <u>\$3,315,810</u> | <u>17%</u> |
| | | | |
| Current Value of Capital Assets Paid Through Water Charges, per Connection: | # of water system connections: | 1,649 | |
| | | <u>\$2,011</u> | |

* source: 2015-2016 audit

Questions

Are all depreciable costs for the Alta Vista Tank project included in the balance sheet of the 2016 audit?
 What improvements listed on Table 4 of the 2011 Bartle Wells Connection Charge Rpt have been completed and are included in the district's capital assets?
 What is the current number of connections--1,649 needs to be updated

MONTARA WATER AND SANITARY DISTRICT



**Unaudited Financial Statements for
April
2017**



MONTARA WATER AND SANITARY DISTRICT AGENDA

Prepared For the Meeting Of: June 01, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens H. Heldmaier, General Manager

SUBJECT: Unaudited Financial Statements – Executive Summary

Budget vs. Actual – Sewer July thru April, 2017 Variances over \$2,000:

- 4610 Property Tax Receipts, \$77,876 above Budget – The District received \$192,794 in ERAF funds, which was split between Sewer and Water funds.
- 4710 Sewer Service Charges, \$167,567 below Budget – \$680,382 received in April, remainder to come in May, June & July (accrual).
- 4720 – Sewer Service Refunds, \$7,197 above budget – No refunds issued in April.
- **Overall Total Operating Income for the period ending April 30, 2017 was \$93,605 below budget. Total revenue received to date is \$2,167,787.**
- 5270 Information Systems, \$3,943 below Budget – Minimal activity to date.
- 5400 Legal, \$5,322 above Budget- Increased activity in the current fiscal year.
- 5610 Accounting, \$8,450 below Budget - Difference due to timing.
- 5630 Consulting, \$11,387 below Budget – District's Strategic Plan is still being developed.
- 5640 Data Services, \$2,875 below Budget – The services of Fred Weber are not utilized until April in concurrence with the budget.
- 5720 Telephone & Internet, \$3,151 above Budget – Higher costs than anticipated. The District has changed both providers and plans in an attempt to rein in costs.
- 6170 Claims, Property Damage, \$8,333 below Budget –No activity to date.
- 6200 Engineering, \$8,812 below Budget – Majority of costs have been related to capital improvement.
- 6600 Collection/Transmission, \$8,333 below Budget – No activity to date.
- 6920 SAM Operations, \$16,627 below Budget – The District received a reimbursement from SA M for a FY 2015-16 operating income.
- 6940 SAM Maintenance, Collection Sys, \$21,924 above Budget – Payment made for Sewer Maintenance expenses.
- 6950 SAM Maintenance, Pumping, \$22,487 below Budget – Lift Stations maintenance in March.



MONTARA WATER AND SANITARY DISTRICT AGENDA

Prepared For the Meeting Of: June 01, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens H. Heldmaier, General Manager

- **Overall Total Operating Expenses for the period ending April 30, 2017 were \$41,844 below Budget.**
- **Total overall Expenses for the period ending April 30, 2017 were \$65,152 below budget. For a net ordinary loss of \$28,453, budgeted vs. actual. Actual net ordinary income is \$821,305.**
- 7100 Connection Fees, \$19,454 below Budget – No new construction connections or remodel connections issued in April.
- 7200 Interest Income, LAIF, \$6,351 above budget – 1st & 2nd quarter interest payments have been booked.
- 8000 CIP, \$598,103 below Budget – \$4,886 in capital improvements booked in April.
- 9175 Capital Assessment – SAM, \$40,278 below Budget – The District received a \$27,469 assessment refund.
- 9200 I-Bank Loan, \$23,066 below Budget – Variance due to timing.



MONTARA WATER AND SANITARY DISTRICT AGENDA

Prepared For the Meeting Of: June 01, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens H. Heldmaier, General Manager

- **Budget vs. Actual – Water July thru April, 2017 Variances over \$2,000:**
- 4400 Fees, \$5,091 above Budget – One New Construction inspection fees and administrative fees collected in April.
- 4610 Property tax Receipts, \$77,876, above Budget – The District received \$192,794 in ERAF funds, which was split between Sewer and Water funds.
- 4810 Water Sales Domestic, \$9,301 above Budget – Anticipated water sales is keeping pace with budgeted projections.
- **Overall Total Operating Income for the period ending April 30, 2017 was \$103,645 above budget. Total revenue received to date is \$1,883,603.**
- 5190 Bank Fees, \$2,798 below Budget – Lower fees than anticipated.
- 5240 CDPH Fees, \$12,917 below Budget – The District has not yet received the annual bill.
- 5250 Conference Attendance, \$2,483 below Budget – Minimal activity to date.
- 5400 Legal, \$10,838 below Budget – Majority of costs have been related to the Sewer enterprise.
- 5530 Memberships, \$2,679 above Budget - Historically, membership fees paid on a calendar year basis. Variance will decrease as the fiscal year continues.
- 5610 Accounting, \$8,450 below Budget - Difference due to timing.
- 5620 Audit, \$7,500 below Budget – The District did not have to undergo a single audit, thus reducing the overall fee.
- 5720 Telephone & Internet, \$2,644 above Budget - Higher costs than anticipated. The District has changed both providers and plans in an attempt to rein in costs.
- 5800 Labor, \$11,260 below Budget – The District's Water Billing Specialist departed in March 2017.
- 6170 Claims, Property Damage, \$8,158 below Budget – Minimal activity to date.
- 6180 Communications, \$7,355 above Budget – SCADA communications expense paid in April.
- 6200 Engineering, \$4,733 above Budget – Water quality engineering costs have been higher than anticipated.
- 6400 Pumping, \$18,468 below Budget – PG&E costs have been less than expected to date.



MONTARA WATER AND SANITARY DISTRICT AGENDA

Prepared For the Meeting Of: June 01, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens H. Heldmaier, General Manager

- 6500 Supply, \$24,800 below Budget – No water purchases in April.
- 6600 Collection/Transmission, \$42,748 above Budget – Water Main maintenance four bills paid in April.
- 6700 Treatment, \$18,651 below Budget – Costs related to chemicals and filtering have been held below historic levels.
- 6800 Vehicles, \$5,577 below Budget – Indicative of lower fuel costs and less than anticipated vehicle repairs.
- **Overall Total Operating Expenses for the period ending April 30, 2017 were \$10,650 below Budget.**
- **Total overall Expenses for the period ending April 30, 2017 were \$53,230 below budget. For a net ordinary income of \$156,875, budgeted vs. actual. Actual net ordinary income is \$720,980.**
- 7100 Connection Fees, \$45,452 above Budget – 1 new construction connection as well as 1 PFP connection issued in April.
- 7600 Bond Revenues, G.O. \$156,915 below Budget – Variance due to timing.
- 8000 CIP, \$94,546 above Budget – Projects include: Alta Vista Well monitoring, Rental of Capital Equipment and diversion line installation.
- 9100 Interest Expense- Go Bonds, \$124,712 under Budget - Variance due to timing.
- 9150 SRF Loan, \$8,933 above Budget - Variance due to timing.

RECOMMENDATION:

This is for Board information only

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Sewer Budget | \$ Over Budget |
|--|------------------|-----------------|----------------|
| Ordinary Income/Expense | | | |
| Income | | | |
| 4220 · Cell Tower Lease | 28,573.00 | 27,916.70 | 656.30 |
| 4400 · Fees | | | |
| 4410 · Administrative Fee (New Constr) | 3,409.00 | 2,500.00 | 909.00 |
| 4420 · Administrative Fee (Remodel) | 1,448.00 | 1,250.00 | 198.00 |
| 4430 · Inspection Fee (New Constr) | 3,220.00 | 2,083.30 | 1,136.70 |
| 4440 · Inspection Fee (Remodel) | 3,748.00 | 2,916.70 | 831.30 |
| 4460 · Remodel Fees | 3,395.90 | 5,833.30 | -2,437.40 |
| Total 4400 · Fees | 15,220.90 | 14,583.30 | 637.60 |
| 4610 · Property Tax Receipts | 312,876.38 | 235,000.00 | 77,876.38 |
| 4710 · Sewer Service Charges | 1,802,158.71 | 1,969,726.00 | -167,567.29 |
| 4720 · Sewer Service Refunds, Customer | -10,529.93 | -3,333.30 | -7,196.63 |
| 4760 · Waste Collection Revenues | 19,208.36 | 17,500.00 | 1,708.36 |
| 4990 · Other Revenue | 279.82 | | |
| Total Income | 2,167,787.24 | 2,261,392.70 | -93,605.46 |
| Gross Profit | 2,167,787.24 | 2,261,392.70 | -93,605.46 |
| Expense | | | |
| 5000 · Administrative | | | |
| 5190 · Bank Fees | 5,732.06 | 4,583.30 | 1,148.76 |
| 5200 · Board of Directors | | | |
| 5210 · Board Meetings | 2,985.82 | 2,500.00 | 485.82 |
| 5220 · Director Fees | 2,289.94 | 2,750.00 | -460.06 |
| 5230 · Election Expenses | 4,859.68 | 3,333.30 | 1,526.38 |
| Total 5200 · Board of Directors | 10,135.44 | 8,583.30 | 1,552.14 |
| 5250 · Conference Attendance | 146.63 | 1,666.70 | -1,520.07 |
| 5270 · Information Systems | 1,056.87 | 5,000.00 | -3,943.13 |
| 5300 · Insurance | | | |
| 5310 · Fidelity Bond | 0.00 | 416.70 | -416.70 |
| 5320 · Property & Liability Insurance | 1,918.47 | 1,416.70 | 501.77 |
| Total 5300 · Insurance | 1,918.47 | 1,833.40 | 85.07 |
| 5350 · LAFCO Assessment | 1,526.00 | 1,666.70 | -140.70 |
| 5400 · Legal | | | |
| 5420 · Meeting Attendance, Legal | 5,670.00 | 7,916.70 | -2,246.70 |
| 5430 · General Legal | 24,235.00 | 16,666.70 | 7,568.30 |
| Total 5400 · Legal | 29,905.00 | 24,583.40 | 5,321.60 |
| 5510 · Maintenance, Office | 6,362.50 | 6,666.70 | -304.20 |
| 5530 · Memberships | 708.00 | | |
| 5540 · Office Supplies | 5,950.03 | 6,666.70 | -716.67 |
| 5550 · Postage | 1,034.37 | 2,083.30 | -1,048.93 |
| 5560 · Printing & Publishing | 576.64 | 2,500.00 | -1,923.36 |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Sewer Budget | \$ Over Budget |
|--|------------------|-----------------|----------------|
| 5600 · Professional Services | | | |
| 5610 · Accounting | 16,550.00 | 25,000.00 | -8,450.00 |
| 5620 · Audit | 13,000.00 | 13,000.00 | 0.00 |
| 5630 · Consulting | 11,946.27 | 23,333.30 | -11,387.03 |
| 5640 · Data Services | 2,125.00 | 5,000.00 | -2,875.00 |
| 5650 · Labor & HR Support | 1,875.00 | 1,875.00 | 0.00 |
| 5660 · Payroll Services | 802.57 | 666.70 | 135.87 |
| 5690 · Other Professional Services | 101.50 | | |
| Total 5600 · Professional Services | 46,400.34 | 68,875.00 | -22,474.66 |
| 5710 · San Mateo Co. Tax Roll Charges | 119.00 | 2,083.30 | -1,964.30 |
| 5720 · Telephone & Internet | 12,317.49 | 9,166.70 | 3,150.79 |
| 5730 · Mileage Reimbursement | 617.44 | 1,250.00 | -632.56 |
| 5740 · Reference Materials | 23.40 | 166.70 | -143.30 |
| 5800 · Labor | | | |
| 5810 · CalPERS 457 Deferred Plan | 12,898.84 | 12,597.50 | 301.34 |
| 5820 · Employee Benefits | 26,511.05 | 28,651.70 | -2,140.65 |
| 5830 · Disability Insurance | 1,020.27 | 1,232.50 | -212.23 |
| 5840 · Payroll Taxes | 11,559.37 | 13,767.50 | -2,208.13 |
| 5850 · PARS | 11,723.88 | 11,473.30 | 250.58 |
| 5900 · Wages | | | |
| 5910 · Management | 83,310.94 | 77,810.80 | 5,500.14 |
| 5920 · Staff | 97,070.52 | 98,703.30 | -1,632.78 |
| 5930 · Staff Certification | 1,500.00 | 1,500.00 | 0.00 |
| 5940 · Staff Overtime | 3,533.82 | 1,949.20 | 1,584.62 |
| 5950 · Staff Standby | 0.00 | | |
| Total 5900 · Wages | 185,415.28 | 179,963.30 | 5,451.98 |
| 5960 · Worker's Comp Insurance | 1,135.48 | 3,040.80 | -1,905.32 |
| Total 5800 · Labor | 250,264.17 | 250,726.60 | -462.43 |
| Total 5000 · Administrative | 374,793.85 | 398,101.80 | -23,307.95 |
| 6000 · Operations | | | |
| 6170 · Claims, Property Damage | 0.00 | 8,333.30 | -8,333.30 |
| 6195 · Education & Training | 0.00 | 833.30 | -833.30 |
| 6200 · Engineering | | | |
| 6210 · Meeting Attendance, Engineering | 0.00 | 1,666.70 | -1,666.70 |
| 6220 · General Engineering | 34,521.84 | 41,666.70 | -7,144.86 |
| Total 6200 · Engineering | 34,521.84 | 43,333.40 | -8,811.56 |
| 6320 · Equipment & Tools, Expensed | 0.00 | 833.30 | -833.30 |
| 6330 · Facilities | | | |
| 6335 · Alarm Services | 4,267.26 | 4,450.00 | -182.74 |
| 6337 · Landscaping | 3,510.00 | 2,000.00 | 1,510.00 |
| Total 6330 · Facilities | 7,777.26 | 6,450.00 | 1,327.26 |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Sewer Budget | \$ Over Budget |
|--|------------------|-----------------|----------------|
| 6400 · Pumping | | | |
| 6410 · Pumping Fuel & Electricity | 23,486.42 | 22,500.00 | 986.42 |
| Total 6400 · Pumping | 23,486.42 | 22,500.00 | 986.42 |
| 6600 · Collection/Transmission | | | |
| 6660 · Maintenance, Collection System | 0.00 | 8,333.30 | -8,333.30 |
| Total 6600 · Collection/Transmission | 0.00 | 8,333.30 | -8,333.30 |
| 6800 · Vehicles | | | |
| 6810 · Fuel | 583.83 | 666.70 | -82.87 |
| 6820 · Truck Equipment, Expensed | 34.06 | 133.30 | -99.24 |
| 6830 · Truck Repairs | 143.24 | 333.30 | -190.06 |
| Total 6800 · Vehicles | 761.13 | 1,133.30 | -372.17 |
| 6890 · Other Operations | 550.00 | | |
| 6900 · Sewer Authority Midcoastside | | | |
| 6910 · SAM Collections | 268,006.70 | 268,006.70 | 0.00 |
| 6920 · SAM Operations | 562,148.80 | 578,775.80 | -16,627.00 |
| 6940 · SAM Maintenance, Collection Sys | 55,256.53 | 33,333.30 | 21,923.23 |
| 6950 · SAM Maintenance, Pumping | 19,179.69 | 41,666.70 | -22,487.01 |
| Total 6900 · Sewer Authority Midcoastside | 904,591.72 | 921,782.50 | -17,190.78 |
| Total 6000 · Operations | 971,688.37 | 1,013,532.40 | -41,844.03 |
| Total Expense | 1,346,482.22 | 1,411,634.20 | -65,151.98 |
| Net Ordinary Income | 821,305.02 | 849,758.50 | -28,453.48 |
| Other Income/Expense | | | |
| Other Income | | | |
| 7000 · Capital Account Revenues | | | |
| 7100 · Connection Fees | | | |
| 7110 · Connection Fees (New Constr) | 109,242.27 | 116,880.00 | -7,637.73 |
| 7120 · Connection Fees (Remodel) | 29,850.80 | 41,666.70 | -11,815.90 |
| Total 7100 · Connection Fees | 139,093.07 | 158,546.70 | -19,453.63 |
| 7200 · Interest Income - LAIF | 13,851.17 | 7,500.00 | 6,351.17 |
| Total 7000 · Capital Account Revenues | 152,944.24 | 166,046.70 | -13,102.46 |
| Total Other Income | 152,944.24 | 166,046.70 | -13,102.46 |
| Other Expense | | | |
| 8000 · Capital Improvement Program | | | |
| 8075 · Sewer | 856,689.09 | 1,454,791.70 | -598,102.61 |
| Total 8000 · Capital Improvement Program | 856,689.09 | 1,454,791.70 | -598,102.61 |

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05/16/17

Accrual Basis

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
July 2016 through April 2017

| | Jul '16 - Apr 17 | Sewer Budget | \$ Over Budget |
|--|------------------|--------------------|-------------------|
| 9000 - Capital Account Expenses | | | |
| 9125 - PNC Equipment Lease Interest | 15,579.28 | 16,419.68 | -840.40 |
| 9175 - Capital Assessment - SAM | 87,813.53 | 128,091.70 | -40,278.17 |
| 9200 - I-Bank Loan | 2,134.81 | 25,201.00 | -23,066.19 |
| Total 9000 - Capital Account Expenses | 105,527.62 | 169,712.38 | -64,184.76 |
| Total Other Expense | 962,216.71 | 1,624,504.08 | -662,287.37 |
| Net Other Income | -809,272.47 | -1,458,457.38 | 649,184.91 |
| Net Income | 12,032.55 | -608,698.88 | 620,731.43 |

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05/16/17

Accrual Basis

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Water Budget | \$ Over Budget |
|--|---------------------|---------------------|-------------------|
| Ordinary Income/Expense | | | |
| Income | | | |
| 4220 · Cell Tower Lease | 28,572.90 | 27,916.70 | 656.20 |
| 4400 · Fees | | | |
| 4410 · Administrative Fee (New Constr) | 6,805.00 | 3,750.00 | 3,055.00 |
| 4420 · Administrative Fee (Remodel) | 0.00 | 750.00 | -750.00 |
| 4430 · Inspection Fee (New Constr) | 6,428.00 | 3,541.70 | 2,886.30 |
| 4440 · Inspection Fee (Remodel) | 460.00 | 666.70 | -206.70 |
| 4460 · Remodel Fees | 106.00 | | |
| Total 4400 · Fees | 13,799.00 | 8,708.40 | 5,090.60 |
| 4610 · Property Tax Receipts | 312,876.27 | 235,000.00 | 77,876.27 |
| 4740 · Testing, Backflow | 12,166.00 | 10,833.30 | 1,332.70 |
| 4810 · Water Sales, Domestic | 1,509,301.48 | 1,500,000.00 | 9,301.48 |
| 4850 · Water Sales Refunds, Customer | -2,333.08 | -2,500.00 | 166.92 |
| 4990 · Other Revenue | 9,220.50 | | |
| Total Income | 1,883,603.07 | 1,779,958.40 | 103,644.67 |
| Gross Profit | 1,883,603.07 | 1,779,958.40 | 103,644.67 |
| Expense | | | |
| 5000 · Administrative | | | |
| 5190 · Bank Fees | 5,534.31 | 8,333.30 | -2,798.99 |
| 5200 · Board of Directors | | | |
| 5210 · Board Meetings | 2,985.79 | 2,500.00 | 485.79 |
| 5220 · Director Fees | 2,289.94 | 2,750.00 | -460.06 |
| 5230 · Election Expenses | 4,859.66 | 3,333.30 | 1,526.36 |
| Total 5200 · Board of Directors | 10,135.39 | 8,583.30 | 1,552.09 |
| 5240 · CDPH Fees | 0.00 | 12,916.70 | -12,916.70 |
| 5250 · Conference Attendance | 850.12 | 3,333.30 | -2,483.18 |
| 5270 · Information Systems | 2,363.45 | 1,250.00 | 1,113.45 |
| 5300 · Insurance | | | |
| 5310 · Fidelity Bond | 0.00 | 416.70 | -416.70 |
| 5320 · Property & Liability Insurance | 1,918.46 | 2,250.00 | -331.54 |
| Total 5300 · Insurance | 1,918.46 | 2,666.70 | -748.24 |
| 5350 · LAFCO Assessment | 2,048.00 | 2,083.30 | -35.30 |
| 5400 · Legal | | | |
| 5420 · Meeting Attendance, Legal | 5,667.50 | 7,083.30 | -1,415.80 |
| 5430 · General Legal | 40,577.50 | 50,000.00 | -9,422.50 |
| Total 5400 · Legal | 46,245.00 | 57,083.30 | -10,838.30 |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Water Budget | \$ Over Budget |
|---|-------------------|-------------------|-------------------|
| 5510 · Maintenance, Office | 8,107.65 | 6,666.70 | 1,440.95 |
| 5530 · Memberships | 17,679.00 | 15,000.00 | 2,679.00 |
| 5540 · Office Supplies | 5,949.96 | 6,666.70 | -716.74 |
| 5550 · Postage | 5,589.46 | 5,000.00 | 589.46 |
| 5560 · Printing & Publishing | 797.12 | 1,666.70 | -869.58 |
| 5600 · Professional Services | | | |
| 5610 · Accounting | 16,550.00 | 25,000.00 | -8,450.00 |
| 5620 · Audit | 13,000.00 | 20,500.00 | -7,500.00 |
| 5630 · Consulting | 20,987.37 | 20,833.30 | 154.07 |
| 5640 · Data Services | 2,125.00 | | |
| 5650 · Labor & HR Support | 1,875.00 | 1,666.70 | 208.30 |
| 5660 · Payroll Services | 802.51 | 708.30 | 94.21 |
| 5690 · Other Professional Services | 2,973.82 | | |
| Total 5600 · Professional Services | 58,313.70 | 68,708.30 | -10,394.60 |
| 5710 · San Mateo Co. Tax Roll Charges | 119.00 | | |
| 5720 · Telephone & Internet | 16,810.50 | 14,166.70 | 2,643.80 |
| 5730 · Mileage Reimbursement | 1,202.19 | 1,666.70 | -464.51 |
| 5740 · Reference Materials | 23.40 | 666.70 | -643.30 |
| 5790 · Other Administrative | 1,452.14 | | |
| 5800 · Labor | | | |
| 5810 · CalPERS 457 Deferred Plan | 28,042.87 | 28,308.30 | -265.43 |
| 5820 · Employee Benefits | 52,579.31 | 57,806.70 | -5,227.39 |
| 5830 · Disability Insurance | 2,524.54 | 2,434.20 | 90.34 |
| 5840 · Payroll Taxes | 31,391.25 | 33,811.70 | -2,420.45 |
| 5850 · PARS | 22,281.87 | 22,504.20 | -222.33 |
| 5900 · Wages | | | |
| 5910 · Management | 83,312.77 | 77,810.80 | 5,501.97 |
| 5920 · Staff | 290,032.63 | 292,325.80 | -2,293.17 |
| 5930 · Staff Certification | 7,525.00 | 7,500.00 | 25.00 |
| 5940 · Staff Overtime | 44,016.65 | 43,627.50 | 389.15 |
| 5950 · Staff Standby | 19,796.19 | 20,714.20 | -918.01 |
| Total 5900 · Wages | 444,683.24 | 441,978.30 | 2,704.94 |
| 5960 · Worker's Comp Insurance | 10,173.73 | 16,093.30 | -5,919.57 |
| Total 5800 · Labor | 591,676.81 | 602,936.70 | -11,259.89 |
| Total 5000 · Administrative | 776,815.66 | 819,395.10 | -42,579.44 |
| 6000 · Operations | | | |
| 6160 · Backflow Prevention | 892.27 | 833.30 | 58.97 |
| 6170 · Claims, Property Damage | 175.00 | 8,333.30 | -8,158.30 |
| 6180 · Communications | | | |
| 6185 · SCADA Maintenance | 19,455.60 | 12,500.00 | 6,955.60 |
| 6180 · Communications - Other | 399.12 | | |
| Total 6180 · Communications | 19,854.72 | 12,500.00 | 7,354.72 |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Water Budget | \$ Over Budget |
|---|-------------------|------------------|-------------------|
| 6195 · Education & Training | 5,876.96 | 5,000.00 | 876.96 |
| 6200 · Engineering | | | |
| 6210 · Meeting Attendance, Engineering | 0.00 | 1,666.70 | -1,666.70 |
| 6220 · General Engineering | 6,121.25 | 16,666.70 | -10,545.45 |
| 6230 · Water Quality Engineering | 71,112.03 | 54,166.70 | 16,945.33 |
| Total 6200 · Engineering | 77,233.28 | 72,500.10 | 4,733.18 |
| 6320 · Equipment & Tools, Expensed | 2,163.65 | 4,166.70 | -2,003.05 |
| 6330 · Facilities | | | |
| 6335 · Alarm Services | 597.06 | 625.00 | -27.94 |
| 6337 · Landscaping | 5,663.53 | 5,000.00 | 663.53 |
| Total 6330 · Facilities | 6,260.59 | 5,625.00 | 635.59 |
| 6370 · Lab Supplies & Equipment | 178.24 | 833.30 | -655.06 |
| 6380 · Meter Reading | 118.79 | | |
| 6400 · Pumping | | | |
| 6410 · Pumping Fuel & Electricity | 62,829.70 | 83,333.30 | -20,503.60 |
| 6420 · Pumping Maintenance, Generators | 7,500.74 | 6,666.70 | 834.04 |
| 6430 · Pumping Maintenance, General | 4,951.36 | 2,083.30 | 2,868.06 |
| 6440 · Pumping Equipment, Expensed | 0.00 | 1,666.70 | -1,666.70 |
| Total 6400 · Pumping | 75,281.80 | 93,750.00 | -18,468.20 |
| 6500 · Supply | | | |
| 6510 · Maintenance, Raw Water Mains | 1,363.08 | | |
| 6520 · Maintenance, Wells | 1,420.58 | 8,333.30 | -6,912.72 |
| 6530 · Water Purchases | 14,082.76 | 33,333.30 | -19,250.54 |
| Total 6500 · Supply | 16,866.42 | 41,666.60 | -24,800.18 |
| 6600 · Collection/Transmission | | | |
| 6610 · Hydrants | 3,818.95 | 833.30 | 2,985.65 |
| 6620 · Maintenance, Water Mains | 102,313.04 | 45,833.30 | 56,479.74 |
| 6630 · Maintenance, Water Svc Lines | 4,166.02 | 20,833.30 | -16,667.28 |
| 6640 · Maintenance, Tanks | 70.58 | 833.30 | -762.72 |
| 6650 · Maint., Distribution General | 1,175.04 | 8,333.30 | -7,158.26 |
| 6660 · Maintenance, Collection System | 23.89 | | |
| 6670 · Meters | 9,930.42 | 2,083.30 | 7,847.12 |
| Total 6600 · Collection/Transmission | 121,497.94 | 78,749.80 | 42,748.14 |
| 6700 · Treatment | | | |
| 6710 · Chemicals & Filtering | 10,359.51 | 25,000.00 | -14,640.49 |
| 6720 · Maintenance, Treatment Equip. | 3,798.34 | 3,333.30 | 465.04 |
| 6730 · Treatment Analysis | 20,523.97 | 25,000.00 | -4,476.03 |
| Total 6700 · Treatment | 34,681.82 | 53,333.30 | -18,651.48 |
| 6770 · Uniforms | 8,578.27 | 7,500.00 | 1,078.27 |

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Accrual Basis

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
 July 2016 through April 2017

| | Jul '16 - Apr 17 | Water Budget | \$ Over Budget |
|---|---------------------|-------------------|-------------------|
| 6800 - Vehicles | | | |
| 6810 - Fuel | 4,729.50 | 6,666.70 | -1,937.20 |
| 6820 - Truck Equipment, Expensed | 327.56 | 833.30 | -505.74 |
| 6830 - Truck Repairs | 1,032.69 | 4,166.70 | -3,134.01 |
| Total 6800 - Vehicles | 6,089.75 | 11,666.70 | -5,576.95 |
| 6890 - Other Operations | 10,057.65 | | |
| Total 6000 - Operations | 385,807.15 | 396,458.10 | -10,650.95 |
| Total Expense | 1,162,622.81 | 1,215,853.20 | -53,230.39 |
| Net Ordinary Income | 720,980.26 | 564,105.20 | 156,875.06 |
| Other Income/Expense | | | |
| Other Income | | | |
| 7000 - Capital Account Revenues | | | |
| 7100 - Connection Fees | | | |
| 7110 - Connection Fees (New Constr) | 130,171.17 | 106,666.70 | 23,504.47 |
| 7120 - Connection Fees (Remodel) | 106.00 | 2,500.00 | -2,394.00 |
| 7130 - Conn. Fees, PFP (New Constr) | 78,508.41 | 54,166.70 | 24,341.71 |
| Total 7100 - Connection Fees | 208,785.58 | 163,333.40 | 45,452.18 |
| 7600 - Bond Revenues, G.O. | 1,115,611.23 | 958,696.70 | 156,914.53 |
| Total 7000 - Capital Account Revenues | 1,324,396.81 | 1,122,030.10 | 202,366.71 |
| Total Other Income | 1,324,396.81 | 1,122,030.10 | 202,366.71 |
| Other Expense | | | |
| 8000 - Capital Improvement Program | | | |
| 8100 - Water | 610,379.22 | 515,833.30 | 94,545.92 |
| Total 8000 - Capital Improvement Program | 610,379.22 | 515,833.30 | 94,545.92 |
| 9000 - Capital Account Expenses | | | |
| 9075 - PFP Connection Expenses | 7,375.00 | | |
| 9100 - Interest Expense - GO Bonds | 171,021.84 | 295,734.00 | -124,712.16 |
| 9125 - PNC Equipment Lease Interest | 15,579.30 | 16,419.68 | -840.38 |
| 9150 - SRF Loan | 46,180.10 | 37,247.00 | 8,933.10 |
| 9210 - Conservation Program/Rebates | 700.00 | | |
| Total 9000 - Capital Account Expenses | 240,856.24 | 349,400.68 | -108,544.44 |
| Total Other Expense | 851,235.46 | 865,233.98 | -13,998.52 |
| Net Other Income | 473,161.35 | 256,796.12 | 216,365.23 |
| Net Income | 1,194,141.61 | 820,901.32 | 373,240.29 |

Montara Water & Sanitary District
Restricted and Non Restricted Cash Assets
July 2016 through June 2017

Assets and Reserves Information

| Year to Date Cash Information | July | August | September | October | November | December | January | February | March | April | May | June | Target Reserves | \$ Over/(Under) Targets | % Over/Under Targets |
|------------------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|------------|-------------|------------------------|--------------------------------|-----------------------------|
| Sewer - Operations | | | | | | | | | | | | | | | |
| Wells Fargo Operating - Sewer | 3,336,939.65 | 3,075,524.30 | 2,705,463.57 | 1,925,893.93 | 1,859,469.58 | 3,025,008.81 | 2,577,749.97 | 2,699,962.53 | 2,487,998.87 | 3,517,496.47 | | | | | |
| Sewer - Reserve Accounts | | | | | | | | | | | | | | | |
| LAIF - | | | | | | | | | | | | | | | |
| Capital Reserve | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,853,967.15 | 3,867,818.32 | 3,867,818.32 | | | 1,626,140.00 | 2,227,827.15 | 237% |
| Connection Fees Reserve | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | 152,756.00 | | | 152,756.00 | - | 100% |
| Operating Reserve | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | 281,893.00 | | | 281,893.00 | - | 100% |
| Sub-total | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,288,616.15 | 4,302,467.32 | 4,302,467.32 | | | | | |
| Water - Operations | | | | | | | | | | | | | | | |
| Wells Fargo Operating - Water | 607,680.10 | 618,197.47 | 630,454.76 | 642,423.58 | 654,933.70 | 665,424.33 | 675,824.13 | 686,062.68 | 696,079.29 | 705,053.24 | | | | | |
| Water - Reserve Accounts | | | | | | | | | | | | | | | |
| Wells Fargo Bank- | | | | | | | | | | | | | | | |
| Capital Reserve | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | 398,249.00 | | | 1,218,980.00 | (820,731.00) | 33% |
| Connection Fees Reserve | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | 157,000.00 | | | 196,000.00 | (39,000.00) | 80% |
| Operating Reserve | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | 190,251.00 | | | 242,487.00 | (52,236.00) | 78% |
| Sub-total | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | 745,500.00 | | | | | |
| Water - Restricted accounts | | | | | | | | | | | | | | | |
| First Republic Bank - Water | | | | | | | | | | | | | | | |
| Acquisition & Improvement Fund | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | 436.13 | | | | | |
| Cost of issuance | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | 122.94 | | | | | |
| GO Bonds Fund | 1,332,844.72 | 796,526.91 | 796,526.91 | 796,526.91 | 796,526.91 | 865,964.79 | 1,442,649.57 | 870,433.65 | 934,387.13 | 944,234.12 | | | | | |
| Sub-total | 1,333,403.79 | 797,085.98 | 797,085.98 | 797,085.98 | 797,085.98 | 866,523.86 | 1,443,208.64 | 870,992.72 | 934,946.20 | 944,793.19 | | | | | |
| Total Cash and equivalents | 10,312,139.69 | 9,524,923.90 | 9,167,120.46 | 8,399,519.64 | 8,345,605.41 | 9,591,073.15 | 9,730,898.89 | 9,291,134.08 | 9,166,991.68 | 10,215,310.22 | | | | | |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | | |
|--|----------|----------|----------|----------|-----------|--------------|------------|------------|-----------|------------|--------|----------|------------------|--------------|----------------|-------------|--|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget | |
| Ordinary Income/Expense | | | | | | | | | | | | | | | | | |
| Income | | | | | | | | | | | | | | | | | |
| 4220 - Cell Tower Lease | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | 2,857.30 | | | 28,573.00 | 33,500.00 | -4,927.00 | 85.29% | |
| 4400 - Fees | | | | | | | | | | | | | | | | | |
| 4410 - Administrative Fee (New Constr) | | 487.00 | | | | 974.00 | 487.00 | 487.00 | 487.00 | 487.00 | | | 3,409.00 | 3,000.00 | 409.00 | 113.63% | |
| 4420 - Administrative Fee (Remodel) | 487.00 | 487.00 | | 474.00 | | | | | | | | | 1,448.00 | 1,500.00 | -52.00 | 96.53% | |
| 4430 - Inspection Fee (New Constr) | | 460.00 | | | | 920.00 | 460.00 | 460.00 | 460.00 | 460.00 | | | 3,220.00 | 2,500.00 | 720.00 | 128.8% | |
| 4440 - Inspection Fee (Remodel) | 566.00 | 460.00 | 530.00 | 908.00 | | 430.00 | 430.00 | 106.00 | 318.00 | | | | 3,748.00 | 3,500.00 | 248.00 | 107.09% | |
| 4460 - Remodel Fees | 341.00 | 682.00 | 106.00 | 1,942.90 | | 324.00 | | | | | | | 3,395.90 | 7,000.00 | -3,604.10 | 48.51% | |
| Total 4400 - Fees | 1,394.00 | 2,576.00 | 636.00 | 3,324.90 | | 2,648.00 | 1,377.00 | 1,053.00 | 1,265.00 | 947.00 | | | 15,220.90 | 17,500.00 | -2,279.10 | 86.98% | |
| 4610 - Property Tax Receipts | | | | 521.37 | 22,366.27 | 100,892.31 | 99,522.31 | 15,063.32 | 1,020.00 | 73,490.80 | | | 312,876.38 | 235,000.00 | 77,876.38 | 133.14% | |
| 4710 - Sewer Service Charges | | | | | | 1,002,502.87 | | 119,003.53 | 270.04 | 680,382.27 | | | 1,802,158.71 | 1,969,726.00 | -167,567.29 | 91.49% | |
| 4720 - Sewer Service Refunds, Customer | | | | | -667.68 | -6,883.77 | | | -2,978.48 | | | | -10,529.93 | -4,000.00 | -6,529.93 | 263.25% | |
| 4760 - Waste Collection Revenues | 1,344.31 | 2,571.11 | 1,169.43 | 2,771.41 | 1,944.68 | 1,910.92 | 1,184.75 | 2,651.03 | 1,013.10 | 2,647.62 | | | 19,208.36 | 21,000.00 | -1,791.64 | 91.47% | |
| 4990 - Other Revenue | | 4.01 | | | 4.48 | 271.33 | | | | | | | 279.82 | | | | |
| Total Income | 5,595.61 | 8,008.42 | 4,662.73 | 9,474.98 | 26,505.05 | 1,104,198.96 | 104,941.36 | 140,628.18 | 3,446.96 | 760,324.99 | | | 2,167,787.24 | 2,272,726.00 | -104,938.76 | 95.38% | |
| Gross Profit | 5,595.61 | 8,008.42 | 4,662.73 | 9,474.98 | 26,505.05 | 1,104,198.96 | 104,941.36 | 140,628.18 | 3,446.96 | 760,324.99 | | | 2,167,787.24 | 2,272,726.00 | -104,938.76 | 95.38% | |
| Expense | | | | | | | | | | | | | | | | | |
| 5000 - Administrative | | | | | | | | | | | | | | | | | |
| 5190 - Bank Fees | 2,803.19 | 350.36 | 306.87 | 283.42 | 307.91 | 300.85 | 306.54 | 309.60 | 460.63 | 302.69 | | | 5,732.06 | 5,500.00 | 232.06 | 104.22% | |
| 5200 - Board of Directors | | | | | | | | | | | | | | | | | |
| 5210 - Board Meetings | | 167.00 | 125.00 | 1,004.58 | 125.00 | 250.00 | 306.72 | | 262.52 | 745.00 | | | 2,985.82 | 3,000.00 | -14.18 | 99.53% | |
| 5220 - Director Fees | | 112.50 | 262.50 | 450.00 | | 637.50 | 262.50 | 187.50 | 187.50 | 189.94 | | | 2,289.94 | 3,300.00 | -1,010.06 | 69.39% | |
| 5230 - Election Expenses | | | 819.68 | | | | | | | | | 4,040.00 | 4,859.68 | 4,000.00 | 859.68 | 121.49% | |
| Total 5200 - Board of Directors | | 279.50 | 1,207.18 | 1,454.58 | 125.00 | 887.50 | 569.22 | 187.50 | 450.02 | 4,974.94 | | | 10,135.44 | 10,300.00 | -164.56 | 98.4% | |
| 5250 - Conference Attendance | | | | | | | | 146.63 | | | | | 146.63 | 2,000.00 | -1,853.37 | 7.33% | |
| 5270 - Information Systems | | 126.87 | | | 390.00 | 150.00 | 150.00 | | 30.00 | 210.00 | | | 1,056.87 | 6,000.00 | -4,943.13 | 17.62% | |
| 5300 - Insurance | | | | | | | | | | | | | | | | | |
| 5310 - Fidelity Bond | | | | | | | | | | | | | | 500.00 | -500.00 | | |
| 5320 - Property & Liability Insurance | 1,918.47 | | | | | | | | | | | | 1,918.47 | 1,700.00 | 218.47 | 112.85% | |
| Total 5300 - Insurance | 1,918.47 | | | | | | | | | | | | 1,918.47 | 2,200.00 | -281.53 | 87.2% | |
| 5350 - LAFCO Assessment | | | | | 1,526.00 | | | | | | | | 1,526.00 | 2,000.00 | -474.00 | 76.3% | |
| 5400 - Legal | | | | | | | | | | | | | | | | | |
| 5420 - Meeting Attendance, Legal | | 500.00 | 587.50 | 1,057.50 | | 467.50 | 562.50 | 1,295.00 | 475.00 | 725.00 | | | 5,670.00 | 9,500.00 | -3,830.00 | 59.68% | |
| 5430 - General Legal | | 4,457.50 | 5,162.50 | 1,487.50 | 3,587.50 | 1,600.00 | 1,432.50 | 1,770.00 | 2,962.50 | 1,775.00 | | | 24,235.00 | 20,000.00 | 4,235.00 | 121.18% | |
| Total 5400 - Legal | | 4,957.50 | 5,750.00 | 2,545.00 | 3,587.50 | 2,067.50 | 1,995.00 | 3,065.00 | 3,437.50 | 2,500.00 | | | 29,905.00 | 29,500.00 | 405.00 | 101.37% | |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|------------------|------------|----------------|-------------|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget |
| 5510 - Maintenance, Office | | 391.98 | 2,136.78 | 32.63 | 550.00 | 1,621.28 | 350.00 | 617.33 | 502.50 | 160.00 | | | 6,362.50 | 8,000.00 | -1,637.50 | 79.53% |
| 5530 - Memberships | | | | | | 708.00 | | | | | | | 708.00 | | | |
| 5540 - Office Supplies | | 1,488.07 | 361.58 | 1,456.12 | 206.75 | 510.47 | 414.60 | 437.34 | 312.20 | 762.90 | | | 5,950.03 | 8,000.00 | -2,049.97 | 74.38% |
| 5550 - Postage | | 100.00 | | 77.85 | | 100.00 | 227.85 | 260.83 | 155.34 | 112.50 | | | 1,034.37 | 2,500.00 | -1,465.63 | 41.38% |
| 5560 - Printing & Publishing | | 37.91 | 40.35 | | 84.43 | 19.14 | 19.58 | 51.10 | 310.27 | 13.86 | | | 576.64 | 3,000.00 | -2,423.36 | 19.22% |
| 5600 - Professional Services | | | | | | | | | | | | | | | | |
| 5610 - Accounting | | | 1,900.00 | 4,200.00 | 1,550.00 | 1,800.00 | 2,800.00 | 1,000.00 | 700.00 | 2,600.00 | | | 16,550.00 | 30,000.00 | -13,450.00 | 55.17% |
| 5620 - Audit | | | 2,800.00 | | 7,500.00 | 2,700.00 | | | | | | | 13,000.00 | 13,000.00 | | 100.0% |
| 5630 - Consulting | | 375.00 | 3,961.50 | 1,756.59 | 3,265.05 | 375.00 | 833.75 | 486.88 | 517.50 | 375.00 | | | 11,946.27 | 28,000.00 | -16,053.73 | 42.67% |
| 5640 - Data Services | | | | | | | | | | | | | 2,125.00 | 6,000.00 | -3,875.00 | 35.42% |
| 5650 - Labor & HR Support | 187.50 | | 187.50 | 375.00 | | 375.00 | | 375.00 | 187.50 | 187.50 | | | 1,875.00 | 2,250.00 | -375.00 | 83.33% |
| 5660 - Payroll Services | 73.94 | 74.95 | 75.94 | 74.95 | 74.95 | 75.94 | 136.21 | 73.96 | 71.95 | 69.78 | | | 802.57 | 800.00 | 2.57 | 100.32% |
| 5690 - Other Professional Services | | | | | | | 101.50 | | | | | | 101.50 | | | |
| Total 5600 - Professional Services | 261.44 | 449.95 | 8,924.94 | 6,406.54 | 12,390.00 | 5,325.94 | 3,871.46 | 1,935.84 | 1,476.95 | 5,357.28 | | | 46,400.34 | 80,050.00 | -33,649.66 | 57.96% |
| 5710 - San Mateo Co. Tax Roll Charges | | | | | 119.00 | | | | | | | | 119.00 | 2,500.00 | -2,381.00 | 4.76% |
| 5720 - Telephone & Internet | 29.98 | 1,347.12 | 1,292.60 | 1,289.46 | 1,468.08 | 1,632.93 | 1,239.12 | 1,258.34 | 1,370.18 | 1,389.68 | | | 12,317.49 | 11,000.00 | 1,317.49 | 111.98% |
| 5730 - Mileage Reimbursement | | | 23.03 | 513.71 | | | 44.43 | | | | | | 617.44 | 1,500.00 | -882.56 | 41.16% |
| 5740 - Reference Materials | | | | | | | | | | 23.40 | | | 23.40 | 200.00 | -176.60 | 11.7% |
| 5800 - Labor | | | | | | | | | | | | | | | | |
| 5810 - CalPERS 457 Deferred Plan | 1,134.69 | 1,254.27 | 1,627.78 | 1,230.60 | 1,237.00 | 1,254.64 | 1,259.28 | 1,235.83 | 1,450.49 | 1,214.26 | | | 12,898.84 | 15,117.00 | -2,218.16 | 85.33% |
| 5820 - Employee Benefits | 2,865.14 | 2,865.14 | 2,865.14 | 2,865.14 | 2,865.14 | 2,865.14 | 6,273.88 | | | 3,046.33 | | | 26,511.05 | 34,382.00 | -7,870.95 | 77.11% |
| 5830 - Disability Insurance | | 113.37 | 113.37 | 113.36 | 113.36 | 113.36 | 113.36 | 113.37 | 113.36 | 113.36 | | | 1,020.27 | 1,479.00 | -458.73 | 68.98% |
| 5840 - Payroll Taxes | 1,327.53 | 1,101.00 | 973.67 | 873.78 | 881.26 | 763.05 | 1,376.25 | 1,350.60 | 1,585.21 | 1,327.02 | | | 11,559.37 | 16,521.00 | -4,961.63 | 69.97% |
| 5850 - PARS | 1,087.07 | 1,144.84 | 1,498.30 | 1,107.10 | 1,136.32 | 1,136.32 | 1,136.32 | 1,077.87 | 1,287.13 | 1,112.61 | | | 11,723.88 | 13,768.00 | -2,044.12 | 85.15% |
| 5900 - Wages | | | | | | | | | | | | | | | | |
| 5910 - Management | 7,391.78 | 7,391.78 | 12,988.30 | 7,590.62 | 7,590.62 | 7,590.62 | 7,590.62 | 7,590.62 | 9,460.98 | 8,125.00 | | | 83,310.94 | 93,373.00 | -10,062.06 | 89.22% |
| 5920 - Staff | 9,332.41 | 10,221.20 | 10,076.11 | 9,441.60 | 9,892.00 | 9,891.20 | 9,891.20 | 8,992.00 | 10,340.80 | 8,992.00 | | | 97,070.52 | 118,444.00 | -21,373.48 | 81.96% |
| 5930 - Staff Certification | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | | | 1,500.00 | 1,800.00 | -300.00 | 83.33% |
| 5940 - Staff Overtime | 478.96 | 155.35 | 39.81 | 398.10 | 39.81 | 291.94 | 358.29 | 922.27 | 769.66 | 79.63 | | | 3,533.82 | 2,339.00 | 1,194.82 | 151.08% |
| 5950 - Staff Standby | | | | | | | | | | | | | | | | |
| Total 5900 - Wages | 17,353.15 | 17,918.33 | 23,254.22 | 17,580.32 | 17,672.43 | 17,923.76 | 17,990.11 | 17,654.89 | 20,721.44 | 17,346.63 | | | 185,415.28 | 215,956.00 | -30,540.72 | 85.86% |
| 5960 - Worker's Comp Insurance | | | | 604.48 | | | 531.00 | | | | | | 1,135.48 | 3,649.00 | -2,513.52 | 31.12% |
| Total 5800 - Labor | 23,767.58 | 24,396.95 | 30,332.48 | 24,374.78 | 23,905.51 | 24,056.27 | 28,680.20 | 21,432.56 | 25,157.63 | 24,160.21 | | | 250,264.17 | 300,872.00 | -50,607.83 | 83.18% |
| Total 5000 - Administrative | 28,780.66 | 33,926.21 | 50,375.81 | 38,434.09 | 44,660.18 | 37,379.88 | 37,868.00 | 29,702.07 | 33,663.22 | 40,003.73 | | | 374,793.85 | 475,122.00 | -100,328.15 | 78.88% |
| 6000 - Operations | | | | | | | | | | | | | | | | |
| 6170 - Claims, Property Damage | | | | | | | | | | | | | | 10,000.00 | -10,000.00 | |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------|--------|--------|---------------------|---------------------|--------------------|----------------|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget |
| 6195 · Education & Training | | | | | | | | | | | | | 1,000.00 | -1,000.00 | | |
| 6200 · Engineering | | | | | | | | | | | | | | | | |
| 6210 · Meeting Attendance, Engineering | | | | | | | | | | | | | | 2,000.00 | -2,000.00 | |
| 6220 · General Engineering | 1,253.00 | 5,519.00 | 0.09 | | 4,101.00 | 6,713.25 | 4,206.50 | 2,685.00 | 5,585.00 | 4,459.00 | | | 34,521.84 | 50,000.00 | -15,478.16 | 69.04% |
| Total 6200 · Engineering | 1,253.00 | 5,519.00 | 0.09 | | 4,101.00 | 6,713.25 | 4,206.50 | 2,685.00 | 5,585.00 | 4,459.00 | | | 34,521.84 | 52,000.00 | -17,478.16 | 66.39% |
| 6320 · Equipment & Tools, Expensed | | | | | | | | | | | | | | 1,000.00 | -1,000.00 | |
| 6330 · Facilities | | | | | | | | | | | | | | | | |
| 6335 · Alarm Services | 444.30 | 518.82 | 391.80 | 444.30 | 518.82 | 391.80 | 444.30 | 518.82 | | 594.30 | | | 4,267.26 | 5,340.00 | -1,072.74 | 79.91% |
| 6337 · Landscaping | | 190.00 | 190.00 | 190.00 | 190.00 | 190.00 | 190.00 | 190.00 | 190.00 | 1,990.00 | | | 3,510.00 | 2,400.00 | 1,110.00 | 146.25% |
| Total 6330 · Facilities | 444.30 | 708.82 | 581.80 | 634.30 | 708.82 | 581.80 | 634.30 | 708.82 | 190.00 | 2,584.30 | | | 7,777.26 | 7,740.00 | 37.26 | 100.48% |
| 6400 · Pumping | | | | | | | | | | | | | | | | |
| 6410 · Pumping Fuel & Electricity | | 2,368.80 | 2,723.57 | 2,490.01 | 2,278.55 | 2,522.97 | 2,376.64 | | 8,725.88 | | | | 23,486.42 | 27,000.00 | -3,513.58 | 86.99% |
| Total 6400 · Pumping | | 2,368.80 | 2,723.57 | 2,490.01 | 2,278.55 | 2,522.97 | 2,376.64 | | 8,725.88 | | | | 23,486.42 | 27,000.00 | -3,513.58 | 86.99% |
| 6600 · Collection/Transmission | | | | | | | | | | | | | | | | |
| 6660 · Maintenance, Collection System | | | | | | | | | | | | | | 10,000.00 | -10,000.00 | |
| Total 6600 · Collection/Transmission | | | | | | | | | | | | | | 10,000.00 | -10,000.00 | |
| 6800 · Vehicles | | | | | | | | | | | | | | | | |
| 6810 · Fuel | | | | | | | 412.87 | 93.33 | 77.63 | | | | 583.83 | 800.00 | -216.17 | 72.98% |
| 6820 · Truck Equipment, Expensed | | | | | | | 34.06 | | | | | | 34.06 | 160.00 | -125.94 | 21.29% |
| 6830 · Truck Repairs | | | | | | | 106.68 | 16.41 | 20.15 | | | | 143.24 | 400.00 | -256.76 | 35.81% |
| Total 6800 · Vehicles | | | | | | | 553.61 | 109.74 | 97.78 | | | | 761.13 | 1,360.00 | -598.87 | 55.97% |
| 6890 · Other Operations | | | | | | | | | 550.00 | | | | 550.00 | | | |
| 6900 · Sewer Authority Midcoastside | | | | | | | | | | | | | | | | |
| 6910 · SAM Collections | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | 26,800.67 | | | 268,006.70 | 321,608.00 | -53,601.30 | 83.33% |
| 6920 · SAM Operations | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 57,877.58 | 41,250.58 | | | 562,148.80 | 694,531.00 | -132,382.20 | 80.94% |
| 6940 · SAM Maintenance, Collection Sys | | | | | | 55,256.53 | | | | | | | 55,256.53 | 40,000.00 | 15,256.53 | 138.14% |
| 6950 · SAM Maintenance, Pumping | | | | | | | | | 19,179.69 | | | | 19,179.69 | 50,000.00 | -30,820.31 | 38.36% |
| Total 6900 · Sewer Authority Midcoastside | 84,678.25 | 84,678.25 | 84,678.25 | 84,678.25 | 84,678.25 | 139,934.78 | 84,678.25 | 84,678.25 | 103,857.94 | 68,051.25 | | | 904,591.72 | 1,106,139.00 | -201,547.28 | 81.78% |
| Total 6000 · Operations | 86,375.55 | 93,274.87 | 87,983.71 | 87,802.56 | 91,766.62 | 149,752.80 | 92,449.30 | 88,181.81 | 119,006.60 | 75,094.55 | | | 971,688.37 | 1,216,239.00 | -244,550.63 | 79.89% |
| Total Expense | 115,156.21 | 127,201.08 | 138,359.52 | 126,236.65 | 136,426.80 | 187,132.68 | 130,317.30 | 117,883.88 | 152,669.82 | 115,098.28 | | | 1,346,482.22 | 1,691,361.00 | -344,878.78 | 79.61% |
| Net Ordinary Income | -109,560.60 | -119,192.66 | -133,696.79 | -116,761.67 | -109,921.75 | 917,066.28 | -25,375.94 | 22,744.30 | -149,222.86 | 645,226.71 | | | 821,305.02 | 581,365.00 | 239,940.02 | 141.27% |
| Other Income/Expense | | | | | | | | | | | | | | | | |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Sewer
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | | |
|---|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|------------------|--------------------|-------------------|--------|--------|--------------------|----------------------|---------------------|---------------|--|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget | |
| Other Income | | | | | | | | | | | | | | | | | |
| 7000 - Capital Account Revenues | | | | | | | | | | | | | | | | | |
| 7100 - Connection Fees | | | | | | | | | | | | | | | | | |
| 7110 - Connection Fees (New Constr) | | -433.57 | 79,040.00 | | -212.16 | | | 30,848.00 | | | | | 109,242.27 | 140,256.00 | -31,013.73 | 77.89% | |
| 7120 - Connection Fees (Remodel) | 1,927.60 | 963.80 | 8,676.00 | 6,264.70 | | 8,645.40 | 481.90 | | 2,891.40 | | | | 29,850.80 | 50,000.00 | -20,149.20 | 59.7% | |
| Total 7100 - Connection Fees | 1,927.60 | 530.23 | 87,716.00 | 6,264.70 | -212.16 | 8,645.40 | 481.90 | 30,848.00 | 2,891.40 | | | | 139,093.07 | 190,256.00 | -51,162.93 | 73.11% | |
| 7200 - Interest Income - LAIF | | | | 6,525.17 | | | 7,326.00 | | | | | | 13,851.17 | 10,000.00 | 3,851.17 | 138.51% | |
| 7700 - Interest, Employee Loans | | | | | | | | | | | | | | | | | |
| Total 7000 - Capital Account Revenues | 1,927.60 | 530.23 | 87,716.00 | 12,789.87 | -212.16 | 8,645.40 | 7,807.90 | 30,848.00 | 2,891.40 | | | | 152,944.24 | 200,256.00 | -47,311.76 | 76.37% | |
| Total Other Income | 1,927.60 | 530.23 | 87,716.00 | 12,789.87 | -212.16 | 8,645.40 | 7,807.90 | 30,848.00 | 2,891.40 | | | | 152,944.24 | 200,256.00 | -47,311.76 | 76.37% | |
| Other Expense | | | | | | | | | | | | | | | | | |
| 8000 - Capital Improvement Program | | | | | | | | | | | | | | | | | |
| 8075 - Sewer | 6,845.00 | 13,941.91 | 328.00 | 573,170.68 | 55,846.75 | 155,064.12 | 20,467.67 | 5,457.50 | 20,681.46 | 4,886.00 | | | 856,689.09 | 1,745,750.00 | -889,060.91 | 49.07% | |
| Total 8000 - Capital Improvement Program | 6,845.00 | 13,941.91 | 328.00 | 573,170.68 | 55,846.75 | 155,064.12 | 20,467.67 | 5,457.50 | 20,681.46 | 4,886.00 | | | 856,689.09 | 1,745,750.00 | -889,060.91 | 49.07% | |
| 9000 - Capital Account Expenses | | | | | | | | | | | | | | | | | |
| 9125 - PNC Equipment Lease Interest | 840.38 | 1,672.69 | 1,663.98 | 1,655.25 | 1,646.50 | 1,637.73 | 1,628.93 | 1,620.12 | 1,611.28 | 1,602.42 | | | 15,579.28 | 19,598.00 | -4,018.72 | 79.49% | |
| 9175 - Capital Assessment - SAM | 12,809.17 | 12,809.17 | 12,809.17 | 12,809.17 | 12,809.17 | 12,809.17 | -27,469.00 | 12,809.17 | 12,809.17 | 12,809.17 | | | 87,813.53 | 153,710.00 | -65,896.47 | 57.13% | |
| 9200 - I-Bank Loan | 2,134.81 | | | | | | | | | | | | 2,134.81 | 25,201.00 | -23,066.19 | 8.47% | |
| Total 9000 - Capital Account Expenses | 15,784.36 | 14,481.86 | 14,473.15 | 14,464.42 | 14,455.67 | 14,446.90 | -25,840.07 | 14,429.29 | 14,420.45 | 14,411.59 | | | 105,527.62 | 198,509.00 | -92,981.38 | 53.16% | |
| Total Other Expense | 22,629.36 | 28,423.77 | 14,801.15 | 587,635.10 | 70,302.42 | 169,511.02 | -5,372.40 | 19,886.79 | 35,101.91 | 19,297.59 | | | 962,216.71 | 1,944,259.00 | -982,042.29 | 49.49% | |
| Net Other Income | -20,701.76 | -27,893.54 | 72,914.85 | -574,845.23 | -70,514.58 | -160,865.62 | 13,180.30 | 10,961.21 | -32,210.51 | -19,297.59 | | | -809,272.47 | -1,744,003.00 | 934,730.53 | 46.4% | |
| Net Income | -130,262.36 | -147,086.20 | -60,781.94 | -691,606.90 | -180,436.33 | 756,200.66 | -12,195.64 | 33,705.51 | -181,433.37 | 625,929.12 | | | 12,032.55 | -1,162,638.00 | 1,174,670.55 | -1.04% | |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------|--------|------------------|--------------|----------------|-------------|--|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget | |
| Ordinary Income/Expense | | | | | | | | | | | | | | | | | |
| Income | | | | | | | | | | | | | | | | | |
| 4220 - Cell Tower Lease | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | 2,857.29 | | | 28,572.90 | 33,500.00 | -4,927.10 | 85.29% | |
| 4400 - Fees | | | | | | | | | | | | | | | | | |
| 4410 - Administrative Fee (New Constr) | | 974.00 | | | 974.00 | 974.00 | 974.00 | 974.00 | 961.00 | 974.00 | | | 6,805.00 | 4,500.00 | 2,305.00 | 151.22% | |
| 4420 - Administrative Fee (Remodel) | | | | | | | | | | | | | 900.00 | | -900.00 | | |
| 4430 - Inspection Fee (New Constr) | | 920.00 | | | 920.00 | 920.00 | 920.00 | 920.00 | 908.00 | 920.00 | | | 6,428.00 | 4,250.00 | 2,178.00 | 151.25% | |
| 4440 - Inspection Fee (Remodel) | | | | 460.00 | | | | | | | | | 460.00 | 800.00 | -340.00 | 57.5% | |
| 4460 - Remodel Fees | | | | | | | | | 106.00 | | | | 106.00 | | | | |
| Total 4400 - Fees | | 1,894.00 | | 460.00 | 1,894.00 | 1,894.00 | 1,894.00 | 1,894.00 | 1,975.00 | 1,894.00 | | | 13,799.00 | 10,450.00 | 3,349.00 | 132.05% | |
| 4610 - Property Tax Receipts | | | | 521.35 | 22,366.26 | 100,892.30 | 99,522.28 | 15,063.32 | 1,019.98 | 73,490.78 | | | 312,876.27 | 235,000.00 | 77,876.27 | 133.14% | |
| 4740 - Testing, Backflow | | | 6,548.00 | | | 5,618.00 | | | | | | | 12,166.00 | 13,000.00 | -834.00 | 93.59% | |
| 4810 - Water Sales, Domestic | 148,457.14 | 150,557.73 | 181,904.17 | 163,485.10 | 151,741.35 | 114,265.07 | 150,373.09 | 140,896.68 | 205,222.65 | 102,398.50 | | | 1,509,301.48 | 1,800,000.00 | -290,698.52 | 83.85% | |
| 4850 - Water Sales Refunds, Customer | | -499.56 | | | | | | -1,532.04 | | -301.48 | | | -2,333.08 | -3,000.00 | 666.92 | 77.77% | |
| 4990 - Other Revenue | | 152.50 | 1,350.54 | | 5,004.47 | | 840.72 | 18.00 | 1,179.00 | 675.27 | | | 9,220.50 | | | | |
| Total Income | 151,314.43 | 154,961.96 | 192,660.00 | 167,323.74 | 183,863.37 | 225,526.66 | 255,487.38 | 159,197.25 | 212,253.92 | 181,014.36 | | | 1,883,603.07 | 2,088,950.00 | -205,346.93 | 90.17% | |
| Gross Profit | 151,314.43 | 154,961.96 | 192,660.00 | 167,323.74 | 183,863.37 | 225,526.66 | 255,487.38 | 159,197.25 | 212,253.92 | 181,014.36 | | | 1,883,603.07 | 2,088,950.00 | -205,346.93 | 90.17% | |
| Expense | | | | | | | | | | | | | | | | | |
| 5000 - Administrative | | | | | | | | | | | | | | | | | |
| 5190 - Bank Fees | 1,256.24 | 502.91 | 429.66 | 452.15 | 425.60 | 498.93 | 453.05 | 602.46 | 442.02 | 471.29 | | | 5,534.31 | 10,000.00 | -4,465.69 | 55.34% | |
| 5200 - Board of Directors | | | | | | | | | | | | | | | | | |
| 5210 - Board Meetings | | 166.99 | 125.00 | 1,004.58 | 125.00 | 250.00 | 306.71 | | 262.51 | 745.00 | | | 2,985.79 | 3,000.00 | -14.21 | 99.53% | |
| 5220 - Director Fees | | 112.50 | 262.50 | 450.00 | | 637.50 | 262.50 | 187.50 | 187.50 | 189.94 | | | 2,289.94 | 3,300.00 | -1,010.06 | 69.39% | |
| 5230 - Election Expenses | | | 819.67 | | | | | | | | | | 4,859.66 | 4,000.00 | 859.66 | 121.49% | |
| Total 5200 - Board of Directors | | 279.49 | 1,207.17 | 1,454.58 | 125.00 | 887.50 | 569.21 | 187.50 | 450.01 | 4,974.93 | | | 10,135.39 | 10,300.00 | -164.61 | 98.4% | |
| 5240 - CDPH Fees | | | | | | | | | | | | | | 15,500.00 | -15,500.00 | | |
| 5250 - Conference Attendance | | | | | | | | 703.50 | 146.62 | | | | 850.12 | 4,000.00 | -3,149.88 | 21.25% | |
| 5270 - Information Systems | | 126.87 | | | 390.00 | 150.00 | 150.00 | | 1,336.58 | 210.00 | | | 2,363.45 | 1,500.00 | 863.45 | 157.56% | |
| 5300 - Insurance | | | | | | | | | | | | | | | | | |
| 5310 - Fidelity Bond | | | | | | | | | | | | | 500.00 | -500.00 | | | |
| 5320 - Property & Liability Insurance | 1,918.46 | | | | | | | | | | | | 1,918.46 | 2,700.00 | -781.54 | 71.05% | |
| Total 5300 - Insurance | 1,918.46 | | | | | | | | | | | | 1,918.46 | 3,200.00 | -1,281.54 | 59.95% | |
| 5350 - LAFCO Assessment | | | | | 2,048.00 | | | | | | | | 2,048.00 | 2,500.00 | -452.00 | 81.92% | |
| 5400 - Legal | | | | | | | | | | | | | | | | | |
| 5420 - Meeting Attendance, Legal | | 500.00 | 587.50 | 1,055.00 | | 470.00 | 562.50 | 1,292.50 | 475.00 | 725.00 | | | 5,667.50 | 8,500.00 | -2,832.50 | 66.68% | |
| 5430 - General Legal | | 4,017.50 | 4,300.00 | 3,275.00 | 3,975.00 | 2,662.50 | 1,155.00 | 7,430.00 | 5,662.50 | 8,100.00 | | | 40,577.50 | 60,000.00 | -19,422.50 | 67.63% | |

**Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
July 2016 through June 2017**

| | | | | | | | | | | | | TOTAL | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|------------------|------------|----------------|-------------|
| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget |
| Total 5400 - Legal | | 4,517.50 | 4,887.50 | 4,330.00 | 3,975.00 | 3,132.50 | 1,717.50 | 8,722.50 | 6,137.50 | 8,825.00 | | | 46,245.00 | 68,500.00 | -22,255.00 | 67.51% |
| 5510 - Maintenance, Office | | 391.98 | 2,151.45 | 32.63 | 1,765.10 | 2,136.66 | 350.00 | 617.33 | 502.50 | 160.00 | | | 8,107.65 | 8,000.00 | 107.65 | 101.35% |
| 5530 - Memberships | | 255.00 | | | 10,680.00 | 6,744.00 | | | | | | | 17,679.00 | 18,000.00 | -321.00 | 98.22% |
| 5540 - Office Supplies | | 1,488.06 | 361.59 | 1,456.10 | 206.74 | 510.45 | 414.59 | 437.34 | 312.20 | 762.89 | | | 5,949.96 | 8,000.00 | -2,050.04 | 74.38% |
| 5550 - Postage | | 570.00 | 318.17 | 989.77 | 130.52 | 570.00 | 735.08 | 790.68 | 838.93 | 646.31 | | | 5,589.46 | 6,000.00 | -410.54 | 93.16% |
| 5560 - Printing & Publishing | | 111.36 | 40.35 | | 84.43 | 19.13 | 19.58 | 51.11 | 205.27 | 265.89 | | | 797.12 | 2,000.00 | -1,202.88 | 39.86% |
| 5600 - Professional Services | | | | | | | | | | | | | | | | |
| 5610 - Accounting | | | 1,900.00 | 4,200.00 | 1,550.00 | 1,800.00 | 2,800.00 | 1,000.00 | 700.00 | 2,600.00 | | | 16,550.00 | 30,000.00 | -13,450.00 | 55.17% |
| 5620 - Audit | | | 2,800.00 | | 7,500.00 | 2,700.00 | | | | | | | 13,000.00 | 20,500.00 | -7,500.00 | 63.42% |
| 5630 - Consulting | | 375.00 | 3,961.49 | 1,756.59 | 2,365.62 | 10,315.55 | 833.75 | 486.87 | 517.50 | 375.00 | | | 20,987.37 | 25,000.00 | -4,012.63 | 83.95% |
| 5640 - Data Services | | | | | | | | | | 2,125.00 | | | 2,125.00 | | | |
| 5650 - Labor & HR Support | 187.50 | | 187.50 | 375.00 | | 375.00 | | 375.00 | 187.50 | 187.50 | | | 1,875.00 | 2,000.00 | -125.00 | 93.75% |
| 5660 - Payroll Services | 73.95 | 74.94 | 75.94 | 74.94 | 74.94 | 75.94 | 136.19 | 73.94 | 71.95 | 69.78 | | | 802.51 | 850.00 | -47.49 | 94.41% |
| 5690 - Other Professional Services | | | | | | | 101.50 | | | 2,872.32 | | | 2,973.82 | | | |
| Total 5600 - Professional Services | 261.45 | 449.94 | 8,924.93 | 6,406.53 | 11,490.56 | 15,266.49 | 3,871.44 | 1,935.81 | 1,476.95 | 8,229.60 | | | 58,313.70 | 78,350.00 | -20,036.30 | 74.43% |
| 5710 - San Mateo Co. Tax Roll Charges | | | | | 119.00 | | | | | | | | 119.00 | | | |
| 5720 - Telephone & Internet | 29.97 | 1,732.10 | 2,109.52 | 1,662.18 | 1,872.91 | 2,078.37 | 1,799.68 | 1,648.91 | 2,096.26 | 1,780.60 | | | 16,810.50 | 17,000.00 | -189.50 | 98.89% |
| 5730 - Mileage Reimbursement | | 45.05 | 96.74 | 655.29 | 57.33 | 61.43 | 93.56 | 53.24 | 99.19 | 40.36 | | | 1,202.19 | 2,000.00 | -797.81 | 60.11% |
| 5740 - Reference Materials | | | | | | | | | | 23.40 | | | 23.40 | 800.00 | -776.60 | 2.93% |
| 5790 - Other Administrative | 1,112.00 | | | | | | | 12.14 | 328.00 | | | | 1,452.14 | | | |
| 5800 - Labor | | | | | | | | | | | | | | | | |
| 5810 - CalPERS 457 Deferred Plan | 2,529.45 | 2,883.96 | 3,144.65 | 2,769.39 | 2,817.69 | 2,826.86 | 2,834.74 | 2,807.31 | 3,160.00 | 2,268.82 | | | 28,042.87 | 33,970.00 | -5,927.13 | 82.55% |
| 5820 - Employee Benefits | 5,780.71 | 5,780.71 | 5,780.71 | 5,780.71 | 5,780.71 | 5,780.71 | 12,731.69 | | | 5,163.36 | | | 52,579.31 | 69,368.00 | -16,788.69 | 75.8% |
| 5830 - Disability Insurance | | 280.45 | 280.52 | 280.51 | 280.51 | 280.51 | 280.51 | 280.51 | 280.51 | 280.51 | | | 2,524.54 | 2,921.00 | -396.46 | 86.43% |
| 5840 - Payroll Taxes | 3,131.43 | 3,208.58 | 2,941.70 | 2,897.95 | 2,908.65 | 2,760.26 | 3,407.02 | 3,395.63 | 3,850.82 | 2,889.21 | | | 31,391.25 | 40,574.00 | -9,182.75 | 77.37% |
| 5850 - PARS | 2,052.14 | 2,315.19 | 2,617.77 | 2,180.06 | 2,264.56 | 2,264.56 | 2,264.57 | 2,103.55 | 2,396.57 | 1,822.90 | | | 22,281.87 | 27,005.00 | -4,723.13 | 82.51% |
| 5900 - Wages | | | | | | | | | | | | | | | | |
| 5910 - Management | 7,391.76 | 7,391.76 | 12,990.28 | 7,590.60 | 7,590.60 | 7,590.60 | 7,590.60 | 7,590.60 | 9,460.97 | 8,125.00 | | | 83,312.77 | 93,373.00 | -10,060.23 | 89.23% |
| 5920 - Staff | 26,704.42 | 31,295.80 | 30,285.26 | 29,268.13 | 29,969.76 | 29,615.70 | 29,844.08 | 27,787.42 | 31,227.72 | 24,034.34 | | | 290,032.63 | 350,791.00 | -60,758.37 | 82.68% |
| 5930 - Staff Certification | 750.00 | 750.00 | 750.00 | 750.00 | 750.00 | 750.00 | 750.00 | 750.00 | 750.00 | 775.00 | | | 7,525.00 | 9,000.00 | -1,475.00 | 83.61% |
| 5940 - Staff Overtime | 4,082.98 | 4,020.68 | 3,049.19 | 4,480.72 | 3,875.97 | 4,092.41 | 4,309.95 | 6,400.44 | 6,830.80 | 2,873.51 | | | 44,016.65 | 52,353.00 | -8,336.35 | 84.08% |
| 5950 - Staff Standby | 2,003.78 | 2,010.97 | 1,933.58 | 1,951.52 | 1,986.48 | 1,982.45 | 2,041.42 | 1,858.66 | 2,068.19 | 1,959.14 | | | 19,796.19 | 24,857.00 | -5,060.81 | 79.64% |
| Total 5900 - Wages | 40,932.94 | 45,469.21 | 49,008.31 | 44,040.97 | 44,172.81 | 44,031.16 | 44,536.05 | 44,387.12 | 50,337.68 | 37,766.99 | | | 444,683.24 | 530,374.00 | -85,690.76 | 83.84% |
| 5960 - Worker's Comp Insurance | | | | 4,998.73 | | | 5,175.00 | | | | | | 10,173.73 | 19,312.00 | -9,138.27 | 52.68% |
| Total 5800 - Labor | 54,426.67 | 59,938.10 | 63,773.66 | 62,948.32 | 58,224.93 | 57,944.06 | 71,229.58 | 52,974.12 | 60,025.58 | 50,191.79 | | | 591,676.81 | 723,524.00 | -131,847.19 | 81.78% |
| Total 5000 - Administrative | 59,004.79 | 70,408.36 | 84,300.74 | 80,387.55 | 91,595.12 | 89,999.52 | 82,106.77 | 68,179.76 | 74,250.99 | 76,582.06 | | | 776,815.66 | 979,174.00 | -202,358.34 | 79.33% |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | |
|--|--------|-----------|----------|-----------|-----------|----------|----------|-----------|-----------|-----------|--------|--------|------------------|------------|----------------|-------------|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget |
| 6000 - Operations | | | | | | | | | | | | | | | | |
| 6160 - Backflow Prevention | | | | | | | 472.45 | | 419.82 | | | | 892.27 | 1,000.00 | -107.73 | 89.23% |
| 6170 - Claims, Property Damage | | | | 175.00 | | | | | | | | | 175.00 | 10,000.00 | -9,825.00 | 1.75% |
| 6180 - Communications | | | | | | | | | | | | | | | | |
| 6185 - SCADA Maintenance | | | | | | 9,939.23 | | 1,320.44 | 1,998.93 | 6,197.00 | | | 19,455.60 | 15,000.00 | 4,455.60 | 129.7% |
| 6180 - Communications - Other | | 222.12 | | 177.00 | | | | | | | | | 399.12 | | | |
| Total 6180 - Communications | | 222.12 | | 177.00 | | 9,939.23 | | 1,320.44 | 1,998.93 | 6,197.00 | | | 19,854.72 | 15,000.00 | 4,854.72 | 132.37% |
| 6195 - Education & Training | | 1,184.68 | 1,330.00 | 304.23 | 670.28 | 172.15 | 215.34 | 825.00 | 574.31 | 600.97 | | | 5,876.96 | 6,000.00 | -123.04 | 97.95% |
| 6200 - Engineering | | | | | | | | | | | | | | | | |
| 6210 - Meeting Attendance, Engineering | | | | | | | | | | | | | | 2,000.00 | -2,000.00 | |
| 6220 - General Engineering | | 165.00 | 797.50 | 482.50 | | 1,232.50 | 55.00 | 746.25 | 882.50 | 1,760.00 | | | 6,121.25 | 20,000.00 | -13,878.75 | 30.61% |
| 6230 - Water Quality Engineering | | 12,442.37 | 6,952.50 | 9,500.85 | | 5,104.80 | 7,266.05 | 12,542.15 | 5,696.25 | 11,607.06 | | | 71,112.03 | 65,000.00 | 6,112.03 | 109.4% |
| Total 6200 - Engineering | | 12,607.37 | 7,750.00 | 9,983.35 | | 6,337.30 | 7,321.05 | 13,288.40 | 6,578.75 | 13,367.06 | | | 77,233.28 | 87,000.00 | -9,766.72 | 88.77% |
| 6320 - Equipment & Tools, Expensed | | 16.99 | 613.28 | | 65.36 | 616.35 | | 202.19 | 399.84 | 249.64 | | | 2,163.65 | 5,000.00 | -2,836.35 | 43.27% |
| 6330 - Facilities | | | | | | | | | | | | | | | | |
| 6335 - Alarm Services | 52.50 | 127.02 | | 52.50 | 127.02 | | 52.50 | 127.02 | | 58.50 | | | 597.06 | 750.00 | -152.94 | 79.61% |
| 6337 - Landscaping | | 420.00 | 437.73 | 420.00 | 485.80 | 420.00 | 420.00 | 420.00 | 420.00 | 2,220.00 | | | 5,663.53 | 6,000.00 | -336.47 | 94.39% |
| 6330 - Facilities - Other | | | | | | | | | | | | | | | | |
| Total 6330 - Facilities | 52.50 | 547.02 | 437.73 | 472.50 | 612.82 | 420.00 | 472.50 | 547.02 | 420.00 | 2,278.50 | | | 6,260.59 | 6,750.00 | -489.41 | 92.75% |
| 6370 - Lab Supplies & Equipment | | | | | | 11.96 | | | 26.58 | 139.70 | | | 178.24 | 1,000.00 | -821.76 | 17.82% |
| 6380 - Meter Reading | | | | | | | | | 118.79 | | | | 118.79 | | | |
| 6400 - Pumping | | | | | | | | | | | | | | | | |
| 6410 - Pumping Fuel & Electricity | | 5,182.01 | 5,080.12 | 5,343.54 | 4,965.79 | 4,594.61 | 4,212.21 | 2,281.25 | 28,760.36 | 2,409.81 | | | 62,829.70 | 100,000.00 | -37,170.30 | 62.83% |
| 6420 - Pumping Maintenance, Generators | | | | | 4,934.49 | | | | 2,566.25 | | | | 7,500.74 | 8,000.00 | -499.26 | 93.76% |
| 6430 - Pumping Maintenance, General | | | | 466.63 | | | | 1,233.43 | 3,251.30 | | | | 4,951.36 | 2,500.00 | 2,451.36 | 198.05% |
| 6440 - Pumping Equipment, Expensed | | | | | | | | | | | | | | 2,000.00 | -2,000.00 | |
| 6400 - Pumping - Other | | | | | | | | | | | | | | | | |
| Total 6400 - Pumping | | 5,182.01 | 5,080.12 | 5,810.17 | 9,900.28 | 4,594.61 | 4,212.21 | 3,514.68 | 34,577.91 | 2,409.81 | | | 75,281.80 | 112,500.00 | -37,218.20 | 66.92% |
| 6500 - Supply | | | | | | | | | | | | | | | | |
| 6510 - Maintenance, Raw Water Mains | | | | | 49.47 | 1,301.10 | | 12.51 | | | | | 1,363.08 | | | |
| 6520 - Maintenance, Wells | | 89.73 | 3.49 | | 1,298.30 | | | 29.06 | | | | | 1,420.58 | 10,000.00 | -8,579.42 | 14.21% |
| 6530 - Water Purchases | | | | 14,082.76 | | | | | | | | | 14,082.76 | 40,000.00 | -25,917.24 | 35.21% |
| Total 6500 - Supply | | 89.73 | 3.49 | 14,082.76 | 1,347.77 | 1,301.10 | | 41.57 | | | | | 16,866.42 | 50,000.00 | -33,133.58 | 33.73% |
| 6600 - Collection/Transmission | | | | | | | | | | | | | | | | |
| 6610 - Hydrants | | | | 5,691.91 | -1,872.96 | | | | | | | | 3,818.95 | 1,000.00 | 2,818.95 | 381.9% |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | |
|--|-----------|-----------|------------|------------|------------|------------|------------|-----------|------------|------------|----------|--------|------------------|--------------|----------------|-------------|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget |
| 6620 · Maintenance, Water Mains | | 255.19 | 1,417.69 | 260.45 | 12,439.95 | 9,676.32 | 24,485.74 | 3,960.90 | 18,677.58 | 31,139.22 | | | 102,313.04 | 55,000.00 | 47,313.04 | 186.02% |
| 6630 · Maintenance, Water Svc Lines | | | 108.35 | | 68.38 | | | | | 3,989.29 | | | 4,166.02 | 25,000.00 | -20,833.98 | 16.66% |
| 6640 · Maintenance, Tanks | | 2.78 | | | | | | | 67.80 | | | | 70.58 | 1,000.00 | -929.42 | 7.06% |
| 6650 · Maint., Distribution General | | 349.24 | | | 278.57 | 89.61 | 69.11 | 388.51 | | | | | 1,175.04 | 10,000.00 | -8,824.96 | 11.75% |
| 6660 · Maintenance, Collection System | | | | | | | | | | 23.89 | | | 23.89 | | | |
| 6670 · Meters | | | 4,136.05 | 1,463.59 | 3,491.01 | | | | 839.77 | | | | 9,930.42 | 2,500.00 | 7,430.42 | 397.22% |
| Total 6600 · Collection/Transmission | | 607.21 | 5,662.09 | 7,415.95 | 14,404.95 | 9,765.93 | 24,554.85 | 4,349.41 | 19,585.15 | 35,152.40 | | | 121,497.94 | 94,500.00 | 26,997.94 | 128.57% |
| 6700 · Treatment | | | | | | | | | | | | | | | | |
| 6710 · Chemicals & Filtering | | 388.92 | 2,950.54 | 1,571.80 | 1,631.28 | 1,269.77 | 181.09 | 132.91 | 1,959.42 | 273.78 | | | 10,359.51 | 30,000.00 | -19,640.49 | 34.53% |
| 6720 · Maintenance, Treatment Equip. | | | 69.18 | 638.49 | | | | | 503.00 | 1,158.57 | 1,429.10 | | 3,798.34 | 4,000.00 | -201.66 | 94.96% |
| 6730 · Treatment Analysis | | 1,043.42 | 473.94 | 7,742.30 | 2,164.75 | 2,309.39 | 2,317.85 | 1,387.60 | 2,067.50 | 1,017.22 | | | 20,523.97 | 30,000.00 | -9,476.03 | 68.41% |
| Total 6700 · Treatment | | 1,432.34 | 3,493.66 | 9,952.59 | 3,796.03 | 3,579.16 | 2,498.94 | 2,023.51 | 5,185.49 | 2,720.10 | | | 34,681.82 | 64,000.00 | -29,318.18 | 54.19% |
| 6770 · Uniforms | | 65.39 | 1,262.41 | 2,097.12 | 1,677.49 | 1,637.70 | | 522.60 | 919.08 | 396.48 | | | 8,578.27 | 9,000.00 | -421.73 | 95.31% |
| 6800 · Vehicles | | | | | | | | | | | | | | | | |
| 6810 · Fuel | | 598.21 | 461.63 | 558.82 | 615.99 | 513.07 | 142.33 | 653.31 | 543.44 | 642.70 | | | 4,729.50 | 8,000.00 | -3,270.50 | 59.12% |
| 6820 · Truck Equipment, Expensed | | 104.06 | 9.04 | 45.79 | 26.30 | 87.30 | -34.06 | | | 89.13 | | | 327.56 | 1,000.00 | -672.44 | 32.76% |
| 6830 · Truck Repairs | | | | | 853.43 | | -106.68 | 114.87 | 141.10 | 29.97 | | | 1,032.69 | 5,000.00 | -3,967.31 | 20.65% |
| Total 6800 · Vehicles | | 702.27 | 470.67 | 604.61 | 1,495.72 | 600.37 | 1.59 | 768.18 | 684.54 | 761.80 | | | 6,089.75 | 14,000.00 | -7,910.25 | 43.5% |
| 6890 · Other Operations | | 105.94 | | | 4,955.21 | 330.00 | 4,003.00 | | 646.15 | 17.35 | | | 10,057.65 | | | |
| Total 6000 · Operations | 52.50 | 22,763.07 | 26,103.45 | 51,075.28 | 38,925.91 | 39,305.86 | 43,751.93 | 27,403.00 | 72,135.34 | 64,290.81 | | | 385,807.15 | 475,750.00 | -89,942.85 | 81.1% |
| Total Expense | 59,057.29 | 93,171.43 | 110,404.19 | 131,462.83 | 130,521.03 | 129,305.38 | 125,858.70 | 95,582.76 | 146,386.33 | 140,872.87 | | | 1,162,622.81 | 1,454,924.00 | -292,301.19 | 79.91% |
| Net Ordinary Income | 92,257.14 | 61,790.53 | 82,255.81 | 35,860.91 | 53,342.34 | 96,221.28 | 129,628.68 | 63,614.49 | 65,867.59 | 40,141.49 | | | 720,980.26 | 634,026.00 | 86,954.26 | 113.72% |
| Other Income/Expense | | | | | | | | | | | | | | | | |
| Other Income | | | | | | | | | | | | | | | | |
| 7000 · Capital Account Revenues | | | | | | | | | | | | | | | | |
| 7100 · Connection Fees | | | | | | | | | | | | | | | | |
| 7110 · Connection Fees (New Constr) | | | 55,966.00 | | -654.96 | | 17,302.00 | 22,400.41 | 17,855.72 | 17,302.00 | | | 130,171.17 | 128,000.00 | 2,171.17 | 101.7% |
| 7120 · Connection Fees (Remodel) | | | | 106.00 | | | | | | | | | 106.00 | 3,000.00 | -2,894.00 | 3.53% |
| 7130 · Conn. Fees, PFP (New Constr) | | -5,160.00 | 35,357.00 | | | | 12,385.00 | 12,628.41 | 10,849.00 | 12,449.00 | | | 78,508.41 | 65,000.00 | 13,508.41 | 120.78% |
| Total 7100 · Connection Fees | | -5,160.00 | 91,323.00 | 106.00 | -654.96 | | 29,687.00 | 35,028.82 | 28,704.72 | 29,751.00 | | | 208,785.58 | 196,000.00 | 12,785.58 | 106.52% |
| 7600 · Bond Revenues, G.O. | | | | 1,616.33 | 67,821.55 | 569,427.86 | 15,594.85 | 58,618.67 | 12,649.51 | 389,882.46 | | | 1,115,611.23 | 1,150,436.00 | -34,824.77 | 96.97% |
| Total 7000 · Capital Account Revenues | | -5,160.00 | 91,323.00 | 1,722.33 | 67,166.59 | 569,427.86 | 45,281.85 | 93,647.49 | 41,354.23 | 419,633.46 | | | 1,324,396.81 | 1,346,436.00 | -22,039.19 | 98.36% |
| Total Other Income | | -5,160.00 | 91,323.00 | 1,722.33 | 67,166.59 | 569,427.86 | 45,281.85 | 93,647.49 | 41,354.23 | 419,633.46 | | | 1,324,396.81 | 1,346,436.00 | -22,039.19 | 98.36% |

Montara Water & Sanitary District
Revenue & Expenditures Budget vs. Actual - Water
July 2016 through June 2017

| | Jul 16 | Aug 16 | Sep 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 | Jun 17 | TOTAL | | | | |
|---|------------------|------------------|--------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------|-------------------|--------|--------|---------------------|---------------------|-------------------|----------------|--|
| | | | | | | | | | | | | | Jul '16 - Jun 17 | Budget | \$ Over Budget | % of Budget | |
| Other Expense | | | | | | | | | | | | | | | | | |
| 8000 - Capital Improvement Program | | | | | | | | | | | | | | | | | |
| 8100 - Water | | 37,701.72 | 377,765.15 | 36,814.58 | 62,516.67 | 13,983.74 | 2,560.00 | 31,508.15 | 29,803.40 | 17,725.81 | | | 610,379.22 | 619,000.00 | -8,620.78 | 98.61% | |
| Total 8000 - Capital Improvement Program | | 37,701.72 | 377,765.15 | 36,814.58 | 62,516.67 | 13,983.74 | 2,560.00 | 31,508.15 | 29,803.40 | 17,725.81 | | | 610,379.22 | 619,000.00 | -8,620.78 | 98.61% | |
| 9000 - Capital Account Expenses | | | | | | | | | | | | | | | | | |
| 9075 - PFP Connection Expenses | | | | | | | | | | 7,375.00 | | | 7,375.00 | | | | |
| 9100 - Interest Expense - GO Bonds | | 24,942.50 | | | | | | 146,079.34 | | | | | 171,021.84 | 295,734.00 | -124,712.16 | 57.83% | |
| 9125 - PNC Equipment Lease Interest | 840.37 | 1,672.69 | 1,663.98 | 1,655.26 | 1,646.50 | 1,637.73 | 1,628.94 | 1,620.12 | 1,611.28 | 1,602.43 | | | 15,579.30 | 19,598.00 | -4,018.70 | 79.49% | |
| 9150 - SRF Loan | | | | | | 45,287.60 | | | 892.50 | | | | 46,180.10 | 37,247.00 | 8,933.10 | 123.98% | |
| 9210 - Conservation Program/Rebates | | | 200.00 | 200.00 | 100.00 | | | | | 200.00 | | | 700.00 | | | | |
| Total 9000 - Capital Account Expenses | 840.37 | 26,615.19 | 1,863.98 | 1,855.26 | 1,746.50 | 46,925.33 | 1,628.94 | 147,699.46 | 2,503.78 | 9,177.43 | | | 240,856.24 | 352,579.00 | -111,722.76 | 68.31% | |
| Total Other Expense | 840.37 | 64,316.91 | 379,629.13 | 38,669.84 | 64,263.17 | 60,909.07 | 4,188.94 | 179,207.61 | 32,307.18 | 26,903.24 | | | 851,235.46 | 971,579.00 | -120,343.54 | 87.61% | |
| Net Other Income | -840.37 | -69,476.91 | -288,306.13 | -36,947.51 | 2,903.42 | 508,518.79 | 41,092.91 | -85,560.12 | 9,047.05 | 392,730.22 | | | 473,161.35 | 374,857.00 | 98,304.35 | 126.22% | |
| Net Income | 91,416.77 | -7,686.38 | -206,050.32 | -1,086.60 | 56,245.76 | 604,740.07 | 170,721.59 | -21,945.63 | 74,914.64 | 432,871.71 | | | 1,194,141.61 | 1,008,883.00 | 185,258.61 | 118.36% | |

Montara Water & Sanitary District Funds Balance Sheet As of April 30, 2017

| | Sewer | Water | TOTAL |
|--|---------------------|---------------------|----------------------|
| ASSETS | | | |
| Current Assets | | | |
| Checking/Savings | | | |
| Sewer - Bank Accounts | | | |
| Wells Fargo Operating - Sewer | 3,517,496.47 | 0.00 | 3,517,496.47 |
| LAIF Investment Fund | | | |
| Capital Reserve | 3,867,818.32 | 0.00 | 3,867,818.32 |
| Connection Fees Reserve | 152,756.00 | 0.00 | 152,756.00 |
| Operating Reserve | 281,893.00 | 0.00 | 281,893.00 |
| Total LAIF Investment Fund | 4,302,467.32 | 0.00 | 4,302,467.32 |
| Total Sewer - Bank Accounts | 7,819,963.79 | 0.00 | 7,819,963.79 |
| Water - Bank Accounts | | | |
| Wells Fargo Operating - Water | 0.00 | 705,053.24 | 705,053.24 |
| Capital Reserve | 0.00 | 398,249.00 | 398,249.00 |
| Operating Reserve | 0.00 | 190,251.00 | 190,251.00 |
| Restricted Cash | | | |
| Acq & Improv Fund | 0.00 | 436.13 | 436.13 |
| Connection Fees Reserve | 0.00 | 157,000.00 | 157,000.00 |
| Cost of Issuance | 0.00 | 122.94 | 122.94 |
| GO Bonds Fund | 0.00 | 944,234.12 | 944,234.12 |
| Total Restricted Cash | 0.00 | 1,101,793.19 | 1,101,793.19 |
| Total Water - Bank Accounts | 0.00 | 2,395,346.43 | 2,395,346.43 |
| Total Checking/Savings | 7,819,963.79 | 2,395,346.43 | 10,215,310.22 |
| Accounts Receivable | | | |
| Sewer - Accounts Receivable | | | |
| Accounts Receivable | 17,278.22 | 0.00 | 17,278.22 |
| Total Sewer - Accounts Receivable | 17,278.22 | 0.00 | 17,278.22 |
| Water - Accounts Receivable | | | |
| Accounts Receivable | 0.00 | -2,683.76 | -2,683.76 |
| Accounts Rec. - Backflow | 0.00 | 10,283.59 | 10,283.59 |
| Accounts Rec. - Water Residents | 0.00 | 181,447.76 | 181,447.76 |
| Unbilled Water Receivables | 0.00 | 222,714.27 | 222,714.27 |
| Total Water - Accounts Receivable | 0.00 | 411,761.86 | 411,761.86 |
| Total Accounts Receivable | 17,278.22 | 411,761.86 | 429,040.08 |
| Other Current Assets | | | |
| Due from Kathryn Slater-Carter | 232.31 | 382.31 | 614.62 |
| Maint/Parts Inventory | 0.00 | 42,656.32 | 42,656.32 |
| Total Other Current Assets | 232.31 | 43,038.63 | 43,270.94 |
| Total Current Assets | 7,837,474.32 | 2,850,146.92 | 10,687,621.24 |
| Fixed Assets | | | |
| Sewer - Fixed Assets | | | |
| General Plant | 2,335,210.98 | 0.00 | 2,335,210.98 |
| Land | 5,000.00 | 0.00 | 5,000.00 |
| Other Capital Improv. | | | |
| Sewer-Original Cost | 685,599.18 | 0.00 | 685,599.18 |
| Other Cap. Improv. | 2,564,810.39 | 0.00 | 2,564,810.39 |
| Total Other Capital Improv. | 3,250,409.57 | 0.00 | 3,250,409.57 |
| Seal Cove Collection System | 995,505.00 | 0.00 | 995,505.00 |
| Sewage Collection Facility | | | |
| Collection Facility - Org. Cost | 1,349,064.00 | 0.00 | 1,349,064.00 |
| Collection Facility - Other | 3,991,243.33 | 0.00 | 3,991,243.33 |
| Total Sewage Collection Facility | 5,340,307.33 | 0.00 | 5,340,307.33 |

Montara Water & Sanitary District
Funds Balance Sheet
As of April 30, 2017

| | | | |
|--|-----------------------------|-----------------------------|-----------------------------|
| Treatment Facility | 244,539.84 | 0.00 | 244,539.84 |
| Accumulated Depreciation | -7,394,155.00 | 0.00 | -7,394,155.00 |
| Total Sewer - Fixed Assets | 4,776,817.72 | 0.00 | 4,776,817.72 |
| Water - Fixed Assets | | | |
| General Plant | 0.00 | 25,889,935.10 | 25,889,935.10 |
| Land & Easements | 0.00 | 734,500.00 | 734,500.00 |
| Surface Water Rights | 0.00 | 300,000.00 | 300,000.00 |
| Water Meters | 0.00 | 1,058,985.00 | 1,058,985.00 |
| Fixed Assets - Other | 0.00 | 48,171.78 | 48,171.78 |
| Accumulated Depreciation | 0.00 | -8,896,821.00 | -8,896,821.00 |
| Total Water - Fixed Assets | 0.00 | 19,134,770.88 | 19,134,770.88 |
| Total Fixed Assets | 4,776,817.72 | 19,134,770.88 | 23,911,588.60 |
| Other Assets | | | |
| Sewer - Other Assets | | | |
| Def'd Amts Related to Pensions | 13,495.00 | 0.00 | 13,495.00 |
| Joint Power Authority | | | |
| SAM - Orig Collection Facility | 981,592.00 | 0.00 | 981,592.00 |
| SAM - Expansion | 1,705,955.08 | 0.00 | 1,705,955.08 |
| Total Joint Power Authority | 2,687,547.08 | 0.00 | 2,687,547.08 |
| Total Sewer - Other Assets | 2,701,042.08 | 0.00 | 2,701,042.08 |
| Water - Other Assets | | | |
| Def'd Amts Related to Pensions | 0.00 | 26,821.00 | 26,821.00 |
| Due from Sewer | 0.00 | 146,418.50 | 146,418.50 |
| Bond Acquisition Cost OID | 0.00 | 57,636.40 | 57,636.40 |
| Bond Issue Cost | 0.00 | 61,691.45 | 61,691.45 |
| Total Water - Other Assets | 0.00 | 292,567.35 | 292,567.35 |
| Total Other Assets | 2,701,042.08 | 292,567.35 | 2,993,609.43 |
| TOTAL ASSETS | <u>15,315,334.12</u> | <u>22,277,485.15</u> | <u>37,592,819.27</u> |
| LIABILITIES & EQUITY | | | |
| Liabilities | | | |
| Current Liabilities | | | |
| Other Current Liabilities | | | |
| Sewer - Current Liabilities | | | |
| Accrued Payables - Sewer | -75.00 | 0.00 | -75.00 |
| Accrued Vacations | 6,911.83 | 0.00 | 6,911.83 |
| Deposits Payable | 28,813.25 | 0.00 | 28,813.25 |
| PNC Equip. Loan - S/T | 7,251.84 | 0.00 | 7,251.84 |
| Total Sewer - Current Liabilities | 42,901.92 | 0.00 | 42,901.92 |
| Water - Current Liabilities | | | |
| Accrued Payables - Water | 0.00 | 978.90 | 978.90 |
| Accrued Vacations | 0.00 | 10,719.62 | 10,719.62 |
| Deposits Payable | 0.00 | 37,487.93 | 37,487.93 |
| PFP Water Deposits | 0.00 | 4,302.50 | 4,302.50 |
| PNC Equip. Loan - S/T | 0.00 | 7,251.80 | 7,251.80 |
| SRF Loan Payable X102 - Current | 0.00 | 81,026.93 | 81,026.93 |
| SRF Loan Payable X109 - Current | 0.00 | 158,287.99 | 158,287.99 |
| Total Water - Current Liabilities | 0.00 | 300,055.67 | 300,055.67 |
| Payroll Liabilities | | | |
| Employee Benefits Payable | 9,829.96 | 0.00 | 9,829.96 |
| Total Payroll Liabilities | 9,829.96 | 0.00 | 9,829.96 |
| Total Other Current Liabilities | 52,731.88 | 300,055.67 | 352,787.55 |
| Total Current Liabilities | 52,731.88 | 300,055.67 | 352,787.55 |

Montara Water & Sanitary District
Funds Balance Sheet
 As of April 30, 2017

| | | | |
|--|-----------------------------|-----------------------------|-----------------------------|
| Long Term Liabilities | | | |
| Sewer - Long Term Liabilities | | | |
| Due to Water Fund | 146,418.50 | 0.00 | 146,418.50 |
| Accrued Vacations | 9,853.51 | 0.00 | 9,853.51 |
| I-Bank Loan | 800,182.73 | 0.00 | 800,182.73 |
| PNC Equip. Loan - L/T | 640,930.10 | 0.00 | 640,930.10 |
| Total Sewer - Long Term Liabilities | <u>1,597,384.84</u> | 0.00 | <u>1,597,384.84</u> |
| Water - Long Term Liabilities | | | |
| Accrued Vacations | 0.00 | 9,969.14 | 9,969.14 |
| Deferred on Refunding | 0.00 | -224,756.00 | -224,756.00 |
| GO Bonds - L/T | 0.00 | 11,479,503.08 | 11,479,503.08 |
| PNC Equip. Loan - L/T | 0.00 | 640,930.13 | 640,930.13 |
| SRF Loan Payable - X102 | 0.00 | 91,108.13 | 91,108.13 |
| SRF Loan Payable - X109 | 0.00 | 3,541,174.66 | 3,541,174.66 |
| Total Water - Long Term Liabilities | <u>0.00</u> | <u>15,537,929.14</u> | <u>15,537,929.14</u> |
| Total Long Term Liabilities | <u>1,597,384.84</u> | <u>15,537,929.14</u> | <u>17,135,313.98</u> |
| Total Liabilities | 1,650,116.72 | 15,837,984.81 | 17,488,101.53 |
| Equity | | | |
| Sewer - Equity Accounts | | | |
| Capital Assets Net | 3,408,252.20 | 0.00 | 3,408,252.20 |
| Fund Balance - Unrestricted | 8,646,292.87 | 0.00 | 8,646,292.87 |
| Retained Earnings | 239,553.41 | 0.00 | 239,553.41 |
| Total Sewer - Equity Accounts | <u>12,294,098.48</u> | 0.00 | <u>12,294,098.48</u> |
| Water - Equity Accounts | | | |
| Capital Assets Net | 0.00 | 2,868,858.70 | 2,868,858.70 |
| Restricted Debt Service | 0.00 | 1,384,997.90 | 1,384,997.90 |
| Unrestricted | 0.00 | -1,562,801.59 | -1,562,801.59 |
| Retained Earnings | 0.00 | -239,553.41 | -239,553.41 |
| Total Water - Equity Accounts | <u>0.00</u> | <u>2,451,501.60</u> | <u>2,451,501.60</u> |
| Equity Adjustment Account | 1,359,086.37 | 2,793,857.13 | 4,152,943.50 |
| Net Income | 12,032.55 | 1,194,141.61 | 1,206,174.16 |
| Total Equity | <u>13,665,217.40</u> | <u>6,439,500.34</u> | <u>20,104,717.74</u> |
| TOTAL LIABILITIES & EQUITY | <u><u>15,315,334.12</u></u> | <u><u>22,277,485.15</u></u> | <u><u>37,592,819.27</u></u> |



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

SUBJECT: SAM Flow Report for April 2017

The Sewer Authority Mid-Coastside (SAM) has prepared the following attached reports for the SAM Board of Directors and the California Regional Water Quality Control Board:

- Flow Report for April 2017.
- Collection System Monthly Overflow Report – April 2017.

The Average Daily Flow for Montara was 0.431 MGD in April 2017. There was no reportable overflow April in the Montara System. SAM indicates there were 3.34 inches of rain in April 2017.

RECOMMENDATION:

Review and file.

Attachments

Sewer Authority Mid-Coastside

Monthly Collection System Activity/SSO Distribution Report, April 2017

April 2017

| | Number of S.S.O.'s | | | | |
|--------------|--------------------|----------|----------|----------|-------------|
| | Total | HMB | GCSD | MWSD | SAM |
| Roots | 0 | 0 | 0 | 0 | 0 |
| Grease | 0 | 0 | 0 | 0 | 0 |
| Mechanical | 2 | 0 | 0 | 0 | 2 |
| Wet Weather | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 0 | 2 |
| | | | | | 100% |

12 Month Moving Total

| | 12 month rolling Number | | | | |
|--------------|-------------------------|------------|-----------|------------|------------|
| | Total | HMB | GCSD | MWSD | SAM |
| Roots | 6 | 2 | 0 | 4 | 0 |
| Grease | 0 | 0 | 0 | 0 | 0 |
| Mechanical | 5 | 0 | 0 | 1 | 4 |
| Wet Weather | 2 | 2 | 0 | 0 | 0 |
| Other | 3 | 0 | 1 | 2 | 0 |
| Total | 16 | 4 | 1 | 7 | 4 |
| | | 25% | 6% | 44% | 25% |

Reportable SSOs

| | Reportable Number of S.S.O.'s | | | | |
|-----------------------|-------------------------------|-----|------|------|-----|
| | Total | HMB | GCSD | MWSD | SAM |
| April 2017 | 2 | 0 | 0 | 0 | 2 |
| 12 Month Moving Total | 16 | 4 | 1 | 7 | 4 |

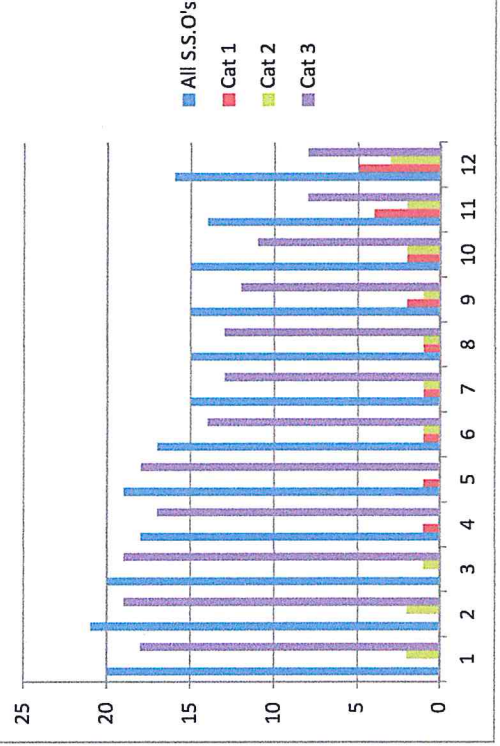
SSOs / Year / 100 Miles

| | Number of S.S.O.'s / Year / 100 Miles | | | | |
|-----------------------|---------------------------------------|--------------|--------------|--------------|-------------|
| | Total | HMB | GCSD | MWSD | SAM |
| April 2017 | 1.9 | 0.0 | 0.0 | 0.0 | 27.4 |
| 12 Month Moving Total | 15.3 | 10.8 | 3.0 | 25.9 | 54.8 |
| Category 1 | 4.8 | 2.7 | 0.0 | 7.4 | 27.4 |
| Category 2 | 2.9 | 2.7 | 0.0 | 0.0 | 27.4 |
| Category 3 | 7.7 | 5.4 | 3.0 | 18.5 | 0.0 |
| Miles of Sewers | 104.5 | 37.0 | 33.2 | 27.0 | 7.3 |
| | | 35.4% | 31.8% | 25.8% | 7.0% |

12 Month Rolling Total Sewer Cleaning Summary

| Month | HMB | GCSD | MWSD | Total Feet | Total Miles |
|-------------------|----------------|----------------|----------------|----------------|--------------|
| May-16 | 11,530 | 15,123 | 11,652 | 38,305 | 7.3 |
| June-16 | 9,762 | 2,161 | 7,367 | 19,290 | 3.7 |
| July-16 | 34,037 | 28,984 | 8,192 | 71,213 | 13.5 |
| Aug -16 | 31,070 | 5,694 | 16,714 | 53,478 | 10.1 |
| Sep - 16 | 13,228 | 35,432 | 11,406 | 60,066 | 11.4 |
| Oct - 16 | 27,226 | 7,389 | 15,283 | 49,898 | 9.5 |
| Nov - 16 | 25,535 | 33,638 | 10,436 | 69,609 | 13.2 |
| Dec - 16 | 33,928 | 19,306 | 10,127 | 63,361 | 12.0 |
| Jan - 17 | 16,650 | 16,144 | 11,837 | 44,631 | 8.5 |
| Feb - 17 | 12,216 | 4,866 | 11,531 | 28,613 | 5.4 |
| Mar - 17 | 15,347 | 11,667 | 10,133 | 37,147 | 7.0 |
| Apr - 17 | 13,101 | 11,588 | 11,460 | 36,149 | 6.8 |
| Annual ft | 243,630 | 191,992 | 136,138 | 571,760 | |
| Annual Mi. | 46.1 | 36.4 | 25.8 | | 108.3 |

12 Month Moving SSO Totals Through April 2017



Attachment A

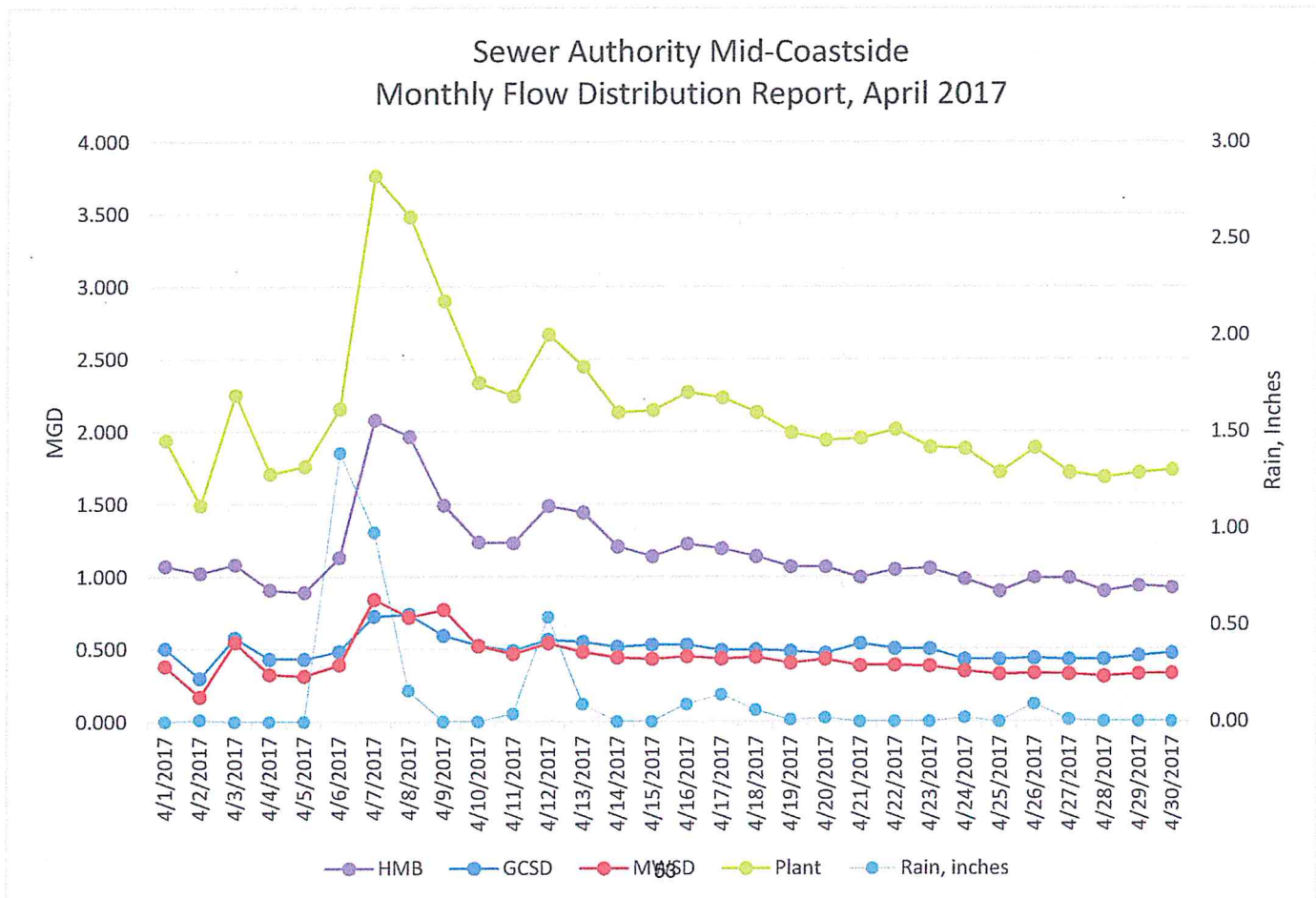
Flow Distribution Report Summary For April 2017

The daily flow report figures for the month of April 2017 have been converted to an Average Daily Flow (ADF) for each Member Agency. The results are attached for your review.

*Influent flow is calculated using the mid-plant flow meter less process water and trucked in waste

The summary of the ADF information is as follows:

| | <u>MGD</u> | <u>%</u> |
|-------------------------------------|--------------|--------------|
| The City of Half Moon Bay | 1.160 | 55.4% |
| Granada Community Services District | 0.501 | 23.9% |
| Montara Water and Sanitary District | <u>0.431</u> | <u>20.6%</u> |
| Total | 2.092 | 100.0% |



Sewer Authority Mid-Coastside

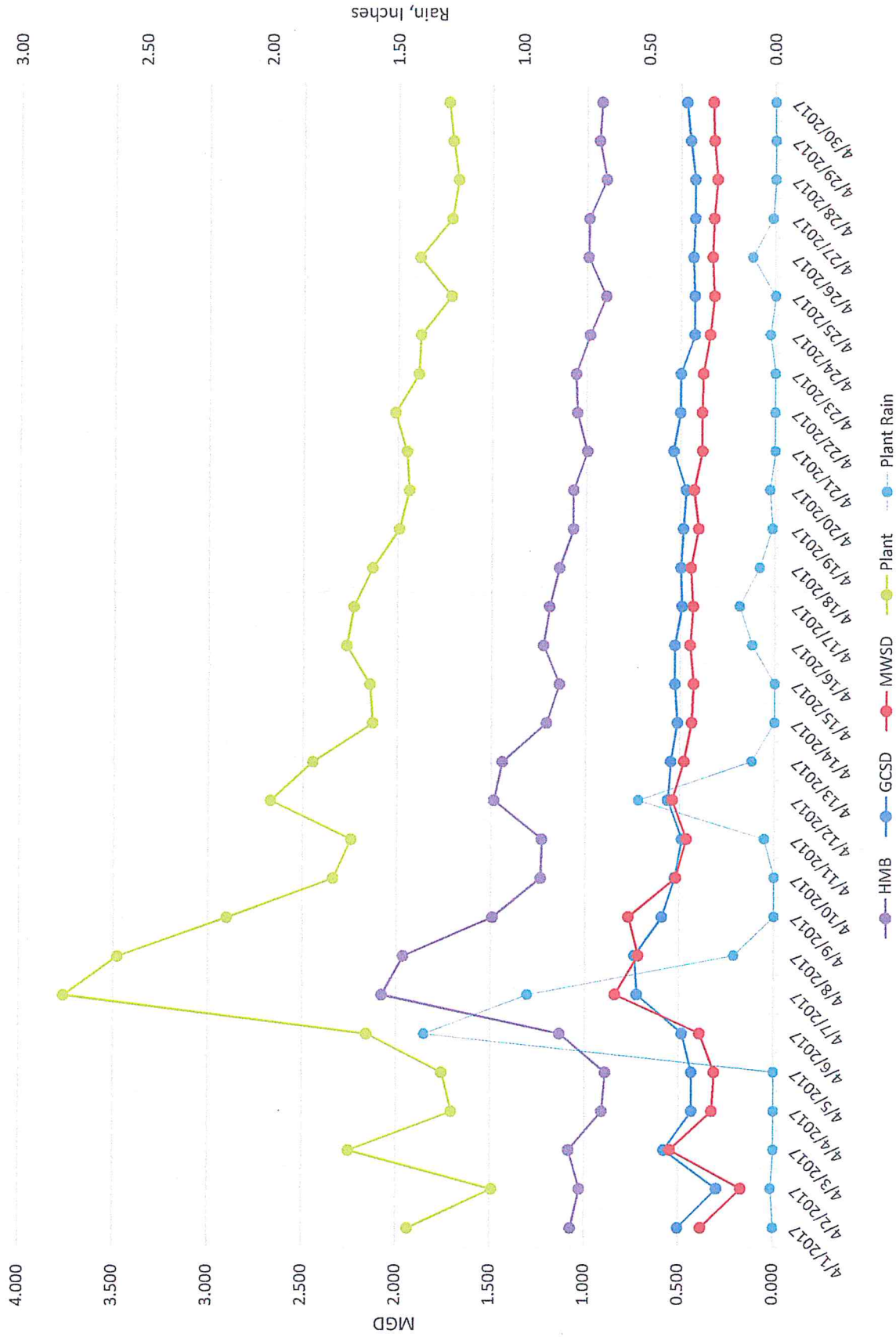
Monthly Flow Distribution Report for April 2017

| <u>Date</u> | <u>HMB</u> | <u>GCSD</u> | <u>MWSD</u> | <u>Plant</u> | <u>Rain Plant</u> | <u>Rain Portola</u> | <u>Rain Montara</u> |
|---------------|---------------|---------------|---------------|---------------|-----------------------|-------------------------|-------------------------|
| 4/1/2017 | 1.072 | 0.503 | 0.381 | 1.938 | 0.00 | 0.00 | 0.00 |
| 4/2/2017 | 1.024 | 0.299 | 0.171 | 1.490 | 0.01 | 0.00 | 0.00 |
| 4/3/2017 | 1.082 | 0.578 | 0.546 | 2.251 | 0.00 | 0.00 | 0.00 |
| 4/4/2017 | 0.908 | 0.432 | 0.326 | 1.707 | 0.00 | 0.00 | 0.00 |
| 4/5/2017 | 0.890 | 0.432 | 0.313 | 1.759 | 0.00 | 0.00 | 0.00 |
| 4/6/2017 | 1.132 | 0.484 | 0.391 | 2.158 | 1.39 | 1.12 | 1.10 |
| 4/7/2017 | 2.078 | 0.724 | 0.841 | 3.764 | 0.98 | 0.82 | 0.86 |
| 4/8/2017 | 1.965 | 0.738 | 0.719 | 3.480 | 0.16 | 0.13 | 0.08 |
| 4/9/2017 | 1.491 | 0.593 | 0.770 | 2.901 | 0.00 | 0.00 | 0.00 |
| 4/10/2017 | 1.236 | 0.525 | 0.520 | 2.338 | 0.00 | 0.00 | 0.00 |
| 4/11/2017 | 1.231 | 0.488 | 0.464 | 2.243 | 0.04 | 0.02 | 0.07 |
| 4/12/2017 | 1.486 | 0.563 | 0.539 | 2.670 | 0.54 | 0.32 | 0.40 |
| 4/13/2017 | 1.442 | 0.549 | 0.478 | 2.447 | 0.09 | 0.05 | 0.03 |
| 4/14/2017 | 1.207 | 0.514 | 0.439 | 2.131 | 0.00 | 0.00 | 0.00 |
| 4/15/2017 | 1.140 | 0.528 | 0.430 | 2.146 | 0.00 | 0.00 | 0.00 |
| 4/16/2017 | 1.226 | 0.529 | 0.449 | 2.271 | 0.09 | 0.17 | 0.20 |
| 4/17/2017 | 1.194 | 0.492 | 0.432 | 2.233 | 0.14 | 0.14 | 0.19 |
| 4/18/2017 | 1.141 | 0.496 | 0.444 | 2.133 | 0.06 | 0.10 | 0.11 |
| 4/19/2017 | 1.068 | 0.485 | 0.403 | 1.993 | 0.01 | 0.01 | 0.01 |
| 4/20/2017 | 1.068 | 0.470 | 0.429 | 1.941 | 0.02 | 0.28 | 0.17 |
| 4/21/2017 | 0.995 | 0.538 | 0.386 | 1.954 | 0.00 | 0.00 | 0.00 |
| 4/22/2017 | 1.049 | 0.502 | 0.387 | 2.015 | 0.00 | 0.00 | 0.00 |
| 4/23/2017 | 1.057 | 0.500 | 0.381 | 1.892 | 0.00 | 0.00 | 0.00 |
| 4/24/2017 | 0.983 | 0.428 | 0.347 | 1.881 | 0.02 | 0.01 | 0.00 |
| 4/25/2017 | 0.897 | 0.428 | 0.325 | 1.720 | 0.00 | 0.00 | 0.00 |
| 4/26/2017 | 0.991 | 0.435 | 0.332 | 1.886 | 0.09 | 0.14 | 0.12 |
| 4/27/2017 | 0.988 | 0.426 | 0.326 | 1.716 | 0.01 | 0.00 | 0.00 |
| 4/28/2017 | 0.896 | 0.427 | 0.309 | 1.683 | 0.00 | 0.00 | 0.00 |
| 4/29/2017 | 0.934 | 0.452 | 0.326 | 1.713 | 0.00 | 0.00 | 0.00 |
| 4/30/2017 | 0.921 | 0.471 | 0.331 | 1.734 | 0.00 | 0.00 | 0.00 |
| Totals | 34.793 | 15.027 | 12.935 | 64.187 | 3.65 | 3.31 | 3.34 |

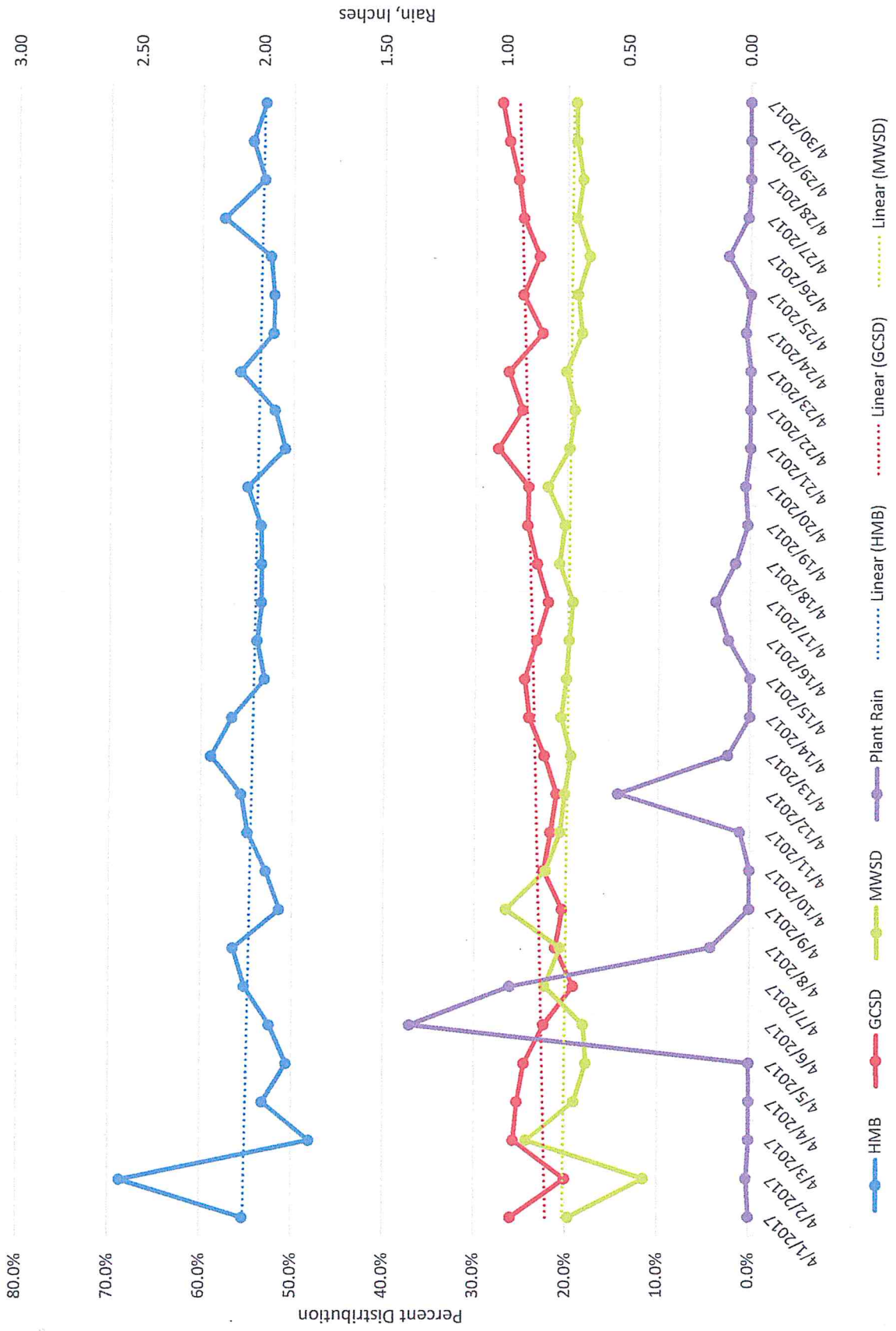
Summary

| | <u>HMB</u> | <u>GCSD</u> | <u>MWSD</u> | <u>Plant</u> |
|---------------------|--------------|--------------|--------------|---------------|
| Minimum | 0.890 | 0.299 | 0.171 | 1.490 |
| Average | 1.160 | 0.501 | 0.431 | 2.092 |
| Maximum | 2.078 | 0.738 | 0.841 | 3.764 |
| Distribution | 55.4% | 23.9% | 20.6% | 100.0% |

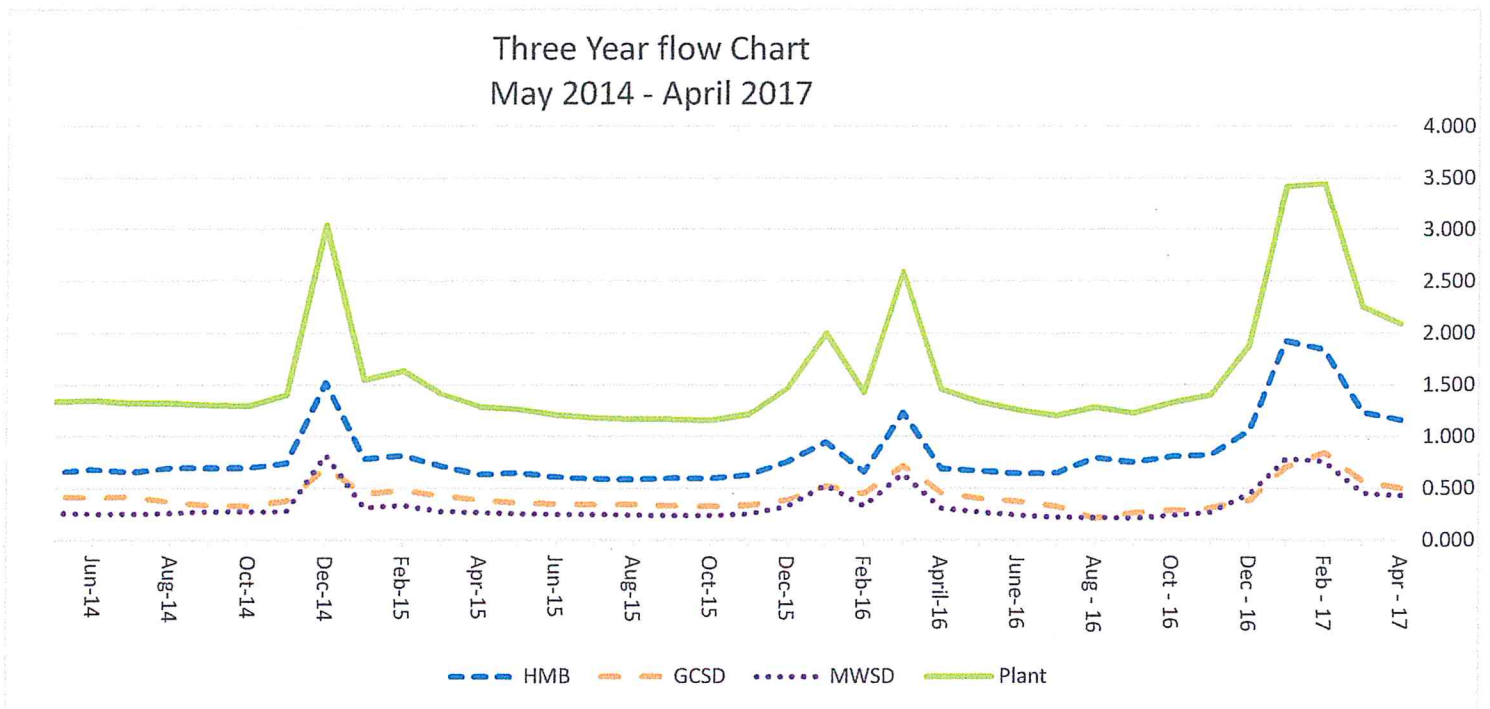
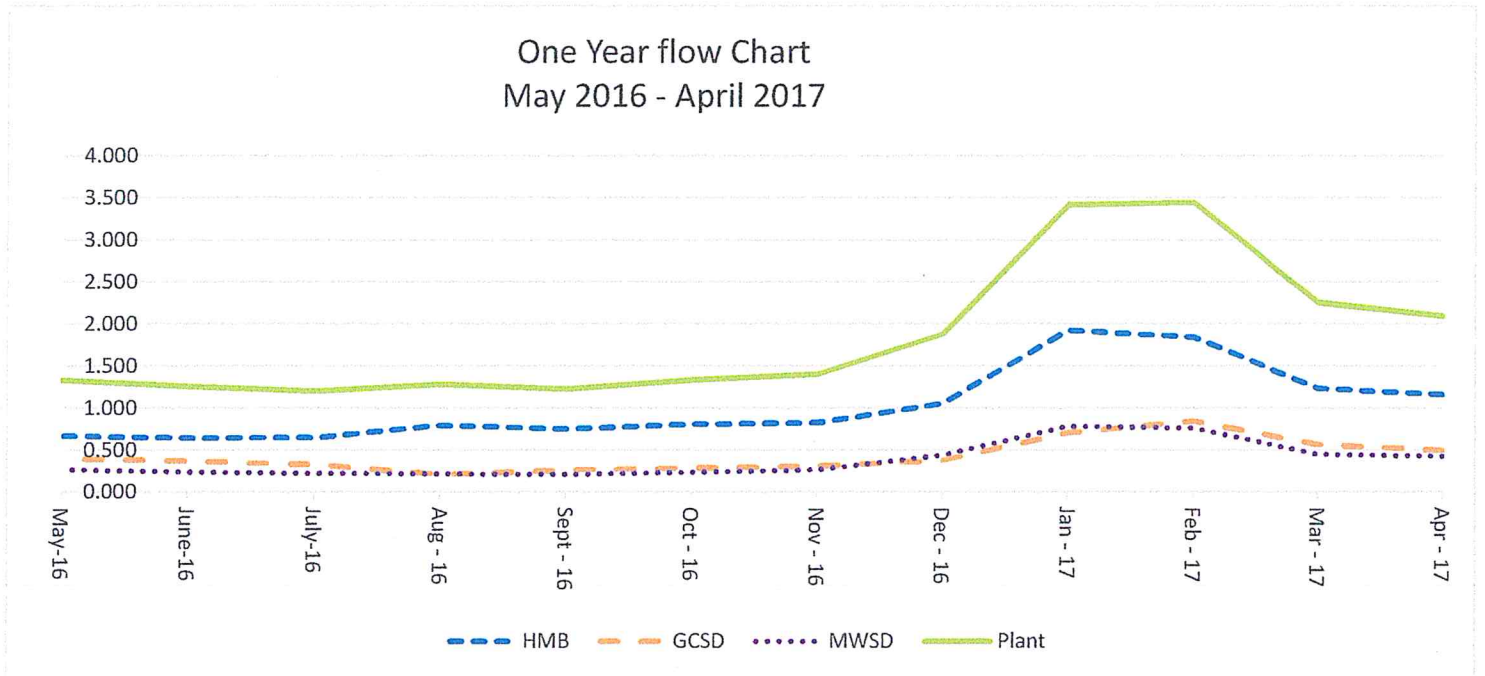
Sewer Authority Mid-Coastside Monthly Flow Distribution Report, April 2017



Percent Distribution April 2017



Most recent flow calibration December 2016 PS, November 2016 Plant





MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: June 1, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

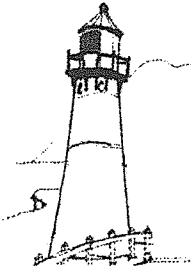
SUBJECT: Review of Current Investment Portfolio

The District's Investment Policy and Guidelines requires that the Board review the status of the current investment portfolio. The following summarizes the status of these accounts:

- The District has most of its idle sewer funds deposited in the State of California's Local Agency Investment Fund (LAIF). The Monthly Average interest rate for April 2017 the rate was 0.884.
- The District has one checking account with Wells Fargo Bank for Water and Sewer Funds that is largely backed by Federal securities.

RECOMMENDATION:

District staff attempts to cash manage idle funds in LAIF as long as possible before transferring to the Wells Fargo checking accounts for disbursements.



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: June 1, 2017

TO: BOARD OF DIRECTORS

SUBJECT: Connection Permit Applications Received

As of June 1, 2017 the following new Sewer Connection Permit applications were received since the last report:

| Date of Application | Property Owner | Site Address | Home Size |
|---------------------|----------------|--------------|-----------|
| | | | |

As of June 1, 2017 the following new Water (Private Fire Sprinkler) Connection Permit applications were received since the last report:

| Date of Application | Property Owner | Site Address | Home Size |
|---------------------|----------------|--------------|-----------|
| | | | |

As of June 1, 2017 the following new Water Connection Permit applications were received since the last report:

| Date of App. | Property Owner | Site Address | Home Size | Type of Connection |
|--------------|----------------|--------------|-----------|--------------------|
| | | | | |

RECOMMENDATION:

No action is required. This is for Board information only.



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: June 1st, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

A handwritten signature in black ink, appearing to be 'C Heldmaier', written in a cursive style.

SUBJECT: Monthly Water Production Report

The attached two charts summarize the monthly water production for the District.

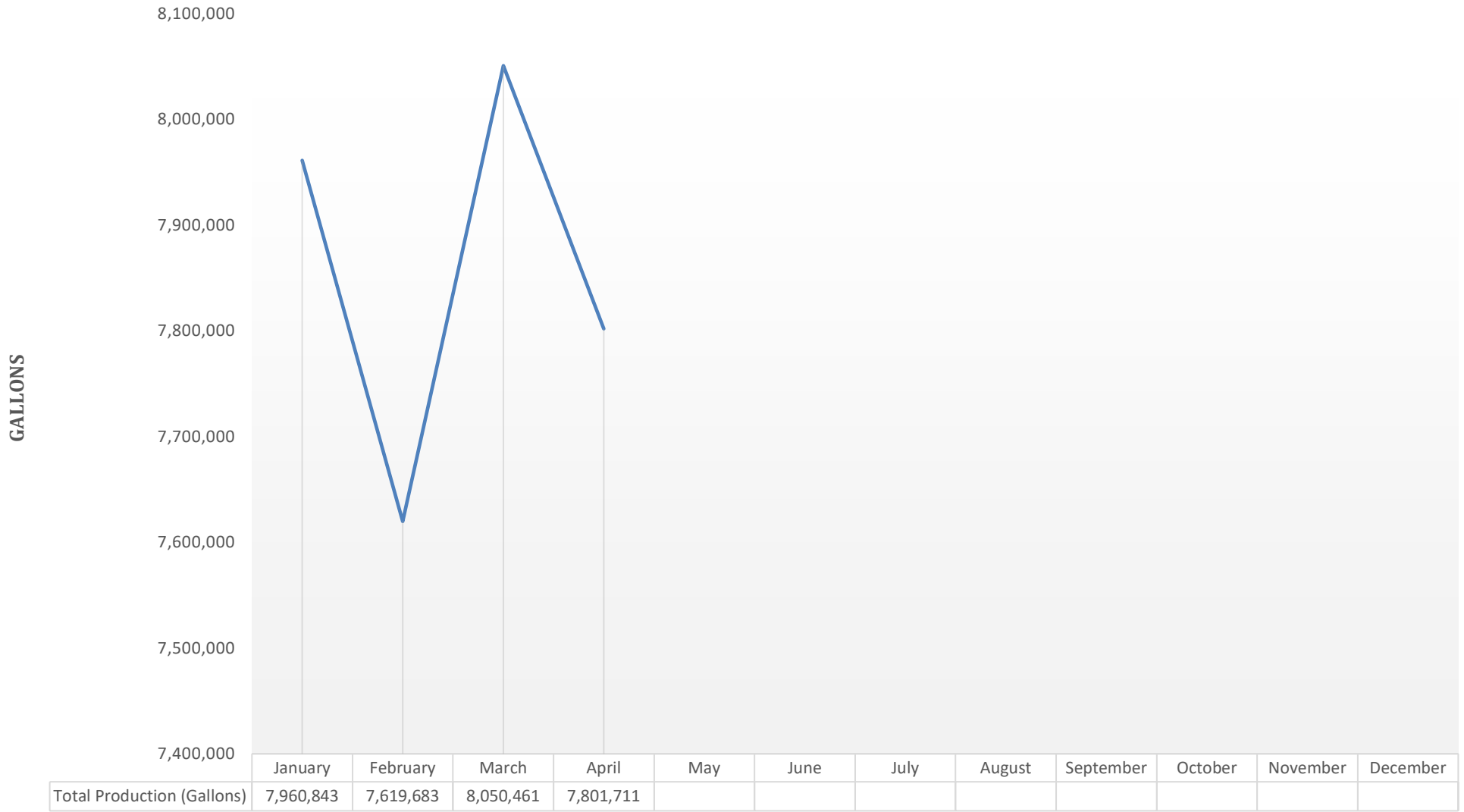
The first shows a consolidated from all sources by month. The second shows each water source the District uses, both wells and surface water. The production is shown in gallons of water produced.

RECOMMENDATION:

No action is required. These reports are provided for the Board's information only.

Attachments: 2

TOTAL PRODUCTION 2017(Gallons)



MONTH



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting of: June 1st, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

A handwritten signature in black ink, appearing to be 'C. Heldmaier', written in a cursive style.

SUBJECT: Rain Report

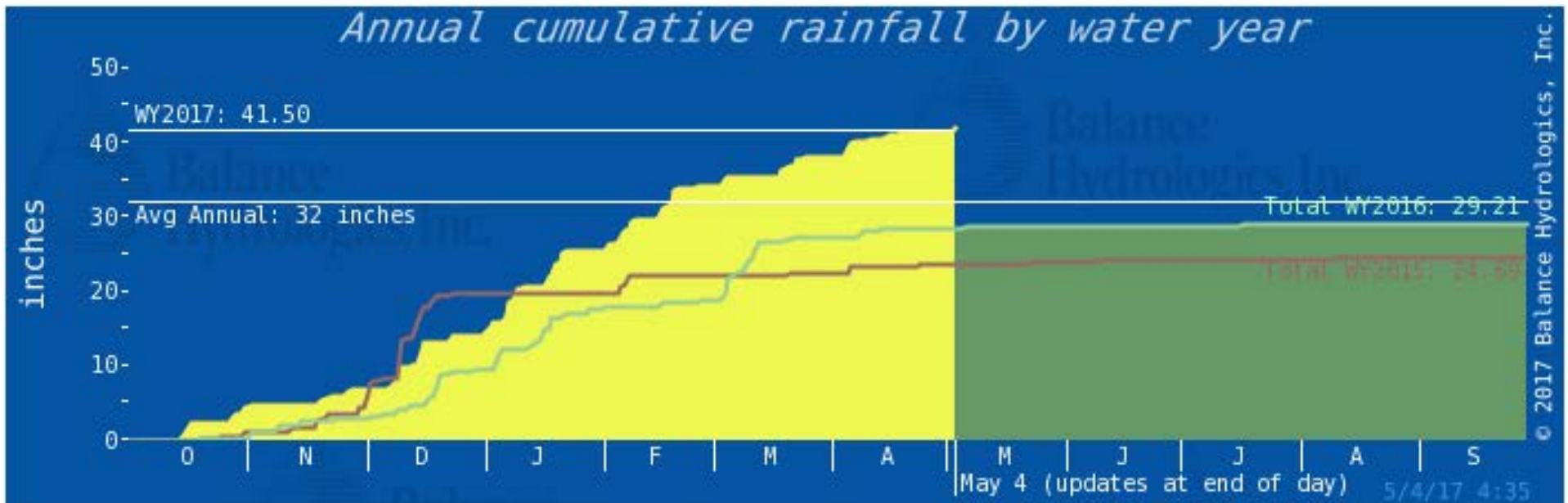
The attached chart shows the monthly rainfall at Alta Vista Treatment Plant for the current and prior water years along with seven-year average rain fall.

RECOMMENDATION:

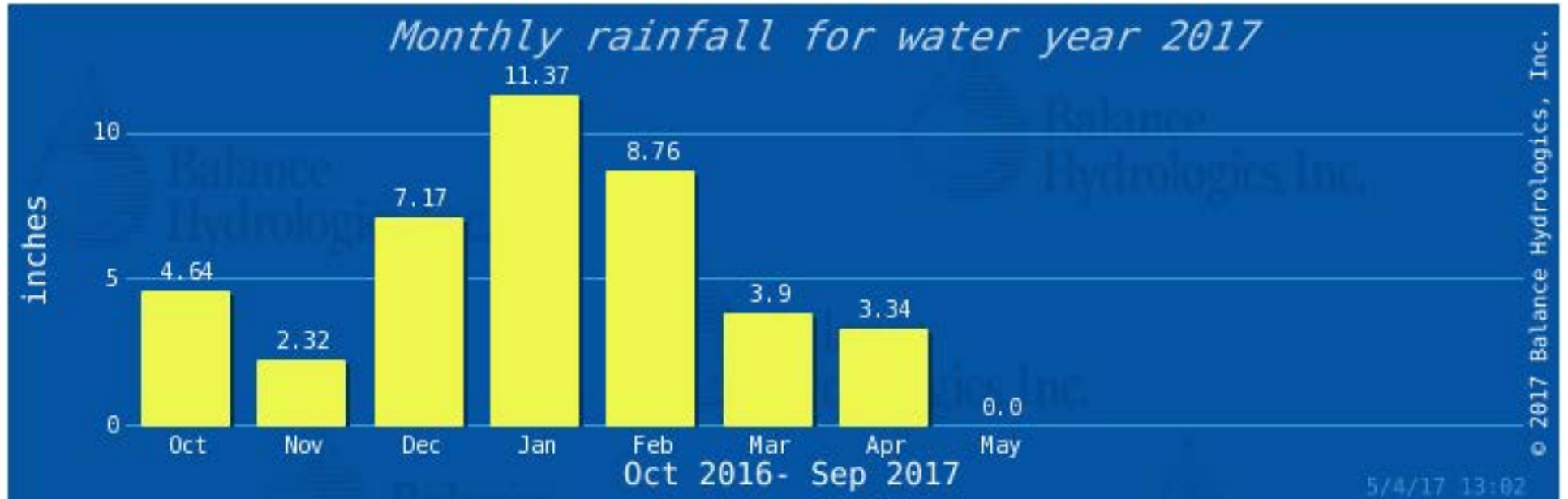
No action is required. These reports are provided for the Board's information only.

Attachments: 2

Annual Cumulative Rainfall



Monthly Rainfall Report Oct 2016 – Sept 2017





MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: June 1st, 2017

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

A handwritten signature in black ink, appearing to be 'C Heldmaier'.

SUBJECT: Monthly Solar Energy Report

The attached chart summarizes the monthly solar production at the Alta Vista Array. Since the installation of the solar panels the District produced 38877 kWh and saved 66089 lbs of CO₂.

Please note - due to an electrical storm in December, the solar array equipment was damaged and has been disconnected. Array was reconnected April 15th , 2017

RECOMMENDATION:

No action is required. This information is provided for the Board's information only.

Attachments: 1



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager 

**SUBJECT: Monthly Public Agency Retirement Service
Report for March 2017.**

The District has received the monthly PARS report for March 2017.

Contributions are calculated on a bi-weekly basis, and contributions are made on a monthly basis.

The following monthly reports are submitted as consent agenda items on a monthly basis.

RECOMMENDATION:

This is for Board information only.

Attachment

MONTARA WATER & SANITARY DISTRICT
PARS REP Program

Monthly Account Report for the Period
3/1/2017 to 3/31/2017

Clemens Heldmaier
General Manager
Montara Water & Sanitary District
8888 Cabrillo Highway
Montara, CA 94037

Account Summary

| Source | Beginning Balance as of 3/1/2017 | Contributions | Earnings | Expenses | Distributions | Transfers | Ending Balance as of 3/31/2017 |
|-----------------------|--|-------------------|-------------------|-----------------|---------------|---------------|--------------------------------------|
| Employer Contribution | \$483,475.34 | \$7,219.55 | \$2,499.00 | \$224.43 | \$0.00 | \$0.00 | \$492,969.46 |
| Totals | \$483,475.34 | \$7,219.55 | \$2,499.00 | \$224.43 | \$0.00 | \$0.00 | \$492,969.46 |

Investment Selection

Capital Appreciation Index PLUS

Investment Objective

The primary goal of the Capital Appreciation objective is growth of principal. The major portion of the assets are invested in equity securities and market fluctuations are expected.

Investment Return

| 1-Month | 3-Months | 1-Year | Annualized Return | | | Plan's Inception Date |
|---------|----------|--------|-------------------|---------|----------|-----------------------|
| | | | 3-Years | 5-Years | 10-Years | |
| 0.51% | 4.22% | 11.94% | - | - | - | 3/8/2016 |

Information as provided by US Bank, Trustee for PARS; Not FDIC Insured; No Bank Guarantee; May Lose Value

Past performance does not guarantee future results. Performance returns may not reflect the deduction of applicable fees, which could reduce returns. Information is deemed reliable but may be subject to change.

Investment Return: Annualized rate of return is the return on an investment over a period other than one year multiplied or divided to give a comparable one-year return.

Account balances are inclusive of Trust Administration, Trustee and Investment Management fees

MONTARA WATER AND SANITARY DISTRICT
RETIREMENT ENHANCEMENT PLAN

Statement of Plan Account
for the Period
3/01/2017 to 3/31/2017

PLAN ID: P7-REP15A

CLEMENS HELDMAIER
GENERAL MANAGER
MONTARA WATER & SANITARY DISTRICT
PO BOX 370131
MONTARA, CA 94037

=====

VALUATION FOR THE MONTH ENDING 3/31/2017

| | CURRENT PERIOD |
|-------------------------|-------------------|
| | ----- |
| BEGINNING BALANCE | 483,475.34 |
| TRANSFERS IN | 6,704.87 |
| CONTRIBUTIONS | 7,219.55 |
| EARNINGS | 2,499.00 |
| EXPENSES | 224.43 |
| DISTRIBUTIONS | 0.00 |
| TRANSFERS OUT | 6,704.87 |
| | ----- |
| BALANCE AS OF 3/31/2017 | 492,969.46 |
| | ===== |

=====

IMPORTANT INFORMATION

Contributions are applied to your plan account based upon the data received from your agency by our office, and confirmed by actual deposits made to the PARS Trust based upon reports we receive from US Bank, The PARS Trustee. Contributions will be listed on this statement only if these deposits were received in the PARS Trust during the valuation month for which this statement covers.

It is not the responsibility of PARS to monitor the timeliness of your agency's plan contributions. If there exists any discrepancies between the data received from your agency and the actual deposits made into the PARS Trust, we will attempt to reconcile those discrepancies prior to the monthly valuation of the plan. In certain cases there may be a need to delay the monthly valuation, which may involve contacting your agency for more information. If there are material discrepancies your agency will be notified as soon as possible. Please contact Michael Hambel at mhambel@pars.org or (800)540-6369 x125 if you have any questions.

PARS is not licensed to provide and does not offer tax, accounting, legal or actuarial advice.

Prepared by PARS on 5/04/2017

**March 2017 PARS Statement
Detail Information**

PARS Beginning Balance as of March 1, 2017 \$ 483,475.34

Contributions:

February 15, 2017 Calculation

| | | |
|------------------------|--------------|-------------|
| Wages | \$ 26,161.26 | |
| Employer - 6.5% | \$ 1,700.48 | |
| Employee - 8.25% | \$ 2,158.30 | |
| Contributions Subtotal | | \$ 3,858.79 |

| Fund Impact - PARS Wages | | |
|---------------------------------|--------------|--------------|
| Sewer | Water | Total |
| \$ 8,740.91 | \$ 17,420.36 | \$ 26,161.26 |
| \$ 568.16 | \$ 1,132.32 | \$ 1,700.48 |

| Sewer | Water | Total |
|-------------|--------------|--------------|
| \$ 7,841.71 | \$ 14,943.08 | \$ 22,784.78 |
| \$ 509.71 | \$ 971.30 | \$ 1,481.01 |

February 28, 2017 Calculation

| | | |
|----------------------------------|--------------|-------------|
| Wages | \$ 22,784.78 | |
| Employer - 6.5% | \$ 1,481.01 | |
| Employee - 8.25% | \$ 1,879.74 | |
| Contributions Subtotal | | \$ 3,360.76 |
| Rounding | | \$ - |
| Total Contributions thru January | | \$ 7,219.54 |

Earnings \$2,499.00

Expenses \$ (224.43)

PARS Ending Balance as of March 31, 2017 \$ 492,969.45



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

SUBJECT: Review and Possible Action Concerning Sewer Authority Mid-Coastside Fiscal Year 2017-2018 Budget.

At the SAM Board of Directors meeting on April 10, 2017, the Board approved the SAM General Budget for Fiscal Year 2017/18 be sent as two separate budgets for the member agencies to consider and approve.

The overall Collections Budget has decreased by \$55,414 over the prior Fiscal Year, mainly due to lower equipment budget. Additionally, the allocation of costs between the contracting member agencies is now based on the percentage of total lines cleaned and percentage of lift stations maintained rather than a percentage of total man hours. The 2017/18 assessment for MWSD for the Collections Contract Services is \$285,934, 11% less than in the prior year.

The General Budget contains for the first time an Infrastructure Division Budget, that is based on a SAM approved 5 Year Capital Improvement Program designed to address the maintenance shortfalls of SAM. The addition of the CIP based budget, with inclusion of the Intertie Pipeline System Repair of the section that failed in early April, SAM is asking for an increase to the General Budget of \$4,546,100. The overall amount that SAM plans to spend under the General Budget is an increase of 111%, or \$8,692,302. MWSD's assessment would increase by 121% to \$1,877,537.

At a subsequent SAM meeting the SAM Board directed the manager to meet with the member agency managers and engineers to receive comments in regards to the O&M budget. The managers met twice and recommended a number of changes. Some of the recommended changes were submitted to the SAM Board at the May 22 SAM meeting. The SAM Board directed staff to reprioritize the infrastructure plan and reduce the associated budget to \$1.5 million.

RECOMMENDATION:

This is for information and discussion only. Staff plans to present the revised SAM Budget after approval by the SAM Board for distribution to member agencies.

Attachments

Clemens

From: Beverli Marshall <bmarshall@samcleanswater.org>
Sent: Friday, May 26, 2017 10:53 AM
To: Chuck Duffy (cduffy@dudek.com); Cheldmaier; Delia Comito; Magda Gonzalez (mgonzalez@hmbcity.com)
Cc: Vivian Housen; Pippin Cavagnaro; Kishen Prathivadi
Subject: SAM Budget Discussion

All,

At the May 22 Board meeting, the SAM Board directed staff to meet with SRT engineers to reprioritize the proposed infrastructure projects for FY 2017/18. The direction was that the proposed infrastructure budget would be reduced to \$1.5 million and only the projects that can be accomplished within that budget will be considered at this time. Staff will present the reprioritized list of projects to the SAM Board at the June 12 meeting.

No reductions to the O&M budget, other than the infrastructure projects, was recommended by the Board as part of that discussion.

Beverli A. Marshall, SDA
General Manager
Sewer Authority Mid-Coastside
(650) 726-0124 ext. 125

*"New ideas are inspired by
pressure."* Paloma Picasso



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SEWER AUTHORITY MID-COASTSIDE

Staff Report

TO: Honorable Board of Directors

FROM: Beverli A. Marshall, General Manager

DATE: May 22, 2017

SUBJECT: **Discuss JPA General Budget for FY 2017/18 Recommendations from Member Agency Managers/Engineers and Provide Direction**

Staff Recommendation

Staff recommends that the Board of Directors discuss the recommendations from the member agency managers/engineers regarding the JPA General Budget for FY 2017/18 and provide direction to staff.

Fiscal Impact

The fiscal impact depends on the direction provided by the Board.

Strategic Plan Compliance

The recommendation complies with the SAM Strategic Plan's Goal 3 *"Consider long-term costs, and ensure that finances are stable and understandable by the board, member agencies, and the public."*

Background and Discussion/Report

At the May 8, 2017, meeting, the Board directed staff to meet with the member agency managers and engineers to discuss prioritizing the infrastructure projects as the proposed funding request was too great. Staff met with the agencies twice (May 11 and 12) to discuss the projects. The following recommendations were made by one or more of the managers/engineers.

- Prior to embarking on IPS segment replacements for failing sections SAM should:

| | | | |
|---------------------------|--------------|------------------|------------|
| BOARD MEMBERS: | J. Blanchard | S. Boyd | D. Penrose |
| | D. Ruddock | K. Slater-Carter | L. Woren |
| ALTERNATE MEMBERS: | M. Clark | J. Harvey | B. Huber |
| | R. Kowalczyk | H. Rarback | |

1. Provide IPS map and plan replacement of segments over 12-15 years based on risk priority
 2. Provide 65% design plan of the fix recommendation for the proposed 3 segments
 3. Revise the design and bidding schedule to meet expected 2-year timeframe
- Revise approved 5-Year Infrastructure Plan to reprioritize critical need vs. “good idea” projects
 - We should be conservative in what we say we can accomplish (don’t overpromise)
 - Spend no more than \$1.5 million each FY on infrastructure; fix what is leaking
 - HMB not agreeing to any particular projects at this time
 - Write bid documents to contain mobilization costs
 - Need to think of SAM budget like personal finances vs. government spending
 - Be more conscientious of rate payer impact
 - Underbudget for non-fixed costs and ask for more mid-year, only if needed
 - Staff do more of the work and depend less on contractors (cut by 50%)
 - Key O&M budget lines to reduce: Professional Services and Building & Maintenance Services
 - Key budget lines to eliminate: Vehicle Replacement funding, Equipment
 - No new equipment for Contract Collection Services due to uncertainty of participation by HMB
 - Need to evaluate number of staff in each position – may be overstaffed
 - Dire situation, need to strip the O&M budget bare
 - Provide more information of SAM’s funding options: loans, bonds, etc.

Staff requests that the Board discuss the recommendations and provide direction.

Supporting Documents

None


| | | | |
|---------------------------|---------------------|-------------------------|-------------------|
| BOARD MEMBERS: | J. Blanchard | S. Boyd | D. Penrose |
| | D. Ruddock | K. Slater-Carter | L. Woren |
| ALTERNATE MEMBERS: | M. Clark | J. Harvey | B. Huber |
| | R. Kowalczyk | H. Rarback | |



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager 

**SUBJECT: Review and Possible Action Concerning
Approval of Water and Sewer Budgets and
Capital Improvement Programs.**

A Draft Budget was presented at the May 4 meeting for Board Review. On May 24 the Finance Committee met, reviewed the budget and suggested changes. The Finance Committee recommends approval of the budget at this time.

The Budgets contains a suggested water rate increase of 3%, and a suggested sewer service charge increase of 2.88% to cover increased debt service, personnel cost, capital needs and building of reserves on the water side.

RECOMMENDATION:

Adopt Resolution No._____, RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT APPROVING BUDGET FOR THE FISCAL YEAR 2017-2018. Authorize a 3.79% cost of living wage increase for all non-exempt employees starting July 1, 2017.

Attachments

RESOLUTION NO. _____

**RESOLUTION OF THE MONTARA WATER AND
SANITARY DISTRICT APPROVING BUDGET FOR THE
FISCAL YEAR 2017-2018**

RESOLVED, by the Board of the Montara Water and Sanitary District, San Mateo County, California, as follows:

1. That the balances on hand as of June 30, 2017, in each of funds of the District shall be reserved for use by the District during the Fiscal Year 2017-2018.
2. That the budget for said District for the Fiscal Year 2017-2018 heretofore presented to this Board and a copy of which is hereto attached and the same is hereby approved.
3. That the Secretary of this District be, and hereby is, authorized and directed to file a certified copy of this resolution with the budget of this District thereto attached, with the County Controller of San Mateo County.

COUNTERSIGNED:

President, Montara Water and Sanitary District

Secretary, Montara Water and Sanitary District

* * *

I HEREBY CERTIFY that the foregoing Resolution No. _____ was duly and regularly adopted and passed by the Board of the Montara Water and Sanitary District, San Mateo County, California, at a meeting held on the 1st day of June 2017, by the following vote:

AYES, Directors:

NOES, Directors:

ABSENT, Directors:

Secretary, Montara Water and Sanitary District

Fiscal Year 2017-2018

Budget Executive Summary

General Manager

Clemens Heldmaier

Staff

Julian Martinez
Judy Gromm
Nicholas Carrington
Reeson Blevins
Clyde Bradshaw

Board of Directors

Dwight Wilson, *President*
Scott Boyd, *President Pro Tem*
Kathryn Slater-Carter, *Secretary*
Bill Huber, *Treasurer*
Jim Harvey, *Director*

The Mission of Montara Water and Sanitary District

To sensitively manage the natural resources entrusted to our care, to provide the people of Montara and Moss Beach with reliable, high-quality water, wastewater, and trash disposal services at an equitable price, and to ensure the fiscal and environmental vitality of the district for future generations.

District Overview

The Montara Water & Sanitary District, formed in 1958 as a public agency, is responsible for maintaining approximately twenty-five miles of sewer line and thirteen pump stations. The District is a member of the JPA, Sewer Authority-Mid Coastside (SAM), which operates the sewage treatment plant and inter-tie pipeline connecting the member agencies.

In addition, the District manages a solid waste franchise with Recology of the Coast which collects all trash and disposes of it properly, as well as recycles the material placed in the recycling bins by each household.

Through special State legislation, was granted the powers of a county water district. This was done in an effort to improve the water supply and service provided by the private water company serving the area. On August 5, 2003, the district acquired, and began operating, the water system to serve the unincorporated areas of Montara and Moss Beach. Since then the District has successfully improved water quality and source reliability.

Fiscal Year 2017-2018

Budget Executive Summary

Fiscal year 2016-17 Accomplishments

1. Zero Water Operator turnover
2. Increase in Connections sold in both the Water and Sewer enterprise
3. Successful Financial Audit and Single Audit
 - a. No note of material weaknesses or significant deficiencies in the Financial Statement Audit

Fiscal Year 2017-18 Budget Overview

This budget continues the District's tradition of meeting all regulatory requirements in planning, designing, operating, and maintaining its facilities. We also continue a tradition of fiscal responsibility, recognizing the cost of the District services impacts the community, balanced with the need to maintain prudent reserves to sustain our capital assets. With the resources provided in this budget, the District can continue to focus on customers, work in an environmentally friendly manner, establish and maintain partnerships with other organizations, and foster a positive environment for employees.

Projections used in this budget are the result of multi-levels of review by management, staff, finance committee and the Board of Directors. Cost increases have been limited as much as possible to essential projects or services. As shown in the following Budgeted Cash Flow for both Sewer and Water, the budget presents a projection of revenues by funding source, operating expenses, debt service costs and capital expenditures planned for fiscal year 2017-18. Capital project cost estimates are based on the Capital Improvement Program (CIP) and related water master plan.

Sewer Enterprise:

Sewer service charge:

The budget model has been set using a dollar value growth factor of 2.88%. The actual dollar percentage increased by 1.70% due to slightly un-favorable flow distribution in the prior wet weather period. Due to this decrease in flow of 1.57%, the District is expecting to take in \$30,445 more revenue than prior fiscal year. The current residential occupancy rate charge is \$41.73 per hundred cubic feet (HCF). The District is proposing a rate of \$42.93 HCF, which is the maximum prop 218 limit. The District will be going out for a rate study in fiscal year 2017-18, this expense has been budgeted for.

Sewer Authority Mid-Coastside:

The major factors impacting the Sewer enterprise are the overall costs of being a part of the SAM JPA. The SAM budget is comprised of two separate assessments:

1. Operations & Maintenance, which includes a capital infrastructure component
2. Collection Services

Fiscal Year 2017-2018

Budget Executive Summary

Current year differences as compared to last fiscal year are as follows:

| | FY 2016-17 | FY 2017-18 | | |
|--------------------------|----------------|-----------------|---------------|--------------|
| | Adopted Budget | Proposed Budget | \$ (Decrease) | % (Decrease) |
| Operations & Maintenance | \$ 694,531 | \$ 1,259,320 | \$ 564,789 | 81.32% |
| Collection Services | \$ 321,608 | \$ 285,934 | \$ (35,674) | -11.09% |
| Infrastructure | \$ 153,710 | \$ - | \$ (153,710) | -100.00% |
| | \$ 1,169,849 | \$ 1,545,254 | | |

Labor:

The District has the equivalent of two full time equivalents that are paid through Sewer operations. Overall, benefits and labor in comparison to fiscal year 2016-17 are budgeted to increase \$5,768 or 1.92%. This fiscal year includes a 3.79% cost of living increase as well as a 2.5% merit increase. The District will welcome a new District Clerk at the beginning of the new fiscal year, taking over for Judy Gromm who is planning on leaving in the Summer of 2017.

Connection Fees:

Revenue from new residential construction has been budgeted to increase slightly by \$4,320 or 3.08%. For fiscal year 2016-17 the District has issued four new connections. Based on the unexpected nature of new connection issuances, the District is remaining conservative and budgeting for a total of six new connections issued for fiscal year 2017-18. The revenue from these connections is used for MWSD capital expenditures and the SAM assessment for capital infrastructure improvements

Capital Improvement:

Fiscal year 2016-17 Sewer CIP budget was set at \$1,745,750. The planned high priority projects included the Cabrillo Highway Phase 1 A & B sewer main replacement as well as other mechanical system repairs & replacements that were deemed to be high priority. A number of issues have plagued the ability to proceed on a number of these planned projects. Through April 2017, Sewer CIP is 49.07% through its total budget for a total of \$856,689 in capital costs.

Fiscal year 2017-2018 budget model currently includes the majority of these high priority projects as well as others. For this reason, the budget set for fiscal year 2016-17 is \$1,640,000. The District expects to have to use a good portion of reserves to fund these projects which have been in the works for many years.

Water Enterprise:

Water Sales:

In fiscal year 2014-2015 the District's Water enterprise went through a comprehensive Rate Study prepared by Bartle Wells. The rate study was the culmination of many months of work. Bartle Wells

Fiscal Year 2017-2018

Budget Executive Summary

drafted various financial models in order to decide the long term rate structure for the District. The specific assumptions made included the *cost escalation factor*, *interest earnings rate*, *growth in customer base*, and *price elasticity*. These assumptions are used in order to account for the known cost drivers. The largest portion being the Water enterprise's debt service responsibilities for the next 10-15 years and the District's long term capital improvement program set forth by the District's master plan. After careful consideration of three proposed financial models put in place by Bartle Wells, the decision of a 3% water rate increase and 10 new connections per year was deemed appropriate.

Whereas the Bartle Wells model is used as a guide for the District's budget, it is not followed to the dollar. For fiscal year 2017-18, water rates have been budgeted for a 3% rate increase, which compared to our projected revenues for the fiscal year would translate to an additional \$54,000 of revenue. An additional \$50,000 is expected from increased consumption. This brings the District's overall expectation of revenue from water sales to be \$1,915,496; an increase of \$115,496 or 6.42%.

Labor:

The District has the equivalent of 5 full time equivalents that are paid through Water operations. Overall, benefits and labor in comparison to fiscal year 2016-17 are budgeted to increase \$45,738 or 6.32%. This fiscal year includes a 3.79% cost of living increase as well as a 2.5% merit increase. The District will welcome a new billing specialist at the beginning of the fiscal year, taking over for Joanne Andreotti, who left in March 2017.

Connection Fees:

Connection fees revenue for new construction has been set to increase by \$47,020 with the estimate that 10 connections will be issued in fiscal year 2017-18. Thus far through April the District has issued seven new connections. The District is aware that the possibility of many more connections being issued related to the Big Wave project. However, with the current uncertainty regarding the project, it would not be prudent to include the additional revenue for fiscal year 2017-18.

Fiscal Year 2017-2018

Budget Executive Summary

Capital Improvement:

The current year CIP budget of \$713,500 is an increase of \$94,500 or 15.27%. This increase was to be expected as the District is back to continually maintaining and improving the current system through the traditional sense of replacing water main, laterals, and meters. The Pillar Ridge Rehab project is currently on-going and is expected to continue for the next five years.

Conclusion:

The District strives to keep its rate increases and overall costs as low as possible while meeting or exceeding regulatory standards and maintaining a focus on environmental stewardship. Rate increases for services remain below the average in the region, while the District has been recognized for excellence at the local and state levels.

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Montara Water & Sanitary

Budgeted Cash Flow - Sewer

Fiscal year 2017-2018

Cash flow summary

Operating cash flow

| Operating income | | |
|---|-----------|--------------------|
| Sewer Service Charges | \$ | 1,999,171 |
| Cell Tower Lease | \$ | 34,300 |
| Fees & Other | \$ | 17,000 |
| Property Tax | \$ | 235,000 |
| Waste Collection Revenues | \$ | 22,000 |
| Total operating income | \$ | 2,307,471 |
| Operating expenses | | |
| Personnel | \$ | (306,639) |
| Professional Services | \$ | (114,950) |
| Facilities & Administration | \$ | (46,100) |
| Engineering | \$ | (52,000) |
| Pumping | \$ | (32,000) |
| Sewer Authority Mid-Coastside | \$ | (1,635,254) |
| All other Accounts | \$ | (53,860) |
| Total operating expenses | \$ | (2,240,803) |
| Net Cash Flow Provided by Operations | \$ | 66,668 |

Investment cash flow

| Investment income | | |
|--|-----------|--------------------|
| Interest Revenue | \$ | 15,000 |
| Total investment income | \$ | 15,000 |
| Investment expenses | | |
| Capital Improvement Program | \$ | (1,640,000) |
| SAM Capital Assessment | \$ | - |
| Total investment expenses | \$ | (1,640,000) |
| Net Cash Flow Used by Investments | \$ | (1,625,000) |

Financing cash flow

| Financing income | | |
|---|-----------|--------------------|
| Connection Fees | \$ | 194,576 |
| Total financing income | \$ | 194,576 |
| Financing expenses | | |
| Loan Interest Expense | \$ | (42,634) |
| Loan Principal Payment | \$ | (75,179) |
| Total financing expenses | \$ | (117,813) |
| Net Cash Flow Provided by Financing Activities | \$ | 76,763 |
| Overall projected cash flow | \$ | (1,481,568) |
| Transfer from Sewer Reserves | \$ | 1,481,568 |
| Net cash flow | \$ | - |



Montara Water & Sanitary

Budgeted Cash Flow - Water

Fiscal year 2017-2018

Cash flow summary

Operating cash flow

| Operating income | | |
|---|-----------|--------------------|
| Water Sales | \$ | 1,912,496 |
| Cell Tower Lease | \$ | 34,300 |
| Fees & Other | \$ | 12,050 |
| Property Tax | \$ | 235,000 |
| Backflow Testing & Other | \$ | 13,000 |
| Total operating income | \$ | 2,206,846 |
| Operating expenses | | |
| Personnel | \$ | (769,260) |
| Professional Services | \$ | (139,700) |
| Facilities & Administration | \$ | (57,380) |
| Engineering | \$ | (87,000) |
| Pumping | \$ | (109,000) |
| Supply | \$ | (52,000) |
| Collection/Transmission | \$ | (94,500) |
| Treatment | \$ | (64,000) |
| All Other Accounts | \$ | (130,600) |
| Total operating expenses | \$ | (1,503,440) |
| Net Cash Flow Provided by Operations | \$ | 703,406 |

Investment cash flow

| Investment income | | |
|--|-----------|------------------|
| GO Bonds, Assessment Receipts | \$ | 1,150,436 |
| Total investment income | \$ | 1,150,436 |
| Investment expenses | | |
| Capital Improvement Program | \$ | (713,500) |
| Total investment expenses | \$ | (713,500) |
| Net Cash Flow Used by Investments | \$ | 436,936 |

Financing cash flow

| Financing income | | |
|---|-----------|--------------------|
| Connection Fees | \$ | 253,020 |
| Total financing income | \$ | 253,020 |
| Financing expenses | | |
| Long Term Debt - Interest Expense | \$ | (326,530) |
| Long Term Debt - Principal Payment | \$ | (1,062,675) |
| Total financing expenses | \$ | (1,389,205) |
| Net Cash Flow Provided by Financing Activities | \$ | (1,136,185) |
| Overall projected cash flow | \$ | 4,157 |
| Transfer to Water Reserves | \$ | 4,157 |
| Net cash flow | \$ | - |



MWSD – Fiscal Year 2017-18 Operations Budget - SEWER ENTERPRISE

| Operating Revenue | GL Codes | 2014-15 | | Approved | | Income/Expenditure | | Projected as | | Budgeted amounts | Increase/(Decrease) | Increase/(decrease) |
|---|----------|------------------|------------------|------------------|------------------|--------------------|------------------|----------------|------------------|------------------|---------------------|---------------------|
| | | Actual | 2015-16 Actual | Budget 2016-17 | s as of April 30 | % To date | Projected | % of Budget | 2017-18 | | | |
| Cell Tower Lease: | 4220 | 32,422 | 33,500 | 33,500 | 28,573 | 85.29% | 34,288 | 102.35% | 34,300 | 800 | 2.39% | |
| Administrative Fees (New Construction): | 4410 | 1,852 | 3,318 | 3,000 | 3,409 | 113.63% | 4,091 | 136.36% | 3,500 | 500 | 16.67% | |
| Administrative Fees (Remodel): | 4420 | 3,241 | 1,422 | 1,500 | 1,448 | 96.53% | 1,738 | 115.84% | 2,000 | 500 | 33.33% | |
| Inspection Fees (New Construction): | 4430 | 1,748 | 3,136 | 2,500 | 3,220 | 128.80% | 3,864 | 154.56% | 3,500 | 1,000 | 40.00% | |
| Inspection Fees (Remodel): | 4440 | 4,969 | 3,219 | 3,500 | 3,748 | 107.09% | 4,498 | 128.50% | 4,000 | 500 | 14.29% | |
| Remodel Fees: | 4460 | 19,777 | 2,222 | 7,000 | 3,396 | 48.51% | 4,075 | 58.22% | 4,000 | (3,000) | -42.86% | |
| Property Tax Receipts: | 4610 | 214,220 | 325,926 | 235,000 | 312,876 | 133.14% | 327,000 | 139.15% | 235,000 | | | |
| Sewer Service Charges: | 4710 | 2,203,383 | 2,063,335 | 1,969,726 | 1,802,159 | 91.49% | 1,969,726 | 100.00% | 2,003,171 | 33,445 | 1.70% | |
| Sewer Service Refunds, Customer: | 4720 | (6,915) | (8,386) | (4,000) | (10,530) | 263.25% | (12,636) | 315.90% | (4,000) | | | |
| Waste Collection Revenues: | 4760 | 17,844 | 19,350 | 21,000 | 19,208 | 91.47% | 23,050 | 109.76% | 22,000 | 1,000 | 4.76% | |
| Other Revenue: | 4990 | | 154 | | 280 | 100.00% | 336 | 100.00% | | | | |
| Total Operating Revenue: | | 2,492,171 | 2,447,196 | 2,272,726 | 2,167,787 | 95.38% | 2,360,029 | 103.84% | 2,307,471 | 34,745 | 1.53% | |
| Operating Expenses | | | | | | | | | | | | |
| Bank Fees: | 5190 | 6,709 | 3,363 | 5,500 | 5,732 | 104.22% | 6,400 | 116.36% | 6,500 | 1,000 | 18.18% | |
| Board Meetings: | 5210 | 4,850 | 3,282 | 3,000 | 2,986 | 99.53% | 3,583 | 119.44% | 4,000 | 1,000 | 33.33% | |
| Director Fees: | 5220 | 1,269 | 2,363 | 3,300 | 2,290 | 69.39% | 3,053 | 92.53% | 3,300 | | | |
| Election Expenses: | 5230 | | 4,000 | 4,000 | 4,860 | 121.50% | 4,860 | 121.50% | | (4,000) | | |
| Conference Attendance: | 5250 | | 2,000 | 2,000 | 147 | 7.33% | 1,000 | 50.00% | 2,000 | | | |
| Information Systems: | 5270 | 3,069 | 3,888 | 6,000 | 1,057 | 17.62% | 1,409 | 23.49% | 6,000 | | | |
| Fidelity Bond: | 5310 | 438 | | 500 | | | | | 500 | | | |
| Property & Liability Insurance: | 5320 | 1,667 | 1,688 | 1,700 | 1,918 | 112.85% | 1,918 | 112.82% | 2,000 | 300 | 17.65% | |
| LAFCO Assessment: | 5350 | 1,754 | 1,718 | 2,000 | 1,526 | 76.30% | 1,526 | 76.30% | 2,000 | | | |
| Meeting Attendance, Legal: | 5420 | 6,770 | 7,139 | 9,500 | 5,670 | 59.68% | 7,560 | 79.58% | 9,500 | | | |
| General Legal: | 5430 | 9,375 | 31,865 | 20,000 | 24,235 | 121.18% | 32,313 | 161.57% | 25,000 | 5,000 | 25.00% | |
| Maintenance, Office: | 5510 | 5,337 | 7,619 | 8,000 | 6,363 | 79.54% | 8,484 | 106.05% | 8,000 | | | |
| Meetings, Local: | 5520 | | | | | | | | | | | |
| Memberships: | 5530 | | | | 708 | 100.00% | | | | | | |
| Office Supplies: | 5540 | 9,319 | 7,366 | 8,000 | 5,950 | 74.38% | 7,933 | 99.17% | 8,000 | | | |
| Postage: | 5550 | 1,214 | 2,668 | 2,500 | 1,034 | 41.36% | 1,379 | 55.15% | 2,500 | | | |
| Printing & Publishing: | 5560 | 2,786 | 3,478 | 3,000 | 577 | 19.23% | 769 | 25.64% | 3,000 | | | |
| Accounting: | 5610 | 24,483 | 38,555 | 30,000 | 16,550 | 55.17% | 22,067 | 73.56% | 30,000 | | | |
| Audit: | 5620 | 10,050 | 12,050 | 13,000 | 13,000 | 100.00% | 13,000 | 100.00% | 13,000 | | | |
| Consulting: | 5630 | 18,979 | 16,886 | 28,000 | 11,947 | 42.67% | 15,929 | 56.89% | 28,000 | | | |
| Data Services: | 5640 | 5,792 | 5,504 | 6,000 | 2,125 | 35.42% | 2,833 | 47.22% | 6,000 | | | |
| Labor & HR Support: | 5650 | 4,286 | 1,875 | 2,250 | 1,875 | 83.33% | 2,500 | 111.11% | 2,500 | 250 | 11.11% | |
| Payroll Services: | 5660 | 753 | 839 | 800 | 803 | 100.38% | 1,071 | 133.83% | 950 | 150 | 18.75% | |
| Other Professional Services: | 5690 | 10 | 375 | | 102 | 100.00% | 135 | 100.00% | | | | |
| San Mateo County Tax Roll Charges: | 5710 | | 116 | 2,500 | 119 | 4.76% | 159 | 6.35% | 2,500 | | | |
| Telephone & Internet: | 5720 | 9,812 | 13,742 | 11,000 | 12,317 | 111.97% | 16,423 | 149.30% | 16,500 | 5,500 | 50.00% | |
| Mileage Reimbursement: | 5730 | 1,137 | 682 | 1,500 | 617 | 41.13% | 823 | 54.84% | 1,500 | | | |
| Reference Materials: | 5740 | | | 200 | 23 | 11.50% | 31 | 15.33% | 200 | | | |
| Other Administrative: | 5790 | | | | | | | | | | | |
| CalPERS 457 Deferred Plan: | 5810 | 13,303 | 13,954 | 15,117 | 12,899 | 85.33% | 15,479 | 102.39% | 15,445 | 328 | 2.17% | |
| Employee Benefits: | 5820 | 34,993 | 47,890 | 34,382 | 26,511 | 77.11% | 31,813 | 92.53% | 35,635 | 1,253 | 3.64% | |
| Disability Insurance: | 5830 | 1,206 | 1,397 | 1,479 | 1,020 | 68.97% | 1,224 | 82.76% | 1,534 | 55 | 3.72% | |
| Payroll Taxes: | 5840 | 12,920 | 14,577 | 16,521 | 11,559 | 69.97% | 13,871 | 83.96% | 16,879 | 358 | 2.17% | |
| Worker's Compensation Insurance: | 5960 | 2,558 | 491 | 3,649 | 1,135 | 31.12% | 1,363 | 37.35% | 2,447 | (1,202) | -32.93% | |
| Management: | 5910 | 71,501 | 92,434 | 93,373 | 83,311 | 89.22% | 99,973 | 107.07% | 103,725 | 10,352 | 11.09% | |
| Staff : | 5920 | 100,302 | 112,648 | 118,444 | 97,071 | 81.96% | 116,485 | 98.35% | 112,599 | (5,845) | -4.93% | |
| Staff Certification: | 5930 | 1,800 | 1,800 | 1,800 | 1,500 | 83.33% | 1,800 | 100.00% | 1,800 | | | |
| Staff Overtime: | 5940 | 3,480 | 2,888 | 2,339 | 3,533 | 151.04% | 4,240 | 181.25% | 2,514 | 175 | 7.49% | |
| Staff Standby: | 5950 | 928 | 29 | | | | | | | | | |
| PARS: | 5850 | | 13,495 | 13,768 | 11,724 | 85.15% | 14,069 | | 14,061 | 293 | 2.13% | |
| Claims, Property Damage: | 6170 | 2,139 | | 10,000 | | | | | 10,000 | | | |
| Education & Training: | 6195 | | | 1,000 | | | | | 1,000 | | | |
| Meeting Attendance, Engineering: | 6210 | | | 2,000 | | | | | 2,000 | | | |
| General Engineering: | 6220 | 61,309 | 31,924 | 50,000 | 34,522 | 69.04% | 46,029 | 92.06% | 50,000 | | | |
| Equipment & Tools, Expensed: | 6320 | | | 1,000 | | | | | 1,000 | | | |



MWSD — Fiscal Year 2017-18 Operations Budget - SEWER ENTERPRISE

| Operating Revenue | GL Codes | 2014-15 | Approved | | Income/Expenditure | | Projected | Projected as | Budgeted amounts | Increase/(Decrease) | Increase/(decrease) |
|--|----------|------------------|------------------|------------------|--------------------|----------------|------------------|----------------|------------------|---------------------|---------------------|
| | | Actual | 2015-16 Actual | Budget 2016-17 | s as of April 30, | % To date | | % of Budget | | | |
| Alarm Services: | 6335 | 4,701 | 5,896 | 5,340 | 4,267 | 79.91% | 5,689 | 106.54% | 5,700 | 360 | 6.74% |
| Landscaping: | 6337 | 2,280 | 3,512 | 2,400 | 3,510 | 146.25% | 4,080 | 170.00% | 2,400 | | |
| Pumping Fuel & Electricity: | 6410 | 26,888 | 25,454 | 27,000 | 23,486 | 86.99% | 31,315 | 115.98% | 32,000 | 5,000 | 18.52% |
| Pumping Maintenance, General: | 6430 | | 3,525 | | | | | | | | |
| Maintenance, Collection System: | 6660 | | | 10,000 | | | | | 10,000 | | |
| Fuel: | 6810 | 511 | 792 | 800 | 584 | 72.98% | 778 | 97.31% | 800 | | |
| Truck Equipment, Expensed: | 6820 | 87 | 89 | 160 | 34 | 21.29% | 45 | 28.38% | 160 | | |
| Truck Repairs: | 6830 | 51 | 153 | 400 | 143 | 35.81% | 191 | 47.75% | 400 | | |
| Total Other Operations: | 6890 | 119 | | | 550 | 100.00% | 733 | 100.00% | | | |
| SAM Collections: | 6910 | 305,856 | 360,504 | 321,608 | 268,007 | 83.33% | 321,608 | 100.00% | 285,934 | (35,674) | -11.09% |
| SAM Operations: | 6920 | 624,024 | 707,892 | 694,531 | 562,149 | 80.94% | 674,579 | 97.13% | 1,259,320 | 564,789 | 81.32% |
| SAM Prior-Year Adjustment: | 6930 | (3,190) | | | | | | | | | |
| SAM Maintenance, Collection System: | 6940 | 15,550 | 27,649 | 40,000 | 55,257 | 138.14% | 55,257 | 138.14% | 40,000 | | |
| SAM Maintenance, Pumping: | 6950 | 46,632 | | 50,000 | 19,180 | 38.36% | 19,180 | 38.36% | 50,000 | | |
| Total Operations Expense: | | 1,399,540 | 1,636,054 | 1,691,360 | 1,346,483 | 79.61% | 1,616,961 | 95.60% | 2,240,803 | 549,443 | 32.49% |
| Net Change in position from Operations: | | 1,092,630 | 811,142 | 581,366 | 821,305 | 141.27% | 743,068 | 127.81% | 66,668 | (514,698) | -88.53% |

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MWSD — Fiscal Year 2017-2018 Non-Operating Budget - SEWER ENTERPRISE

| | GL Codes | 2014-15 Actual | 2015-16 Actual | Approved Budget 2016-17 | Income/Expenditure s as of April 30_ | % To date | Projected | Projected as % of Budget | Budgeted amounts 2017-18 | Increase/(Decrease) from 2016-17 \$ | Increase/(decrease) % |
|--|----------|-------------------|-----------------|----------------------------|---|---------------|----------------|-----------------------------|-----------------------------|--|--------------------------|
| Non Operating Revenue | | | | | | | | | | | |
| Connection Fees, Residential New Const: | 7110 | 142,923 | 53,363 | 140,256 | 109,242 | 77.89% | 131,091 | 93.47% | 144,576 | 4,320 | 3.08% |
| Connection Fees, Residential Remodel: | 7120 | 23,432 | 47,234 | 50,000 | 29,851 | 59.70% | 35,821 | 71.64% | 50,000 | | |
| LAIF, Interest: | 7200 | 11,938 | 18,184 | 10,000 | 13,851 | 138.51% | 16,621 | 166.21% | 15,000 | 5,000 | 50.00% |
| Total Non Operating Revenue: | | 182,362 | 119,676 | 200,256 | 152,944 | 76.37% | 183,533 | 91.65% | 209,576 | 9,320 | 4.65% |
| Non Operating Expense | | | | | | | | | | | |
| PNC Equipment Lease: | 9125 | 21,819 | 20,743 | 19,598 | 15,579 | 79.49% | 18,695 | 95.39% | 18,280 | (1,318) | -6.73% |
| Capital Assessment, SAM: | 9175 | 63,360 | 160,668 | 153,710 | 87,814 | 57.13% | 105,377 | 68.56% | | (153,710) | -100.00% |
| I-Bank Loan: | 9200 | 26,493 | 28,484 | 25,201 | 2,135 | 8.47% | 2,562 | 10.17% | 24,354 | (847) | -3.36% |
| Total Non Operating Expense: | | 111,671 | 209,895 | 198,508 | 105,528 | 53.16% | 126,633 | 63.79% | 42,634 | (155,875) | -78.52% |
| Net Change in position from Non Operating | | 70,691 | (90,219) | 1,748 | 47,416 | | 56,900 | | 166,942 | 165,195 | |

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MWSD — Fiscal Year 2017-2018 Operations Budget - WATER ENTERPRISE

| Operating Revenue | GL Codes | 2014-15 | 2015-16 | Approved Budget | Income/Expenditures | | | Projected as % of Budget | | Budgeted amounts | | Increase/(Decrease) | |
|---|----------|------------------|------------------|------------------|----------------------|---------------|------------------|--------------------------|------------------|------------------|--------------|---------------------|--|
| | | Actual | Actual | 2016-17 | as of April 30, 2017 | % To date | Projected | 2017-18 | 2017-18 | from 2016-17 \$ | % | | |
| Cell Tower Lease: | 4220 | 32,422 | 33,500 | 33,500 | 28,573 | 85.29% | 34,288 | 102.35% | 34,300 | 800 | 2.39% | | |
| Administrative Fees (New Construction): | 4410 | 5,067 | 6,349 | 4,500 | 6,805 | 151.22% | 8,166 | 181.47% | 5,500 | 1,000 | 22.22% | | |
| Administrative Fees (Remodel): | 4420 | 985 | 0 | 900 | 0 | 0.00% | 0 | 0.00% | 900 | 0 | 0.00% | | |
| Inspection Fees (New Construction): | 4430 | 4,833 | 5,813 | 4,250 | 6,428 | 151.25% | 7,714 | 181.50% | 5,000 | 750 | 17.65% | | |
| Inspection Fees (Remodel): | 4440 | 929 | 0 | 800 | 460 | 57.50% | 552 | 69.00% | 650 | (150) | -18.75% | | |
| Mainline Extension Fees: | 4450 | 10,290 | 46,459 | | 0 | 0.00% | 0 | 0.00% | 0 | 0 | | | |
| Remodel Fees: | 4460 | 324 | 0 | | 106 | 100.00% | 127 | 100.00% | 0 | | | | |
| Property Tax Receipts: | 4610 | 424,451 | 325,926 | 235,000 | 312,876 | 133.14% | 327,000 | 139.15% | 235,000 | 0 | 0.00% | | |
| Testing, Backflow: | 4740 | 9,589 | 16,377 | 13,000 | 12,166 | 93.59% | 14,599 | 112.30% | 13,000 | 0 | 0.00% | | |
| Water Sales: | 4810 | 1,667,369 | 1,739,389 | 1,800,000 | 1,509,301 | 83.85% | 1,811,161 | 100.62% | 1,915,496 | 115,496 | 6.42% | | |
| Water Sales Refunds, Customer: | 4850 | (395) | (1,488) | (3,000) | (2,333) | 77.77% | (2,800) | 93.32% | (3,000) | 0 | 0.00% | | |
| Other Revenue: | 4990 | 2,855 | 8,793 | | 9,221 | 100.00% | 11,065 | 100.00% | 0 | 0 | | | |
| Total Operating Revenue: | | 2,158,720 | 2,181,118 | 2,088,950 | 1,883,603 | 90.17% | 2,211,872 | 105.88% | 2,206,846 | 117,896 | 5.64% | | |
| Operating Expenses | | | | | | | | | | | | | |
| Bank Fees: | 5190 | 5,874 | 9,607 | 10,000 | 5,534 | 55.34% | 7,379 | 73.79% | 7,000 | (3,000) | -30.00% | | |
| Board Meetings: | 5210 | 2,931 | 3,282 | 3,000 | 2,986 | 99.53% | 3,981 | 132.71% | 4,000 | 1,000 | 33.33% | | |
| Director Fees: | 5220 | 3,188 | 2,363 | 3,300 | 2,290 | 69.39% | 3,053 | 92.53% | 3,300 | 0 | 0.00% | | |
| Election Expenses: | 5230 | | 0 | 4,000 | 4,860 | 121.50% | 6,480 | 162.00% | 0 | (4,000) | | | |
| CDPH Fees: | 5240 | 14,535 | 18,086 | 15,500 | 0 | 0.00% | 0 | 0.00% | 15,500 | 0 | 0.00% | | |
| Conference Attendance: | 5250 | 3,442 | 5,267 | 4,000 | 850 | 21.25% | 1,133 | 28.34% | 4,000 | 0 | 0.00% | | |
| Information Systems: | 5270 | 3,069 | 3,888 | 1,500 | 2,363 | 157.53% | 2,363 | 157.53% | 3,000 | 1,500 | 100.00% | | |
| Fidelity Bond: | 5310 | 438 | 500 | 500 | 0 | 0.00% | 0 | 0.00% | 500 | 0 | 0.00% | | |
| Property & Liability Insurance: | 5320 | 1,667 | 1,688 | 2,700 | 1,918 | 71.05% | 2,558 | 94.74% | 2,700 | 0 | 0.00% | | |
| LAFCO Assessment: | 5350 | 2,376 | 2,328 | 2,500 | 2,048 | 81.92% | 2,731 | 109.23% | 2,500 | 0 | 0.00% | | |
| Meeting Attendance, Legal: | 5420 | 6,768 | 7,700 | 8,500 | 5,668 | 66.68% | 7,557 | 88.91% | 8,500 | 0 | 0.00% | | |
| General Legal: | 5430 | 58,623 | 43,625 | 60,000 | 40,578 | 67.63% | 54,104 | 90.17% | 60,000 | 0 | 0.00% | | |
| Maintenance, Office: | 5510 | 5,337 | 8,122 | 8,000 | 8,108 | 101.35% | 10,811 | 135.13% | 8,000 | 0 | 0.00% | | |
| Meetings, Local: | 5520 | 298 | 0 | 0 | 0 | 0.00% | 0 | 0.00% | 0 | 0 | | | |
| Memberships: | 5530 | 16,945 | 17,225 | 18,000 | 17,679 | 98.22% | 17,679 | 98.22% | 18,000 | 0 | 0.00% | | |
| Office Supplies: | 5540 | 9,319 | 7,366 | 8,000 | 5,949 | 74.36% | 7,932 | 99.15% | 8,000 | 0 | 0.00% | | |
| Postage: | 5550 | 9,909 | 7,578 | 6,000 | 5,589 | 93.15% | 7,452 | 124.20% | 7,500 | 1,500 | 25.00% | | |
| Printing & Publishing: | 5560 | 2,681 | 1,650 | 2,000 | 797 | 39.85% | 1,063 | 53.13% | 2,000 | 0 | 0.00% | | |
| Accounting: | 5610 | 24,483 | 38,555 | 30,000 | 16,550 | 55.17% | 22,067 | 73.56% | 30,000 | 0 | 0.00% | | |
| Audit: | 5620 | 10,050 | 20,950 | 20,500 | 13,000 | 63.42% | 17,333 | 84.55% | 13,000 | (7,500) | -36.59% | | |
| Consulting: | 5630 | 50,273 | 28,650 | 25,000 | 20,987 | 83.95% | 27,983 | 111.93% | 25,000 | 0 | 0.00% | | |
| Data Services: | 5640 | 9,044 | 18,773 | | 2,125 | 100.00% | 0 | 0.00% | 0 | 0 | | | |
| Labor & HR Support: | 5650 | 4,661 | 2,651 | 2,000 | 1,875 | 93.75% | 2,500 | 125.00% | 2,250 | 250 | 12.50% | | |
| Payroll Services: | 5660 | 1,017 | 839 | 850 | 803 | 94.47% | 1,071 | 125.96% | 950 | 100 | 11.76% | | |
| Other Professional Services: | 5690 | 19,425 | 227 | | 2,974 | 100.00% | 3,965 | 100.00% | 0 | 0 | | | |
| San Mateo County Tax Roll Charges: | 5710 | | 122 | | 119 | 100.00% | 159 | 100.00% | | | | | |
| Telephone & Internet: | 5720 | 13,491 | 19,391 | 17,000 | 16,811 | 98.89% | 22,415 | 131.85% | 22,380 | 5,380 | 31.65% | | |
| Mileage Reimbursement: | 5730 | 2,326 | 2,157 | 2,000 | 1,202 | 60.10% | 1,603 | 80.13% | 2,000 | 0 | 0.00% | | |
| Reference Materials: | 5740 | 0 | 0 | 800 | 23 | 2.88% | 31 | 3.83% | 800 | 0 | 0.00% | | |
| Other Administrative: | 5790 | 248 | 127 | | 1,452 | 100.00% | 1,936 | 100.00% | 0 | 0 | | | |
| CalPERS 457 Deferred Plan: | 5810 | 29,503 | 31,571 | 33,970 | 28,043 | 82.55% | 33,652 | 99.06% | 35,513 | 1,543 | 4.54% | | |
| Employee Benefits: | 5820 | 55,586 | 75,196 | 69,368 | 52,579 | 75.80% | 63,095 | 90.96% | 86,856 | 17,488 | 25.21% | | |
| Disability Insurance: | 5830 | 2,605 | 3,329 | 2,921 | 2,525 | 86.44% | 3,030 | 103.73% | 3,637 | 716 | 24.51% | | |
| Payroll Taxes: | 5840 | 32,426 | 36,932 | 40,574 | 31,391 | 77.37% | 37,669 | 92.84% | 42,294 | 1,720 | 4.24% | | |
| Worker's Compensation Insurance: | 5960 | 12,461 | 4,788 | 19,312 | 10,174 | 52.68% | 12,208 | 63.22% | 19,948 | 636 | 3.30% | | |
| Management: | 5910 | 93,691 | 92,434 | 93,373 | 83,313 | 89.23% | 99,976 | 107.07% | 103,725 | 10,352 | 11.09% | | |
| Staff : | 5920 | 286,814 | 329,764 | 350,791 | 290,033 | 82.68% | 348,040 | 99.22% | 358,357 | 7,566 | 2.16% | | |
| Staff Certification: | 5930 | 9,000 | 9,440 | 9,000 | 7,525 | 83.61% | 9,030 | 100.33% | 9,000 | 0 | 0.00% | | |
| Staff Overtime: | 5940 | 47,530 | 48,214 | 52,353 | 44,017 | 84.08% | 52,820 | 100.89% | 55,831 | 3,478 | 6.64% | | |
| Staff Standby: | 5950 | 17,742 | 22,621 | 24,857 | 19,796 | 79.64% | 23,755 | 95.57% | 25,947 | 1,091 | 4.39% | | |
| PARS: | 5850 | | | 27,005 | 22,282 | 82.51% | 26,738 | | 28,152 | 1,147 | 4.25% | | |
| Backflow Prevention: | 6160 | 4,682 | 800 | 1,000 | 892 | 89.23% | 1,190 | 118.97% | 1,000 | 0 | 0.00% | | |



MWSD — Fiscal Year 2017-2018 Operations Budget - WATER ENTERPRISE

| Operating Revenue | GL Codes | 2014-15 | 2015-16 | Approved Budget | Income/Expenditures | % To date | Projected | Projected as % | Budgeted amounts | Increase/(Decrease) | Increase/(decrease) |
|--|----------|------------------|------------------|------------------|----------------------|----------------|------------------|----------------|------------------|---------------------|---------------------|
| | | Actual | Actual | 2016-17 | as of April 30, 2017 | | | of Budget | 2017-18 | from 2016-17 \$ | % |
| Claims, Property Damage: | 6170 | 0 | 0 | 10,000 | 175 | 1.75% | 233 | 2.33% | 10,000 | 0 | 0.00% |
| SCADA Maintenance: | 6185 | 11,177 | 28,817 | 15,000 | 19,456 | 129.71% | 25,941 | 172.94% | 20,000 | 5,000 | 33.33% |
| Internet & Telephone, Communications: | 6187 | | 0 | | 0 | 0.00% | 0 | 0.00% | 0 | 0 | |
| Education & Training: | 6195 | 4,278 | 2,574 | 6,000 | 5,877 | 97.95% | 7,836 | 130.60% | 7,000 | 1,000 | 16.67% |
| Meeting Attendance, Engineering: | 6210 | 0 | 0 | 2,000 | 0 | 0.00% | 0 | 0.00% | 2,000 | 0 | 0.00% |
| General Engineering: | 6220 | 3,780 | 15,406 | 20,000 | 6,121 | 30.61% | 8,161 | 40.81% | 20,000 | 0 | 0.00% |
| Water Quality Engineering: | 6230 | 77,001 | 82,864 | 65,000 | 71,112 | 109.40% | 94,816 | 145.87% | 65,000 | 0 | 0.00% |
| Equipment & Tools, Expensed: | 6320 | 5,186 | 4,008 | 5,000 | 2,164 | 43.28% | 2,885 | 57.71% | 5,000 | 0 | 0.00% |
| Alarm Services: | 6335 | 715 | 640 | 750 | 597 | 79.60% | 796 | 106.13% | 800 | 50 | 6.67% |
| Landscaping: | 6337 | 3,746 | 6,226 | 6,000 | 5,664 | 94.40% | 7,552 | 125.87% | 6,000 | 0 | 0.00% |
| Lab Supplies & Equipment: | 6370 | 39 | 818 | 1,000 | 178 | 17.80% | 237 | 23.73% | 1,000 | 0 | 0.00% |
| Meter Reading: | 6380 | 0 | 0 | 0 | 119 | 100.00% | 159 | 100.00% | 0 | 0 | |
| Pumping Fuel & Electricity: | 6410 | 72,500 | 89,652 | 100,000 | 62,830 | 62.83% | 83,773 | 83.77% | 90,000 | (10,000) | -10.00% |
| Pumping Maintenance, Generators: | 6420 | 9,581 | 4,771 | 8,000 | 7,501 | 93.76% | 10,001 | 125.01% | 10,000 | 2,000 | 25.00% |
| Pumping Maintenance, General: | 6430 | 4,297 | 6,284 | 2,500 | 4,951 | 198.05% | 6,602 | 264.07% | 7,000 | 4,500 | |
| Pumping Equipment, Expensed: | 6440 | 0 | 1,786 | 2,000 | 0 | 0.00% | 0 | 0.00% | 2,000 | 0 | 0.00% |
| Maintenance, Raw Water Mains: | 6510 | 0 | 2,478 | | 1,363 | 100.00% | 1,817 | 100.00% | 2,000 | 2,000 | |
| Maintenance, Wells: | 6520 | 4,853 | 20,657 | 10,000 | 1,421 | 14.21% | 1,894 | 18.94% | 10,000 | 0 | 0.00% |
| Water Purchases: | 6530 | 35,443 | 38,009 | 40,000 | 14,083 | 35.21% | 18,777 | 46.94% | 40,000 | 0 | 0.00% |
| Hydrants: | 6610 | 0 | 0 | 1,000 | 3,819 | 381.90% | 5,092 | 509.19% | 1,000 | 0 | 0.00% |
| Maintenance, Water Mains: | 6620 | 68,976 | 71,575 | 55,000 | 102,313 | 186.02% | 136,417 | 248.03% | 55,000 | 0 | 0.00% |
| Maintenance, Water Service Lines: | 6630 | 16,458 | 33,705 | 25,000 | 4,166 | 16.66% | 5,555 | 22.22% | 25,000 | 0 | 0.00% |
| Maintenance, Tanks: | 6640 | 690 | 8,741 | 1,000 | 71 | 7.06% | 94 | 9.41% | 1,000 | 0 | 0.00% |
| Maintenance, Distribution General: | 6650 | 10,656 | 2,406 | 10,000 | 1,175 | 11.75% | 1,567 | 15.67% | 10,000 | 0 | 0.00% |
| Maintenance, Collection System: | 6660 | | 0 | | 24 | 100.00% | 32 | 100.00% | | | |
| Meters: | 6670 | 4,805 | 5,382 | 2,500 | 9,930 | 397.22% | 13,241 | 529.62% | 2,500 | 0 | 0.00% |
| Chemicals & Filtering: | 6710 | 27,289 | 40,896 | 30,000 | 10,360 | 34.53% | 13,813 | 46.04% | 30,000 | 0 | 0.00% |
| Maintenance, Treatment Equipment: | 6720 | 2,949 | 11,965 | 4,000 | 3,798 | 94.95% | 5,064 | 126.60% | 4,000 | 0 | 0.00% |
| Treatment Analysis: | 6730 | 22,355 | 28,890 | 30,000 | 20,524 | 68.41% | 27,365 | 91.22% | 30,000 | 0 | 0.00% |
| Uniforms: | 6770 | 10,435 | 14,530 | 9,000 | 8,578 | 95.31% | 11,437 | 127.08% | 12,000 | 3,000 | 33.33% |
| Fuel: | 6810 | 7,129 | 6,117 | 8,000 | 4,730 | 59.13% | 6,307 | 78.83% | 8,000 | 0 | 0.00% |
| Truck Equipment, Expensed: | 6820 | 1,098 | 651 | 1,000 | 328 | 32.80% | 437 | 43.73% | 1,000 | 0 | 0.00% |
| Truck Repairs: | 6830 | 5,752 | 1,074 | 5,000 | 1,033 | 20.66% | 1,377 | 27.55% | 5,000 | 0 | 0.00% |
| Other Operations: | 6890 | 2,702 | 2,811 | | 10,058 | 100.00% | 13,411 | 100.00% | | 0 | |
| Total Operations Expense: | | 1,288,342 | 1,461,040 | 1,454,922 | 1,162,227 | 79.88% | 1,461,232 | 100.43% | 1,503,440 | 48,518 | 3.33% |
| Net Change in position from Operations: | | 870,377 | 720,078 | 634,028 | 721,376 | 113.78% | 750,640 | 118.39% | 703,406 | 69,378 | 10.94% |



MWSD — Fiscal Year 2017-2018 Non-Operating Budget - WATER ENTERPRISE

| | GL Codes | 2014-15 Actual | 2015-16 Actual | Approved Budget 2016-17 | Income/Expenditures as of April 30, 2017 | % To date | Projected | Projected as % of Budget | Budgeted amounts 2017-18 | Increase/(Decrease) from 2015-2016 \$ | Increase/(decrease) % |
|--|----------|-------------------|-------------------|----------------------------|---|----------------|------------------|-----------------------------|-----------------------------|--|--------------------------|
| Non Operating Revenue | | | | | | | | | | | |
| Connection Fees, Residential New Const: | 7110 | 104,344 | 77,695 | 128,000 | 130,171 | 101.70% | 156,205 | 122.04% | 173,020 | 45,020 | 35.17% |
| Connection Fees, Residential Remodel: | 7120 | 2,757 | 0 | 3,000 | 106 | 3.53% | 127 | 4.24% | | (3,000) | -100.00% |
| Connection Fees, Residential Fire: | 7130 | 65,392 | 61,724 | 65,000 | 78,508 | 120.78% | 94,210 | 144.94% | 80,000 | 15,000 | 23.08% |
| Connection Fees, Residential Remodel Fire: | 7140 | 0 | | | | 0.00% | 0 | 0.00% | | 0 | |
| Connection Fees, Well Conversion: | 7150 | | | | | 0.00% | 0 | 0.00% | | 0 | |
| General Obligation Bonds, Assessment Receipts: | 7600 | 1,265,893 | 1,215,941 | 1,150,436 | 1,115,611 | 96.97% | 1,338,733 | 116.37% | 1,150,436 | 0 | 0.00% |
| Total Non Operating Revenue: | | 1,438,385 | 1,355,360 | 1,346,436 | 1,324,396 | 98.36% | 1,589,275 | 118.04% | 1,403,456 | 57,020 | 4.23% |
| Non Operating Expense | | | | | | | | | | | |
| General Obligation Bonds: | 9100 | 327,105 | 307,634 | 295,734 | 171,022 | 57.83% | 205,226 | 69.40% | 273,978 | (21,757) | -7.36% |
| PNC Equipment Lease: | 9125 | 21,819 | 20,743 | 19,598 | 15,579 | 79.49% | 18,695 | 95.39% | 18,280 | (1,318) | -6.73% |
| State Revolving Fund Loan: | 9150 | 7,469 | 60,239 | 37,247 | 46,180 | 123.98% | 55,416 | 148.78% | 34,273 | (2,975) | -7.99% |
| Water Rebates : | 9210 | | 6,018 | | 700 | 100.00% | 840 | 100.00% | 500 | 500 | |
| Total Non Operating Expense: | | 356,393 | 394,634 | | 233,481 | 100.00% | 280,177 | 100.00% | 327,030 | (26,049) | |
| Net Change in position from Non Operating activities: | | 1,081,992 | 960,726 | 1,346,436 | 1,090,915 | | 1,309,098 | | 1,076,426 | 83,069 | 6.17% |

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Montara Water and Sanitary District

Revenue By Grouping - Sewer Enterprise

| Grouped Categories | Actual FY 2016-17 | FY 2016-17 | FY 2016-17 | % To date | FY 2016-17 | Difference between | Budgeted amounts | Increase/(Decrease) | Increase/(decrease) |
|---------------------------|-------------------|-------------------|-------------------------------|---------------|--------------------|------------------------|------------------|---------------------|---------------------|
| | | Budgeted Revenues | Revenues as of March 31, 2017 | | Projected Revenues | Budgeted vs. Projected | 2017-18 | from 2016-2017 \$ | % |
| Sewer Service Charges | 2,054,949 | 1,965,726 | 1,791,629 | 91.14% | 1,957,090 | (8,636) | 1,999,171 | 33,445 | 1.70% |
| Cell Tower Lease | 33,500 | 33,500 | 28,573 | 85.29% | 34,288 | 788 | 34,300 | 800 | 2.39% |
| Fees & Other | 13,471 | 17,500 | 15,501 | 88.58% | 18,601 | 1,101 | 17,000 | (500) | -2.86% |
| Property Tax | 325,926 | 235,000 | 312,876 | 133.14% | 327,000 | 92,000 | 235,000 | 0 | 0.00% |
| Waste Collection Revenues | 19,350 | 21,000 | 19,208 | 91.47% | 23,050 | 2,050 | 22,000 | 1,000 | 4.76% |
| Total | 2,447,196 | 2,272,726 | 2,167,787 | 95.38% | 2,360,029 | 87,303 | 2,307,471 | 34,745 | 1.53% |

Expenditures by Grouping

General Operating Budget - Cost Center Roll-up

| Grouped Categories | Actual FY 2016-17 | FY 2016-17 | FY 2016-17 | % To date | FY 2016-17 | Difference between | Budgeted amounts | Increase/(Decrease) | Increase/(decrease) |
|-------------------------------|-------------------|-----------------------|-------------------------------|---------------|------------------------|------------------------|------------------|---------------------|---------------------|
| | | Budgeted Expenditures | Revenues as of March 31, 2017 | | Projected Expenditures | Budgeted vs. Projected | 2017-18 | from 2016-2017 \$ | % |
| Personnel | 301,602 | 300,871 | 250,263 | 83.18% | 300,316 | (555) | 306,639 | 5,768 | 1.92% |
| Professional Services | 115,087 | 109,550 | 76,307 | 69.65% | 97,409 | (12,141) | 114,950 | 5,400 | 4.93% |
| Facilities & Administration | 44,281 | 40,240 | 34,018 | 84.54% | 44,757 | 4,517 | 46,100 | 5,860 | 14.56% |
| Engineering | 31,924 | 52,000 | 34,522 | 66.39% | 46,029 | (5,971) | 52,000 | 0 | 0.00% |
| Pumping | 28,979 | 27,000 | 23,486 | 86.99% | 31,315 | 4,315 | 32,000 | 5,000 | 18.52% |
| Sewer Authority Mid-Coastside | 1,096,045 | 1,106,139 | 904,592 | 81.78% | 1,070,624 | (35,515) | 1,635,254 | 529,115 | 47.83% |
| All other Accounts | 18,135 | 55,560 | 23,294 | 41.93% | 26,510 | (29,050) | 53,860 | (1,700) | -3.06% |
| Total | 1,636,054 | 1,691,360 | 1,346,483 | 79.61% | 1,616,961 | (74,399) | 2,240,803 | 549,443 | 32.49% |

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Montara Water and Sanitary District

Revenue By Grouping - Water Enterprise

| Grouped Categories | FY 2016-17 | | FY 2016-17 | | FY 2016-17 Projected Revenues | Difference between Budgeted vs. Projected | Budgeted amounts 2017-18 | Increase/(Decrease) from 2016-2017 \$ | Increase/(decrease) % |
|--------------------------|-------------------|-------------------|-------------------------------|---------------|-------------------------------|---|--------------------------|---------------------------------------|-----------------------|
| | Actual FY 2016-17 | Budgeted Revenues | Revenues as of March 31, 2017 | % To date | | | | | |
| Water Sales | 1,737,901 | 1,797,000 | 1,506,968 | 83.86% | 1,808,362 | 11,362 | 1,912,496 | 115,496 | 6.43% |
| Cell Tower Lease | 33,500 | 33,500 | 28,573 | 85.29% | 34,288 | 788 | 34,300 | 800 | 2.39% |
| Fees & Other | 58,621 | 10,450 | 13,799 | 132.05% | 16,559 | 6,109 | 12,050 | 1,600 | 15.31% |
| Property Tax | 325,926 | 235,000 | 312,876 | 133.14% | 327,000 | 92,000 | 235,000 | 0 | 0.00% |
| Backflow Testing & Other | 25,170 | 13,000 | 21,387 | 164.52% | 25,664 | 12,664 | 13,000 | 0 | 0.00% |
| Total | 2,181,118 | 2,088,950 | 1,883,603 | 90.17% | 2,211,872 | 122,922 | 2,206,846 | 117,896 | 5.64% |

Expenditures by Grouping

General Operating Budget - Cost Center Roll-up

| Grouped Categories | FY 2016-17 | | FY 2016-17 | | FY 2016-17 Projected Expenditures | Difference between Budgeted vs. Projected | Budgeted amounts 2017-18 | Increase/(Decrease) from 2016-2017 \$ | Increase/(decrease) % |
|-----------------------------|-------------------|-----------------------|-------------------------------|---------------|-----------------------------------|---|--------------------------|---------------------------------------|-----------------------|
| | Actual FY 2016-17 | Budgeted Expenditures | Revenues as of March 31, 2017 | % To date | | | | | |
| Personnel | 654,290 | 723,522 | 591,678 | 81.78% | 710,013 | (13,509) | 769,260 | 45,738 | 6.32% |
| Professional Services | 162,091 | 146,850 | 104,560 | 71.20% | 136,580 | (10,270) | 139,700 | (7,150) | -4.87% |
| Facilities & Administration | 52,788 | 50,450 | 46,886 | 92.94% | 62,514 | 12,064 | 57,380 | 6,930 | 13.74% |
| Engineering | 98,270 | 87,000 | 77,233 | 88.77% | 102,977 | 15,977 | 87,000 | 0 | 0.00% |
| Pumping | 102,493 | 112,500 | 75,282 | 66.92% | 100,376 | (12,124) | 109,000 | (3,500) | -3.11% |
| Supply | 61,144 | 50,000 | 16,866 | 33.73% | 22,489 | (27,511) | 52,000 | 2,000 | 4.00% |
| Collection/Transmission | 121,810 | 94,500 | 121,498 | 128.57% | 161,997 | 67,497 | 94,500 | 0 | 0.00% |
| Treatment | 81,751 | 64,000 | 34,682 | 54.19% | 46,243 | (17,757) | 64,000 | 0 | 0.00% |
| All other Accounts | 126,403 | 126,100 | 93,542 | 74.18% | 118,043 | (8,057) | 130,600 | 4,500 | 3.57% |
| Total | 1,461,040 | 1,454,922 | 1,162,227 | 79.88% | 1,461,232 | 6,310 | 1,503,440 | 48,518 | 3.33% |

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 5/26/2017

| Payroll | Water | Overtime | Doubletime | On Call | Cert Pay | Total | Health | Disability | WC | CalPERS | PARS | Medicare | SS | F/Y Total Water |
|----------------------|----------------------|---------------------|---------------------|---------------------|--------------------|----------------------|---------------------|--------------------|---------------------|---------------------|---------------------|--------------------|---------------------|----------------------|
| | | | | | | | | | | 7% | 6.50% | 1.45% | 6.20% | |
| GM | \$ 103,725.13 | | | | | \$ 103,725.13 | \$ 12,453.00 | \$ 731.00 | \$ 1,224.00 | \$ 7,260.76 | \$ 6,742.13 | \$ 1,504.01 | \$ 6,430.96 | \$ 140,071.00 |
| Superintendent | \$ 58,726.51 | \$ 1,524.63 | \$ 677.61 | | \$ 1,800.00 | \$ 62,728.75 | \$ 6,483.00 | \$ 541.00 | \$ 4,423.00 | \$ 4,391.01 | \$ 3,817.22 | \$ 909.57 | \$ 3,889.18 | \$ 87,182.74 |
| Account Specialist | \$ 53,872.66 | | | | | \$ 53,872.66 | \$ 24,906.00 | \$ 384.00 | \$ 521.00 | \$ 3,771.09 | \$ 3,501.72 | \$ 781.15 | \$ 3,340.11 | \$ 91,077.73 |
| Water Operator | \$ 75,261.89 | \$ 7,815.66 | \$ 8,684.06 | \$ 4,454.93 | \$ 2,400.00 | \$ 98,616.54 | \$ 9,054.00 | \$ 676.00 | \$ 4,260.00 | \$ 6,903.16 | \$ 4,892.02 | \$ 1,429.94 | \$ 6,114.23 | \$ 131,945.88 |
| Water Operator | \$ 71,635.24 | \$ 9,298.80 | \$ 7,439.04 | \$ 4,946.96 | \$ 2,400.00 | \$ 95,720.05 | \$ 9,054.00 | \$ 654.00 | \$ 4,180.00 | \$ 6,700.40 | \$ 4,656.29 | \$ 1,387.94 | \$ 5,934.64 | \$ 128,287.32 |
| Water Operator | \$ 69,887.33 | \$ 8,467.12 | \$ 6,854.33 | \$ 5,056.08 | \$ 2,400.00 | \$ 92,664.87 | \$ 24,906.00 | \$ 651.00 | \$ 4,132.00 | \$ 6,486.54 | \$ 4,542.68 | \$ 1,343.64 | \$ 5,745.22 | \$ 140,471.95 |
| Temp. Operator | \$ 5,163.66 | \$ 1,936.37 | \$ 1,290.92 | \$ 5,886.57 | | \$ 14,277.52 | | | \$ 379.00 | | | \$ 207.02 | \$ 885.21 | \$ 15,748.75 |
| Temp. Operator | \$ 5,528.77 | \$ 1,842.92 | | \$ 5,602.49 | | \$ 12,974.19 | | | \$ 300.00 | | | \$ 188.13 | \$ 804.40 | \$ 14,266.71 |
| Operator in training | \$ 14,706.63 | | | | | \$ 14,706.63 | | | \$ 463.00 | | | \$ 213.25 | \$ 911.81 | \$ 16,294.68 |
| Part Time Admin | \$ 2,584.00 | | | | | \$ 2,584.00 | | | \$ 47.00 | | | \$ 37.47 | \$ 160.21 | \$ 2,828.68 |
| Part Time Admin | \$ 990.00 | | | | | \$ 990.00 | | | \$ 19.00 | | | \$ 14.36 | \$ 61.38 | \$ 1,084.74 |
| Totals | \$ 462,081.82 | \$ 30,885.51 | \$ 24,945.97 | \$ 25,947.03 | \$ 9,000.00 | \$ 552,860.34 | \$ 86,856.00 | \$ 3,637.00 | \$ 19,948.00 | \$ 35,512.96 | \$ 28,152.07 | \$ 8,016.47 | \$ 34,277.34 | \$ 769,260.18 |
| | | | | | | | | | | | | | | |
| Payroll | Sewer | Overtime | Doubletime | On Call | Cert Pay | Total | Health | Disability | WC | CalPERS | PARS | Medicare | SS | F/Y Total Sewer |
| GM | \$ 103,725.13 | | | | | \$ 103,725.13 | \$ 12,453.00 | \$ 731.00 | \$ 1,224.00 | \$ 7,260.76 | \$ 6,742.13 | \$ 1,504.01 | \$ 6,430.96 | \$ 140,071.00 |
| Superintendent | \$ 58,726.51 | \$ 1,836.65 | \$ 677.61 | | \$ 1,800.00 | \$ 63,040.77 | \$ 6,483.00 | \$ 419.00 | \$ 702.00 | \$ 4,412.85 | \$ 3,817.22 | \$ 914.09 | \$ 3,908.53 | \$ 83,697.47 |
| District Clerk | \$ 53,872.66 | | | | | \$ 53,872.66 | \$ 16,698.60 | \$ 384.00 | \$ 521.00 | \$ 3,771.09 | \$ 3,501.72 | \$ 781.15 | \$ 3,340.11 | \$ 82,870.33 |
| Totals | \$ 216,324.30 | \$ 1,836.65 | \$ 677.61 | \$ - | \$ 1,800.00 | \$ 220,638.57 | \$ 35,634.60 | \$ 1,534.00 | \$ 2,447.00 | \$ 15,444.70 | \$ 14,061.08 | \$ 3,199.26 | \$ 13,679.59 | \$ 306,638.79 |

SALARY RANGE
MONTARA WATER AND SANITARY DISTRICT
July 1, 2016

| Position | Salary Range | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 | Step 6 | Step 7 | Step 8 | Step 9 | Step 10 |
|-----------------------------|---------------|-----------------------|-----------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------|-----------|
| Operations Manager | \$141,796 | | | | | | | | | | |
| | \$96,000 | \$113,540 | \$116,379 | \$119,288 | \$122,270 | \$125,327 | \$128,460 | \$131,672 | \$134,963 | \$138,337 | \$141,796 |
| | | \$54.59 | \$55.95 | \$57.35 | \$58.78 | \$60.25 | \$61.76 | \$63.30 | \$64.89 | \$66.51 | \$68.17 |
| Superintendent | \$132,888 | | | | | | | | | | |
| | \$106,407 | \$106,407 | \$109,067 | \$111,794 | \$114,589 | \$117,453 | \$120,390 | \$123,399 | \$126,484 | \$129,646 | \$132,888 |
| | | \$51.16 | \$52.44 | \$53.75 | \$55.09 | \$56.47 | \$57.88 | \$59.33 | \$60.81 | \$62.33 | \$63.89 |
| Water System Operator | \$81,048 | | | | | | | | | | |
| | \$64,898 | \$64,898 | \$66,520 | \$68,183 | \$69,888 | \$71,635 | \$73,426 | \$75,262 | \$77,143 | \$79,072 | \$81,048 |
| | | \$31.20 | \$31.98 | \$32.78 | \$33.60 | \$34.44 | \$35.30 | \$36.18 | \$37.09 | \$38.02 | \$38.97 |
| Maintenance Worker I | \$70,369 | | | | | | | | | | |
| | \$56,347 | \$56,347 | \$57,755 | \$59,199 | \$60,679 | \$62,196 | \$63,751 | \$65,345 | \$66,978 | \$68,653 | \$70,369 |
| | | \$27.09 | \$27.77 | \$28.46 | \$29.17 | \$29.90 | \$30.65 | \$31.42 | \$32.20 | \$33.01 | \$33.83 |
| Account Specialist | \$67,280 | | | | | | | | | | |
| | \$53,873 | \$53,873 | \$55,219 | \$56,600 | \$58,015 | \$59,465 | \$60,952 | \$62,476 | \$64,038 | \$65,639 | \$67,280 |
| | | \$25.90 | \$26.55 | \$27.21 | \$27.89 | \$28.59 | \$29.30 | \$30.04 | \$30.79 | \$31.56 | \$32.35 |
| District Clerk | \$67,280 | | | | | | | | | | |
| | \$53,873 | \$53,873 | \$55,219 | \$56,600 | \$58,015 | \$59,465 | \$60,952 | \$62,476 | \$64,038 | \$65,639 | \$67,280 |
| | | \$25.90 | \$26.55 | \$27.21 | \$27.89 | \$28.59 | \$29.30 | \$30.04 | \$30.79 | \$31.56 | \$32.35 |
| 2.5 % step increases | | | | | | | | | | | |
| | | Increase 2.50% | 1-Jul-14 | Increase 8.25% | 1-Jul-15 | Increase 2.70% | 1-Jul-16 | Increase 3.79% | 1-Jul-17 | | |
| Operations Manager | | 1.025 | \$98,400 | 1.0825 | \$106,518 | 1.027 | \$109,394 | 1.0379 | \$113,540 | | |
| Superintendent | | 1.025 | \$92,218 | 1.0825 | \$99,826 | 1.027 | \$102,521 | 1.0379 | \$106,407 | | |
| Water System Operator | | 1.025 | \$56,244 | 1.0825 | \$60,884 | 1.027 | \$62,528 | 1.0379 | \$64,898 | | |
| Maintenance Worker | | 1.025 | \$48,833 | 1.0825 | \$52,862 | 1.027 | \$54,289 | 1.0379 | \$56,347 | | |
| Account Specialist | | 1.025 | \$46,689 | 1.0825 | \$50,541 | 1.027 | \$51,905 | 1.0379 | \$53,873 | | |
| District Clerk | | 1.025 | \$46,689 | 1.0825 | \$50,541 | 1.027 | \$51,905 | 1.0379 | \$53,873 | | |
| Operator in Training | \$18 per hour | | | | | | | | | | |
| Temporary Worker | \$18 per hour | | | | | | | | | | |

Fiscal year 2017-2018 Budget Impact Area

Sewer Service Charges

| | | | |
|--|----|-----------|------------|
| Actual Amount As Of: April 30, 2017 | \$ | 1,802,159 | |
| PROJECTED ACTIVITY to END of FY: | \$ | 167,567 | |
| Projected YEAR END TOTAL - Fiscal Year 2016-17 | \$ | 1,969,726 | (A) |
| PROPOSED budget for fiscal year 2017-2018: | \$ | 2,003,171 | |
| \$ value increase from prior fiscal year | \$ | 33,445 | |
| %'age increase from prior fiscal year | | 1.70% | |

(A) - Sewer Service charges are calculated by an outside consultant. The calculation is based on flow distribution in the prior wet weather period. This amount is then communicated to the County and placed on the District rate payers property tax roll.

The current data from the District shows a flow distribution reduction of approximately 1.57% during the wet weather months causing a slight increase in sewer service revenue, taking into account the 2.88% increase in service charge.

The District is apart of the County's teeter plan and will collect all of the amounts bill, but not yet collected.

Occupancy Use Rate Category

| | <u>Current Rate</u> | | <u>Proposed change</u> | | <u>Proposed Increase</u> | |
|----------------------------|---------------------|---------|------------------------|---------|--------------------------|------------|
| Residential | \$41.73 | per HCF | \$42.93 | per HCF | 2.88% | (B) |
| **HCF = Hundred Cubic Feet | | | | | | |

Actual rate to be determined annually within the Prop 218 limits.

(B) - The District's prop 218 limit set in 2010 is currently 42.93 which has been reached for fiscal year 2017-18.

Fiscal year 2017-2018 Budget Impact Area

Water Service Charges

| | |
|--|---------------------|
| Actual Amount As Of: April 30, 2017 | \$ 1,509,301 |
| PROJECTED ACTIVITY to END of FY: | \$ 301,860 |
| Projected YEAR END TOTAL - Fiscal Year 2016-2017 | \$ 1,811,161 |
| Fiscal year 2016-2017 Budget | \$ 1,800,000 |
| Expected Budget over-run | \$ 11,161 |
| PROPOSED budget for fiscal year 2017-2018: | \$ 1,915,496 |
| \$ value increase from prior fiscal year | \$ 115,496 |
| %age increase from prior fiscal year | 6.42% |

| | <u>Current</u> <u>Rate</u> | <u>Proposed</u> <u>Maximum</u> <u>Rate</u> | <u>Percentage</u> <u>Increase</u> |
|--|-------------------------------|--|--------------------------------------|
| Tier 1 0 TO 6 HCF | \$ 7.88 | \$ 8.12 | 3% |
| Tier 2 7 - 13 HCF | \$ 10.51 | \$ 10.83 | 3% |
| Tier 3 14-27 HCF | \$ 13.14 | \$ 13.54 | 3% |
| Tier 4 OVER 27 HCF | \$ 18.41 | \$ 18.96 | 3% |
| Meter Charge - 5/8' Standard Residential Size | \$ 27.15 | \$ 27.96 | 3% |

Water revenues have been budgeted for fiscal year 2017-18 using the District's projected fiscal year end revenue amount of \$1.8 million. Added to this figure was a \$54,000 (3% rate increase) as well as an assumption of an additional \$50,000 in increased water consumption.

**MWSD SEWER Capital Improvement Program
2017-18
SEWER SYSTEM**

| PROJECT | FY 17/18 | FY 18/19 | FY 19/20 | FY 20/21 | FY 21/22 |
|--|---------------------|---------------------|---------------------|------------------|------------------|
| MWSD CAPITAL PROJECTS | | | | | |
| Mechanical System Repairs & Replacements | \$ 30,000 | \$ 75,000 | \$ 50,000 | \$ 50,000 | \$ 25,000 |
| Inflow & Infiltration Testing / Televising | \$ 10,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 |
| Seal Cove Area Repair and Maint. Project | \$ 35,000 | \$ 20,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 |
| Replace Pump Station Pumps | \$ 20,000 | \$ 20,000 | \$ 150,000 | \$ 50,000 | \$ 20,000 |
| Replace Medium High Priority Sewer Mains | \$ 575,000 | \$ 450,000 | \$ 1,300,000 | \$ 1,300,000 | \$ 1,500,000 |
| Spot Repairs Program | \$ 25,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 |
| Replace Distillery Pump Station | | \$ 5,000 | \$ 15,000 | \$ 120,000 | \$ 80,000 |
| Cabrillo Hwy Express Sewer | \$ 945,000 | \$ 900,000 | | \$ 400,000 | \$ 500,000 |
| | | | | | |
| Pump Station Communication Upgrades | | \$ 2,500 | \$ 2,500 | \$ 2,500 | \$ 2,500 |
| MWSD CAPITAL PROJECTS TOTAL: | \$ 1,640,000 | \$ 1,502,500 | \$ 1,562,500 | 1,967,500 | 2,172,500 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL ANNUAL COST | 1,640,000 | 1,502,500 | 1,562,500 | 1,967,500 | 2,172,500 |
| | | | | | |

MWSD
Five Year Capital Improvement Program
WATER SYSTEM

| Existing Customer CIP - WATER | FY 17/18 | FY 18/19 | FY 19/20 | FY 20/21 | FY 21/22 | 5-Year CIP Total |
|---|-------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Distribution System Renewal and Replacement Pro | \$ 180,000 | \$ 200,000 | \$ 200,000 | \$ 200,000 | \$ 200,000 | \$ 980,000 |
| Water Conservation Program | \$ 8,500 | \$ 8,755 | \$ 9,018 | \$ 9,288 | \$ 9,567 | \$ 45,128 |
| Storage Tank Rehabilitation Program | \$ 150,000 | \$ 100,000 | | \$ - | \$ - | \$ 250,000 |
| Emergency Generator Replacement Program | \$ 75,000 | \$ 40,000 | \$ 40,000 | \$ 40,000 | \$ 40,000 | \$ 235,000 |
| Vehicle Replacement Fund | \$ - | \$ 25,000 | \$ 27,000 | \$ 29,000 | \$ - | \$ 81,000 |
| Pillar Ridge Rehabilitation Program | \$ 20,000 | \$ 50,000 | \$ 300,000 | \$ 25,000 | \$ 50,000 | \$ 445,000 |
| EXISTING CUSTOMER CIP TOTAL | \$ 433,500 | \$ 423,755 | \$ 576,018 | \$ 303,288 | \$ 299,567 | \$ 2,036,128 |
| New Customer CIP - WATER | FY 17/18 | FY 18/19 | FY 19/20 | FY 20/21 | FY 21/22 | 5-Year CIP Total |
| Water Main Upgrade Program | \$ 180,000 | \$ 309,000 | \$ 318,270 | \$ 327,818 | \$ 337,653 | \$ 1,472,741 |
| Existing Well Upgrade Program | \$ 100,000 | | \$ 280,000 | \$ 288,400 | \$ 297,052 | \$ 965,452 |
| New and Upgraded PRV Stations' Program | \$ - | \$ 250,000 | \$ 257,500 | \$ 265,225 | \$ 273,182 | \$ 1,045,907 |
| Emergency Generator Upgrade Program | \$ - | \$ 150,000 | \$ 154,500 | \$ 159,135 | \$ 163,909 | \$ 627,544 |
| Schoolhouse Booster Pump Station Upgrade | \$ - | \$ - | \$ - | \$ - | \$ 350,000 | \$ 350,000 |
| Portola Tank Telemetry Upgrade | \$ - | \$ 150,000 | \$ 100,000 | \$ - | \$ - | \$ 250,000 |
| Develop Additional Supply Reliability | \$ - | \$ - | \$ - | \$ 450,000 | \$ 1,000,000 | \$ 1,450,000 |
| Big Wave NPA Water Main Extension | | \$ 2,030,000 | \$ - | \$ - | \$ - | \$ 2,030,000 |
| NEW CUSTOMER CIP TOTAL | \$ 280,000 | \$ 2,889,000 | \$ 1,110,270 | \$ 1,490,578 | \$ 2,421,795 | \$ 8,191,644 |
| Total Annual Capital Cost | \$ 713,500 | \$ 3,312,755 | \$ 1,686,288 | \$ 1,793,866 | \$ 2,721,362 | \$ 10,227,772 |
| | | | | | | |

Fiscal year 2017-2018 Budget Debt Service

| | Original Issue Amount | Balance June 30, 2017 | Additions | Retirements | Balance June 30, 2018 | Interest Expense |
|--------------------------|--------------------------|--------------------------|-------------|---------------------|--------------------------|-------------------|
| Sewer | | | | | | |
| CIEDB Loan (I Bank) | \$ 1,010,000 | \$ 812,574 | | \$ 28,184 | \$ 784,390 | \$ 24,354 |
| PNCEF Lease Obligation | \$ 927,222 | \$ 640,930 | | \$ 46,995 | \$ 593,935 | \$ 18,280 |
| Subtotal - Sewer | | <u>\$ 1,523,581</u> | <u>\$ -</u> | <u>\$ 75,179</u> | <u>\$ 1,378,325</u> | <u>\$ 42,634</u> |
| Water | | | | | | |
| General Obligation Bonds | \$ 15,635,000 | \$ 11,479,501 | | \$ 876,458 | \$ 10,603,043 | \$ 273,978 |
| PNCEF Lease Obligation | \$ 927,222 | \$ 640,930 | | \$ 46,995 | \$ 593,935 | \$ 18,280 |
| SRF Loan | \$ 2,920,000 | \$ 1,723,622 | | \$ 139,222 | \$ 1,584,401 | \$ 34,273 |
| Subtotal - Water | | <u>14,877,729</u> | <u>-</u> | <u>1,062,675</u> | <u>12,781,378</u> | <u>326,530</u> |
| Total Debt Service | | <u>\$ 16,401,310</u> | <u>\$ -</u> | <u>\$ 1,137,854</u> | <u>\$ 14,159,704</u> | <u>\$ 369,164</u> |

PNCEF lease obligation is split evenly between Sewer and Water.

The District entered into an agreement with the State of California Department of health under the Safe Drinking Water State Revolving Fund Law of 1947. This agreement constitutes funding in the form of a loan and a grant made by the State to the District to assist in financing the cost of studies, planning and other preliminary activities for a project which will enable the district to meet safe drinking water standards.

Per the repayment terms, the principal and interest payments will start one year from the project completion date at an interest rate of 2.09%. The Alta Vista Tank Project is expected to be completed by the winter of 2015.

Fiscal year 2017-2018 Budget Impact Area

Operating Reserves

WATER

Water Operating Account as of April 30, 2017

Wells Fargo Checking: \$ 705,053

Current Operating Reserves as of April 30, 2017

Operating: \$ 190,251

Operating Reserve:

The District's Water Operating Reserve target is two months of operating expenses. Based on fiscal year 2016-17 budget the amount of operating reserves is as follows:

Target calculation

| | | |
|-------------|-----------|-------------------------------------|
| \$ | 1,503,440 | Budgeted FY 2017-18 expenditures |
| | 12 | Months |
| <hr/> | | |
| \$ | 125,287 | Monthly budgeted operating expenses |
| | x 2 | Two months expenditures |
| <hr/> | | |
| \$ | 250,573 | Target Reserve |
| <hr/> <hr/> | | |

Conclusion:

Currently, the District has sufficient Operating Water Reserves for Fiscal Year 2017-18.

Fiscal year 2017-2018 Budget Impact Area

Operating Reserves

SEWER

Sewer Operating Account as of April 30, 2017

Wells Fargo Checking \$ 3,517,496

Current Reserves as of April 30, 2017

Operating: \$ 281,893

Operating Reserve:

For the District's Sewer Operating Reserve, the maximum target amount shall equal ten months' of operating expenses and the minimum target amount shall equal two months' of operating expenses.

Based on fiscal year 2015-16 budget the amount of operating reserves is as follows:

| Minimum Target | | |
|-----------------------|-----------|-------------------------------------|
| \$ | 2,240,803 | Budgeted fiscal year 2017-18 |
| | 12 | Months |
| <hr/> | | |
| \$ | 186,734 | Monthly budgeted operating expenses |
| | x 2 | Monthly budgeted operating expenses |
| <hr/> | | |
| \$ | 373,467 | Minimum Target Reserve |
| <hr/> <hr/> | | |

| Maximum Target | | |
|-----------------------|-----------|-------------------------------------|
| \$ | 2,240,803 | Budgeted fiscal year 2017-18 |
| | 12 | Months |
| <hr/> | | |
| \$ | 186,734 | Monthly budgeted operating expenses |
| | x 10 | Monthly budgeted operating expenses |
| <hr/> | | |
| \$ | 1,867,336 | Maximum Target Reserve |
| <hr/> <hr/> | | |

Conclusion: Year

Currently, the District has insufficient dedicated operating Sewer Reserves for Fiscal Year 2017-18

Beginning in Fiscal Year 2017-18 the minimum target reserve amount will be set aside in the District's LAIF account and displayed on the balance sheet.

Fiscal year 2017-2018 Budget Impact Area Capital and Connection Reserves

CAPITAL RESERVE

Capital Reserve:

For the Water and Sewer capital reserves, the target amounts are based on district engineers' estimates of the annual costs to replace water and sewer facilities and the five year capital improvement plans (CIP). Each Utility enterprise shall have a separate capital reserve. The maximum target amount shall equal the highest total annual amount shown in the CIP applicable to existing customers plus the district engineer's estimate of annual replacement capital project costs. The minimum target amount shall equal the lowest total annual amount shown in the CIP applicable to existing customers plus the district engineers' estimate of annual replacement capital project costs.

WATER

Current Capital Reserves as of April 30, 2017

Capital: \$ 398,249

Minimum Target

| | |
|---------------------|--|
| \$ 299,567 | Lowest year CIP existing customers (fiscal year 2021-22) |
| \$ 750,000 | Engineer estimate |
| <u>\$ 1,049,567</u> | Minimum target |

Maximum Target

| | |
|---------------------|---|
| \$ 576,018 | Highest year CIP existing customers (fiscal year 2019-20) |
| \$ 750,000 | Engineer estimate |
| <u>\$ 1,326,018</u> | Maximum target |

Conclusion:

Based on the above, the District is \$651,318 short of the current minimum Capital reserve target.

Staff is recommending adhering to the rate study performed and through continued stewardship, fully fund the District's capital reserves.

Fiscal year 2017-2018 Budget Impact Area

Capital and Connection Reserves

SEWER

Current Capital Reserves as of April 30, 2017

Capital: \$ 3,867,818

Minimum Target

\$ 1,502,500 Lowest year CIP existing customers (fiscal year 2018-19)

\$ 1,177,000 Engineer estimate

\$ 2,679,500 Minimum target

Maximum Target

\$ 2,172,500 Highest year CIP existing customers (fiscal year 2021-22)

\$ 1,177,000 Engineer estimate

\$ 3,349,500 Maximum target

Conclusion:

Based on the above, the District is \$1,188,318 in excess of the current minimum reserve and is \$518,318 in excess of the current maximum reserve needs.

CONNECTION FEE RESERVE

Connection Fees:

Provides funds for expansion-related capital projects caused by increases in new water and sewer customers. The connection fee reserves are restricted pursuant to Government Code Section 66013.

The water and sewer connection fee reserves shall equal one year's revenue.

WATER

At the beginning of the fiscal year, the budgeted amounts will be set aside as a reserve.

Fiscal year 2017-18 amount to be reserved is \$253,020.

SEWER

At the beginning of the fiscal year, the budgeted amounts will be set aside as a reserve.

Fiscal year 2017-18 amount to be reserved is \$194,576.

Montara Water and Sanitary District

2017 - 2026

Sewer Repairs - 10 Year Capital Improvement Priority (CIP) List

Status: Updated May 26, 2017

| Fiscal Year | CIP Capital Improvement Needs | Notes/Status |
|--|--|---|
| 2017-2018 Fiscal Year Capital Improvement Needs | | |
| Carryover from 2014 | Cabrillo Highway PHASE 1A+1B - Trunk Sewer (Crossing to 14th) 220 LF @ 3300 Bore and Jack \$726,000 | Caltrans Permit Delay Carry project from 12/13 High Priority,SSO Risk |
| | Contingencies (30%) \$217,800 | Sag, Roots, Cracks |
| | Cost increase from Original Budget \$943,800 | Unsafe to Clean in roadway |
| | Montara Sewers + CCTV Main St, 10th and 14th. Moss Beach Hills | Added 2009 |
| | 1,400 LF @ \$285 ./LF Pipe Burst and Open \$399,000 | Mediun Priority |
| 1,000 LF @ \$285 ./LF Pipe Burst and Open \$285,000 | | |
| Contingencies (30%) \$205,200 | Long term plan | |
| | \$604,219 | |
| Planned and Carryover Planned Planned | Pump Station Mechanical, Electrical and Coating Upgrades | High Priority |
| | 1 EA @ \$15,000 ./EA coatings/Mechan. \$15,000 | Corrosion |
| | 3 EA @ \$5,000 ./EA pipe works \$15,000 | Corrosion Repairs |
| | 2 EA @ \$10,000 ./EA pump rebuilds \$20,000 | Scheduled Repairs |
| | 3 EA @ \$5,000 ./EA Electrical Work \$15,000 | Un-scheduled Repairs |
| | Contingencies (35%) \$22,750 | |
| | \$87,750 | |
| 2017-2018 SUB-TOTAL (Including 2014-2016 Carryover) | | \$1,635,769 |
| 2018-2019 Fiscal Year Capital Improvement Needs | | |
| Carryover from 2014 | Cabrillo Highway PHASE 1A+1B - Trunk Sewer (Crossing to 14th) 963 LF @ \$575 ./LF Open Trench \$553,725 | Caltrans Permit Delay Carry project from 12/13 High Priority,SSO Risk |
| | Contingencies (30%) \$166,118 | Sag, Roots, Cracks |
| | Cost increase from Original Budget \$719,843 | Unsafe to Clean in roadway |
| | Various Montara Sewers Main St, 6th, 9th and 13th. | Added 2009 |
| 900 LF @ \$285 ./LF Pipe Burst and Open \$256,500 | Mediun Priority | |
| Contingencies (30%) \$76,950 | Long term plan | |
| | \$333,450 | |
| Planned | Pump Station Mechanical, Electrical and Coating Upgrades | High Priority |
| | 1 EA @ \$10,000 ./EA pump rebuilds \$10,000 | Scheduled Repairs |

| | | | |
|--|--|--------------------|---------------------------|
| Planned | 1 EA @ \$2,500 /EA Communications | \$2,500 | Un-scheduled Repairs |
| | <u>Contingencies (35%)</u> | <u>\$4,375</u> | |
| | | \$16,875 | |
| Planned | Sun Valley (Phase #3, South Section) | | Moved from 13/14 |
| | 900 LF @ \$350 /LF Open Cut | \$315,000 | pipe ok, flat grade |
| | <u>Contingencies (30%)</u> | <u>\$94,500</u> | need open cut repair |
| | | \$409,500 | (SAM Hot List #6) |
| TOTAL WITH CARRY OVERY 2018-19 Total | | \$1,462,793 | |
| 2019-2020 Fiscal Year Capital Improvement Needs | | | |
| | Nevada St and Moss Beach Area Sewers | | Multiple Fractures |
| | 785 LF @ \$285 /LF Pipe Burst | \$223,725 | (Spot Repairs needed now) |
| | <u>Contingencies (30%)</u> | <u>\$67,118</u> | |
| | | \$290,843 | |
| | Sun Valley (Phase #3, South Section) | | Moved from 13/14 |
| | 1,500 LF @ \$320 /LF Open Cut | \$480,000 | pipe ok, flat grade |
| | <u>Contingencies (30%)</u> | <u>\$144,000</u> | need open cut repair |
| | | \$624,000 | (SAM Hot List #6) |
| | Various Moss Beach Sewers on Steston St. | | Multiple Fractures |
| | 1,450 LF @ \$320 /LF Pipe Burst and Open | \$464,000 | (Spot Repairs needed now) |
| | <u>Contingencies (30%)</u> | <u>\$139,200</u> | |
| | | \$603,200 | |
| | Pump Station Mechanical, Electrical and Coating Upgrades | | High Priority |
| | 1 EA @ \$10,000 /EA coatings/Mechan. | \$10,000 | Corrosion |
| | 1 EA @ \$5,000 /EA pipe works | \$5,000 | Corrosion/Leak Risk |
| | 1 EA @ \$12,500 /EA pump rebuilds | \$12,500 | Scheduled Repairs |
| | 1 EA @ \$5,000 /EA Electric/Comm | \$5,000 | Un-scheduled Repairs |
| | <u>Contingencies (35%)</u> | <u>\$11,375</u> | |
| | | \$43,875 | |
| Cabrillo Alternate Included 2019-20 Total | | \$1,561,918 | |
| 2020-2021 Fiscal Year Capital Improvement Needs | | | |
| | Cabrillo Highway PHASE 3 - Trunk Sewer (14th - 11th) | | Move from 13/14 |
| | 750 LF @ \$425 /LF CIPP-Lining | \$318,750 | |
| | <u>Contingencies (30%)</u> | <u>\$95,625</u> | |
| | | \$414,375 | |
| | Nevada St and Moss Beach Area Sewers | | Multiple Fractures |

| | | |
|--|--------------------|---------------------------|
| 1,500 LF @ \$300 ./LF Pipe Burst + Open C | \$450,000 | (Spot Repairs needed now) |
| <u>Contingencies (30%)</u> | <u>\$135,000</u> | |
| | \$585,000 | |
| George West Kanoff | | Multiple Sags |
| 1,350 LF @ \$450 ./LF Open Cut | \$607,500 | Grease problem |
| <u>Contingencies (30%)</u> | <u>\$182,250</u> | (Spot Repairs needed now) |
| | \$789,750 | |
| Pump Station Mechanical, Electrical and Coating Upgrades | | High Priority |
| 2 EA @ \$5,000 ./EA pipe works | \$10,000 | Corrosion/Leak Risk |
| 2 EA @ \$10,000 ./EA pump rebuilds | \$20,000 | Scheduled Repairs |
| 2 EA @ \$5,000 ./EA Electrical Work | \$10,000 | Un-scheduled Repairs |
| <u>Contingencies (35%)</u> | <u>\$14,000</u> | |
| | \$54,000 | |
| Pump Station - Distillary Pump Station (And 4 houses) | | High Priority |
| 2 EA @ \$25,000 ./EA Pump Connections | \$50,000 | (Spot Repairs Made) |
| 1 EA @ \$50,000 ./LF Distillary Forcemain | \$50,000 | Move from 15/16 |
| <u>Contingencies (35%)</u> | <u>\$17,500</u> | |
| | \$117,500 | |
| 2020-21 Total | | |
| | \$1,960,625 | |

| 2021-2022 Fiscal Year Capital Improvement Needs | | |
|--|------------------|--------------------------|
| Cabrillo Highway PHASE 4a - Parallel Pipes (10th St to 6th Street) | | Move from 15/16 to 16/17 |
| 1,440 LF @ \$475 ./LF Open Cut | \$684,000 | |
| <u>Contingencies (35%)</u> | <u>\$239,400</u> | |
| | \$923,400 | |
| Various Moss Beach Sewers Near Carlos St. | | Added 2009 |
| 750 LF @ \$350 ./LF Pipe Burst and Open | \$262,500 | Mediun Priority |
| <u>Contingencies (30%)</u> | <u>\$78,750</u> | Long term plan |
| | \$341,250 | |
| Cedar Street (Phase #3, South Section) | | Moved from 13/14 |
| 450 LF @ \$250 ./LF Open Cut | \$112,500 | pipe ok, flat grade |
| <u>Contingencies (30%)</u> | <u>\$33,750</u> | may need open cut repair |
| | \$146,250 | (SAM Hot List #6) |
| Montara Montara Easements Sewers Various Locations. | | Added 2009 |
| 1,350 LF @ \$250 ./LF Pipe Burst and Open | \$337,500 | Mediun Priority |
| <u>Contingencies (30%)</u> | <u>\$101,250</u> | Long term plan |
| | \$438,750 | |

| | | |
|--|---|----------------------------|
| | Pump Station Mechanical, Electrical and Coating Upgrades | High Priority |
| 2 | EA @ \$25,000 ./EA coatings/Mechan. | Corrosion |
| 2 | EA @ \$7,500 ./EA pipe works | Corrosion/Leak Risk |
| 3 | EA @ \$7,500 ./EA Electrical Work | Un-scheduled Repairs |
| | <u>Contingencies (35%)</u> | |
| | \$118,125 | |
| | Pump Station - Distillary Pump Station (And 4 houses) | High Priority-from FY15-16 |
| 2 | EA @ \$25,000 ./EA Pump Connections | (Spot Repairs Made) |
| 1 | EA @ \$125,000 ./LF Distillary Forcemain | |
| | <u>Contingencies (30%)</u> | |
| | \$192,500 | |
| | 2021-22 Total | \$2,160,275 |
| 2022-2023 Fiscal Year Capital Improvement Needs | | |
| | Cabrillo Highway PHASE 4b - Trunk Sewer (11th - 7th + Crossing) | Move from 14/15 |
| 900 | LF @ \$550 ./LF CIPP | |
| | <u>Contingencies (35%)</u> | |
| | \$668,250 | |
| | Various Moss Beach Sewers Near Buena Vista St. | |
| 1,900 | LF @ \$250 ./LF Pipe Burst and Open | Added 2009 |
| | <u>Contingencies (30%)</u> | Mediun Priority |
| | \$617,500 | Long term plan |
| | Vallimar Sewer PUMPS (Strand, Niagara, Private Pumps) | Added 2010, Errosion Risk |
| 10 | EA @ \$20,000 ./EA Open Cut | Long term plan |
| | Electrical + Distribution | |
| | \$300,000 | |
| | PS Niagra Abandonment | |
| | \$50,000 | |
| | <u>Contingencies (35%)</u> | |
| | \$742,500 | |
| | Various Moss Beach Sewers Near Nevada & Buena Vista St. | |
| 2,500 | LF @ \$250 ./LF Pipe Burst and Open | Added 2009 |
| | <u>Contingencies (30%)</u> | Mediun Priority |
| | \$812,500 | Long term plan |
| | 2022-23 Total | \$2,098,250 |
| 2023-2024 Fiscal Year Capital Improvement Needs | | |
| | Various Moss Beach Sewers Near Carlos St. | Added 2009 |
| 1,000 | LF @ \$250 ./LF Pipe Burst and Open | Mediun Priority |
| | <u>Contingencies (30%)</u> | Long term plan |
| | \$325,000 | |

| | | | | | | |
|--|----------|------|---------------------|--------------------|--|----------------------|
| Various Sewers Seal C | \$300 | | | | | Added 2009 |
| 2,500 LF @ | | ./LF | Pipe Burst and Open | \$750,000 | | Medium Priority |
| Contingencies (30%) | | | | \$225,000 | | Long term plan |
| | | | | <u>\$975,000</u> | | |
| Montara Montara Easements Sewers Various Locations. | | | | | | Added 2009 |
| 3,000 LF @ | \$250 | ./LF | Pipe Burst and Open | \$750,000 | | Medium Priority |
| Contingencies (30%) | | | | \$225,000 | | Long term plan |
| | | | | <u>\$975,000</u> | | |
| Pump Station Mechanical, Electrical and Coating Upgrades | | | | | | High Priority |
| 2 EA @ | \$30,000 | ./EA | coatings/Mechan. | \$60,000 | | Corrosion |
| 2 EA @ | \$10,000 | ./EA | pipe works | \$20,000 | | Corrosion/Leak Risk |
| 2 EA @ | \$20,000 | ./EA | pump rebuilds | \$40,000 | | Scheduled Repairs |
| 2 EA @ | \$10,000 | ./EA | Electrical Work | \$20,000 | | Un-scheduled Repairs |
| Contingencies (35%) | | | | \$49,000 | | |
| | | | | <u>\$189,000</u> | | |
| 2023-24 Total | | | | \$2,464,000 | | |

FY Completed from 2010

| | | | | | |
|-----------|--|----------------------|--|------------|--|
| 2010-2011 | Cedar at George St and Area Sewers (Phase #1 SAM Hot List #2) | | | | |
| | | Contingencies (30%) | | | |
| 2010-2011 | Cedar Street + Area Sewers (Phase #2, SAM Hot List #2-b) | | | | |
| | | 600 LF @ \$250/LF | | | |
| | | Contingencies (25%) | | | |
| 2010-2011 | Cedar Street (Phase #3a, SAM Hot List #5) | | | | |
| | | 245 ft x \$250/ft | | | |
| | | Contingencies (30%) | | | |
| 2012-2013 | Nevada Street Creek Crossing Repair (w/ new casing) | | | | |
| | | 140 LF @ \$350 ./LF | | CIPP+Open | |
| | | Contingencies (35%) | | | |
| 2012-2013 | Hawthorn Street Sewer | | | | |
| | | 300 LF @ \$200 ./LF | | Pipe Burst | |
| | | Contingencies (35%) | | | |
| 2012-2013 | Pump Station Control Upgrades - Vallemar, California, Seal Cove #4 | | | | |
| | | 3 EA @ \$20,000 ./LF | | Float/Pum | |
| | | Contingencies (35%) | | | |
| 2012-2013 | George St Trunk Sewer West of Cedar St - Phase 1 and 2 of 3 | | | | |
| | | 620 LF @ \$220 ./LF | | open cut | |
| | | Contingencies (30%) | | | |
| 2012-2013 | Cypress Easement and Vacinity (SAM Hot List #8) | | | | |
| | | 400 LF @ \$275 ./LF | | Open Cut | |
| | | Contingencies (30%) | | | |

Pump Station Control Upgrades - Date Harte, Seal Cove 1, 2, and 3

This project will improve the reliability sanitary sewer pump stations 1 redundant float motor starters and communication links as well and of improvements at Date Hart, Seal Cove 1 and 3. Seal Cove #2 requires Replacement.

| | | | | |
|----------------------------|---|----------|------|------------|
| 6 EA | @ | \$20,000 | ./LF | Float/Pump |
| 1 EA | @ | \$30,000 | ./LF | MCC |
| <u>Contingencies (35%)</u> | | | | |

Acacia Street M730.03 - M721.03 (SAM Hot List #4)

SAM has to clean this sewer multiple times per year due to heavy root cracks which increase infiltration and over flow risks.

| | | | | |
|----------------------------|---|-------|------|------------|
| 720 LF | @ | \$180 | ./LF | Pipe Burst |
| <u>Contingencies (30%)</u> | | | | |

Montara Area Easements Sewers, 10th at Farallone, 7th at LaConte, Sam Hotlist #

The Easement sewers are difficult to clean and Manholes M201.05 to M440.07 to M760.07 are lines SAM has to clean this sewer multiple times due to heavy root intrusion and various cracks which increase infiltration and flow risks.

| | | | | |
|----------------------------|---|-------|------|------------|
| 1,025 LF | @ | \$160 | ./LF | Pipe Burst |
| <u>Contingencies (30%)</u> | | | | |

Montara Area Street Sewers, Farallone between 10th and 11th, South of Harte St

Farallone between 10th and 11th and the sewer South of Harte St on E M801.09, M310.05-M311.05, are sewers SAM has to clean multiple times due to heavy root intrusion and various cracks which increase infiltration and flow risks.

| | | | | |
|----------------------------|---|-------|------|------------|
| 750 LF | @ | \$180 | ./LF | Pipe Burst |
| <u>Contingencies (30%)</u> | | | | |

DRAFT _ NOT FORMATED

| | |
|-----------|---|
| 2014-2015 | George St Trunk Sewer West of Tamarand St |
| | 900 LF @ \$250 ./LF Pipe Burst |
| | <u>Contingencies (30%)</u> |

| | |
|-----------|---|
| 2014-2015 | 6 th -7th Street Area sewers and Easements |
| | 750 LF @ \$180 ./LF Open Cut |
| | <u>Contingencies (30%)</u> |

| | | | | | | |
|-----------|---|-----|----|---|-----------|----------|
| 2014-2015 | 6 th -7th Street Area sewers and Easements | 750 | LF | @ | \$180 .LF | Open Cut |
| | Contingencies (30%) | | | | | |

2013-2014 Fiscal Year Capital Improvement Needs

| | | | | | | |
|-----------|--|---|----|---|--------------|------------|
| 2013-2014 | Pump Station Control Upgrades - Date Harte, Seal Cove 1,2, and 3 | 6 | EA | @ | \$20,000 .LF | Float/Pump |
| | | 1 | EA | @ | \$30,000 .LF | MCC |
| | Contingencies (35%) | | | | | |

| | | | | | | |
|---------------|---|--|--|--|--|--|
| (Carryover) | 2015-2016 SIP project, work will carry over into 2016-2017 FY | | | | | |
| 2017 complete | ~2737 LF Sewer Mains and ~ 15 Manhole Rehab. | | | | | |
| | Contingencies (20%) (Design already competed) | | | | | |
| | Darcy Harty Project, Kanoff, Easements, School House and more | | | | | |

Notes

| | | |
|---|---|---|
| <p>\$250,000 <u>\$75,000</u> \$325,000</p> | <p>COMPLETED at 40% under budget</p> | |
| <p>\$435,000 <u>\$160,000</u> \$595,000</p> | <p>COMPLETED at 40% under budget</p> | |
| <p>\$61,250 <u>18,000</u> \$79,250</p> | <p>COMPLETED at 40% under budget</p> | |
| <p>\$49,000 <u>\$17,000</u> \$66,000</p> | <p>Added 2012 V. High Priority CIPP/save crossing may save \$50K</p> | <p>CIPP repair (old casing) ~\$250/lf</p> |
| <p>\$60,000 <u>\$21,000</u> \$81,000</p> | <p>Moved to 12/13 Med/High Priority (SAM Hot List #7)</p> | <p>Final price construct ~\$110/lf</p> |
| <p>\$60,000 <u>\$21,000</u> \$81,000</p> | <p>Added 2010 High Priority Pump Failure Risk</p> | <p>STILL IN PROGRESS May 2013</p> |
| <p>\$136,400 <u>\$40,940</u> \$177,340</p> | <p>Added 2011 High Priority</p> | <p>Final price construct ~\$240/lf</p> |
| <p>\$110,000 <u>\$33,000</u> \$143,000</p> | <p>Sags, Open Cut to Fix Flat Grade, Med Priority (SAM Hot List #8)</p> | |

by the installation of
her miscellaneous panel
complete MCC Panel

\$120,000
\$30,000
\$52,500
\$202,500

t intrusion and various

\$129,600
\$38,880
\$168,480

#3

o M201.13, and
times per year
ion and over

\$164,000
\$49,200
\$213,200

3irch, manholes M800.07-
times per year due to
l over flow risks.

\$135,000
\$40,500
\$175,500

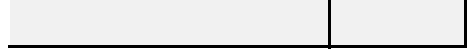
\$225,000
\$67,500
\$292,500

Added 2009
Med.High Priority

\$135,000
\$40,500
\$175,500

Spot Repairs Made
push back some lines
(SAM Hot List #3)

| | |
|-----------|----------------------|
| \$135,000 | Spot Repairs Made |
| \$40,500 | push back some lines |
| \$175,500 | (SAM Hot List #3) |



| | |
|-----------|-------------------|
| \$120,000 | High Priority |
| \$30,000 | Pump Failure Risk |
| \$52,500 | |
| \$202,500 | |

| | |
|-----------|---------------------|
| \$675,000 | Engineers Estimate |
| \$135,000 | Pending Bid Results |
| \$810,000 | est |

4 th St Sewers S. West of Tamarand St

450 LF @ \$180 ./LF

Contingencies (30%)

Tarrace, Moss Beach

262 LF @ \$180 ./LF

Contingencies (30%)

orig est,

project est

| | | |
|------------|-----------|-------------------|
| Pipe Burst | \$81,000 | Added 2009 |
| | \$24,300 | Med.High Priority |
| | <hr/> | |
| | \$105,300 | |

| | | |
|------------|----------|-------------------|
| Pipe Burst | \$47,160 | Added 2009 |
| | \$14,148 | Med.High Priority |
| | <hr/> | |
| | \$61,308 | |

| | | |
|----------------------|------------------|--|
| 2015-16 Total | ##### | |
| | <hr/> | |
| | \$675,000 | |

Montara Water and Sanitary District

Existing Customer

Water System Capital Improvement Program

Update FY17/18 – FY21/22

June 2017

Board of Directors

Dwight Wilson, President

Scott Boyd, President Pro Tem

Bill Huber, Treasurer

Kathryn Slater-Carter, Secretary

Jim Harvey, Director

Clemens Heldmaier, General Manager

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

The District’s water system requires improvements to address system renewal and replacement needs, continue to improve water supply reliability, and ensure sufficient response under daily operational scenarios, fire flow, and emergency conditions. These potential improvements make up the District’s Capital Improvement Program (CIP) and include the rehabilitation of the existing infrastructure, addition of new facilities, development of new sources of supply, implementation of repair and replacement, and preventive maintenance programs.

In 2003, the Board established the CIP prioritization criteria that serve as the foundation for the District’s capital improvements decision-making process to ensure a relevant implementation schedule and adequate funding for the improvements. The criteria provides a method to rate the relative importance of a particular project based upon factors such as protection of public health, employee safety, legal and regulatory requirements, and funding constraints. These criteria established which projects should be implemented in any given year and over the CIP planning horizon. The prioritization criteria used by MWSD are presented in Table 1, below, categorized into three priority levels, listed from most to least critical for implementation.

| Table 1. Prioritization Criteria | | |
|--|--|--|
| Priority Level | Description | Examples |
| Level One <i>Mandatory Projects</i> | <i>“Must do” – highest priority.</i> District has little or no control to defer. | <ol style="list-style-type: none"> 1. Projects required by law/legislation, regulations; 2. Projects protecting health and safety of employees and the public; and 3. Project funded by others. |
| Level Two <i>Necessary Projects</i> | <i>Must be done.</i> District has moderate level of control over the timing of implementation. | <ol style="list-style-type: none"> 1. Projects required for providing adequate emergency storage and meeting fire flow requirements; 2. Projects reducing water system losses and reducing pipeline leaks. |
| Level Three <i>Discretionary Projects</i> | <i>Should be done.</i> District has significant level of control over the timing of implementation. | Projects that are required but can be deferred to a later date. Level Three Projects can be completed as needed, if Level One or Level Two Projects are postponed. |

In addition, following introduction of new domestic connections to the water system in 2011 by the Board, the District has started developing a two-part CIP that includes projects designed exclusively for or shared by the new customers connecting to the water system. This category is funded through the Water Capacity Charge (WCC). The second category of projects is needed for the existing customers and designed to provide appropriate levels of renewal and replacement for the current water system. The water rate revenues fund these projects.

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

The planning-level cost estimates included in this CIP are total project costs with the +50%/-30% estimating accuracy and include the following elements:

1. Engineer's opinion of probable construction cost
2. Planning, permitting, legal, and administrative costs 40 percent
3. Planning-level contingency 25 percent

While the CIP projects and programs included in the following sections include long-range and short-term projects for the water system, the summary presented in Table 2, Project Cost Distribution and Fiscal Year Schedule, only includes capital projects and portions of the capital programs that the District anticipates completing the next five (5) fiscal years. Project descriptions that follow include the cost of the entire project or program that may extend beyond the initial five years of the CIP. The actual timing of implementing the project would depend on various factors, including but not limited to the number of customers requesting water connections, regulatory climate, etc.

This document includes Existing Customer CIP only. The New Customer CIP is described in Chapter 6 of the 2017 Water Master Plan Update and presented separately.

Montara Water and Sanitary District

WATER SYSTEM FIVE-YEAR CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

Table 3. Total Project Cost Distribution and Fiscal Year Schedule – Existing Customer CIP

| Existing Customer CIP - WATER | FY 17/18 | FY 18/19 | FY 19/20 | FY 20/21 | FY 21/22 | 5-Year CIP Total |
|--|------------------|------------------|------------------|------------------|------------------|--------------------|
| Distribution System Renewal and Replacement Program | \$180,000 | \$200,000 | \$200,000 | \$200,000 | \$200,000 | \$980,000 |
| Water Conservation Program | \$8,500 | \$8,755 | \$9,018 | \$9,288 | \$9,567 | \$45,128 |
| Storage Tank Rehabilitation Program | \$150,000 | \$100,000 | - | - | - | \$250,000 |
| Emergency Generator Replacement Program | \$75,000 | \$40,000 | \$40,000 | \$40,000 | \$40,000 | \$235,000 |
| Vehicle Replacement Fund | - | \$25,000 | \$27,000 | \$29,000 | - | \$81,000 |
| Pillar Ridge Rehabilitation Program | \$20,000 | \$50,000 | \$300,000 | \$25,000 | \$50,000 | \$445,000 |
| EXISTING CUSTOMER CIP TOTAL | \$433,500 | \$423,755 | \$676,018 | \$303,288 | \$299,567 | \$2,036,128 |

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

The District's water system requires improvements to address system renewal and replacement needs and ensure sufficient response under daily operational scenarios, fire flow, and emergency conditions. These necessary improvements make up the District's Priority Level Two, Necessary Projects, which include the rehabilitation of the existing infrastructure, repair and replacement, and preventative maintenance programs.

Priority Level Two – These projects provide measurable progress in achieving the District's goals, but over which the District has a moderate level of control over the timing of implementation. Examples of such projects include projects reducing water system losses and reducing pipeline leaks.

Table 4 below provides a list of the Priority Two Level projects. These projects serve existing District's customers and are funded by the water rate revenues.

| Table 4. Priority Level Two – Necessary Projects |
|---|
| 1. Distribution System Renewal and Replacement Program |
| 2. Water Conservation Program |
| 3. Storage Tank Rehabilitation Program |
| 4. Emergency Generator Replacement Program |
| 5. Vehicle Replacement Fund |
| 6. Pillar Ridge Rehabilitation Program |

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Program: Distribution System Renewal and Replacement Program

Priority: Level Two

This program is an on-going annual rehabilitation program that includes the following projects:

- Mechanical systems replacement
 - Water meter replacement
 - Water lateral replacement
 - Water main replacement
 - Fire hydrant replacement
-

Project: Distribution System Renewal and Replacement Program

CIP Total Cost: \$980,000

Project Funding: This program will be funded by existing customers through water rate revenues

Basis of Priority: This program is ranked as Priority Level Two because it address system renewal and replacement needs and ensure sufficient response under daily operational scenarios, fire flow, and emergency conditions.

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Program: Water Conservation Program

Priority: Level Two

The District continues its multi-year rebate program to encourage customers to replace their fixtures and appliances with water-efficient units.

Project: Water Conservation Program

CIP Total Cost: \$45,128

Project Funding: This program will be funded by existing customers through water rate revenues.

Basis of Priority: This program is ranked as Priority Level Two because it continues to promote water conservation.

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Program: Storage Tank Rehabilitation Program

Priority: Level Two

The existing Alta Vista Tank 1 (AVT 1) was inspected in 2016 and found needing to be taken off line for rehabilitation. It was determined that the tank floor and areas on the wall of the AVT 1 shows signs of significant corrosion. AVT 1 will be rehabilitated, including: cleaning, recoating and corrosion spot repair. Some areas, such as the tank floor, may require more extension corrosion repair.

Project: Storage Tank Rehabilitation Program

CIP Total Cost: \$250,000

Project Funding: This program will be funded by existing customers through water rate revenues

Basis of Priority: This program is ranked as Priority Level Two because it ensures continued operation of the existing water supply sources

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Project: Emergency Generator Replacement

Priority: Level Two

This project will replace existing emergency generators that reached the end of their useful life.

Project: Emergency Generator Replacement

CIP Total Cost: \$235,000

Project Funding: This project will be funded by existing customers through water rate revenues

Basis of Priority: This project is ranked as Priority Level Two because it ensures efficiency of water operations.

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Project: Vehicle Replacement Fund

Priority: Level Two

This funding is targeted to a renewal of the District fleet of trucks and started in FY 15/16 with a purchase of a heavy truck followed by replacing one light truck annually in the following three years of the CIP.

Project: Vehicle Replacement Fund

CIP Total Cost: \$81,000

Project Funding: This project will be funded by existing customers through water rate revenues

Basis of Priority: This project is ranked as Priority Level Two because it ensures efficiency of water operations.

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (FY2017/18 – FY2021/22)

PRIORITY LEVEL TWO – NECESSARY PROJECTS

Program: Pillar Ridge Rehabilitation Program

Priority: Level Two

Consolidation of the Pillar Ridge Water System into the MWSD water system benefits all District's customers. The addition of new facilities, however, necessitates planning for the renewal and replacement of the Pillar Ridge treatment, supply, and storage facilities. Existing customer water rate revenues will fund this project.

Project: Pillar Ridge Rehabilitation Program

CIP Total Cost: \$445,000

Project Funding: This program will be funded through water rate revenues

Basis of Priority: This program is ranked as Priority Level Two because it ensures existing facility functionality and reliability

Montara Water and Sanitary District

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM UPDATE (2013 – 2018)

PRIORITY LEVEL THREE – DISCRETIONARY PROJECTS

Projects not meeting the criteria for Priority Level One or Two are ranked as Priority Level Three. These projects are needed, albeit may not yet have defined scopes, schedules, or funding sources. Many factors exist that may promote Level Three projects to Level One or Two such as the release of new regulations and legislation or the availability of funding.

Priority Level Three – Projects that are required but can be deferred to a later date. Level Three Projects can be completed as needed, if Level One or Level Two Projects are postponed. District has significant level of control over the timing of implementation.

Table 17 below provides a list of the Priority Level Three projects. Funding for these projects is not currently included as part of this CIP.

| Table 5. Priority Level Three – Discretionary Projects |
|---|
| 1. Portola Tank Road Repair |
| 2. Alta Vista Water Treatment Plant Replacement |
| 3. District Office Remodel |
| 4. New Large Service Connections ^a |

^a New connections remain in this category until they are funded by a third party and move to Priority One

Montara Water and Sanitary District

2017 Water System Master Plan Update
New Customer Capital Improvements Program

June 2017

Board of Directors

Dwight Wilson, President

Scott Boyd, President Pro Tem

Bill Huber, Treasurer

Kathryn Slater-Carter, Secretary

Jim Harvey, Director

Clemens Heldmaier, General Manager

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

The District’s water system requires improvements to address system renewal and replacement needs, continue to improve water supply reliability, and ensure sufficient response under daily operational scenarios, fire flow, and emergency conditions. These potential improvements make up the District's Capital Improvement Program (CIP) and include the rehabilitation of the existing infrastructure, addition of new facilities, development of new sources of supply, implementation of repair and replacement, and preventive maintenance programs.

In 2003, the Board established the CIP prioritization criteria that serve as the foundation for the District's capital improvements decision-making process to ensure a relevant implementation schedule and adequate funding for the improvements. The criteria provides a method to rate the relative importance of a particular project based upon factors such as protection of public health, employee safety, legal and regulatory requirements, and funding constraints. These criteria established which projects should be implemented in any given year and over the CIP planning horizon. The prioritization criteria used by MWSD are presented in Table 1, below, categorized into three priority levels, listed from most to least critical for implementation.

| Table 1. Prioritization Criteria | | |
|--|--|--|
| Priority Level | Description | Examples |
| Level One <i>Mandatory Projects</i> | <i>“Must do” – highest priority.</i> District has little or no control to defer. | <ol style="list-style-type: none"> 1. Projects required by law/legislation, regulations; 2. Projects protecting health and safety of employees and the public; and 3. Project funded by others. |
| Level Two <i>Necessary Projects</i> | <i>Must be done.</i> District has moderate level of control over the timing of implementation. | <ol style="list-style-type: none"> 1. Projects required for providing adequate emergency storage and meeting fire flow requirements; 2. Projects reducing water system losses and reducing pipeline leaks. |
| Level Three <i>Discretionary Projects</i> | <i>Should be done.</i> District has significant level of control over the timing of implementation. | Projects that are required but can be deferred to a later date. Level Three Projects can be completed as needed, if Level One or Level Two Projects are postponed. |

In addition, following introduction of new domestic connections to the water system in 2011 by the Board, the District has started developing a two-part CIP that includes projects designed exclusively for or shared by the new customers connecting to the water system. This category is funded through the Water Capacity Charge (WCC). The second category of projects is needed for the existing customers and designed to provide appropriate levels of renewal and replacement for the current water system. The water rate revenues fund these projects.

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

The planning-level cost estimates included in this CIP are total project costs with the +50%/-30% estimating accuracy and include the following elements:

1. Engineer's opinion of probable construction cost
2. Planning, permitting, legal, and administrative costs 40 percent
3. Planning-level contingency 25 percent

While the CIP projects and programs included in the following sections include long-range and short-term projects for the water system, the summary presented in Table 2, Project Cost Distribution and Fiscal Year Schedule, only includes capital projects and portions of the capital programs that the District anticipates completing the next five (5) fiscal years. Project descriptions that follow include the cost of the entire project or program that may extend beyond the initial five years of the CIP. The actual timing of implementing the project would depend on various factors, including but not limited to the number of customers requesting water connections, regulatory climate, etc.

This document contains the CIP required to serve new customers while the existing customer CIP is presented in a separate document.

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM FY17/18 – FY21/22

Table 2. Total Project Cost Distribution and Fiscal Year Schedule – New Customer CIP

| New Customer CIP - WATER | FY 17/18 | FY 18/19 | FY 19/20 | FY 20/21 | FY 21/22 | 5-Year CIP Total |
|---|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Water Main Upgrade Program | \$180,000 | \$309,000 | \$318,270 | \$327,818 | \$337,653 | \$1,472,741 |
| Existing Well Upgrade Program | \$100,000 | - | \$280,000 | \$288,400 | \$297,052 | \$965,452 |
| New and Upgraded PRV Stations' Program | - | \$250,000 | \$257,500 | \$265,225 | \$273,182 | \$1,045,907 |
| Emergency Generator Upgrade Program | - | \$150,000 | \$154,500 | \$159,135 | \$163,909 | \$627,544 |
| Schoolhouse Booster Pump Station Upgrade | - | - | - | - | \$350,000 | \$350,000 |
| Portola Tank Telemetry Upgrade | - | \$150,000 | \$100,000 | - | - | \$250,000 |
| Develop Additional Supply Reliability | - | - | - | \$450,000 | \$1,000,000 | \$1,450,000 |
| Big Wave NPA Water Main Extension | - | \$2,030,000 | - | - | - | \$2,030,000 |
| NEW CUSTOMER CIP TOTAL | \$210,000 | \$2,889,000 | \$1,110,270 | \$1,490,578 | \$2,421,795 | \$8,191,644 |

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Priority Level One projects almost exclusively address the projected system deficiencies related to adding new customers to the system. Most of the anticipated system deficiencies are due to adding new connections to the system and increasing water demands.

Priority Level One – These are the highest priority, “must do” capital projects. The District has little or no control to defer these projects. Examples of such projects include: (1) Projects required by law/legislation, regulations; (2) Projects protecting health and safety of employees and the public; and (3) Project funded by others.

Table 3 below, contains *Priority Level One* projects and programs that have been formulated to provide benefit to, and be paid for by, new District customers. A detailed discussion of the projects follows.

| Table 3. Priority Level One – Mandatory Projects |
|---|
| 1. Water Main Upgrade Program |
| 2. Existing Well Upgrade Program |
| 3. New and Upgraded PRV Stations’ Program |
| 4. Emergency Generator Upgrade Program |
| 5. Schoolhouse Booster Pump Station Upgrade |
| 6. Portola Tank Telemetry Upgrade |
| 7. Develop Additional Supply Reliability |
| 8. Big Wave Main Extension Project |

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Water Main Upgrade Program

Priority: Level One

Under the water main upgrade program, the District will undertake the effort of designing and constructing upsizing of the existing distribution system mains to accommodate increasing demands due to the addition of new water customers. This program includes an estimated 12,800 linear feet of 8-inch- and 10-inch-diameter mains installed in the water system replacing existing 2-inch, 4-inch, and 6-inch-diameter mains.

Upsizing of existing water mains and isolation and control valves will be required to accommodate new water customers.

The Water Main Upgrade Program will involve the strategic upgrade of existing water mains to incorporate “arterial distribution loops” throughout the system. These arterial loops will provide added redundancy and reinforcement to handle the addition of new customers or potential leaks and pipe failures. The loops will be designed utilizing the existing distribution system and the installation of short spans of new pipelines. Isolation and control valves will also be installed in critical locations as part of the loop design. As a whole, the arterial loops will provide the District’s Operations Staff the ability to isolate and repair critical sections of the distribution system while still conveying water throughout the system. Additionally, this program includes upsizing of the existing mains that would become deficient due to added new customer demands.

Project: Water Main Upgrade Program

CIP Total Cost: \$7,484,500

Project Funding: This program will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures redundancy and reinforcement of the distribution system to handle the addition of new customers or potential leaks and pipe failures.

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Existing Well Upgrade Program

Priority: Level One

The existing District's wells operate within their design parameters in the existing water system. Hydraulic analysis demonstrates, however, that with increased demands due to new water customers, existing wells' pumps and motors would need to be upsized to pump into the system. The pump and motor replacement and piping modifications are required to accommodate new customers due to increased pressures at each wellhead they would have to overcome. This program would involve replacement of all existing motor control centers (MCCs) and associated power supply improvements.

Project: Existing Well Upgrade Program

CIP Total Cost: \$3,389,000

Project Funding: This project will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it is required to accommodate new customers

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: New and Upgraded Pressure-Regulating Stations Program

Priority: Level One

Due to the District's water system configuration and the terrain of the service area, the District operates over 20 existing pressure-regulating stations (PRVs). With the addition of new customers throughout the service area, this project will install up to 5 new PRV stations and increase the capacity of 13 existing PRV stations.

Project: New and Upgraded Pressure-Regulating Stations Program

CIP Total Cost: \$1,856,000

Project Funding: This project will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures efficient water distribution under new demand conditions

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Emergency Generator Upgrade Program

Priority: Level One

Existing generators at the District's pumping and treatment facilities will become undersized following upgrades of the existing pumps and motors and would require replacement. This program would secure safe and reliable emergency power to the District's critical water treatment and delivery facilities and provide safe operation by staff under the increased demand conditions due to new customers. The associated appurtenances, including automatic transfer switches (ATS) would also have to be replaced due to the increased generator and system capacities.

Project: Emergency Generator Upgrade Program

CIP Total Cost: \$889,500

Project Funding: This project will be funded by new customers WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures efficiency of operations under new demand conditions

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Schoolhouse Booster Pump Station Upgrade

Priority: Level One

The District owns and operates the existing Schoolhouse Booster Pump Station. The addition of new water customers throughout the service area necessitates installation of a new set of booster pumps to accommodate the distribution system expansion for new customers and a new set of parameters under which the system would operate when demand increases. This project will include an addition of a new set of pumps and replacement of the existing pumps with larger pumps and motors.

Project: Schoolhouse Booster Pump Station Upgrade

CIP Total Cost: \$1,545,000

Project Funding: This project will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures water deliveries to new customers with increased flows in the distribution system.

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Portola Tank Telemetry Upgrade

Priority: Level One

The existing Portola Tank currently operates with no telemetry link to the District's SCADA system. While this arrangement works to serve existing water customers, addition of new customers throughout the District's service area will require adding the tank to SCADA to ensure operational optimization of the tank under new demand conditions.

Project: Portola Tank Telemetry Upgrade

CIP Total Cost: \$250,000

Project Funding: This project will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures operational optimization of the Portola Tank under new demand conditions

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Develop Additional Supply Reliability

Priority: Level One

This project provides for planning, permitting, and implementation of water supply augmentation to ensure that the water system's reliability remains intact with the addition of the new water customers to the system. Currently, the District has over 20 percent reliability and redundancy in its water supply portfolio achieved by existing District's customers through adding new sources, implementing water system improvements, securing the existing Airport Wells for its water supply portfolio, and through conservation. This portion of the water supply portfolio will initially be utilized to add new customers to the system; however, the supply reliability needs to be replenished and paid for by the new customers to ensure consistent continued reliability of the water system. The project includes new groundwater source planning, permitting, and development.

Project: Develop Additional Supply Reliability

CIP Total Cost: \$1,984,000

Project Funding: This project will be funded by new customers through the WCC

Basis of Priority: This project is ranked as Priority Level 1 because it ensures consistent continued reliability of the District's water system

Montara Water and Sanitary District

NEW CUSTOMER WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

Project: Big Wave NPA Water Main Extension

Priority: Level One

This project provides for the installation of a new 12-inch-diameter, 4,400-foot-long water main extension required to serve the Big Wave NPA development with 2,000 gallons-per-minute fire flow for 2 hours with the residual pressure at the hydrant on the Bog Wave NPA property of 20 pounds per square inch.

The developer will fund this project in its entirety. This project is NOT included in the water connection fee calculations.

Project: Big Wave NPA Water Main Extension

CIP Total Cost: \$2,030,000

Project Funding: This project will be funded entirely by the developer

Basis of Priority: This project is ranked as Priority Level 1 because it paid for by others



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager 

SUBJECT: Review and Possible Action Concerning 2017 District's Water Master Plan Update

Montara Water and Sanitary District (MWSD or District) has developed its last Water System Master Plan Update in 2011 and the results were instrumental in lifting the moratorium on new connections and thus opening the process of adding new water connections to the District's water system.

Following the development of the 2011 Water Master Plan and the certification of the Public Works Plan (PWP) Amendment allowing new water connections by the California Coastal Commission, the District proceeded with the addition of new water connections that applied for service, both for new residences and private well conversions. During the over five (5) years that passed since the Board adopted the 2011 Master Plan findings, accepted the PWP Amendment, and started issuing new connections, the District has implemented many capital improvements outlined as near-term improvements in the 2011 Master Plan.

Following over five (5) years of water system operation without the moratorium and completion of major water system capital improvements, the Board directed staff to develop a 2017 Water System Master Plan Update to review the current water demands, water supply portfolio, anticipated growth per the San Mateo County Local Coastal Program (SMC LCP), and identify system improvements needed to continue operating the water system and adding new customers. The 2017 Water System Master Plan Update (2017 Master Plan Update) resulted in the development of the long-term (ten years or longer) Capital Improvements Program (CIP) for adding new customers to the water system.

The 2017 Master Plan Update includes the following key findings:

1. The water consumption generally declined each year of the District's ownership, due to the District's implementation of the main replacement program, meter replacement program, improved operational practices, and voluntary conservation by the District's customers.
2. The average annual consumption is approximately 99.10 million gallons (MG) and the average daily consumption is approximately 271,478 gallons per day (gpd).
3. The system water losses for the District have been estimated at 8 percent of total production. This value is below the industry-wide standard of 10 percent unaccounted-for-water for a well-operated system.
4. The water system has sufficient water storage for the foreseeable future.
5. The long-range CIP to address new customers' addition to the water system includes the following programs and projects:



MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: **June 1, 2017**

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

| | |
|---|-------------|
| 1. Water Main Upgrades Program | \$7,484,500 |
| 2. Existing Well Upgrade Program | \$3,389,000 |
| 3. New and Upgraded PRV Stations' Program | \$1,856,000 |
| 4. Emergency Generator Upgrades Program | \$889,500 |
| 5. Schoolhouse Booster Pump Station Upgrade | \$1,545,000 |
| 6. Portola Tank Telemetry Upgrade | \$250,000 |
| 7. Develop Additional Supply Reliability | \$1,984,000 |

RECOMMENDATION:

Receive the 2017 Water System Master Plan Update



Montara Water and Sanitary District Draft WATER SYSTEM MASTER PLAN



June 2017

Prepared by



consultants

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Acknowledgements

SRT Consultants gratefully acknowledges the support and contributions of the Montara Water and Sanitary District Board of Directors and staff in the development of this Water System Master Plan.

MWSD Board of Directors

Dwight Wilson, President

Scott Boyd, President Pro Tem

Bill Huber, Treasurer

Kathryn Slater-Carter, Secretary

Jim Harvey, Director

MWSD Staff

Clemens Heldmaier, General Manager

Julian Martinez, Superintendent of Operations

Judy Gromm, District Clerk

Joanne Marsh, Account Specialist

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**2017
WATER SYSTEM
MASTER PLAN**

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List of Acronyms

| | | | |
|---------------|---|------------------|--|
| µg/L | microgram per liter | CPUC | California Public Utilities Commission |
| ADD | Average Daily Demand | CT | Contact Time |
| AL | Regulatory Action Level | DBP | Disinfection Byproduct |
| AVWTP | Alta Vista Water Treatment Plant | D/DBPR | Disinfectant and Disinfection Byproduct Rule |
| AWWA | American Water Works Association | DDW | Division of Drinking Water |
| AWWTF | Airport Wells Water Treatment Facility | DLR | Reporting Detection Limit |
| BACWA | Bay Area Clean Water Agencies | DWR | Department of Water Resources |
| BAWSCA | Bay Area Water Supply and Conservation Agency | ES | Executive Summary |
| Cal-Am | California American Water Company | fps | feet per second |
| CCC | California Coastal Commission | GAC | Granular Activated Carbon |
| CCR | California Code of Regulations | GAPA | Gross Alpha Particle Activity |
| CCR | Consumer Confidence Report | gp(c)d | gallons (per capita) per day |
| CCWD | Coastside County Water District | gpm | gallons per minute |
| CDFW | California Department of Fish and Wildlife | GWR | Groundwater Rule |
| CDP | Coastal Development Permit | HAAs | Haloacetic Acids |
| CDPH | California Department of Public Health | HGL | Hydraulic Grade Line |
| CDX | Coastal Development Exemption | I&C | Instrumentation & Controls |
| CEQA | California Environmental Quality Act | IDSE | Initial Distribution System Evaluation |
| CIP | Capital Improvements Plan | IES | Ion Exchange System |
| | | IWMP | Integrated Watershed Management Plan |
| | | JPA | Joint Powers Authority |
| | | LCP | Local Coastal Program |
| | | LRAA | Locational Running Annual Average |
| | | (S)MCL(G) | (Secondary) Maximum Contaminant Level (Goal) |
| | | MBTE | methyl tertiary butyl ether |

| | | | |
|----------------|--|---------------|---|
| MDD | Maximum Daily Demand | (L)RAA | (Locational) Running Annual Average |
| MG(D) | million gallons (per day) | ROW | right-of-way |
| mg/L | milligrams per liter | SAM | Sewer Authority Mid-Coastside |
| MRDL(G) | Maximum Residual Disinfectant Level (Goal) | SAW | South Airport Well |
| MWSD | Montara Water & Sanitary District | SCADA | Supervisory Control and Data Acquisition |
| NAW | North Airport Well | SDWA | Safe Drinking Water Act |
| ND | Not Detectable at Testing Limits | SDWS | Secondary Drinking Water Standards |
| NOAA | National Oceanic and Atmospheric Administration | SFPUC | San Francisco Public Utilities Commission |
| OEHHA | Office of Environmental Health Hazard Assessment | SOCs | Synthetic Organic Chemicals |
| OMMP | Operation, Maintenance and Monitoring Plan | SWRCB | State Water Resources Control Board |
| OSHA | Operational Safety and Health Administration | TCP | 1,2,3-Trichloropropane |
| pCi/L | Picocuries per liter | TCR | Total Coliform Rule |
| PDWS | Primary Drinking Water Standards | TTHMs | Total Trihalomethanes |
| PFD | Process Flow Diagram | USEPA | United States Environmental Protection Agency |
| PHD | Peak Hourly Demand | USGS | United States Geological Survey |
| PHG | Public Health Goal | VFD | Variable Frequency Drive |
| ppb | parts per billion | VOCs | Volatile Organic Compounds |
| ppm | parts per million | WCC | Water Capacity Charge |
| PRV | Pressure Regulating Valve | WTP | Water Treatment Plant |
| PRWTP | Pillar Ridge Water Treatment Plant | | |
| psi | pounds per square inch | | |
| PSV | Pressure Sustaining Valve | | |
| PVC | Polyvinyl chloride | | |
| PWP | Public Works Plan | | |
| PWS | Public Water System | | |

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EXECUTIVE SUMMARY

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Executive Summary

The 2017 Water System Master Plan Update (2017 Master Plan) supports the long-term resource planning of water supply and water system facilities for the current and future demands of the Montara Water and Sanitary District (MWSD or District), and creates a basis for the MWSD's Capital Improvements Program (CIP). MWSD provides water, sewer, and trash disposal services to the coastal communities of Montara, Moss Beach, and adjacent areas located north of El Granada and south of the Devil Slide Tunnel, in unincorporated San Mateo County, California. The 2017 Master Plan describes and assesses the existing water infrastructure, examines current and projected water demands, and outlines viable alternatives to allow the District to fulfill its mission:

To sensitively manage the natural resources entrusted to our care, to provide the people of Montara-Moss Beach with reliable, high quality water, wastewater, and trash disposal at an equitable price, and to ensure the fiscal and environmental vitality of the District for future generations. Be open to providing other services desired by our community.

Several studies developed between 1996 and 2011 preceded this master planning effort and have evaluated alternative water supply options for the District's service area. The 2017 Master Plan updates and expands upon MWSD's *2011 Water System Master Plan Update*, prepared by SRT Consultants (SRT). The objectives of this 2017 Master Plan include addressing the following key issues for the MWSD water system:

- Assess current and future water supply reliability to ensure adequate daily service and fire protection for the District's customers;
- Assess the water system's historical water quality and treatment infrastructure reliability;
- Assess the hydraulic capacity of the District's existing distribution and storage facilities; and
- Develop a CIP to address existing deficiencies in the water system's infrastructure and future water demands, consistent with the current San Mateo County Local Coastal Program (LCP).

MWSD Water System

MWSD customers in eight (8) pressure zones are supplied through a distribution system that receives water from seven (7) treated water storage tanks, twelve (12) groundwater wells, and the surface and groundwater treatment facilities at the Alta Vista, and Pillar Ridge sites and at all wellheads. The MWSD water system includes raw (untreated) water and treated water storage facilities. Raw water diverted from Montara Creek is stored in an updated 77,000-gallon concrete raw water storage tank. The District's seven (7) treated water storage tanks have a combined capacity of about 1.4 million gallons (MG) for operational, emergency, and firefighting uses.

Water is conveyed to MWSD's customers through a network of pipes approximately 150,000 feet long ranging in diameter from two (2) to sixteen (16) inches, two (2) booster pump stations, and twenty-eight (28) Pressure Regulating Valve (PRV) stations. The water system provides potable water to over six thousand people and commercial and industrial customers. 148 private fire protection meters are also connected to the District's system; these meters only draw water in the event of a fire. In 2015, the MWSD's water system was consolidated with the Pillar Ridge water system, which counts 229 residences and serves over 850 people.

Supply and Consumption

MWSD is exclusively served by groundwater sources from the San Mateo Coastal Basin Aquifers and surface water from the Montara Creek. Each source has a rated capacity established at the time it was brought on line; however, all sources typically operate below their respective rated capacities. Rated capacities are used to determine the reliable capacity and the maximum serviceable demand of the water system. MWSD sources currently have a combined rated capacity of 677 gallons per minute (gpm), as follows:

| | |
|--------------------------------------|----------------|
| Twelve (12) active groundwater wells | 602 gpm |
| Montara Creek surface water | 75 gpm |
| Total source capacity | 677 gpm |

The reliable capacity of the system is representative of the most probable true capacity, and is defined as the capacity of the system with the largest source out of service. The following calculation determines the reliable supply of the system, assuming the Alta Vista Well is out of service:

| | |
|--------------------------------|----------------|
| Total source capacity | 677 gpm |
| Alta Vista Well capacity | (150 gpm) |
| | |
| Total reliable capacity | 527 gpm |

The drought supply capacity is representative of the District’s capacity under the most severe drought conditions, and is considered an extremely conservative planning value. The industry-wide standard for calculating drought supply capacity is by reducing the total rated supply capacity by fifty (50) percent, as follows:

| | |
|-------------------------------|----------------|
| Total source capacity | 677 gpm |
| | |
| Total drought capacity | 339 gpm |

According to 2015 monthly production records, the average production rate of the twelve (12) wells was 324 gpm while in operation, or about fifty-four (54) percent of their rated capacity. Between November 2007 and December 2014, prior to the addition of three (3) Pillar Ridge wells, the average production rate of the nine (9) wells was 337 gpm while in operation, or about sixty-two (62) percent of their rated capacity. A summary of average production rates for each source for this time period is presented in Table ES-1. Detailed production data for 2004 - 2016 can be found in Appendices A and B.

Table ES-1 Average Monthly Production Rates, 2004 – 2015

| MWSD Source | Rated Capacity, gpm | Annual Average Production Rate, gpm ^a |
|---|------------------------|---|
| Alta Vista Well ^b | 150 | 100 |
| North Airport Well | 100 | 72 |
| South Airport Well | 55 | 26 |
| Airport Well No. 3 | 100 | 38 |
| Drake Well | 35 | 36 |
| Portola Well No. 1 | 9 | 5 |
| Portola Well No. 3 | 10 | 7 |
| Portola Well No. 4 | 16 | 7 |
| Wagner Well No. 3 | 70 | 58 |
| Pillar Ridge Wells No. 1 – 3 ^c | 57 | 40 |
| Montara Creek Surface Diversion | 75 | 62 |
| TOTAL | 677 | 450 |

^a Production rates are the operating rates of each source when in use. The annual average is determined from the operating production rates of each source, averaged over the total operating time.

^b The Alta Vista Well was added to the MWSD system in November 2007.

^c The Pillar Ridge Wells were added to the MWSD system in January 2015.

MWSD customer billing records showing the volume of water delivered to metered customers between 2004 and 2016 were used to evaluate the annual consumption trends over the thirteen (13) year time period (2004 through 2016). The water consumption generally declined each year, with the exception of a small increase in 2008, due to the inclusion of the Alta Vista Well, and in 2015, following the acquisition of the Pillar Ridge Wells. The general decrease in consumption can be attributed to the District's implementation of the main replacement program, meter replacement program, improved operational practices, and voluntary conservation by the District's customers. A summary of the consumption data analysis is presented in Table ES-2.

Table ES-2 Annual Consumption Rates, 2004 – 2016

| Year | Total Consumption, MG | Average Daily Water Use, gpd |
|-------------|------------------------------|-------------------------------------|
| 2004 | 117.41 | 321,671 |
| 2005 | 114.99 | 315,041 |
| 2006 | 111.17 | 304,575 |
| 2007 | 104.61 | 286,603 |
| 2008 | 106.72 | 292,384 |
| 2009 | 98.93 | 271,041 |
| 2010 | 92.83 | 254,329 |
| 2011 | 87.75 | 240,411 |
| 2012 | 93.11 | 255,107 |
| 2013 | 94.67 | 259,367 |
| 2014 | 86.48 | 236,921 |
| 2015 | 89.53 | 245,274 |
| 2016 | 90.07 | 246,754 |
| Average | 90.10 | 271,478 |

From this data, average and per capita water use values were calculated. The average annual consumption is approximately 99.10 million gallons (MG) and the average daily consumption is approximately 271,478 gallons per day (gpd).

MWSD's source production is dependent upon customer consumption, as the sources only produce water in response to customer demands. The difference between the water system's production and consumption rates represent system losses, known as unaccounted-for-water. Unaccounted-for-water represents water used for fire flow testing, water main flushing, repairs, filter backwash operations at the WTPs, and distribution system leaks. The system losses for the District have been estimated at 8

percent of total production, the average calculated from the 2004 through 2016 time period assessed herein. This value is below the industry-wide standard of 10 percent unaccounted-for-water for a well-operated system.

Current and Future Demand

Water demand volume and trend projections provide the basis for sizing and prioritizing improvements to water facilities and identifying the need for additional water supply sources or facilities. Average, maximum daily, and peak hourly demands (ADD, MDD, PHD, respectively) were calculated from 2004 through 2016 monthly production records from all of the District’s water supply sources. Population growth, future water demand volumes, and the allocation of available water sources among the various sectors in the community were estimated using the current demand calculations and data from the *2013 County of San Mateo Local Coastal Program Policies (LCP) Update*.

Since MWSD’s water source production is directly dependent upon customer demand and unaccounted-for-water, recorded production values reflect the water system’s demand and, therefore, the supply required to support the customer water use. Table ES-3 presents MWSD’s average and peak water demands based on the production records between 2004 and 2016. On average, MWSD water sources produced 296,018 gpd over the past thirteen (13) years, with an annual average minimum and maximum production of 260,983 gpd in 2014 and 359,023 gpd in 2004, respectively. The data trend generally indicates the production decreasing across the thirteen (13) years.

Table ES-3 MWSD Water Use, 2004 – 2016

| Year | MWSD Production (gallons) | Water Use (gallons) | Peaking Ratio |
|----------------------------|---------------------------|------------------------|------------------|
| Average Daily Demand (ADD) | 296,018 | 271,501 ^b | 1.0 |
| Maximum Daily Demand (MDD) | 478,230 ^a | 438,919 ^b | 1.6 ^c |
| Maximum Hour (PHD) | 32,069 ^d | 29,433 ^{b, d} | 2.6 |
| Design Fire (2 hours) | 240,000 | 240,000 | N/A |

^a Based on daily production data for maximum production months, 2006 – 2016. 2004 and 2005 data was not available.

^b Calculated from ADD and MDD production values, respectively, with an 8.2-percent reduction for unaccounted-for-water.

^c Calculated empirically from the system’s MDD and ADD values.

^d Calculated utilizing a peaking ratio of 2.6, as used in previous MWSD Master Plans.

The per-capita-daily water demand was established as approximately sixty-six (66) gallons per capita per day (gpcd) based on the MWSD water production and water

connection records, the 2010 U.S. Census population data for Montara and Moss Beach communities, number of residential water connections (1,620), and the population of the Pillar Ridge community (850 persons) and the number of residences (229 connections) at the time of the 2015 consolidation. This post-Pillar-Ridge-consolidation per capita daily water demand was determined by calculating the weighted average of the per capita demand of Montara and Moss Beach from 2004 to 2014 and the per capita demand of the consolidated system since 2015. Since the consolidation in 2015, the water supplied to Pillar Ridge through their one (1) meter is no longer absorbed in the Montara and Moss Beach per capita demand. The post-consolidation household size of 2.84 persons per household was similarly defined by calculating the weighted average of the household size of the Montara/Moss Beach area and of Pillar Ridge.

The projected demands on the system for future years were based on the following assumptions:

- The population already residing or owning property in the service area that is not connected to MWSD, will be connecting to system, at a current historical rate of 2 well conversions per year, and
- The District will serve new homes being built in the service area in accordance with the population growth rate of one (1) percent, or 20 units per year established in the *2013 County of San Mateo LCP Update* and the calculated per capita demand. Table ES-4, below, presents the projected ADD and MDD with the addition of up to 1000 connections.

Table ES-4 Projected Population and Demand Estimates

| Connections Added | Number of Connections | Total Population Served^a | Projected Average Daily Demand (gpd)^b | Projected Maximum Daily Demand (gpd)^c |
|--------------------------|------------------------------|--|---|---|
| 200 | 1,820 | 5,824 | 333,506 | 533,609 |
| 400 | 2,020 | 6,392 | 370,994 | 593,590 |
| 600 | 2,220 | 6,960 | 370,994 | 653,571 |
| 800 | 2,420 | 7,528 | 445,970 | 713,552 |
| 1000 | 2,620 | 8,096 | 483,458 | 773,533 |

^a Calculated using the household size of 2.84 of the post-Pillar-Ridge-consolidation system

^b Calculated using the per capita demand of 66 gpcd

^c Calculated using the empirical factor of 1.6 derived from the system's MDD and ADD values

System Reliability

To determine MWSD’s water system reliability, the MDD was compared to the reliable supply capacity. Table ES-5 shows the current available capacity of the water system and compares this volume of water to the MDD of the current population within the MWSD service area. As shown, the water system is able to support the demands of the projected population with slight deficit appearing when 1000 new connections are added to the system.

Table ES-5 Water Supply Projections

| Year | Reliable System Capacity, gpd ^a | MDD, gpd | Supply Available, gpd |
|----------------------|--|----------|-----------------------|
| 2016 - current | 758,880 | 478,230 | 280,650 |
| 200 new connections | 758,880 | 533,609 | 225,271 |
| 400 new connections | 758,880 | 593,590 | 165,290 |
| 600 new connections | 758,880 | 653,571 | 105,309 |
| 800 new connections | 758,880 | 713,552 | 45,328 |
| 1000 new connections | 758,880 | 773,533 | -14,653 |

^a Calculated assuming all sources are operating at rated capacity for 24 hours per day

Water Quality

MWSD’s water quality is monitored and reported in compliance with all applicable federal and state regulations. The United States Environmental Protection Agency (USEPA) that is responsible for setting standards and assuring compliance promulgates regulations at the federal level. The State Water Board Division of Drinking Water (DDW) maintains regulations at the State level. DDW requires that all public water systems (PWS) monitor each potable water source and distribution system for chemical, biological, and radiological contaminants, and disinfection residuals and byproducts.

To ensure high water quality, MWSD owns and operates treatment facilities and associated processes, including a surface water treatment plant (WTP), a groundwater WTP, and wellhead treatment units at each of the District’s twelve (12) production wells for nitrate treatment and disinfection. The Alta Vista Water Treatment Plant (AVWTP) treats water diverted from Montara Creek by coagulation, contact clarification, filtration, and chlorination. The Pillar Ridge WTP treats groundwater from the Corona Well, Culebra Well, and Retiro Well using aeration, settling, and iron and manganese filtration, and chlorination.

Water quality is reported to the District's consumers in annual Consumer Confidence Reports (CCR) as required by the Safe Drinking Water Act. MWSD is in compliance with all water quality regulations based on the 2016 MWSD CCR, included in Appendix C. The following constituents were detected below enforceable regulatory limits, but are mitigated by the District to ensure safe drinking water in case of future water quality concerns:

- Copper and lead were found at levels *below* the Regulatory Action Level (AL) of 1.3 and fifteen (15) ppm, respectively, in the 2015 residential tap sampling.
- Arsenic was detected at the Alta Vista Well at levels *below* the Maximum Contaminant Level (MCL) but above five (5) ppb.
- Fluoride was found at the Corona Well at levels *below* the MCL but above one (1) ppm.
- Manganese was found at levels that exceeded the SMCL of fifty (50) ppb and iron was found at levels that exceeded the SMCL of 300 ppb. Secondary MCLs are set to protect against aesthetic effects of water and exceeding SMCLs poses no health risks.

Distribution System and Storage Requirements

The capacities and deficiencies of the MWSD water system were evaluated based on a range of established demands and a hydraulic model analysis. The District's distribution and storage facilities were evaluated against planning and design parameters adopted by the District's Board of Directors using the hydraulic model and current and future demand analyses. The results of the evaluation were used to inform the storage capacity requirements, distribution system evaluation, system deficiencies, and the CIP. For the purpose of this Master Plan, the ability of the system to meet current and future demands, and therefore the required sizing of facilities to provide sufficient quantities of water at adequate pressure, is based on the following demand scenarios: MDD, and Design Fire Flow.

The District's potable water distribution system was simulated using the WaterCAD Analyzer software to determine if system components adequately operate under various water demand conditions and against the District's planning and design parameters. The WaterCAD Analyzer hydraulic model simulates water system operations and generates information on pressure, flow, velocity, and headloss that can be used to

analyze the performance of the system and identify its deficiencies. The scenarios modeled include maximum and fire flow analyses and current and future demand conditions.

The total required volume of storage in a water system includes water for operational, emergency, and fire-fighting uses. Operational storage is directly related to the amount of water necessary to meet peak demands, and therefore the only value related to the number of customers connected to the District's system. The intent of operational storage is to provide the difference in quantity between the customers' peak demands and the system's available supply. Water storage for fighting fires is regulated in quantity by the National Fire Code, Insurance Service Office, and local Fire District.

The volume of water allocated for emergency uses is a policy decision based on the historical record of emergencies experienced, the amount of time which is expected to lapse before the emergency can be corrected, and the ability of the utility to recover from these emergencies. There are three (3) types of emergency events that a utility typically prepares for: minor emergencies, major emergencies, and natural disasters. The susceptibility of MWSD's water system to these emergency situations have been evaluated based on the District's current equipment and approach to handling potential emergency situations.

Table ES-6 summarizes MWSD's established storage goals for current demands and for the expected future and ultimate growth. The total storage goal is a target value that the District has set for the operation of its system and is not a mandated requirement. To date, MWSD is in compliance with regulations related to water storage requirements and has sufficient storage to serve existing customers. Additional connections only minimally increase the operation storage goal; the system's current storage volume can handle the projected growth storage needs.

Table ES-6 MWSD Storage Goals

| Storage Goal Category | Storage Volume, gallons | | | | | |
|-----------------------|-------------------------|---------|---------|---------|---------|---------|
| | Current (2016) | 200 | 400 | 600 | 800 | 1000 |
| ADD | 296,018 | 333,506 | 370,994 | 408,482 | 445,970 | 483,458 |
| MDD | 478,230 | 533,609 | 593,590 | 653,571 | 713,552 | 773,533 |
| Operational Storage | 119,558 | 133,402 | 148,398 | 163,393 | 178,388 | 193,383 |

| | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
| (25% of MDD) Emergency Storage (2 Days at ADD) | 592,036 | 667,012 | 741,988 | 816,964 | 891,940 | 966,916 |
| Fire Fighting Storage (2 hours at 2,000 gpm) | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 |
| Total Storage Goal | 951,593 | 1,040,414 | 1,130,385 | 1,220,357 | 1,310,328 | 1,400,299 |
| Existing Storage | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 |

Capital Improvement Program

The analysis presented in the 2017 Master Plan demonstrates that the water system requires improvements to address system deficiencies due to the addition of new customers and to ensure sufficient response under maximum daily operational scenarios, fire flow, and other emergency conditions. These potential improvements make up the District's CIP and include the rehabilitation of the existing infrastructure, addition of new facilities, and implementation of a repair and replacement and preventive maintenance program. The proposed improvements are categorized *Priority Level 1*, based on the District's CIP prioritization criteria.

Priority Level 1 projects almost exclusively address the system deficiencies related to adding new customers to the system. Most of the identified system deficiencies are due to adding new connections to the system and increasing demand. The projects and actions described below would allow the District to address system deficiencies and continue to operate an efficient and reliable system. The near-term improvements will be funded entirely through the Water Capacity Charge (WCC). Table ES-7, below, summarizes *Priority Level 1* projects formulated to add new District customers.

Table ES-7 Priority 1 Level CIP

| Program/Project | Total Program/Project Cost |
|---|----------------------------|
| 1. Water Main Upgrades Program | \$7,484,500 |
| 2. Existing Well Upgrade Program | \$3,389,000 |
| 3. New and Upgraded PRV Stations' Program | \$1,856,000 |
| 4. Emergency Generator Upgrades Program | \$889,500 |
| 5. Schoolhouse Booster Pump Station Upgrade | \$1,545,000 |
| 6. Portola Tank Telemetry Upgrade | \$250,000 |
| 7. Develop Additional Supply Reliability | \$1,984,000 |

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SECTION ONE

Introduction

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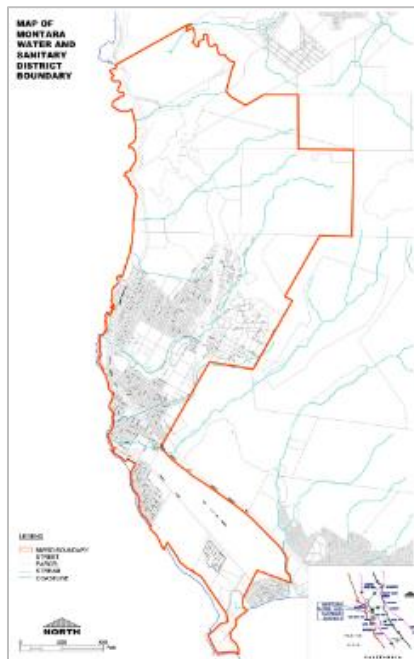
1. Introduction

The Montara Water and Sanitary District (MWSD, or District) provides water, sewer, and trash disposal services to the coastal communities of Montara, Moss Beach, and adjacent areas in unincorporated San Mateo County, California. In 2003, the Board of Directors adopted the following statement as the District’s mission:

To sensitively manage the natural resources entrusted to our care, to provide the people of Montara-Moss Beach with reliable, high quality water, wastewater, and trash disposal at an equitable price, and to ensure the fiscal and environmental vitality of the District for future generations. Be open to providing other services desired by our community.

The District owns and operates water storage, treatment, and distribution facilities (“water system” or “water infrastructure”) that provide potable water to over six thousand (6,000) people. The water system serves 1,620 domestic accounts, ninety-eight (98)-percent of which are residential connections, distributed among eight (8) pressure zones. The water served is diverted from a surface water source, Montara Creek, and extracted from twelve (12) groundwater wells that withdraw water from Montara Creek and Denniston Creek groundwater basins. The system also includes a surface water treatment plant (WTP), a groundwater WTP, seven (7) potable water storage tanks, and over 150,000 feet of distribution system pipelines.

Figure 1 MWSD Service Area



1.1. Objective

The objective of the 2017 Water System Master Plan Update (Master Plan) is to assess the District's current and future water supply needs, the adequacy of the system's infrastructure, and to create a foundation for the MWSD's Capital Improvement Plan (CIP). This Master Plan describes and assesses the existing water infrastructure, examines current and projected water demands, and outlines viable alternatives that will allow the District to fulfill its mission.

The objectives of this Master Plan include addressing the following key issues for the District's water system:

- Assess current and future water supply reliability to ensure adequate daily service and fire protection for the District's customers;
- Assess the water system's historical water quality and treatment infrastructure reliability;
- Assess the hydraulic capacity of the District's existing distribution and storage facilities;
- Develop a CIP to address existing deficiencies in the water system's infrastructure and future water demands; and
- Assess the ability of the system to handle the residential growth now allowed per the LCP and the implementation of planned large development projects (e.g., Big Wave and Sierra 1).

Figure 2 portrays the District’s planning approach to assess its water system needs.

Figure 2 MWSD Master Plan Approach

| MWSD Now | MWSD Needs | How MWSD Can Address Needs |
|--|--|---|
| <p>Reliably Serving Customers with Water that meets all Drinking Water and Safety Standards</p> <p>Facilities Water Storage Tanks Wells and Pumps Surface Water Diversion Surface Water WTP Groundwater WTP Wellhead Treatment Distribution System</p> <p>Sources Montara Creek Airport Wells (3) Portola Estate Wells (3) Pillar Ridge Wells (3) Wagner Well Drake Well Alta Vista Well</p> | <ul style="list-style-type: none"> • Ability to Reliably Serve Current and Future Water Demands • Continue to Serve Water Meeting All Drinking Water and Safety Standards • Function Reliably and Cost-effectively • Resource Sustainability | <p>Near-term:</p> <ul style="list-style-type: none"> • Implement facility improvements • Explore options for additional water supply <p>Long-term:</p> <ul style="list-style-type: none"> • Develop additional water supply to meet future demands and secure supply reliability • Implement facility improvements <p>Continuous</p> <ul style="list-style-type: none"> • Water Conservation Program to maintain low per capita usage • Groundwater Monitoring |

Facilities required to address the water system needs must be sized to provide sufficient quantities of water at adequate pressure while meeting the system demands. For the purpose of this Master Plan, the ability of the system to meet demands has been evaluated based on various flow scenarios, including:

- Maximum Day Demand
- Design Fire Flow

Water quality considerations have a major impact on the type and location of the facilities recommended for implementation in this Master Plan. Ensuring water system operational and seismic reliability through careful monitoring and control of equipment

and process units and backup equipment and backup power provisions is essential in meeting the water supply and water quality requirements.

1.2. Background

In May 2002, the Montara Sanitary District filed a condemnation action to acquire the local water system. The District's filing came after the voters of Montara and Moss Beach, with eighty-one (81)-percent of the votes in favor, authorized the issue of up to \$19 million in general obligation bonds to purchase and rehabilitate the water system.

The Board of Directors of the Montara Sanitary District, in a special meeting held on May 29, 2003, approved a Settlement and Asset Purchase Agreement with the California-American Water Company (Cal-Am), which owned the water system serving Montara, Moss Beach, and adjacent areas. The Agreement was negotiated under the auspices of the County of San Mateo Superior Court.

The Agreement approved on May 29, 2003 authorized the Montara Sanitary District to take possession of Cal-Am's Montara Water System and all associated assets on August 1, 2003. In a document dated August 1, 2003, the California Department of Public Health (CDPH, now Division of Drinking Water, DDW) approved the application for a permit amendment requested by the then re-named Montara Water and Sanitary District. Domestic Water Supply Permit No. 02-04-98P-4110010, issued on February 23, 1998 by CDPH to the Citizens Utility Company of California and amended in 2002 for Cal-Am's acquisition of the water system, was again amended in 2003 to recognize MWSD's ownership and operation of the water system.

1.3. Previous Studies

Several studies preceded this master planning effort and have evaluated alternative water supply options for the District's service area:

- The *1996 Water System Master Plan Update* prepared by Montgomery Watson for the Citizens Utility Company of California evaluated potential new groundwater wells in the Montara and Denniston basins; rehabilitation of existing wells; water transfers from Federal, State, or local agencies in the form of water rights or entitlement transfers; water purchases from neighboring districts; increased diversion from Montara Creek; new local surface water diversions; and seawater desalination.

- The *1999 Montara Water Supply Study for Montara Sanitary District* prepared by the California Department of Water Resources (DWR) examined the development of new groundwater and surface water sources; new water contract; water transfers; water from dewatering of Devil's Slide; seawater desalination; use of recycled water for irrigation and aquifer recharge; and increased water conservation.
- The *1999 Preliminary Feasibility Assessment of Groundwater in the Martini Creek, McNee Ranch and Upper Montara Area*, prepared by Balance Hydrologics for the Montara Sanitary District, indicated that additional local groundwater may be available, recommended conjunctive use of surface and groundwater resources, identified several potential well locations for further study, and recommended measuring flows on Martini Creek.
- The *2000 Water System Master Plan Update* prepared by Montgomery Watson for Citizens Utility Company of California elaborated on the alternatives put forth by the previous studies.
- The *2002 Montara Water Supply Source Study, Groundwater Alternatives* prepared by Bookman-Edmonston for Cal-Am discussed 42 potential sources of groundwater.
- The *2004 Water System Master Plan*, prepared by Olivia Chen Consultants
- The *2005 Water System Master Plan Addendum*, prepared by SRT Consultants
- The *Bay Area Clean Water Agencies (BACWA) Integrated Watershed Management Plan (IWMP)* compiled by BACWA, included the MWSD Groundwater Exploration Project, which consisted of drilling up to two (2) test wells for the purpose of characterizing the aquifers in terms of optimal potable water supply use.
- The *2007 Brackish Water/Seawater Desalination Feasibility Study*, prepared by RBF Consulting for MWSD, indicated that the construction of a seawater desalination facility on the District's property appears feasible.
- The *2011 Water System Master Plan Update*, prepared by SRT Consultants.

1.4. Previous Water Supply Augmentation Efforts

The aforementioned studies completed since 1996 were consistent in many of their findings; the discussion in this section summarizes the results, research, testing, and evaluation of alternatives as they relate to potential future water supply sources for MWSD.

1.4.1. Groundwater

Groundwater represents the least costly, most readily available source of water supply for MWSD. Completed studies have estimated capacities at various locations, but ultimately concluded that further investigations are required to define the extent and reliability of groundwater resources. The District investigated potential new groundwater sources in the Martini and Montara Creek basins in 2004 and 2005; these exploration efforts led to the addition of the Alta Vista production well with a rated capacity of 150 gallons per minute (gpm) as permitted by the California Coastal Commission (CCC).

The District's pursuit to secure rights to conduct groundwater exploration work within the Caltrans Right-of-Way (ROW) east of Montara has continued. Caltrans secured this ROW over thirty years ago for the construction of a highway, however, the project was annulled. The ROW land ownership may be transferred to another governmental entity. This land is presumed to have high potential for containing groundwater sources that could be used to address the District's future supply needs, and/or to replace current sources of low quality. Progress on this effort is summarized in the following sections.

1.4.2. Surface Water

The studies produced between 1996 and 2000 advocated for the use of surface water sources to the maximum extent possible; however, lack of sufficient hydrologic information precluded the preparers of the reports from estimating the available volumes of surface water of adequate quality for development. In addition, concerns from resource agencies including the California Department of Fish and Wildlife (CDFW), and the National Oceanic and Atmospheric Administration (NOAA) regarding the diminishment of the fish population in Coastside creeks and endangered species protection, prohibit any new and/or increased creek diversions in the District's service area. No additional consideration to augmenting surface water supply has been considered by the District since the *2011 Water System Master Plan Update*.

1.4.3. Water Transfers

Early studies of the MWSD water supply deemed water transfers and water wheeling as feasible options for augmenting the MWSD water supply. However, as of the *2000*

Master Plan Update, it was determined that there were no reliable water supplies available for purchase from outside of the service area. 2003 and 2008 correspondence from the Bay Area Water Supply and Conservation Agency (BAWSCA) firmly stated that BAWSCA had no ability to secure water transfers from the San Francisco Public Utilities Commission (SFPUC) for MWSD due to the terms of its existing contracts with SFPUC and the SFPUC's water allocation commitments to its existing wholesale customers.

Dewatering of the Devil's Slide area by the Department of Transportation was additionally evaluated in the *1996 Master Plan Update* and the *1999 DWR Study*. The project would have involved constructing a five (5)-mile-long pipeline to convey water to MWSD from the slide area. The feasibility, cost-effectiveness, and long-term reliability of this supply could not be assured, the water was both scarce and of poor quality. The District has considered no additional water transfer options since the *2011 Water System Master Plan Update*.

1.4.4. Recycled Water

The *2000 Master Plan Update* first included water reclamation, as a potentially feasible solution to meet the short-term and long-term water supply needs of the District. Options for the transmission of treated wastewater from nearby wastewater treatment facilities or via the construction of decentralized wastewater treatment facilities within the District's service area continue to be evaluated.

1.4.5. Water Conservation

Contrary to prior studies, the *2011 Master Plan Update* considered water conservation as a reliable, additional supply source. This report documented an eighteen (18) - percent reduction in water demand, equivalent to forty (40) gpm, from water conservation efforts implemented by the District, including water main leak reduction and operational changes, and from changes in landscaping strategies by its customers. This reduction was considered sustainable and, therefore, became an augmentation of the District's water supply. Despite MWSD's historically low per capita rate of water consumption, the *2011 Master Plan Update* recommended further water conservation measures to develop additional supply reliability.

1.4.6. Brackish and Seawater Desalination

The feasibility of seawater desalination by MWSD was evaluated in several of the listed studies. The *1996 Master Plan Update* proposed desalination as a source of additional water supply, but it was deemed economically infeasible for the District. The *2000*

Master Plan Update reevaluated seawater desalination and concluded that it may become more cost-effective in the future and should be further considered.

In 2007, the District began work on a *Brackish Water Desalination Study*. When no brackish water was discovered, the study instead focused on the feasibility of seawater desalination on MWSD property, with full agreement from the Department of Water Resources (DWR), the study's funding agency. The existing outfall remaining from the decommissioned wastewater treatment plant on the District's property was considered as a potential intake for a desalination facility. The study found seawater desalination to be technically feasible.

Participation in a regional seawater desalination project with other Midcoast water purveyors has also been discussed as a long-term water supply option. Brackish water desalination at a location other than the District property also remains a feasible option for the District's water supply augmentation. Brackish water and seawater desalination are second only to groundwater as the most feasible and effective options for water supply augmentation.

1.5. New Supply

The identification of supplemental water sources has been a central issue in the Montara/Moss Beach area since 1986, when the California Public Utilities Commission (CPUC) established a moratorium on new water connections based on the finding that water supplies were inadequate to meet demands on the system. Even prior to finalizing the water system acquisition process, MWSD proactively initiated a study and procured permits for groundwater exploration, and has continued to do so, in particular within the Caltrans ROW previously discussed.

With the appropriate water rights and land agreements, groundwater within the Caltrans ROW land could be used to address the District's future supply needs, and/or to replace current sources of low quality.

In January 2015, MWSD consolidated the Pillar Ridge Manufactured Home Community Water System (Pillar Ridge) and thus acquired supply sources and storage and treatment infrastructure. By consolidating with the Pillar Ridge water system, MWSD was no longer required to reserve thirty-five (35) gpm of its supply and additionally procured the operation of three (3) groundwater wells with a total rated capacity of fifty-seven (57) gpm. These wells range in depth from fifty (50) to seventy (70) feet, and have the following rated capacities:

- Corona Well: 20 gpm
- Culebra Well: 25 gpm
- Retiro Well: 12 gpm

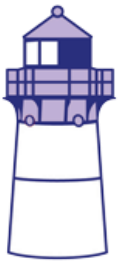
In addition to having these groundwater supply additions, MWSD has assessed the potential for expanding the pumping capacities of its current wells and has continued to explore alternative groundwater sources. In 2014, the District rehabilitated Portola Wells No. 3 and 4 as prescribed in the *2011 Master Plan Update Near-Term CIP*. The Portola Wells Production Restoration Project called for re-drilling and rehabilitation of the wells and replacement of pumping equipment to restore the wells to their original rated capacities. Portola Well No. 3 was re-drilled to a depth of 600 feet and its instrumentation and pumping equipment were upgraded. These efforts improved the rated capacity of the well by fifty-five (55) gpm; this supply increase offset the fifty-five (55) gpm rated capacity of the South Airport Well (SAW), which was re-assigned to standby status due to poor water quality. The District has also re-drilled Portola Well No. 4 to a depth of 800 feet and upgraded its instrumentation, pumping and casing. These efforts re-established the rated capacity of Portola Well No. 4. The North Airport Well's instrumentation and control (I&C) equipment was updated in January 2014, with no impact to the well's rated capacity.

Furthermore, MWSD has expended significant efforts in assessing the potential to collaborate with the Sewer Authority Mid-Coastside (SAM) Joint Powers Authority (JPA) that treats the sewerage of the MWSD's service area and that of nearby agencies, and the Coastside County Water District (CCWD) that purveys water to areas adjacent to MWSD, to produce tertiary treated recycled water for interested customers. Studies have assessed the feasibility of providing recycled water to interested customers, and have developed preliminary design for treatment and distribution facilities. At this time, MWSD, SAM, and CCWD are in the discussions and planning phases for the potential construction of a 0.8-million-gallon-per-day (MGD) recycled water treatment, storage, and distribution facility to provide water for irrigation to the Ocean Colony Golf Course in Half Moon Bay.

MWSD intensified water conservation strategies due to California's severe drought conditions. In 2014, California declared a state of emergency drought and issued various regulations and relief acts to reduce water consumption throughout the state. Despite already having a low per capita water consumption rate and prior water

conservation programs, MWSD, with the support of its customers, further reduced water demand resulting in a twenty-six (26)-percent reduction since 2004. MWSD achieved this by adopting operational water conservation strategies, including but not limited to eliminating fire flow testing at hydrants. With the CCC, the District additionally agreed to set aside fifty (50)-percent of all available capacity for drought contingencies. Accordingly, the District received the 2009 Silicon Valley Water Conservation Award for the lowest per capita water consumption rate in California.

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SECTION TWO

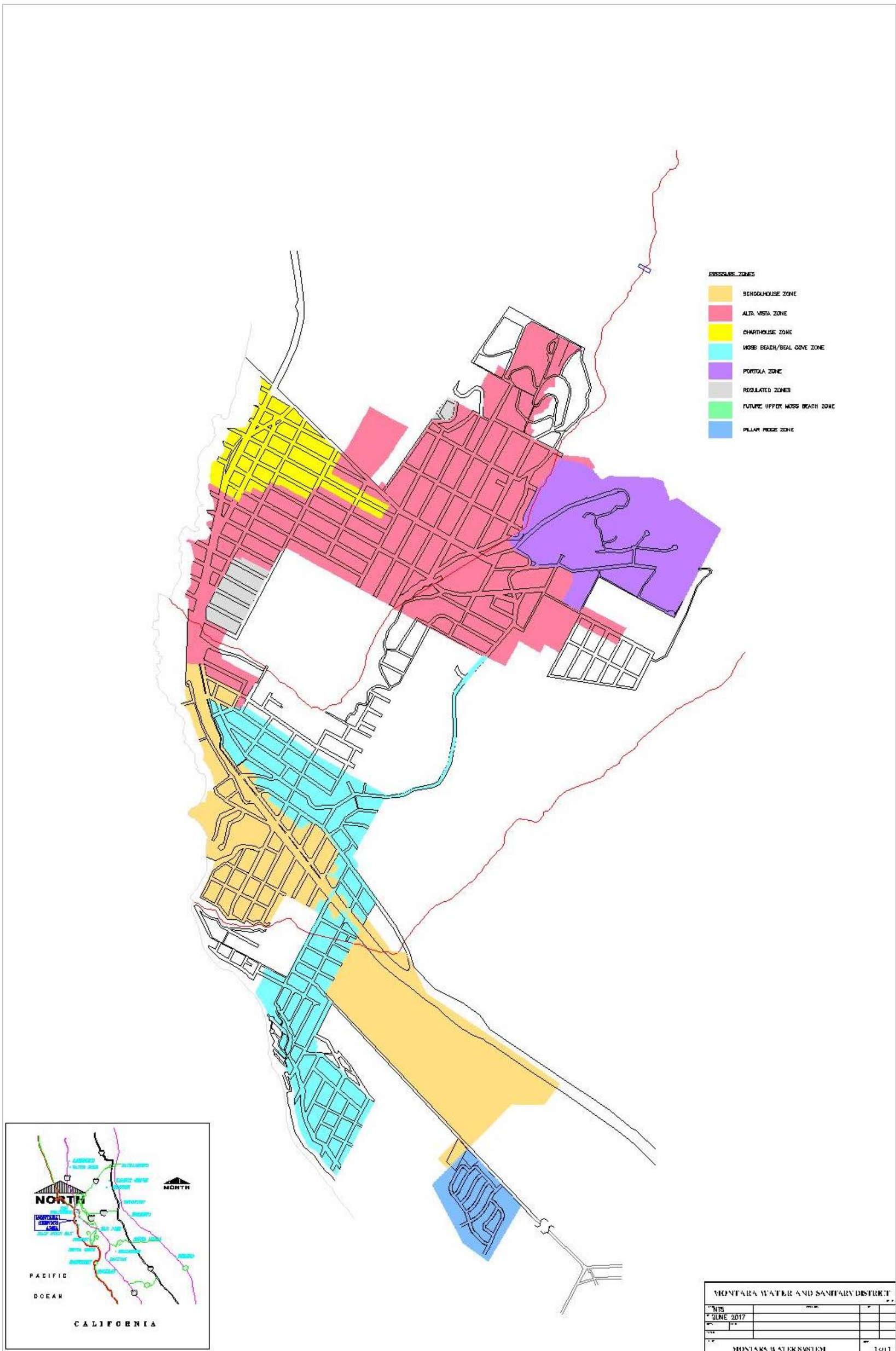
Water Supply and Consumption

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2. Water Supply and Consumption

MWSD is exclusively served by groundwater sources from the San Mateo Coastal Basin Aquifers and surface water from the Montara Creek. The District's water system includes water storage tanks, a surface WTP, a groundwater WTP, wellhead treatment facilities, two (2) booster pump stations, and distribution pipelines. Figure 3 presents an approximate layout of the District's facilities and pressure zones in the distribution system.

Figure 3 MWSD Water System Layout



2.1. Water Supply

MWSD currently withdraws water from one surface source and several groundwater wells:

- *Montara Creek* is the District's surface water source. Pre-1913 water rights allow MWSD to divert up to 200 gpm from Montara Creek, subject to regulatory and resource agency approvals. MWSD conveys water through a six (6)-inch diameter raw water pipeline from a diversion point north of Montara into a 77,000-gallon concrete raw water tank at the Alta Vista Water Treatment Plant (AVWTP). The District replaced this pipeline in 2003, immediately upon taking ownership of the water system. Suspended solids are allowed to settle in the raw water tank prior to treatment at the AVWTP. Treated water is stored in the 462,000-gallon AV Tank No. 1 or 500,000-gallon AV Tank No. 2 and then conveyed to the distribution system.
- *Groundwater* is currently extracted at twelve (12) locations: Alta Vista Well; Drake Well; Portola Wells Nos. 1, 3, and 4; Wagner Well No. 3; Airport Wells (North Airport Well, South Airport Well, and Airport Well No. 3); and the Pillar Ridge Wells (Corona Well, Culebra Well, and Retiro Well). More information on these wells is presented in the following sections.

2.1.1. Capacities

MWSD serves water that comes from Montara Creek, a surface water source, and twelve (12) groundwater wells that withdraw water from the Montara and Denniston groundwater Basins. Each source has a rated capacity established at the time it was brought on line; however, all sources typically operate below their respective rated capacities. Rated capacities are used to determine the reliable capacity and the maximum serviceable demand of the system. This section establishes the rated and actual capacity of the District's water system and determines its current reliable capacity.

2.1.1.1. Annual Average Estimates

To accurately evaluate the capacity of the MWSD water system, an analysis was conducted with the data collected since MWSD acquired the system. Although data was available for the period of 2000 – 2003, and was included in the *2004 MWSD Water System Master Plan*, the quality and consistency of data collection during this time period was unknown. Since actual production records were not available prior to

January 2004 to verify the accuracy of the data and subsequent analysis, the *2017 Master Plan Update* only includes data collected since the MWSD acquisition.

Three sets of analyses were completed that follow and expand upon the methodology presented in the *2011 Master Plan Update*; these analyses use data collected between January 2004 and October 2007, prior to the addition of the Alta Vista Well, between November 2007 and December 2014, following the addition of the Alta Vista Well and prior to the addition of the Pillar Ridge Wells, and between January 2015 and December 2015, after the addition of the Pillar Ridge Wells. The actual reported production rates were recorded while the source was in service and do not imply that the source can continuously operate at the reported rate. Most sources operate at the reported rates for fewer than twelve (12) hours per day due to diurnal customer demand fluctuations. In addition, some sources are taken out of service during certain times of the year, depending on source conditions and system demands. The data summarized in this section represent the actual production rates of the sources. Detailed annual production data for 2004 through 2016 is presented in Appendix A.

2.1.1.2. 2004 – October 2007 Source Capacities

Between January 2004 and October 2007, MWSD sources had a rated capacity of 470 gpm and an average combined production rate of 348 gpm while in service. A summary of the average production rates for each source during this time is presented in Table 1.

Table 1 Average Monthly Production Rates, 2004 – October 2007

| MWSD Source | Rated Capacity, gpm | Annual Average Production Rate, gpm ^a |
|---------------------------------|----------------------------|---|
| North Airport Well | 100 | 56 |
| South Airport Well | 55 | 42 |
| Airport Well No. 3 | 100 | 73 |
| Drake Well | 35 | 37 |
| Portola Well No. 1 | 9 | 6 |
| Portola Well No. 3 | 10 | 7 |
| Portola Well No. 4 | 16 | 6 |
| Wagner Well No. 3 | 70 | 58 |
| Montara Creek Surface Diversion | 75 | 63 |
| TOTAL | 470 | 348 |

^a Production rates are the operating rates of each source and are only recorded when the source is being used. The annual average is determined from the operating production rates of each source, averaged over the total operating time, and not the total time.

2.1.1.3. *November 2007 – 2014 Source Capacities*

Between the addition of the Alta Vista Well with a rated capacity of 150 gpm in November 2007 and December 2014, MWSD sources had a total rated capacity of 620 gpm and an average combined production rate of 393 gpm. A summary of the average production rates for each source during this time is presented in Table 2.

Table 2 Average Monthly Production Rates, November 2007 – 2014

| MWSD Source | Rated Capacity, gpm | Annual Average Production Rate, gpm ^a |
|---------------------------------|---------------------|--|
| Alta Vista Well | 150 | 100 |
| North Airport Well | 100 | 77 |
| South Airport Well | 55 | 20 |
| Airport Well No. 3 | 100 | 25 |
| Drake Well | 35 | 36 |
| Portola Well No. 1 | 9 | 5 |
| Portola Well No. 3 | 10 | 6 |
| Portola Well No. 4 | 16 | 7 |
| Wagner Well No. 3 | 70 | 59 |
| Montara Creek Surface Diversion | 75 | 56 |
| TOTAL | 620 | 393 |

^a Production rates are the operating rates of each source and are only recorded when the source is being used. The annual average is determined from the operating production rates of each source, averaged over the total operating time, and not the total time.

2.1.1.4. *2015 Source Capacities*

In January 2015, MWSD consolidated the Pillar Ridge Community and acquired three (3) wells with a total rated capacity of fifty-seven (57) gpm. Starting in 2015, MWSD sources had a total rated capacity of 677 gpm and an average combined production rate of 450 gpm. A summary of the average production rates for each source during this time is presented in Table 3.

Table 3 Average Monthly Production Rates, 2015

| MWSD Source | Rated Capacity (gpm) | Annual Average Production Rate (gpm) ^a |
|---------------------------------|----------------------|---|
| Alta Vista Well | 150 | 122 |
| North Airport Well | 100 | 49 |
| South Airport Well | 55 | 0 |
| Airport Well No. 3 | 100 | 0 |
| Drake Well | 35 | 30 |
| Portola Well No. 1 | 9 | 0 |
| Portola Well No. 3 | 10 | 40 |
| Portola Well No. 4 | 16 | 1 |
| Wagner Well No. 3 | 70 | 42 |
| Pillar Ridge Wells No. 1 – 3 | 57 | 40 |
| Montara Creek Surface Diversion | 75 | 54 |
| TOTAL | 677 | 378 |

^a Production rates are the operating rates of each source and are only recorded when the source is being used. The annual average is determined from the operating production rates of each source, averaged over the total operating time, and not the total time.

2.1.1.5. Montara Creek Surface Water

The capacity of the surface water source, Montara Creek, is unknown. The District has the right to divert up to 200 gpm, however, the availability of such a flow rate is uncertain. In addition, the CDFW occasionally limits diversion rates at certain seasons to protect endangered species. Presently, the AVWTP has a rated operating capacity of seventy-five (75) gpm. AVWTP production records between 2004 and 2015 indicate that the treatment plant produces between thirty-two (32) gpm and seventy-four (74) gpm when in operation. When turbidity is too high, which typically occurs during the winter months, the AVWTP is shut down. In addition, AVWTP cannot operate when flow in the raw water pipeline falls below thirty (30) gpm, which typically occurs in the summer months.

2.1.1.6. Groundwater Wells

MWSD operates twelve (12) active groundwater wells with a combined rated capacity of 602 gpm. Production records between 2004 and 2016 show variable yields from the District's wells due to operational constraints and maintenance issues. The wells typically operate no more than twelve (12) hours in a given day, and they do not operate during all days of a year. The typical operating hours depend on water quality, well

location, and system demands. As a result, wells may produce below their rated capacities.

According to monthly production records in 2015, the average production rate of the twelve (12) wells was 324 gpm while in operation, or about fifty-four (54) percent of their rated capacity. Between November 2007 and December 2014, prior to the addition of the Pillar Ridge Wells, the average production rate of the nine (9) wells was 337 gpm while in operation, or about sixty-two (62) percent of their rated capacity. Prior to November 2007, when the Alta Vista Well was added to the system, the eight (8) wells had a rated capacity of 395 gpm and the average production rate of the active wells was 285 gpm while in operation, or about seventy-two (72) percent of their rated capacity. Drake Well and Wagner Well normally operate near their respective rated capacities.

2.1.2. System Reliability

The current rated capacities were utilized to evaluate the total MWSD source capacity. In summary, the District's water system currently relies on the following source capacities:

| | |
|--------------------------------------|----------------|
| Twelve (12) active groundwater wells | 602 gpm |
| Montara Creek surface water | 75 gpm |
| Total source capacity | 677 gpm |

The reliable capacity of the system is representative of the most probable true capacity and is defined as the capacity of the system with the largest source out of service. The *2005 Water System Master Plan Addendum* defined the Airport Wells, collectively, as the largest source in the system for the supply reliability calculation, even though each well is technically an individual source. In 2005, considering the Airport Wells as one source was a valid argument based on water quality history, current treatment, and the lease agreement effective at that time.

The *2011 Water System Master Plan Update* re-evaluated these assumptions and determined that the largest source in the MWSD system was the Alta Vista Well with a rated capacity of 150 gpm. This decision was described in the *2011 Water System Master Plan Update* and was based on a nitrate contamination analysis of the Airport Wells, treatment modifications at the AVWTP, and lease agreement negotiations for the Airport Wells land that deemed the Airport Wells no longer collectively vulnerable to water quality or legal issues and, therefore, individual sources for the MWSD system.

The following calculation determines the reliable supply of the system, assuming the Alta Vista Well is out of service:

| | |
|--------------------------------|----------------|
| Total source capacity | 677 gpm |
| Alta Vista Well capacity | (150 gpm) |
| Total reliable capacity | 527 gpm |

The drought supply capacity is representative of the District’s capacity under the most severe drought conditions, and is considered an extremely conservative planning value. The industry-wide standard for calculating drought supply capacity is by reducing the total rated supply capacity by fifty (50) percent, as follows:

| | |
|-------------------------------|----------------|
| Total source capacity | 677 gpm |
| Total drought capacity | 339 gpm |

The current total, reliable, and drought supply capacities are summarized in Table 4.

Table 4 Total, Reliable, and Drought Supply Capacities, 2015

| MWSD Source | Rated Capacity (gpm) | Rated Capacity (gpd) |
|--|----------------------|----------------------|
| Montara Creek Surface Diversion | 75 | 108,000 |
| Twelve (12) Groundwater Wells | 602 | 866,880 |
| Total Supply Capacity <i>Sum of all sources</i> | 677 | 974,880 |
| Reliable Supply Capacity <i>Total supply capacity excluding largest source</i> | 527 | 758,880 |
| Drought Supply Capacity <i>50% of total supply capacity</i> | 339 | 487,440 |

2.1.3. Source Production

On average, MWSD water sources produced about 296,000 gallons per day (gpd) over the past thirteen (13) years, 2004 through 2016, with an annual average minimum production of 260,983 gpd in 2014 and an annual average maximum of 359,023 gpd in 2004.

The data trend generally indicates the production decreasing across the first eleven (11) years; the observed production increase in 2015 is solely due to the acquisition of the Pillar Ridge Wells. Over the thirteen (13) years, production from all sources is relatively

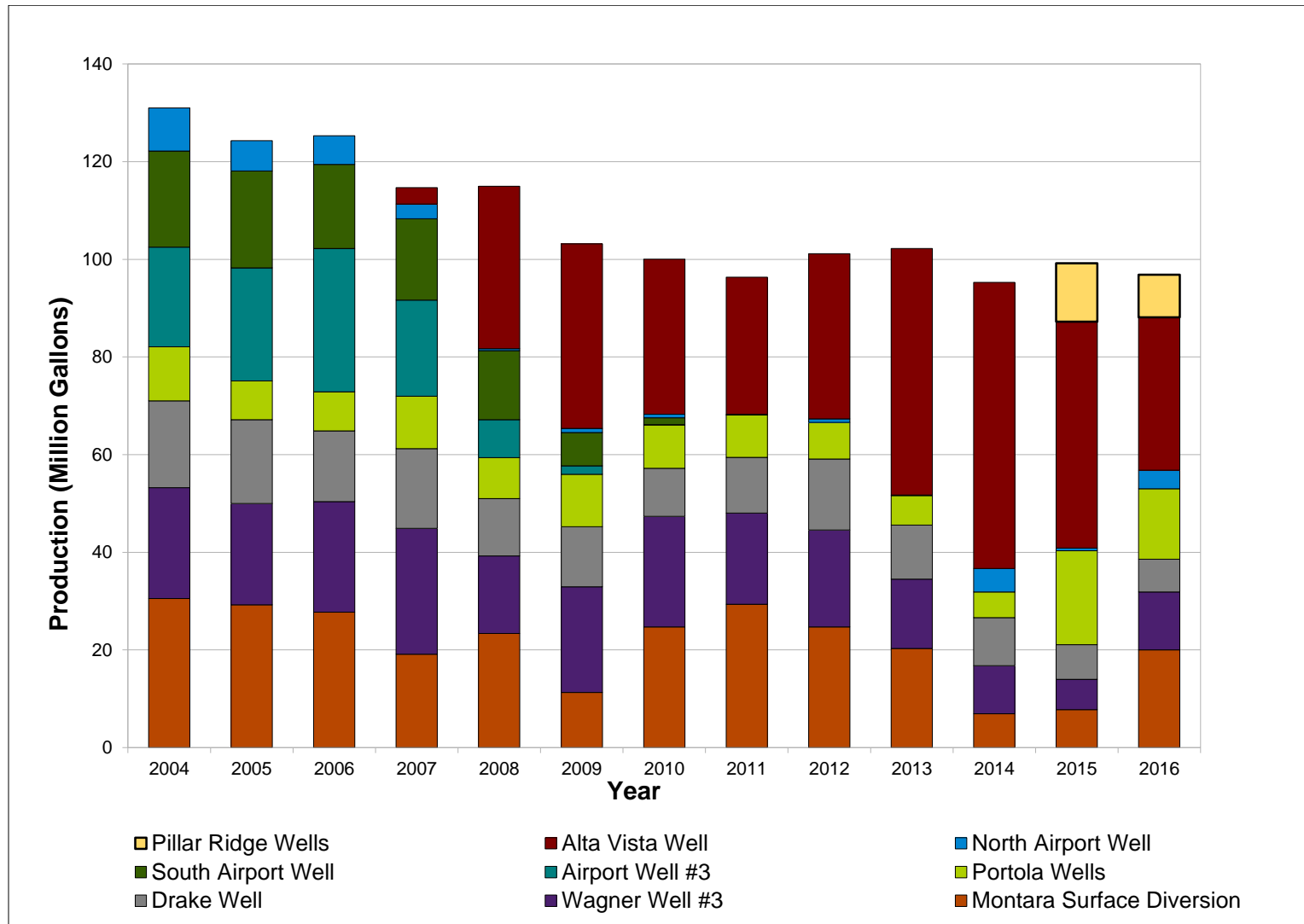
stable, except for from the Airport Well No. 3, the South Airport Well, and the Alta Vista Well. Most notably, when the Alta Vista Well came on line in 2008 for the first full year of production, MWSD was able to lessen its dependence on the Airport Wells, thus realizing an important improvement in the water system reliability. The average daily production rate of the MWSD system was calculated for this time period (2004 through 2016) and is presented in the Table below. The detailed monthly production data and analysis is included as Appendix B.

The maximum daily rate of production was determined by reviewing production records and by identifying the greatest production rate observed on any one (1) day during each of the previous nine (9) years, between 2008 and 2016. The maximum daily production rate was calculated as the maximum daily rate of production since 2008, due to significant changes in demands resulting from system improvements made between 2004 and 2008; results are summarized in Table 5. Figure 4 shows the total annual production for each source between 2004 and 2016.

Table 5 Average and Maximum Daily Source Production

| MWSD Source | Total Production (gpd) (Month) |
|-----------------------------|---------------------------------------|
| Average Daily (2004 – 2016) | 296,018 |
| Maximum Day 2008 | 437,440 (June) |
| Maximum Day 2009 | 406,780 (July) |
| Maximum Day 2010 | 478,230 (July) |
| Maximum Day 2011 | 379,610 (July) |
| Maximum Day 2012 | 381,080 (June) |
| Maximum Day 2013 | 414,676 (June) |
| Maximum Day 2014 | 386,610 (August) |
| Maximum Day 2015 | 402,210 (August) |
| Maximum Day 2016 | 400,876 (July) |

Figure 4 Total Annual Water Production by Source, 2004 – 2016



2.2. Current Consumption

MWSD's water consumption rates between 2004 and 2016 are presented below.

2.2.1. Consumption Trends

Data on the volume of water delivered to metered customers between 2004 and 2016 was used to calculate monthly and annual consumption values; average monthly consumption rates are shown on Figure 5 on the following page. The driest months of the year, May through October, have the highest consumption volumes on average, most likely due to increases in water used for irrigation.

The consumption data was also analyzed to evaluate the annual trends in water use over the thirteen (13) year time period (2004 – 2016). The water consumption generally declines each year, with the exception of a small increase in 2008, due to the inclusion of the Alta Vista Well, and in 2015, after the acquisition of the Pillar Ridge Wells. The general decrease in consumption can be attributed to the District's implementation of the main replacement program, meter replacement program, improved operational practices, and voluntary conservation by the District's customers. A summary of the consumption data analysis is presented in Table 6 and Figures 5 and 6.

Table 6 Annual Consumption Rates, 2004 – 2016

| Year | Total Consumption, MG | Average Daily Water Use, gpd |
|-------------|------------------------------|-------------------------------------|
| 2004 | 117.41 | 321,671 |
| 2005 | 114.99 | 315,041 |
| 2006 | 111.17 | 304,575 |
| 2007 | 104.61 | 286,603 |
| 2008 | 106.72 | 292,384 |
| 2009 | 98.93 | 271,041 |
| 2010 | 92.83 | 254,329 |
| 2011 | 87.75 | 240,411 |
| 2012 | 93.11 | 255,107 |
| 2013 | 94.67 | 259,367 |
| 2014 | 86.48 | 236,921 |
| 2015 | 89.53 | 245,274 |
| 2016 | 90.08 | 246,786 |

Average and per capita water use values were calculated based on the above data. The average annual consumption is approximately 99.1 MG and the average daily consumption is approximately 271,500 gpd.

Figure 5 Average Monthly Consumption Volumes, 2004 – 2016

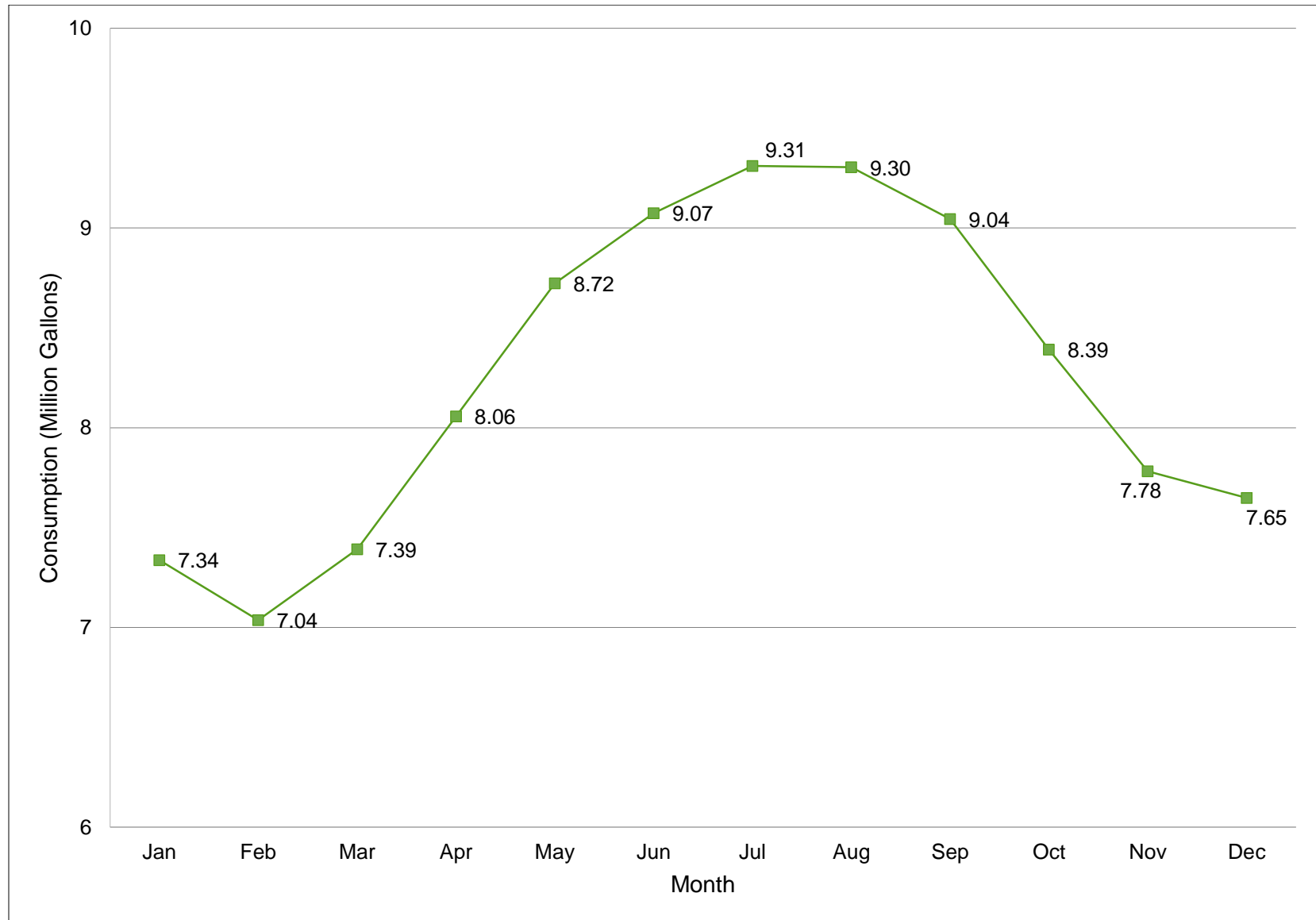
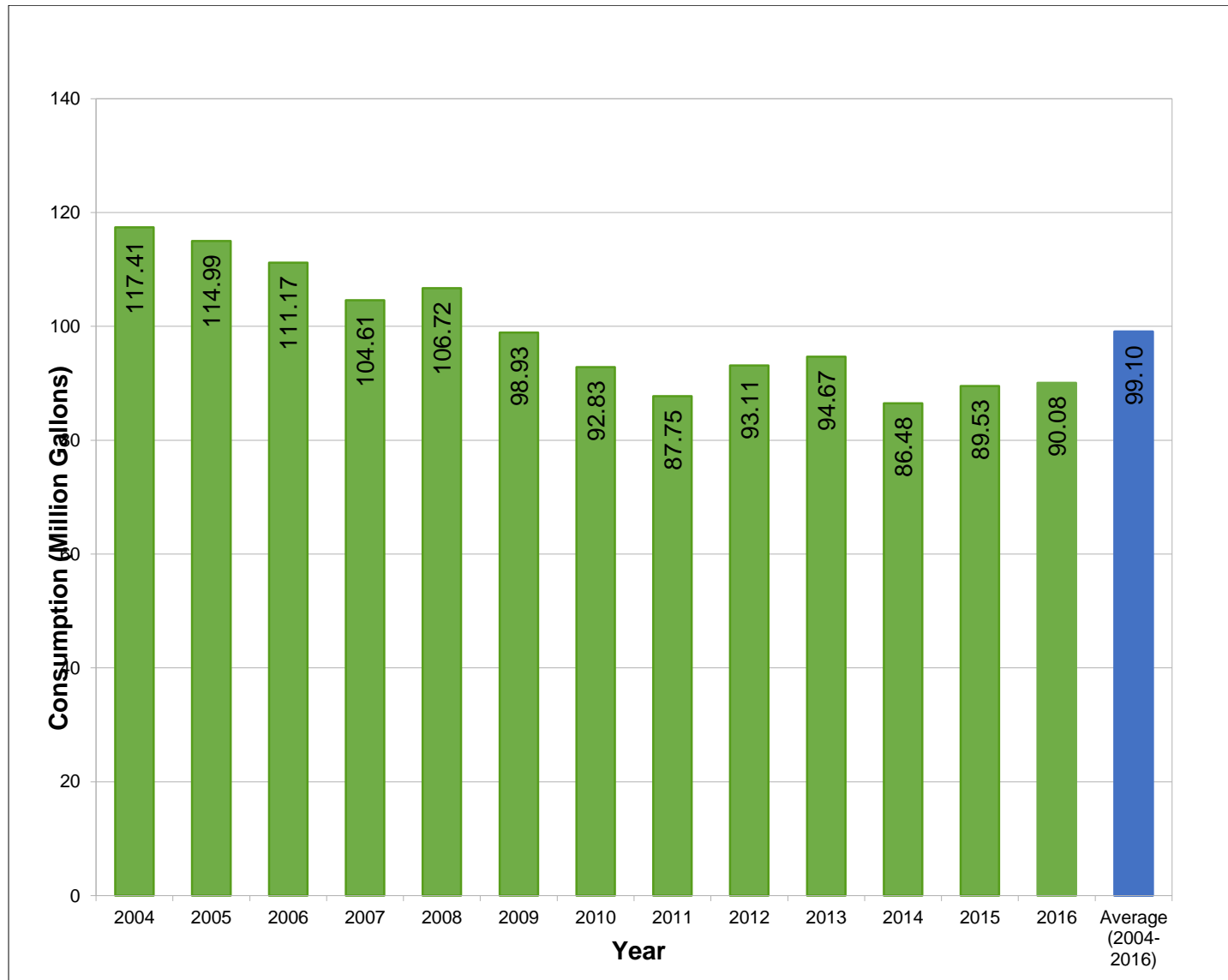


Figure 6 Annual Consumption Volumes, 2004 – 2016



2.2.2. Unaccounted-for-Water

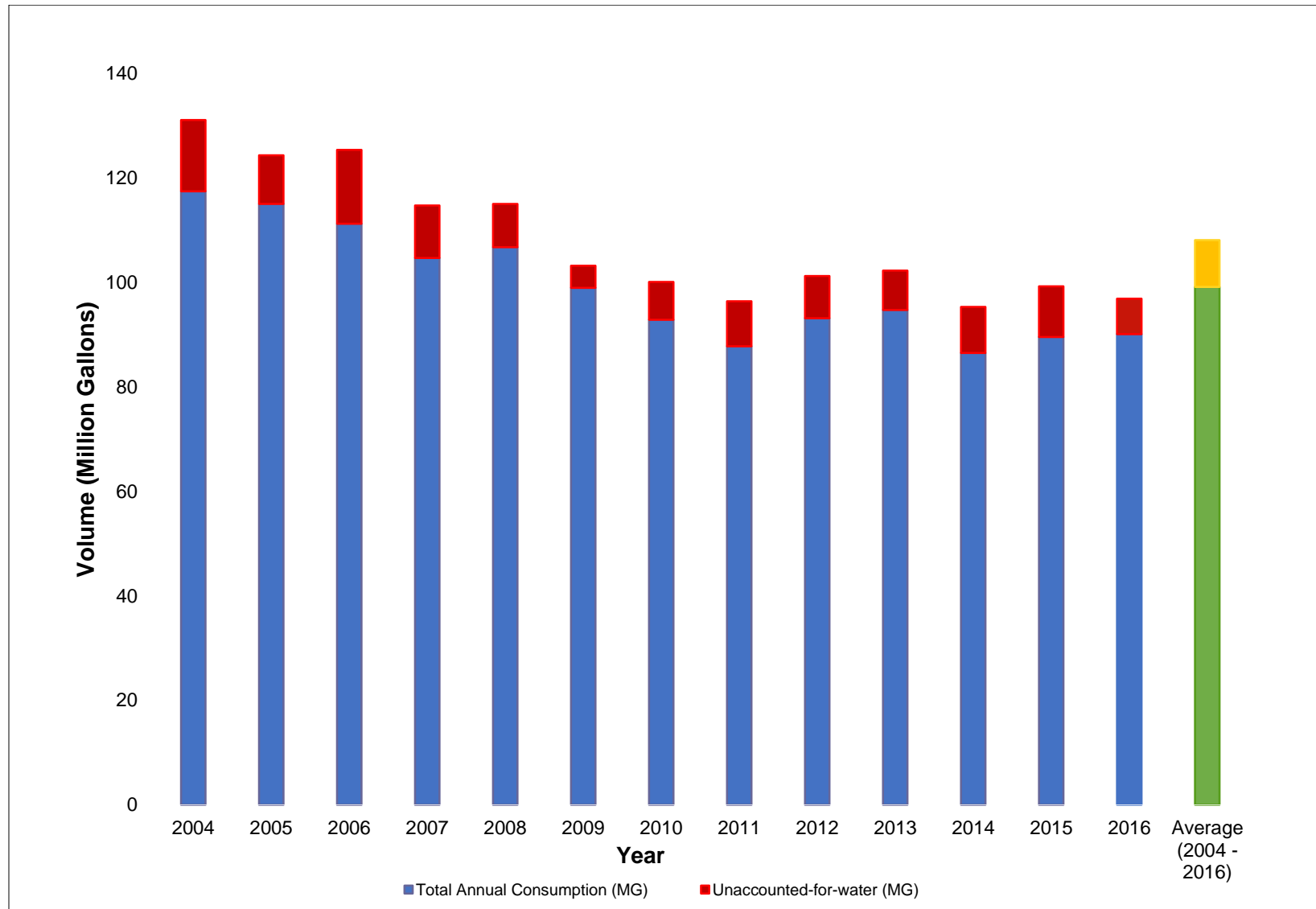
MWSD’s source production is dependent upon customer consumption, as the sources only produce water in response to customer demands. The difference between the water system’s production and consumption rates represent system losses, known as unaccounted-for-water. Unaccounted-for-water represents water used for fire flow testing, water main flushing, repairs, filter backwash operations at the WTPs, and distribution system leaks. Table 7 and Figure 7 compare consumption and production volumes for the MWSD system and quantify unaccounted-for-water between 2004 through 2016.

Table 7 Unaccounted-for-Water Volumes, 2004 – 2016

| Year | Total Annual Water Production, MG | Total Annual Consumption, MG | Unaccounted-for-Water, MG | System Losses Percent of Total Production |
|-------------|--|-------------------------------------|----------------------------------|--|
| 2004 | 131.04 | 117.41 | 13.63 | 10.40% |
| 2005 | 124.30 | 114.99 | 9.31 | 7.49% |
| 2006 | 125.31 | 111.17 | 14.14 | 11.28% |
| 2007 | 114.69 | 104.61 | 10.08 | 8.79% |
| 2008 | 114.99 | 106.72 | 8.27 | 7.19% |
| 2009 | 103.17 | 98.93 | 4.24 | 4.11% |
| 2010 | 100.05 | 92.83 | 7.22 | 7.22% |
| 2011 | 96.35 | 87.75 | 8.60 | 8.93% |
| 2012 | 101.17 | 93.11 | 8.06 | 7.96% |
| 2013 | 102.22 | 94.67 | 7.55 | 7.38% |
| 2014 | 95.26 | 86.48 | 8.78 | 9.22% |
| 2015 | 99.21 | 89.53 | 9.68 | 9.76% |
| 2016 | 96.84 | 90.08 | 6.77 | 6.99% |

Unaccounted-for-water is higher in 2004 and 2006, most likely due to an increased number of main and hydrant replacement projects and increased flushing activities to address water quality issues. Unaccounted-for-water volume decreased after 2006 following the implementation of the distribution system improvements program. In 2014 and 2015, the increases observed in unaccounted-for-water are likely due to distribution system leaks. A noticeable decrease of the volume of unaccounted-for water occurred in 2016, likely due to system’s improvements. For the purpose of estimating future demands, the system losses for the District have been assumed at 8.2 percent of total production, the average calculated from the 2004 – 2016 time period presented in the above Table 7. This value is below the industry-wide standard of 10% unaccounted-for-water for a well-operated system.

Figure 7 Annual Production, Consumption, Unaccounted-for-Water Volumes, 2004 - 2016



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SECTION THREE

Current and Future Water Demand

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3. Current and Future Water Demands

Water demand volume and trend projections provide the basis for sizing and prioritizing improvements to water facilities and identifying the need for additional water supply sources or facilities. Average, maximum daily, and peak hourly demands (ADD, MDD, PHD, respectively) were calculated from 2004 through 2016 monthly production records from all of the District's water supply sources. The 2010 U.S. Census data for the census-designated places served by MWSD, Montara and Moss Beach, and the population of the Pillar Ridge community at the time of the 2015 consolidation as reported by Millennium Housing, the owner of the Pillar Ridge community, were used to estimate current per capita water demands.

Population growth, future water demand volumes, and the allocation of available water sources among the various sectors in the community at future growth scenarios were estimated using the current demand calculations and data from the *2013 County of San Mateo Local Coastal Program Policies (LCP) Update*. The future growth scenarios were defined as potential number of connections added to the system, from the addition of 200 to up to 1,000 connections. It was assumed that any growth would not exceed within the maximum growth rate mandated by the 2013 San Mateo County LCP, of 20 units per year.

The following sections detail information regarding the District's number of connections, existing customer demand, estimated projections of water demands and supply availability based on projected growth, and the distribution of water use by LCP-designated priority uses and by pressure zones.

3.1. Regulatory Framework

Regulations pertaining to the quantity of water supplied by the District to meet customer demands include Title 22, Chapter 16 of California Code of Regulations. These sections require that MWSD make available a sufficient quantity of water from the aforementioned water sources in order to have an adequate, dependable and safe water supply under MDD conditions for the entirety of the District's service area, and that system pressures remain at a minimum of twenty (20) pounds per square inch (psi) under PHD or ADD conditions, whichever is greatest, plus design fire flow. These sections do not specify water

quality criteria; the DWD administers the implementation and compliance with water quality regulations promulgated by the USEPA as described in Section 4.

The National Fire Code, Insurance Service Office, and local Fire Department identify storage requirements for firefighting purposes based on a fire flow of 2,000 gpm for a two (2)-hour duration. 2,000 gpm corresponds to a land use of multiple one (1)- and two (2)-story residential and light commercial or light industrial developments.

The geographic location of MWSD brings the District under the jurisdiction of the CCC. A Coastal Development Permit (CDP) is required under the California Coastal Act for any new development in the coastal zone, including most activities associated with changes to the MWSD water infrastructure. Such activities include, but are not limited to, a change in the intensity of water use or access to water, the placement of any solid material or structure, a change in land use density or intensity, and removal of major vegetation.

The San Mateo County's (County) LCP, initially created in the 1980s between the County Board of Supervisors and the CCC and since then updated, serves to compile the policies and requirements of planning projects located within the Coastal Zone which ultimately fall under CDPs or Coastal Development Exemptions.

The San Mateo's LCP establishes the County's population growth limits by stipulating the land use density and development density limits, which ultimately define an area's buildout. Additionally, the LCP limits expansion of public works facilities to serve an area's specified buildout population. The *2013 County of San Mateo LCP Update* now in effect was certified by the CCC and approved by the Board of Supervisors of the County of San Mateo in August 2012. The LCP requires that MWSD monitor the actual amount of water consumption by land use, and the rate of growth of new development. Monitoring results are submitted to the San Mateo County in the form of annual reports.

According to the San Mateo County LCP, new public water connections in the District's service area are allowed only if they are consistent with the MWSD Public Works Plan (PWP) and amendments in effect, Chapter 2 of the LCP, and all other applicable policies of the LCP as amended. When the PWP was first certified in 2008, the moratorium on new connections that initially had been imposed by the California Public Utilities

Commission (CPUC) in the 1980s on the then privately-owned water system was still in effect. After acquiring the system in 2003, the District continued the moratorium due to substandard infrastructure and an unreliable water supply portfolio. Accordingly, the PWP acknowledged the existence of the moratorium by including reference to it and providing that the improvements authorized by the PWP were not intended to lift the moratorium. That provision was consistent with the District's early Master Plans and the condition of MWSD's infrastructure at that time.

However, MWSD has since improved the condition of its infrastructure and the reliability of its water supply through high levels of conservation and operational improvements. These improvements included the Water Main Replacement Program, which resulted in a six (6)-percent reduction in water losses, the Raw Water Pipeline Replacement, which improved water quality and flow, as well as groundwater pumping and treatment improvements, distribution system upgrades, and construction of additional storage facilities. As a result of such improvements increasing the reliability of the District's water supply, MWSD repealed the moratorium in March 2011. The District has since continued water conservation programs and improvements to its infrastructure in order to provide an adequate supply of quality of water to its customers in an environmentally conscious and sustainable manner.

As of December 11, 2013, the District's PWP acknowledged that the District had 128,000 gpd available to be utilized for new service connections and was permitted to serve new connections. Available water supply may be utilized to serve existing development that is within the LCP urban area that is currently served by private wells, or it may be utilized to provide new service connections to development that has been authorized pursuant to the County's LCP, including the LCP's growth limitation, which is currently one (1)-percent per year. Approval of any new private wells within the District's service area was limited to five (5) per year between August 8, 2012 and August 7, 2015, unless MWSD obtained approval from the CCC to provide water service to vacant properties.

The LCP Land Use Plan, including Policies 2.8 and 2.24 and Table 2.17, also requires that the District reserve available water supply for priority uses, and that the amount of water required being reserved would decrease as priority connections are made. Priority

connections and uses are herein defined as those which serve the priority capacity to provide municipal water service to residential dwellings which are connected to the public sanitary sewer system when such a connection is necessary to avert a substantial hardship caused by the failure of a private well serving the dwelling in production quantity or quality as certified by the County, and when non-priority connections are not available. Substantial hardship, for these purposes, does not include any failure that can be remedied by repair, replacement nor relocation, and is determined by the County. As of December 11, 2013, 47,041 gpd are available for non-priority uses, including residential, commercial and industrial uses and for the conversion of private residential wells within the District’s service area, based on MWSD’s available water supply and LCP requirements.

3.2. Current Demand

Since MWSD’s water source production is directly dependent upon customer demand and unaccounted-for-water, recorded production values reflect the water system’s demand and therefore the supply required to support the customer water use. The following Table presents MWSD’s average and peak water demands based on the production records between 2004 and 2016.

Table 8 MWSD Water Use, 2004 – 2016

| Year | MWSD Production gallons | Water Use gallons | Peaking Ratio |
|----------------------------|----------------------------|----------------------|------------------|
| Average Daily Demand (ADD) | 296,018 ^a | 271,501 ^b | 1.0 |
| Maximum Daily Demand (MDD) | 478,230 ^a | 439,015 ^c | 1.6 ^d |
| Maximum Hour | 32,069 ^e | 29,439 ^c | 2.6 |
| Design Fire (2 hours) | 240,000 | 240,000 | N/A |

^a Based on daily production data for maximum production months, 2006 – 2016. 2004 and 2005 data was not used due to inaccessibility

^b Based on water consumption data, from 2004 – 2016

^c Calculated from average and maximum daily production values, respectively, with an 8.22-percent reduction for unaccounted-for-water

^d Calculated empirically from the system’s MDD and ADD values

^e Calculated utilizing a peaking ratio of 2.6, as used in previous MWSD Master Plans

3.2.1. Per Capita Demand

The per capita demand is the MWSD water demand per person based on the MWSD water production and water connection records, the 2010 U.S. Census population data for Montara and Moss Beach, and the population of the Pillar Ridge community at the time of the 2015 consolidation.

2010 U.S. Census population data was used to estimate average household sizes for Montara and Moss Beach, while water connection records determined the population that MWSD serves.

The average household size of 2.84 persons used for the population growth predictions of the consolidated MWSD system was determined by calculating the weighted average of Montara and Moss Beach household size of 2.72 persons and the Pillar Ridge household size of 3.71 persons, based on the percentage of residences in each area.

The number of residential water connections in the system was reported as 1,620 in the Montara/Moss Beach service area by MWSD, and a population of 5,256 people (2.72 persons per household in Montara/Moss Beach x 1,620 households + 850-person Pillar Ridge population) is served by the District.

Calculated above from production data, the average ADD for 2004 through 2016 was 296,018 gpd. This daily consumption includes the thirty-three (33) commercial water connections in the service area, so the population absorbs that demand in the per capita demand estimate.

The per capita demand for the system post-Pillar-Ridge consolidation has been calculated by doing a weighted average of the per capita demand of the Montara/Moss Beach area prior to the consolidation from 2004 to 2014 (69 gpcd) and the per capita demand of the system including Pillar Ridge for 2015 and 2016 (51 gpcd).

Based on these calculations, the per capita daily water demand was established as approximately sixty-six (66) gallons per capita per day (gpcd). This per capita demand is significantly lower than the seventy-two (72) gpcd estimated for the years 2000 through 2008, as reported in the 2009 Master Plan Update. The per capita water use, which is based on the average annual daily consumption of 271,501 gpd and does not include

unaccounted-for-water, is approximately fifty-one (51) gpcd. As unaccounted-for-water volumes decrease, the per capita demand will also decrease and approach the per capita consumption value.

3.2.2. Demand by Pressure Zone

The distribution of water use by pressure zone as ADD is shown in Table 9 and is based on the estimated number of service connections and population in each zone and the average ADD presented in Table 8. The boundaries of individual pressure zones are shown in Figure 3. With the incorporation of the Pillar Ridge water system, adjustments to the District's system to accommodate a new pressure zone were made.

Table 9 Estimated Current Water Demand by Pressure Zone

| Pressure Zone | Hydraulic Grade Line, HGL (feet) | Percent of Connections ^a | Current Water Demand (gpd) |
|---------------------------|---|--|-----------------------------------|
| Alta Vista | 512 | 43.6% | 129,064 |
| Charthouse | 318 | 4.2% | 12,433 |
| Upper Moss Beach | 388 | 2.5% | 7,400 |
| Moss Beach / Seal Cove | 338 | 13.4% | 39,666 |
| Pillar Ridge ^b | 179 | 16.2% | 47,955 |
| Portola | 462 | 3.4% | 10,065 |
| Regulated | 303 – 336 | 2.5% | 7,400 |
| Schoolhouse | 193 | 14.2% | 42,035 |
| TOTAL | | 100% | 296,018 |

^a Based on number of actively billed residential domestic water meters.

^b Percent of connections and water demand of Pillar Ridge Pressure Zone assumed based on estimated number of residences (229 residences) because this Pressure Zone is served by one (1) commercial meter instead of by residential meters.

3.3. Future Water Demand

Future demands on the MWSD water system were estimated for various numbers of additional connections, up to 1000 additional connections. Future demand estimates are based on the following assumptions:

- The population already residing or owning property in the service area that is not connected to MWSD, will be connecting to water system, and

- The District will serve new homes being built in the service area in accordance with the *2013 County of San Mateo LCP Update*.

3.3.1. Existing Population Demand

Current populations within the service area have been estimated for 2004 through 2016 based on the average household size calculated based on the 2010 U.S. Census data, the population of the Pillar Ridge community at the time of the 2015 consolidation, and on records kept by MWSD regarding the number of residential water connections and sewer connections. Since every new house in the MWSD service area must be connected to the sewer system, the number of new sewer connections provides an accurate estimate of the number of new houses, and therefore, the approximate population, including people relying on private wells for their water supply.

The information presented in the Table 10 was provided by MWSD and utilized to estimate historical population growth in the MWSD system since the consolidation with Pillar Ridge and the lift of the moratorium. The number of residences not connected to the MWSD water system was determined by calculating the difference between the number of residential sewer connections and the number of residential water connections each year. Prior to the Pillar Ridge consolidation, the population served by the system was determined by multiplying the number of water connections by the average Montara/Moss Beach household size of 2.72 persons. Calculating the difference between the number of sewer and water connections and multiplying by the household size of 2.72 resulted in estimated population relying on private wells.

Table 10 Current Population Estimates

| Year | Number of Sewer Connections ^a | Number of Residential Water Connections ^a | Number of Houses Not Connected to MWSD Water System | Population Served by the District ^b | Estimated Population Not Connected to Water System ^b | Total Estimated Population |
|------|--|--|---|--|---|----------------------------|
| 2014 | 1,906 | 1,611 | 295 | 4,382 | 802 | 5,184 |
| 2015 | 1,907 | 1,611 | 296 | 5,232 ^c | 805 | 6,037 ^c |
| 2016 | 1,910 | 1,620 | 290 | 5,256 ^c | 789 | 6,046 ^c |

^a Based on MWSD records

^b Calculated using the historical household size of 2.72

^c Includes 850-person population of Pillar Ridge community, as reported by Millennium Housing, as of the January 2015

Based on this analysis, there are an estimated 290 houses in the service area that are not connected to the system, housing an estimated population of about 790. The potential demand addition to the system that well conversions represent is taken into consideration in the analysis in this Master Plan Update.

3.3.2. Future Population Demand

The projected demand scenarios for future years were determined based on the number of connections added to the system. The demands were calculated using the household size of the post-Pillar-Ridge-consolidation system and the average per capita demand of 66 gpcd. Two large developments known as the Big Wave Project and the Sierra 1 Development are planned within the MWSD service area in the next three (3) years. For the future population and demand estimates, the weighted average of the Pillar Ridge and the Montara/Moss Beach household sizes (2.84 people per household) was used, to represent the new integrated system.

Table 11 Future Population and Demand Estimates

| Connections Added | Number of Connections | Total Population Served by the System | Projected Average Daily Demand (gdp) ^d | Projected Maximum Daily Demand (gdp) ^e |
|-------------------|-----------------------|---------------------------------------|---|---|
| Current 2016 | 1,620 ^a | 5,256 ^b | 296,018 | 478,230 |
| 200 | 1,820 | 5,824 ^c | 333,506 | 533,609 |
| 400 | 2,020 | 6,392 ^c | 370,994 | 593,590 |
| 600 | 2,220 | 6,960 ^c | 370,994 | 653,571 |
| 800 | 2,420 | 7,528 ^c | 445,970 | 713,552 |
| 1000 | 2,620 | 8,096 ^c | 483,458 | 773,533 |

^a From MWSD sewer and water connection records; see previous Table 10

^b Estimated based on a 2.72 household size and a Pillar Ridge population of 850 people

^c Calculated from the post-Pillar-Ridge consolidation household size (2.84)

^d Assumes 66 gpcd demand

^e Assumes 1.6 peaking ratio based on empirical analysis of MWSD system

3.3.3. Priority Uses

Priority uses must be considered in evaluating the supply available for additional connections to the MWSD system, as water must be reserved for these uses. The maximum volumes prescribed by the *2013 County of San Mateo LCP Update*, are presented in the following Table. The Sierra 1 Development discussed in a later section is

an affordable housing complex located at one of the designate sites in Moss Beach which water demand qualifies as a Priority Use.

Table 12 Priority Uses

| Priority Use | Requirements at Buildout (gpd) |
|---|---------------------------------------|
| Commercial Recreation | 1,230 |
| Public Recreation | 4,080 |
| Floriculture | 10,000 |
| Essential Public Services | 5,000 |
| Specific Developments of Designated Sites containing Affordable Housing | 35,816 to 51,504 |
| Other Affordable Housing | 5,000 |
| Total Water Capacity for Priority Land Uses | 61,126 to 76,814 |

3.3.4. Supply and Demand Analysis

To determine the water system’s reliability, the ADD and MDD are compared to the reliable supply capacity defined in Section 2. Table 13 shows the current available capacity of the water system, and compares this volume of water to the MDD of the current population within the MWSD service area. The MWSD system currently has enough supply to support the long-term demands that correspond to the addition of over 900 connections, as indicated by the supply in

Table 13 and in Figure 8. This additional reliable supply can cater to the population currently residing within the service area but not connected to the system as well as ensuring reliable supply for additional connections. Figure 9 shows the annual ADD from 2004 to 2016 against MWSD’s total, reliable and drought supply capacities.

Table 13 Supply Projections – Reliable Supply

| Connections Added | Reliable System Capacity (gpd) ^a | MDD (gpd) | Excess or Deficit Supply (gpd) |
|-------------------|---|-----------|--------------------------------|
| 2016 | 758,880 | 478,230 | 280,650 |
| 200 connections | 758,880 | 533,609 | 225,271 |
| 400 connections | 758,880 | 593,590 | 165,290 |
| 600 connections | 758,880 | 653,571 | 105,309 |
| 800 connections | 758,880 | 713,552 | 45,328 |
| 1000 connections | 758,880 | 773,533 | -14,653 |

^a Calculated assuming all sources are operating at rated capacity for 24 hours per day

In addition, the current MWSD projected supply and demand scenario was evaluated by comparing the current and future ADDs with a more conservative available supply estimate. In determining the available supply, this methodology utilizes the rated capacity of all sources as the basis for determining the available supply and assumes that the sources are capable of sustainably producing only fifty (50)-percent of their rated capacity. Table 14 presents this analysis.

Table 14 Supply Projections – Severe Drought Supply

| Connections Added | Sources Operating at 50% Rated Capacity (gpd) ^a | ADD (gpd) | Excess or Deficit Supply (gpd) |
|-------------------|--|-----------|--------------------------------|
| 2016 | 487,440 | 296,018 | 191,422 |
| 200 connections | 487,440 | 333,506 | 153,934 |
| 400 connections | 487,440 | 370,994 | 116,446 |
| 600 connections | 487,440 | 409,482 | 77,958 |
| 800 connections | 487,440 | 445,970 | 41,470 |
| 1000 connections | 487,440 | 483,458 | 3,982 |

^a Calculated assuming all sources are operating at rated capacity for 24 hours per day

3.4. Future Large Developments Demand

3.4.1. Big Wave Development

The Big Wave Project is a development that will be located on coastal land adjacent to the Half Moon Bay Airport and South of Pillar Ridge. The Project involves the construction of

a Wellness Center that will include a total of 50 housing units for adults with special needs, and a Business Park, which will include 6 commercial buildings.

The Big Wave project will be phased in and it is expected that Phase 1 - three (3) commercial buildings and 25 bedrooms of the Wellness Center- will be built by 2019.

Per the 2013 San Mateo County LCP, the rooms of the Wellness Center are not considered units, since they will not have individual kitchens. The water demand of the Phase I of the Wellness Center was therefore estimated by assuming one (1) person per bedroom and a per capita demand of 66 gpcd.

The estimated water demand of the first phase of the Big Wave development is 6,058 gpd, or 4.2 gpm. The breakdown of the water usage estimates is presented in Table 15.

Table 15 Big Wave Phase I Water Demands Estimations

| Big Wave Demand – Phase I | Description | Water Demands (gpd) |
|---------------------------------------|--------------------|----------------------------|
| Wellness Center ^a | 25 bedrooms | 1,650 |
| Commercial Spaces ^b | | |
| Commercial Lot 1 | 30,000 sqft | 1,378 |
| Commercial Lot 2 | 30,000 sqft | 1,378 |
| Commercial Lot 3 | 36,000 sqft | 1,653 |
| Total | | 6058 |

^a Assumes one person per bedroom and a per capita demand of 66 gpcd

^b Assumes a water usage of 2,000 gallons/acre-day as estimated in the 2013 San Mateo County LCP for commercial spaces

The type of businesses that the Business Center will host and the specifics about their water usage are currently unknown. The demand estimations will be confirmed once the water demands from the Big Wave development are finalized.

3.4.2. Sierra 1 Development

Sierra 1 is a development planned to come online by 2020 that will be located at the intersection of Carlos Street and Sierra Street in Moss Beach. The development will include 71-unit affordable housing complex and adjacent parking spaces. Assuming a per capita demand of 66 gpcd and a household size average of 2.84, the water demand of the Sierra 1 Project is estimated at 13,308 gpd or 9.24 gpm. The affordable housing units of the Sierra Project qualify as priority uses as described in the 2013 San Mateo County LCP.

Therefore, the water demand of Sierra 1 will be supplied by the priority use water reserves for affordable housing (35,816 to 51,504 gpd per the 2013 San Mateo County LCP).

Figure 8 Maximum Daily Demand vs. Reliably Supply

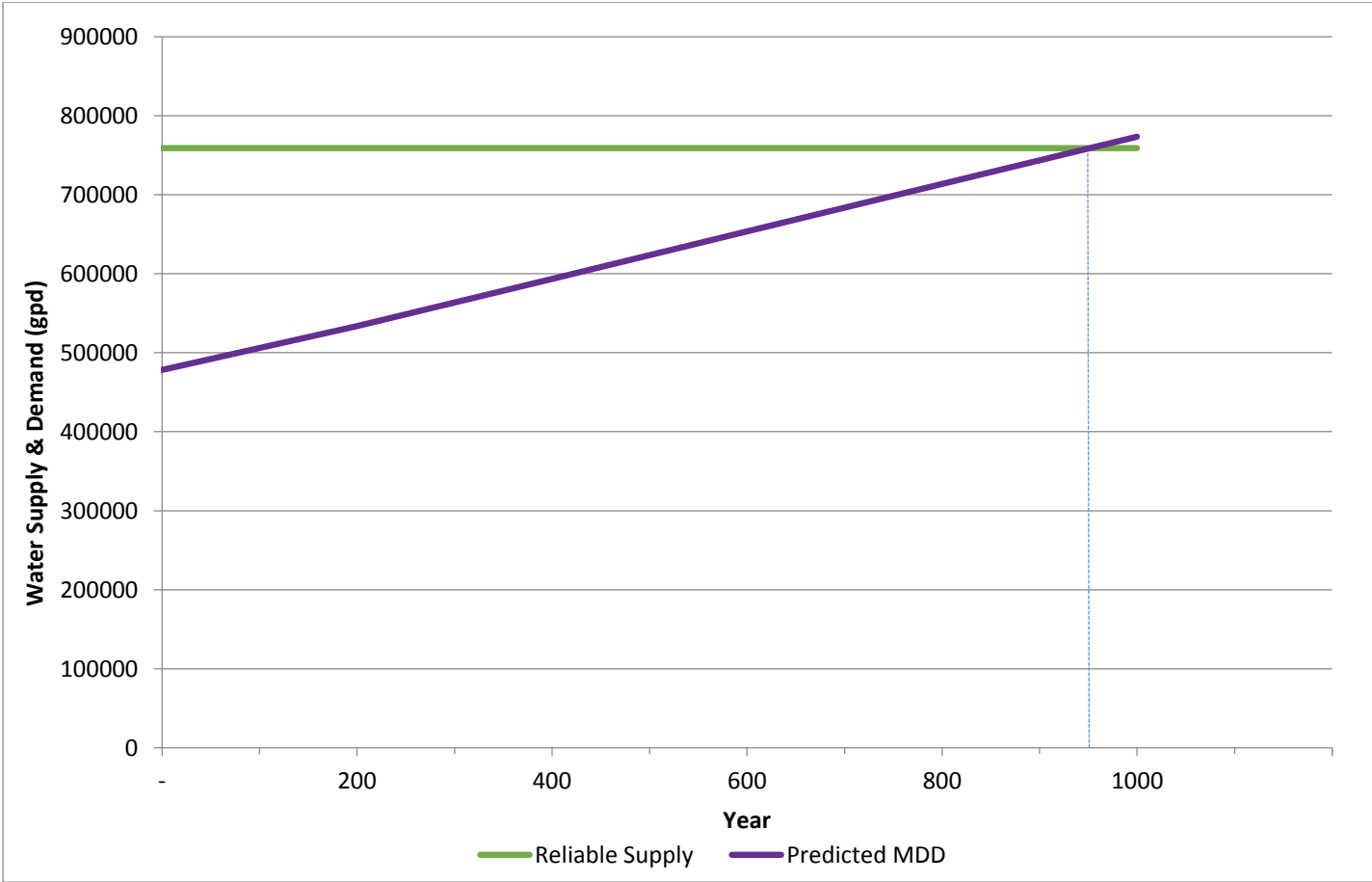
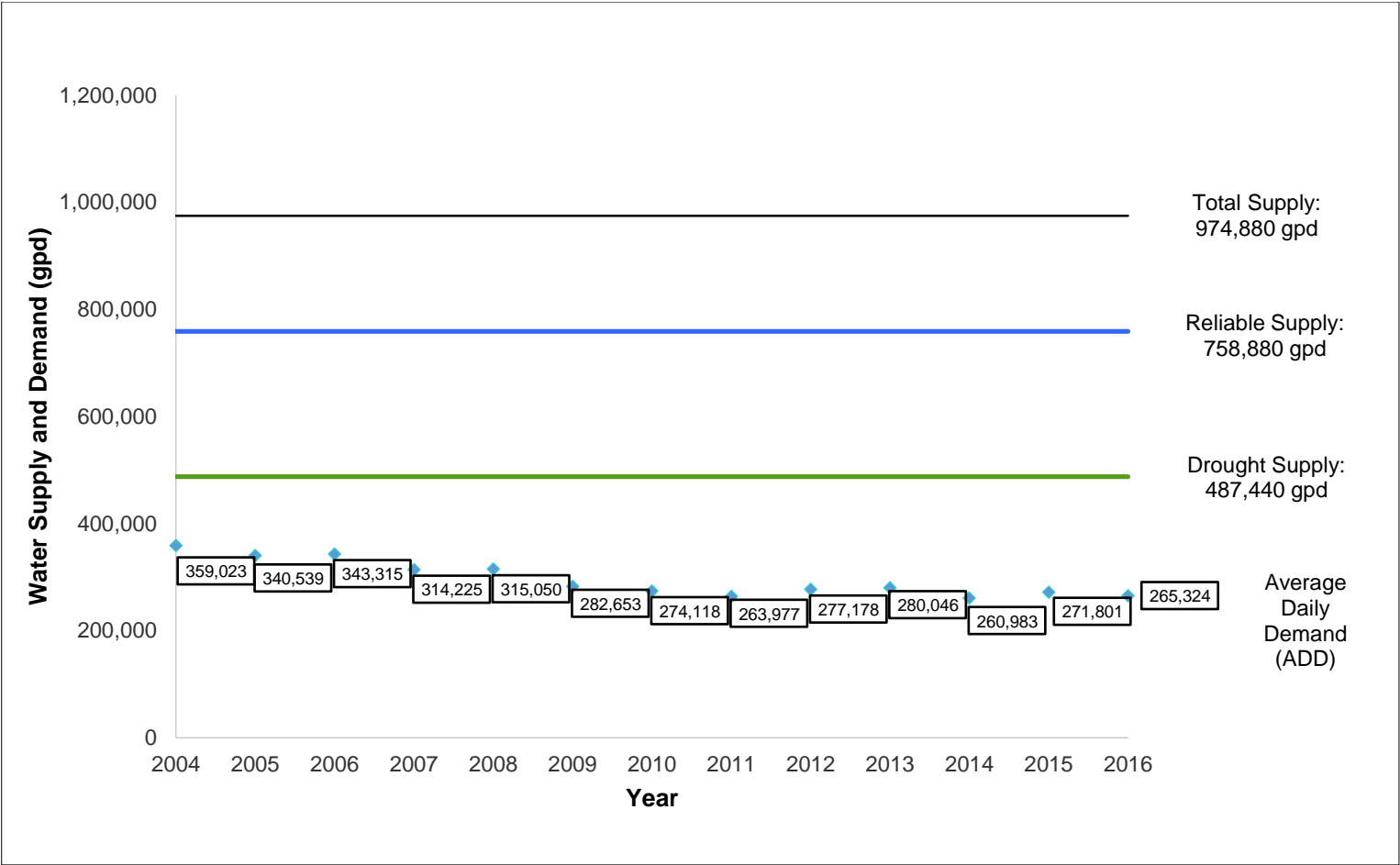


Figure 9 Annual Average Daily Demand vs. Supply Capacities, 2004 – 2016



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SECTION FOUR

Water Quality

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4. Water Quality

MWSD's water quality is monitored and reported in compliance with all federal and state regulations. Approximately 1,200 analyses are conducted on the drinking water per year, and findings are reported to consumers in annual Consumer Confidence Reports (CCR) as required by the USEPA's Safe Drinking Water Act.

4.1. Drinking Water Quality Monitoring and Reporting

The following sections detail the water quality standards that MWSD must meet based on the characteristics of the community size and water supply sources.

4.1.1. State Drinking Water Quality and Monitoring Regulations

The District must comply with regulations established at the federal and state levels. Regulations at the federal level are promulgated by the USEPA, which is responsible for setting standards and assuring compliance. Regulations at the state level are maintained by the CDPH, which carries out similar responsibilities.

The Federal Safe Drinking Water Act is the primary legislation that directs the USEPA's regulatory control. Through its original charter and subsequent amendments, Maximum Contaminant Level (MCL) standards for a significant number of constituents have been established. California establishes its own standards and MCLs in Title 22 of the California Code of Regulations (CCR). These standards are at least as stringent as the federal levels and are administered by the CDPH's Division of Drinking Water (DDW).

CDPH requires that all public water systems (PWS) monitor their potable water sources for chemical, biological, and radiological contaminants. Testing for these categories of constituents, which include synthetic organic chemicals (SOCs), volatile organic compounds (VOCs), and radionuclides, is required at each water source in the system. Distribution systems must also be monitored for bacteriological constituents (total and fecal coliforms), disinfection residuals (chlorine), disinfection byproducts (total trihalomethanes, TTHMs, and haloacetic acids, HAAs), lead, and copper.

4.1.1.1. Primary Maximum Contaminant Levels

The USEPA has established Primary MCLs for constituents with known health effects, with the consideration of the technical and economic impacts of setting an MCL for that

constituent. The USEPA provides a list of regulated constituents and current MCLs adopted by the State of California. All PWSs are required to monitor these constituents at each of their raw water sources at frequencies set forth by the CDPH.

4.1.1.2. Secondary MCLs

Secondary MCLs (SMCLs) have been established for certain constituents without known health effects, but for which there are aesthetic or technical concerns such as color, taste, odor, or corrosivity. The USEPA provides a list of the constituents with the current SMCLs adopted by the State of California. Currently, constituents with SMCLs must be tested for at least once every three (3) years at all groundwater sources.

Constituents with MCLs that typically impact PWSs with groundwater sources are iron and manganese; these constituents are common metallic elements found in the earth's crust that are chemically similar and cause similar problems. When exposed to air, iron and manganese sediments oxidize and change from colorless, dissolved forms to colored, solid forms. Excessive amounts of these sediments are responsible for staining and may even clog water pipes. Iron and manganese can also affect the flavor and color of food and water. Finally, nonpathogenic bacteria, which feed on iron and manganese in water, can form slime in toilet tanks and clog water systems.

4.1.2. Disinfectant and Disinfection Byproducts Rule (D/DBPR)

The D/DBPR Rule was created by the USEPA to protect public health from disinfectant chemicals and byproducts; the D/DBPR was developed in two stages, described below.

4.1.2.1. Stage 1 D/DBPR

Disinfectants of drinking water can react with naturally occurring materials in the water to form unintended organic and inorganic byproducts that may pose health risks. Amendments to the Safe Drinking Water Act (SDWA) in 1996 required that the USEPA develop rules to reduce disinfection byproducts (DBPs) in drinking water. The USEPA promulgated the Stage 1 D/DBPR on December 16, 1998. The Stage 1 D/DBPR applies to all PWSs that add chemical disinfectants to their drinking water supply. Stage 1 D/DBPR reduces exposure to three (3) disinfectants (chlorine, chloramines, and chlorine dioxide) by establishing maximum residual disinfectant level goals (MRDLGs) and maximum residual disinfectant levels (MRDLs), and to the following DBPs: four (4)

TTHMs, five (5) HAAs, chlorite, and bromate. The five (5) most common HAAs regulated under the Stage 1 D/DBPR are collectively referred to as HAA5 and are the following:

- Monochloroacetic acid (MCA), ClCH_2COOH
- Dichloroacetic acid (DCA), Cl_2CHCOOH
- Trichloroacetic acid (TCA), Cl_3CCOOH
- Monobromoacetic acid (MBA), BrCH_2COOH
- Dibromoacetic acid (DBA), Br_2CHCOOH

TTHM and HAA5 monitoring is required for any water system using chlorine as a disinfectant. Chlorite is monitored only in systems using chlorine dioxide as a disinfectant, whereas bromate must only be monitored in systems using ozone.

Under the Stage 1 D/DBPR, the MCL for TTHMs is 0.080 milligrams per liter (mg/L), for HAA5 is 0.060 mg/L, and for bromate is 0.01 mg/L. Compliance for TTHMs, HAA5 and bromate is measured by the running annual average (RAA) of all results taken from all sampling locations over a one (1) year period. Chlorite compliance is measured as a monthly average and the MCL is 1.0 mg/L.

4.1.2.2. Stage 2 D/DBPR

The USEPA's Stage 2 D/DBPR became effective on March 6, 2006 applies to all PWSs which add chemical disinfectants to the drinking water supply. The Stage 2 D/DBPR strengthens public health protection for customers of systems that deliver disinfected water by requiring such systems to meet MCLs as an average at each compliance monitoring location, instead of as a system-wide average as in previous rules, for two (2) groups of DBPs: TTHMs and HAA5.

The Stage 2 D/DBPR builds incrementally on existing rules and targets systems with greater water quality risks. The rule additionally requires systems to investigate any "high" DBP levels via an Operational Evaluation, and to conduct an Initial Distribution System Evaluation (IDSE) to identify locations within their distribution systems representing maximum TTHM and HAA5 concentrations. Utilities can apply for an exemption to these

two (2) requirements if all previous samples have been below 40 micrograms per liter ($\mu\text{g/L}$) and 30 $\mu\text{g/L}$ for TTHMs and HAA5s, respectively.

The major difference between the Stage 1 and the Stage 2 D/DBP is the compliance calculation of TTHM and HAA5 concentrations. Stage 1 D/DBPR compliance is based on a system-wide RAA, while Stage 2 D/DBPR is based on RAAs at each location, called the locational running annual average (LRAA). Under the Stage 2 D/DBPR, the MCLs for TTHMs and HAA5 remain the same as under the Stage 1 D/DBPR.

4.1.3. Radionuclide Rule

The USEPA's final drinking water standard for radionuclides became effective on December 8, 2003. The final rule includes MCLs and monitoring requirements for gross alpha, radium-226, radium-228, uranium, and beta/photon emitters. The State of California was required to adopt or issue a radionuclide rule no less stringent than the 2003 final federal rule.

Under the radionuclide rule, gross alpha, radium-226, radium-228, uranium must be analyzed, and results for the radium-226 and radium-228 analyses must be reported separately. The MCL for gross alpha is fifteen (15) picocuries per liter (pCi/l), for uranium is 20 pCi/l, and for the sum of radium-226 and radium-228 is five (5) pCi/l. Subsequent gross alpha, radium-226, radium-228, and uranium monitoring frequencies are based on the initial round of analysis results, the submittal of which was required in 2007. If the results were less than the detection limit for the purpose of reporting (DLR), the monitoring requirement is one (1) sample every nine (9) years. If the results were less than one-half of the MCL but greater than the DLR, the monitoring requirement is one (1) sample every six (6) years. If the results were greater than one-half of the MCL but less than the MCL, the monitoring requirement is one (1) sample every three (3) years. If the results were greater than the MCL, the sources have to be monitored quarterly until the RAA is less than the MCL. The PWS must provide radionuclide treatment at the State's discretion.

4.1.4. Arsenic Rule

On January 22, 2001, the USEPA published the final Arsenic Rule establishing the MCL at 0.010 mg/L (or ten, 10, parts per billion, ppb). Drinking water systems were required to

comply with the MCL by January 2006. Groundwater systems were required to take an initial sample between 2005 and 2007 to measure compliance with the new MCL. If that sample was less than the MCL, subsequent samples were required every three (3) years. If the initial sample was greater than the MCL, quarterly samples were required until the system consistently sampled below the MCL.

4.1.5. Lead and Copper Rule

On January 12, 2000, the USEPA revised the Lead and Copper Rule, previously adopted on December 11, 1995. The revised rules require that PWSs monitor lead and copper concentrations at a number of residential taps based on the population served. The required number of lead and copper samples may be reduced depending on past results. Compliance is based on the 90th percentile concentration for all samples collected. The Action Level (AL) for lead is 0.015 mg/L and for copper is 1.3 mg/L.

The USEPA is considering Long-Term Revisions to the Lead and Copper Rule to improve public health protection and to streamline the Rule's requirements; the Long-Term Revisions will intend to:

- Improve the effectiveness of corrosion control treatment in reducing exposure to lead and copper, and
- Trigger additional actions that equitably reduce exposure to lead and copper when corrosion control treatment alone is not effective.

4.1.6. Groundwater Rule

On October 12, 2006, the USEPA released the final Groundwater Rule (GWR) to reduce the risk of fecal contamination in PWSs; the GWR applies to all PWSs that use groundwater as a source of drinking water supply. The GWR addresses microbiological contamination risks in drinking water through a risk targeting approach. The four (4) major components of the GWR are described below.

4.1.6.1. *Periodic Sanitary Survey*

Under the GWR, states are required to conduct a sanitary survey for each PWS that uses groundwater. The survey requires evaluation of eight (8) critical elements and identification of significant deficiencies therein: 1) sources; 2) treatment; 3) distribution

system; 4) finished water storage; 5) pumps, pump facilities, and controls; 6) monitoring, reporting, and data verification; 7) system management and operation; and 8) operator compliance with state requirements. Each PWS must have completed an initial survey by December 31, 2012 and must update the survey every three (3) years thereafter.

PWSs that meet certain performance criteria may have been granted an exemption to instead complete an initial survey by December 31, 2014 and to update the survey every five (5) years thereafter. The performance criteria are met if the PWS in question: 1) provides four (4)-log removal treatment of viruses before or at the first customer from all groundwater sources; 2) has outstanding performance record as defined by the state; and 3) has no history of total coliform MCL or monitoring violations under the Total Coliform Rule (TCR).

4.1.6.2. Source Water Monitoring

For water systems that do not achieve at least a four (4)-log of viruses inactivation or removal, triggered monitoring is required if any sample collected during the routine sampling under the TCR has a positive total coliform result. Subsequently, the PWS is required to take one (1) sample at each groundwater source and to test it for fecal indicators (*E. Coli*, *enterococci* or *coliphage*) within twenty-four (24) hours of receiving the positive total coliform result. If any fecal indicator is detected, the PWS is required to take five (5) additional repeat samples and to test for a fecal indicator within twenty-four (24) hours. If one (1) or more of the five (5) repeat samples test positive for any fecal indicator, corrective action is required. The compliance date for triggered monitoring and associated corrective action was December 1, 2009.

As a complement to triggered monitoring, the GWR allows states to require PWs that do not provide at least a four (4)-log virus inactivation or removal to conduct source water assessment monitoring at any time to help identify high-risk systems. The USEPA recommends that the following risk factors be considered by states in targeting high-risk systems: 1) high population density combined with on-site wastewater treatment systems; 2) aquifers with restricted geographic extent, 3) aquifers with thin karst, fractured bedrock and gravel; 4) shallow unconfined aquifer; 5) aquifers with thin or absent soil cover; and 6) groundwater wells previously identified as having fecal contamination.

4.1.6.3. Corrective Actions

Corrective Actions are required for any PWS with a significant deficiency identified during the sanitary survey or with detectable fecal matter at any groundwater source. The PWS must implement one (1) or more of the following corrective actions within 120 days of identification of a significant deficiency or a positive fecal indicator detection: 1) correct all significant deficiencies, 2) eliminate the source of contamination, 3) provide an alternative source of water, and/or 4) provide treatment which reliably achieves four (4)-log virus inactivation or removal.

The most common and economic method to provide a four (4)-log virus inactivation is chlorination. To achieve inactivation, a certain CT (chlorine residual concentration in mg/L multiplied by contact time in minutes) value is required, which is based on water temperature and pH. For example, at fifteen degrees Celsius (15°C) and a pH-level between six (6) and nine (9), a CT of four (4) mg-min/L is required to achieve a four (4)-log virus inactivation. Therefore, if a PWS has one (1) mg/L of chlorine residual at the first customer and the contact time between the point of application and the first customer is four (4) minutes, the CT value is four (4) mg-min/L (1 mg/L × 4 min).

To date, MWSD has not been required to implement any aforementioned Corrective Action.

4.1.6.4. Compliance Monitoring

If a PWS already treats groundwater to achieve at least a four (4)-log virus inactivation or removal, the GWR requires regular compliance monitoring to ensure that the treatment technology installed is reliable. For PWSs that use chlorine as a disinfectant and serve more than 3,300 people, continuous residual chlorine monitoring is required. The PWS must maintain the state-determined residual chlorine level at all times. If the residual chlorine falls below the required level, the system must restore the residual chlorine to an appropriate level within four (4) hours. If the continuous residual chlorine monitor fails, the PWS is required to take a grab sample every four (4) hours, and the operator is allowed a maximum of fourteen (14) days to resume continuous monitoring.

These regulations took effect on December 1, 2009. MWSD has since continuously monitored residual chlorine to protect the water supply against California's Maximum Residual Disinfectant Level (MRDL) of four (4) mg/L as Cl₂ established in Title 22, Chapter 15, Section 64533 of the California CCR.

4.2. Consumer Confidence Report

In 1996, the U.S. Congress amended the Safe Drinking Water Act (SDWA) adding a requirement that water systems report water quality to their customers. The finalized rule, called the Consumer Confidence Report (CCR) Rule, was published in the Federal Register on August 19, 1998 and requires every community water system to prepare an annual CCR describing the quality of water delivered by the systems and deliver the CCR to its customers by July 1 of each year.

Every CCR must contain the following: 1) water system information, including the name and phone number of a contact person, information on public participation opportunities, a Spanish language section on important content, and information for other non-English speaking populations; 2) water source identification and the results of the source water vulnerability assessment; 3) summary of data on detected regulated and unregulated contaminants, including possible source(s) of each contaminant, and whether the water system received any violations; and 4) educational information on nitrate, arsenic, lead, radon, and *Cryptosporidium*, if applicable. A copy of the most recent CCR (CCR 2016) is found in Appendix C.

4.2.1. MWSD Water Quality Concerns

Based on the 2016 MWSD CCR, MWSD is in compliance with all water quality regulations. The following constituents were detected below enforceable regulatory limits, but are mitigated by the District to ensure safe drinking water in case of future water quality concerns.

Copper and lead were found at levels *below* the Regulatory Action Level (AL) of 1.3 and fifteen (15) ppm, respectively, in the 2015 residential tap sampling. No exceedances were found in the distribution system sampling. The potential source of copper contamination in the MWSD system is corrosive water at the Airport Wells coupled with internal corrosion of

household plumbing systems and erosion of natural deposits. The corrosivity of the Airport Wells water is indicated by pH values below seven (7.0) and a Langelier Saturation Index (LSI) less than zero (0).

Arsenic was detected at the Alta Vista Well at levels *below* the MCL but above five (5) ppb. While the drinking water meets the federal and state standards for arsenic, the California CCR guidelines require utilities to report observations of Arsenic concentrations greater than five (5) ppb and to monitor the contaminant more frequently. This precautionary protocol balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Fluoride was found at the Corona Well at levels *below* the MCL but above one (1) ppm. While the drinking water meets the federal and state standards for fluoride, it does contain low levels of fluoride. Some people who drink water containing fluoride in excess of the federal MCL of four (4) ppm over many years may get bone disease. Children who drink water containing fluoride in excess of the California MCL of two (2) ppm may get mottled teeth.

As previously stated, Secondary MCLs (SMCLs) were set to protect against unpleasant aesthetic effects of water such as color, taste, odor, and the staining of plumbing fixtures and clothing. Exceeding SMCLs poses no health risks. Manganese was found at levels that exceeded the SMCL of fifty (50) ppb, and iron was found at levels that exceeded the SMCL of 300 ppb. The high manganese and iron levels are most likely due to leaching of natural deposits in the soil where groundwater is in contact with naturally occurring sediments.

4.3. Water Treatment Facilities

DDW-approved treatment facilities and associated processes include a surface water treatment plant, a groundwater treatment plant acquired by MWSD after the 2015

consolidation for treatment of Pillar Ridge's three (3) wells (Corona Well, Culebra Well, and Retiro Well), and several wellhead treatment units.

4.3.1. Surface Water Treatment

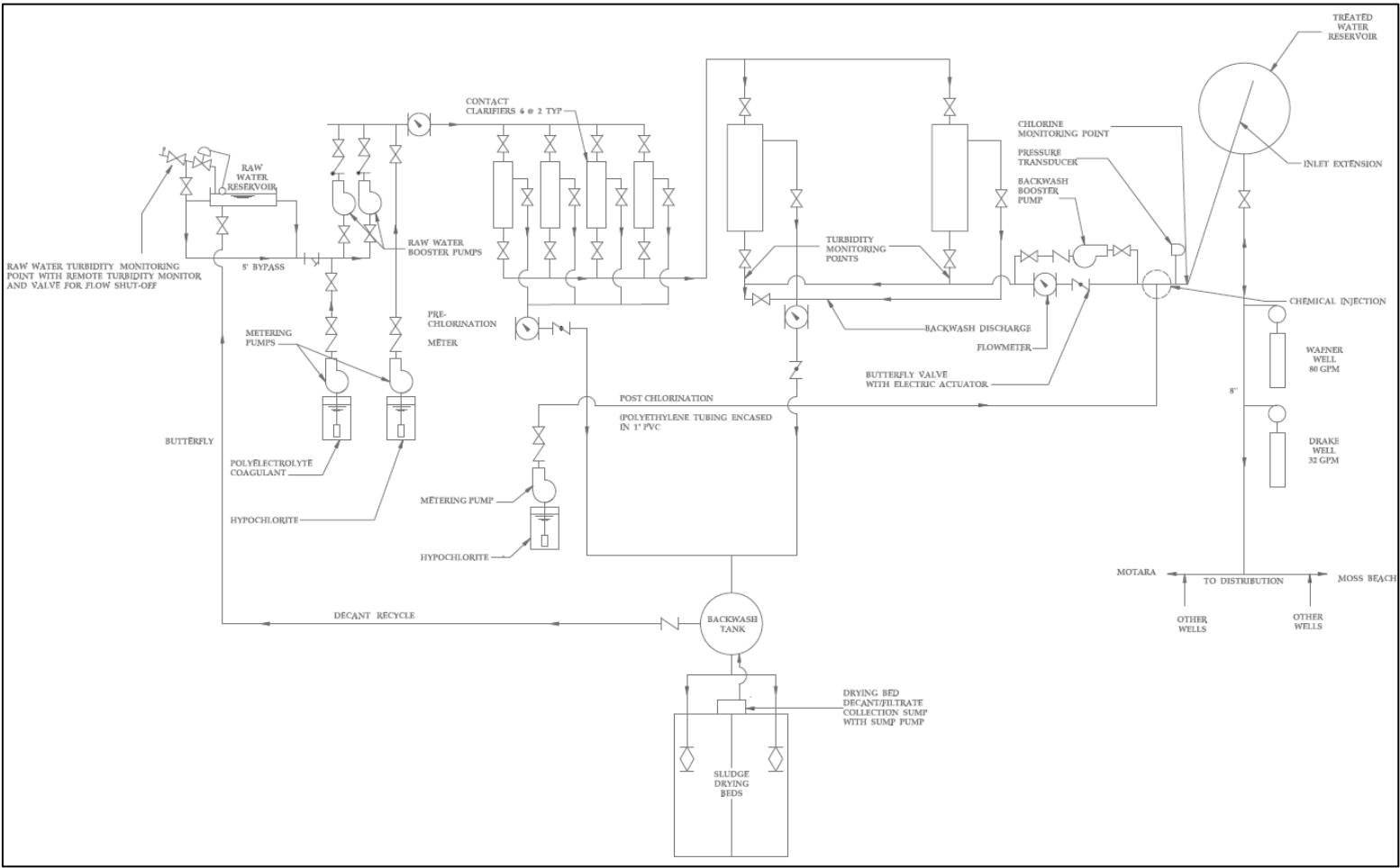
4.3.1.1. *Alta Vista Water Treatment Plant (AVWTP)*

The AVWTP treats surface water from the Montara Creek diversion structure, located approximately one-half mile and fifty (50) feet higher than the AVWTP. Montara Creek water is fed by a six (6)-inch steel raw water pipeline into a 77,000-gallon concrete tank prior to treatment at the AVWTP. The direct filtration AVWTP was constructed in 1978 with a design peak capacity of seventy-five (75)-gpm and was upgraded in 1995 to include pressure contact clarifiers and vertical pressure filter vessels.

The AVWTP treatment facilities consists of four (4) vertical pressure contact clarifiers, two (2) multi-media vertical pressure filters, chemical feeders and containers, one (1) compressor for the clarifier air scour, two (2) raw water booster pumps, one (1) surface wash pump, one (1) backwash pump, chemical feed metering pumps for cationic polyelectrolyte coagulant and hypochlorite solution, pneumatic control valves, storage, and controls. The AVWTP uses Nalco 8102 as the primary coagulant. Sodium hypochlorite disinfection provided at four (4) percent available chlorine prior to filtration maintains a residual chlorine concentration of 0.5 to 1.0 mg/L at the point of entering the MWSD distribution system.

The District has implemented various improvements at the AVWTP in the last five (5) years, including the replacement of all sampling lines and all laboratory equipment, replacement of the filter turbidimeter, and replacement of both raw water booster pumps. One booster pump was replaced in September 2014 and the other booster pump was replaced in March 2015. An Operation, Maintenance and Monitoring Plan (OMMP) was last updated in 2013. The Process Flow Diagram (PFD) for this system is shown in Figure 10.

Figure 10 Alta Vista Water Treatment Plant PFD



4.3.2. Groundwater Treatment

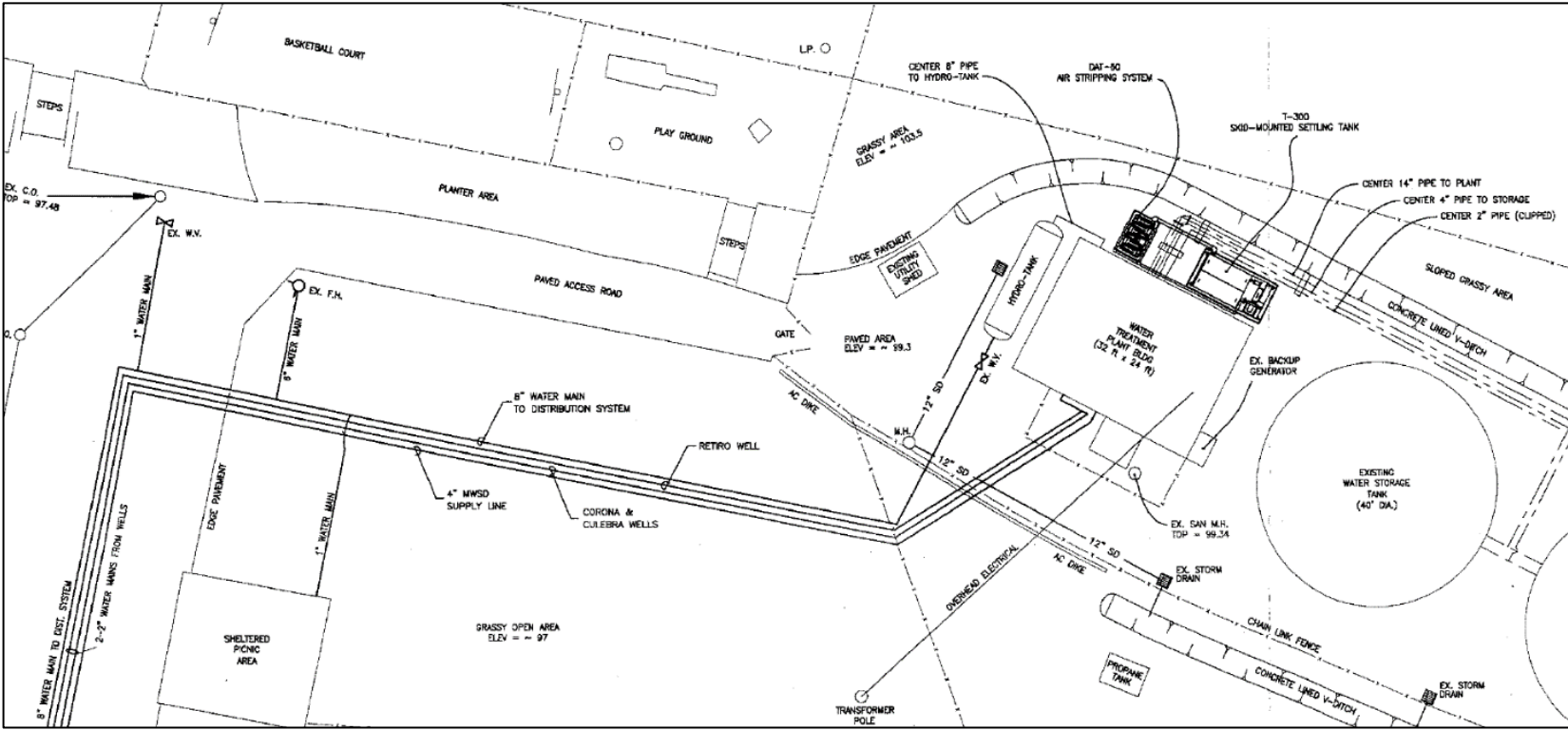
4.3.2.1. *Pillar Ridge Water Treatment Plant (PRWTP)*

The PRWTP, which treats groundwater from the Corona Well, Culebra Well, and Retiro Well, was acquired by MWSD after the 2015 consolidation of the Pillar Ridge community into MWSD's service area. The CDPH permits the PRWTP to treat water for the removal of iron, manganese and VOCs. The existing treatment system consists of a Carbonair DAT-60 aeration tower, a Carbonair T-300 settling system, and a Filtronics Model FV-04 Electromedia 1 iron and manganese filtration system. The filtration system was designed and installed with the PRWTP in 1990, and the aeration system was installed in 2003 during a treatment plant upgrade. The filter media for the Filtronics equipment was replaced in 2003.

In 2015, MWSD made various upgrades to the PRWTP including the installation of a new surge tank for backwash water, a tie-in of the PRWTP with an air gap into the sewer system, and new Filtronics filter media; the reparation of a broken lateral pipeline and an automatic control valve; and the replacement of the compressor pump for the hydropneumatic tank, the autodialer for callouts, and two (2) surge tanks for the storage wells.

The PRWTP layout is shown in Figure 11. Each of the Pillar Ridge Wells is outfitted with a submersible pump and a local pump control system consisting of a hydropneumatic tank and pressure switch. Raw water enters the PRWTP through the aeration tower and then resides in the settling system's tank, after which it is pumped through the iron and manganese filters and ultimately to the storage tanks. High service pumps transfer water from the storage tanks to the District's distribution system. The treated water storage tanks supply backwash water through the booster pumps; supernatant is pumped from the backwash water storage tank to an irrigation field.

Figure 11 Pillar Ridge Water Treatment Plant Layout



4.3.3. Wellhead Treatment

Each of the District's twelve (12) production wells has wellhead water treatment facilities described below. Water from the three (3) wells at the Half Moon Bay Airport, North Airport Well, South Airport Well, and Airport Well No. 3, have localized water treatment facilities, which are proposed to be updated due to high observed levels of nitrate, 1,2,3-Trichloropropane (TCP) and corrosivity.

TCP is expected to be regulated in the near future, and is considered by the State of California as an unregulated contaminant that should be monitored. The State Water Resources Control Board (SWRCB) hence established an interim non-enforceable Notification Level of 0.005 micrograms per liter ($\mu\text{g/L}$, or, ppb) in 2005. The Office of Environmental Health Hazard Assessment (OEHHA) within the California EPA established a Public Health Goal (PHG) of 0.0007 $\mu\text{g/L}$ (or, ppb) in 2009. CDPH is working to establish an enforceable MCL for TCP set as close to the PHG as is technically and economically feasible.

Between 2011 and 2016, MWSD observed TCP at each of the three (3) Airport Wells at concentrations ranging from 0.0051 $\mu\text{g/L}$ (or, ppb) to 0.026 $\mu\text{g/L}$ (or, ppb) and did not observe TCP at other groundwater sources. TCP was only observed at the North Airport Well and Airport Well No. 3 in 2011, but was observed during each year between 2011 and 2016 at the South Airport Well, as shown in Table 16.

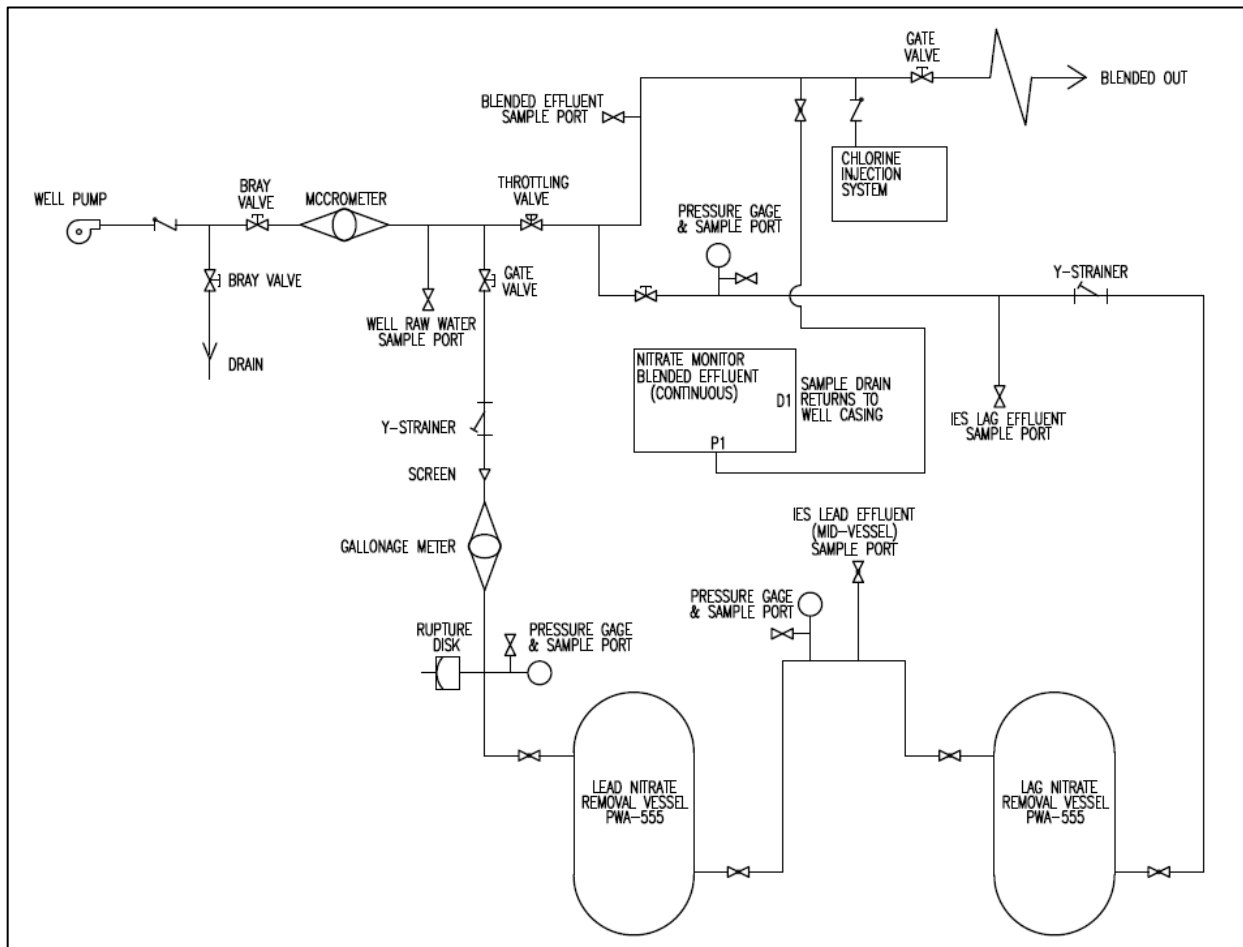
Table 16 2011-2016 Observed TCP Concentrations in Raw Water Supply

| Raw Water Source | Concentration Observed by Year ($\mu\text{g/L}$, or, ppb) | | | | | |
|--------------------|---|-------------------|---------------------------|----------------------------|---------------------------|---------|
| | 2011 | 2013 | 2014 | 2015 | 2016 | Maximum |
| North Airport Well | 0.0051 | - | - | - | - | 0.0051 |
| South Airport Well | 0.013, 0.014, 0.019 | 0.012, - 0.013 | 0.010, 0.011, 0.013 | 0.0095, 0.012, 0.026 | 0.013, 0.012, 0.013 | 0.026 |
| Airport Well No. 3 | 0.0053, 0.0064 | - | - | - | - | 0.0064 |

4.3.3.1. Nitrate Treatment

Under an approved CDPH drinking water permit amendment, an Ion Exchange System (IES) consisting of four (4) ion exchange vessels placed in series was installed in 2005 to reduce nitrate at the North Airport Well. The IES is only in operation with the North Airport Well providing water for distribution. Water pumped from the North Airport Well is passed through a split-stream configuration, either undergoing treatment through the IES (50- to 65-percent of the North Airport Well raw water) or bypassing the IES and sent to blend with the IES treated effluent (45- to 50-percent of the North Airport Well raw water). The PFD for this system is shown in the following Figure.

Figure 12 North Airport Well IES PFD



4.3.3.2. MTBE Treatment

A Granular Activated Carbon (GAC) treatment and chlorination system used to reduce methyl tertiary butyl ether (MTBE) in the Drake Well and Wagner Well water was discontinued with approval from CDPH due to proven MTBE absence.

4.3.3.3. Disinfection

Wellhead liquid sodium hypochlorite disinfection systems are installed and in use at all District wells, except Portola Estate Well No. 4; Wagner Well No. 3 and Drake Well are chlorinated with the same liquid sodium hypochlorite disinfection system located downstream of the Drake Well. The systems use Pulsatron electric metering pumps that inject a 12.5-percent sodium hypochlorite solution into the water system to maintain a free chlorine residual of 0.8 mg/L prior to distribution.

Wells and raw water lines are on a regular maintenance and rehabilitation program to control the growth of iron bacteria, common in groundwater wells in the area. Wells are treated chemically every month and every three (3) to five (5) years with chemical and mechanical rehabilitation. During rehabilitation, pumps are pulled and cleaned and the wells are treated. During rehabilitation, the raw water lines are chemically treated to remove build up and disinfected as required by DDW.

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SECTION FIVE

Distribution System and Storage Requirements

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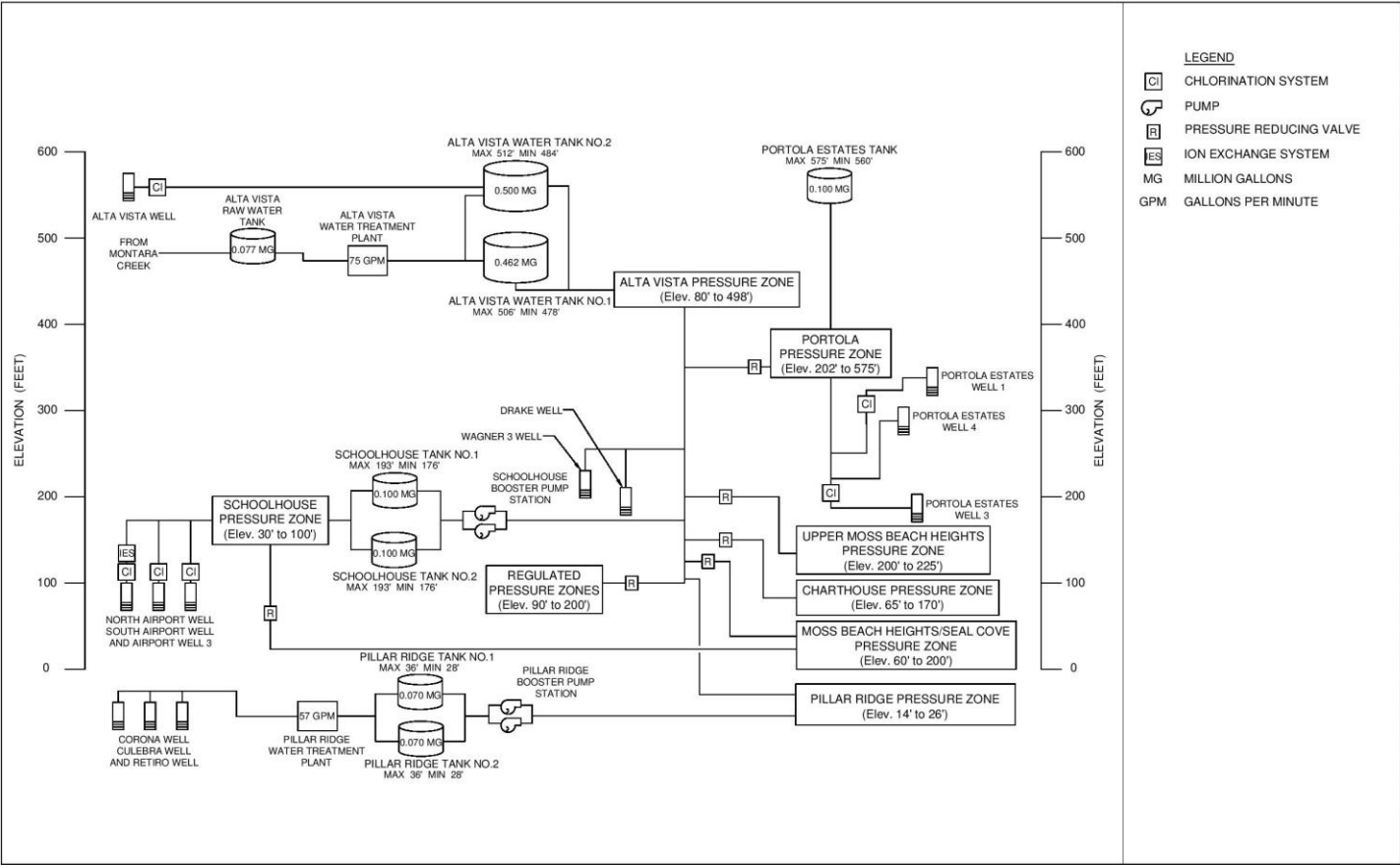
5. Distribution System and Storage Requirements

The capacities and deficiencies of the MWSD water system were evaluated based on current and projected demands and a hydraulic model analysis. The distribution and storage system facilities and associated design criteria were utilized to evaluate the efficiency of the system at handling a range of demands. This section outlines the current facilities and design parameters for current and projected demand scenarios, and evaluates the facilities against the parameters using the hydraulic model. The results of the evaluation indicate the deficiencies of the system and inform the CIP detailed in Section 6.

5.1. Existing Distribution System and Storage Facilities

MWSD customers in eight (8) different pressure zones are supplied through a distribution system that receives water from seven (7) storage tanks, twelve (12) groundwater wells, and the surface and groundwater treatment plants at Alta Vista, Pillar Ridge and at all wellheads. The location of the District's distribution and storage facilities and the eight (8) pressure zones are shown in Figure 3, MWSD Water System Layout. A schematic of the water system is shown in Figure 13.

Figure 13 MWSD Water System Schematic



5.1.1. Distribution System

Water is conveyed to MWSD's customers through a network of pipes approximately 150,000 feet long, with pipes ranging in diameter from two (2)- to sixteen (16)-inches. Mains have been extended minimally and as necessary for new service connections. The replacement of the 1,266-foot long two (2)-inch diameter steel water main with a six (6)-inch PVC pipe was performed in 2016 along 4th Street between East Avenue and Audubon Avenue.

As of December 2016, the water system had a total of 1,653 metered service connections, with 1,620 connections serving residential customers, and 33 connections serving commercial and industrial customers. In addition, MWSD has served a population of 850 in the Pillar Ridge community, as reported by Millennium Housing, the owner of the Pillar Ridge community, since the January 2015 consolidation. The Pillar Ridge community's water is conveyed through one (1) commercial meter. 148 private fire protection meters are also connected to the District's system; these meters do not draw water for domestic purposes and only draw water in the event of a fire.

Water from the higher pressure zones, those supplied by the Portola Estates and Alta Vista Tanks, supplies areas at lower elevations through multiple PRV stations. There are a total of twenty-eight (28) active PRVs in the District's water system, with the characteristics presented in Table 17. All PRV station polyethylene tubing was upgraded with stainless steel tubing, and upgrades to PRV stations were made as needed.

Table 17 Pressure Regulating Valve Stations

| Location | Manufacturer & Model | Size (inches) | Downstream Pressure Setting (psi) | Elevation (ft) ^a |
|--------------------------------|----------------------|---------------|-----------------------------------|-----------------------------|
| Etheldore and Lancaster | Cla-Val 100 | 6 | 35 | 70 |
| Etheldore and Lancaster | Bailey 30A | 2 | 40 | 70 |
| 3 rd and East | Unknown | 6 | 70 | 115 |
| 3 rd and East | Unknown | 2 | 75 | 115 |
| Farralone and 6 th | Bailey 400 | 6 | 65 | 156 |
| Farralone and 6 th | Bailey 30A | 3 | 70 | 156 |
| 6 th and Farralone | Unknown | 4 | 65 | 133 |
| 6 th and Farralone | Baker | 2 | 55 | 133 |
| 8 th and Main | Baker | 6 | 79 | 116 |
| 8 th and Main | Unknown | 3 | 83 | 116 |
| 11 th and Farralone | Cla-Val | 6 | 70 | 140 |
| 11 th and Farralone | Bailey 30A | 2 | 80 | 140 |
| 12 th and Farralone | Bailey 400 | 6 | 80 | 140 |
| 12 th and Farralone | Bailey 30A | 2 | 85 | 140 |
| 13 th and Farralone | Bailey 400 | 6 | 80 | 103 |
| 13 th and Farralone | Bailey 30A | 2 | 87 | 103 |
| 14 th and Farralone | Bailey 400 | 6 | 90 | 95 |
| 14 th and Farralone | Bailey 30A | 2 | 85 | 95 |
| Alamo and Cypress | Cla-Val | 8 | 130 | 347 |
| Alamo and Cypress ^b | Cla-Val | 2 | 50 | 347 |
| Sierra and Lincoln | Bailey 400 | 8 | 68 | 165 |
| Sierra and Lincoln | Bailey 30A | 3 | 75 | 165 |
| Marine and Cabrillo | Unknown | 8 | 40 | 69 |
| Marine and Cabrillo | Unknown | 2 | 45 | 69 |
| Buena Vista and Lincoln | Unknown | 6 | 75 | 192 |
| Buena Vista and Lincoln | Unknown | 2 | 85 | 192 |
| Sunshine Valley Road | Unknown | 6 | 30 | 246 |
| Sunshine Valley Road | Unknown | 2 | 35 | 246 |

^a Elevations obtained from Google Earth

^b Pressure Sustaining Valve (PSV)

5.1.2. Storage Facilities

The MWSD system includes raw, untreated water and treated water storage facilities. Raw water diverted from Montara Creek is stored in an updated 77,000 gallon concrete raw water storage tank which allows for initial sediment settling and peaking upstream of the AVWTP during approximately fifteen (15) hours of detention time.

The District maintains seven (7) treated water storage tanks with a combined capacity of 1.402 million gallons for operational, emergency, and firefighting uses, listed in Table 18. Since the construction of four (4) new tanks between 2012 and 2016, the District has the capacity to take storage tanks out of service for maintenance or repairs due to system-wide redundancy.

Table 18 Treated Water Storage Tanks

| MWSD Storage Tank | Capacity (gallons) | Year Built | Material | Diameter (feet) | Base Elevation (feet) | Overflow Elevation (feet) |
|-------------------------------------|---------------------------|-------------------|-----------------|------------------------|------------------------------|----------------------------------|
| Alta Vista Storage Tank No. 1 | 462,000 | 2012 | Steel | 52 | 478 | 506 |
| Alta Vista Storage Tank No. 2 | 500,000 | 2015 | Concrete | 55 | 484 | 512 |
| Pillar Ridge WTP Storage Tank No. 1 | 70,000 | 1989 | Steel | 40 | 28 | 36 |
| Pillar Ridge WTP Storage Tank No. 2 | 70,000 | 1989 | Steel | 40 | 28 | 36 |
| Schoolhouse West Storage Tank | 100,000 | 2013 | Steel | 35 | 176 | 193 |
| Schoolhouse East Storage Tank | 100,000 | 2012 | Steel | 35 | 176 | 193 |
| Portola Estates Storage Tank | 100,000 | 1981 | Wood | 34 | 560 | 575 |
| TOTAL | 1,402,000 | | | | | |

The construction of the thirty-five (35)-foot-diameter welded steel East and West Schoolhouse Storage Tanks was completed in 2012 and 2013, respectively, and the original 100,000-gallon concrete Schoolhouse Storage Tank and booster pump station were demolished. The tanks are seventeen (17) feet tall and are sited at the same elevation, buried to a depth of six (6)-feet and supported by a retaining wall.

The fifty-two (52)-foot-diameter, steel Alta Vista Storage Tank No. 1 constructed in 2012 is located along an unpaved extension of Alta Vista Road, adjacent to a 100,000-gallon settling tank and the AVWTP. The construction of the fifty-five (55)-foot-diameter Alta Vista Storage Tank No. 2 was completed in 2015; an eight (8)-inch pipeline connects Alta Vista Storage Tanks Nos. 1 and 2 along Alta Vista Road. Like the Schoolhouse Storage Tanks, the Alta Vista Storage Tank No. 2 was also buried twelve (12) feet below grade and is supported by retaining walls. These facilities store and treat water from Montara Creek before entering the District’s storage and distribution system.

The following necessary improvements were implemented at the storage tanks built prior to 2012:

- Thorough inspections and cleanings of all storage tanks;
- Portola Estates Tank Improvements: Roof hatch, inlet and outlet, access road and drainage improvements at the Portola Estates Tank were completed to improve worker and public safety and to protect the environment;
- Schoolhouse Tank Replacement: Design and construction of two new 100,000-gallon tanks at the current Schoolhouse water storage tank location has been completed to improve supply reliability; and
- Pillar Ridge Tank Improvements: Drainage and aeration improvements and major chemical treatment cleaning were completed after the January 2015 consolidation of the Pillar Ridge community system.

5.2. Distribution System and Storage Design Criteria

Planning and design criteria adopted by the District’s Board of Directors at the December 18, 2003 meeting have been adopted by MWSD for system planning and are summarized in Table 19. These design criteria help define the system deficiencies and guide the necessary system improvements.

5.2.1. Distribution Pipeline System Criteria

The water distribution system must sustain a minimum working pressure of forty (40) psi during PHD conditions and twenty (20) psi during fire flow conditions. In addition, velocity can be no higher than eight (8) feet per second (fps) during PHD conditions, and twelve (12) fps during fire flow conditions. The design criteria for all demand conditions are presented in Table 19.

Table 19 Distribution Pipeline System Criteria

| Demand Condition | Minimum Pressure (psi) | Maximum Velocity (fps) | Maximum Headloss (ft /1,000 ft) |
|------------------|------------------------|------------------------|---------------------------------|
| ADD | 50 | 5 | 3 |
| MDD | 50 | 7 | 5 |
| PHD | 40 | 8 | 7 |
| Fire Flow | 20 | 12 | 10 |

5.2.2. Storage Criteria

The total required volume of storage in a water system includes water for operational, emergency, and fire-fighting uses. Operational storage is directly related to the amount of water necessary to meet peak demands, and therefore the only value related to the number of customers connected to the District's system. The intent of operational storage is to provide the difference in quantity between the customers' peak demands and the system's available supply. The volume of water allocated for emergency uses is decided based on the historical record of emergencies experienced, and on the amount of time which is expected to lapse before the emergency can be corrected. The National Fire Code, Insurance Service Office, and local Fire Department regulate water storage for fighting fires in quantity.

5.2.2.1. Operational Storage

Operational storage is the quantity of water that is required to moderate daily fluctuations in demand beyond the capabilities of the production facilities, based on MDD. Water must be stored to supply the peak flows that exceed the maximum day production rate. Operational storage is then replenished during off-peak hours when the demand is less than the production rate. Operational storage for a typical, system is approximately equal to twenty-five (25) percent of the MDD, or 119,558 gallons.

5.2.2.2. Emergency Storage

Determination of the volume of emergency storage is a policy decision based on the assessment of the risk of failures and the desired degree of system reliability. The amount of required emergency storage is a function of several factors including the diversity of the supply sources, redundancy, and reliability of the production facilities, and the anticipated length of the emergency outage.

The vulnerability of the system is evaluated based on the susceptibility of the system to varying degrees of emergencies and the ability of the utility to recover from these emergencies. An emergency is defined as an unforeseen or unplanned event that may degrade the quality or quantity of potable water supplies available to serve customers. There are three (3) types of emergency events that a utility typically prepares for:

- *Minor emergency* - A fairly routine, normal, or localized event that affects few customers, such as a pipeline break, malfunctioning valve, hydrant break, or a brief power loss. Utilities plan for minor emergencies and typically have staff and material resources available to correct them.

- *Major emergency* - A disaster that affects an entire or large portion of a water system, lowers the quality and quantity of the water, or places the health and safety of a community at risk. Examples include water treatment plant failures, raw water contamination, or major power grid outages. Water utilities infrequently experience major emergencies.
- *Natural disaster* - A disaster caused by natural forces or events that create water utility emergencies. Examples include earthquakes, forest or brush fires, hurricanes, tornadoes or high winds, floods, and other severe weather conditions.

The susceptibility of MWSD’s water system to these emergency situations have been evaluated based on the District’s current equipment and approach to handling potential emergency situations. The evaluation is presented in the following Table.

Table 20 MWSD Emergency Preparedness

| MWSD Emergency Situation | Current Mitigation Approaches |
|---|---|
| <i>Minor Emergencies</i> | |
| Brief (2 hour) Power Loss Pipeline Break Valve Malfunction | Emergency generators for potential power loss Variable Frequency Drives (VFDs) at pumps Agreement with CCWD to deliver water to the District in the event of an emergency |
| <i>Major Emergencies</i> | |
| Major (8 hour) Power Loss Water Treatment Plant Failure Raw Water Contamination | Emergency generators for potential power loss VFDs at pumps Agreement with CCWD to deliver water to the District in the event of an emergency |
| <i>Natural Disasters</i> | |
| Earthquake, Forest Fire | Agreement with CCWD to deliver water to the District in the event of an emergency; the effectiveness of this is contingent upon the state of CCWD’s water system, as an earthquake would be a regional disaster |

Upon initial evaluation of the MWSD system resiliency and vulnerabilities, the volume of emergency storage should suffice to provide enough water to sustain the needs of the MWSD system in the most severe event of those listed in Table 20: an earthquake. Minor and major emergencies would require less emergency water storage and are therefore included within the more conservative evaluation focused on earthquake preparedness; the MWSD water system can recover from both minor and major emergencies in a maximum of eight (8) hours.

There are several ways in which emergency storage can be calculated depending on the types of systems and risks assumed; the *2011 Master Plan Update* presented a comparison of these methods which are updated herein, and presented in Table 21. The emergency storage values from the updated analysis range from 159,410 gallons to 592,036 gallons. The District has established its emergency storage goal at the most conservative value, 592,036 gallons, based on the American Water Works Association (AWWA) Guidelines for conservative emergency preparedness.

Table 21 Emergency Storage Methodology Comparison

| Methodology | Formula | Current MWSD Emergency Storage Volume Required (gallons) |
|-------------------------|--|--|
| AWWA Recommended Target | MDD for 8 hours | 159,410 |
| 50% of MDD | 0.5 x MDD | 239,115 |
| DWD Guidelines | ADD | 296,018 |
| Per Capita Estimate | 2 Days (time to restore normal water supply) x 50 gal/day x Population | 525,600 |
| AWWA Guidelines | 2.0 x ADD | 592,036 |

5.2.2.3. Fire Protection Storage

As previously stated, the National Fire Code, Insurance Service Office, and local Fire Department regulate the quantity of water storage suggested for firefighting purposes. The quantity of water that the District is required to provide can be drawn from operating sources or from storage facilities. Although areas of the District’s system are strictly residential and only require 1,000 gpm for two (2)-hours, the District has established its firefighting delivery and storage goal based on the ability of the District to provide 2,000 gpm for two (2)-hours, strictly drawn from storage facilities. The District’s established fire storage goal is considered conservative and totals 240,000 gallons.

5.2.2.4. Storage Summary

Table 22 summarizes MWSD’s established storage goals for current demands and for the expected future and ultimate growth; the total storage goal is a target value that the District has set for the operation of its system and is not a mandated requirement. Values are conservative estimates assumed should a disaster occur. To date, MWSD is in compliance with regulations related to water storage requirements and has sufficient storage to serve additional customers, up to 1000 connections.

Table 22 MWSD Storage Goals

| Storage Goal Category | Storage Volume (gallons) | | | | | |
|--|--------------------------|------------------|------------------|------------------|------------------|------------------|
| | Current (2016) | 200 | 400 | 600 | 800 | 1000 |
| ADD | 296,018 | 333,506 | 370,994 | 408,482 | 445,970 | 483,458 |
| MDD | 478,230 | 533,609 | 593,590 | 653,571 | 713,552 | 773,533 |
| Operational Storage (25% of MDD) | 119,558 | 133,402 | 148,398 | 163,393 | 178,388 | 193,383 |
| Emergency Storage (2 Days at ADD) | 592,036 | 667,012 | 741,988 | 816,964 | 891,940 | 966,916 |
| Fire Fighting Storage (2 hours at 2,000 gpm) | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 |
| Total Storage Goal | 951,593 | 1,040,414 | 1,130,385 | 1,220,357 | 1,310,328 | 1,400,299 |
| Existing Storage | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 | 1,402,000 |
| Current Storage Deficit | 0 | 0 | 0 | 0 | 0 | 0 |

Additional storage may be required to provide emergency storage capacity for the Big Wave development. The storage facility would be built at the cost of the developer and the location and volume of the tank would depend of the fire flow requirements of the development.

5.3. Hydraulic Model

This section presents the development and calibration of the water system hydraulic model, details the results of the analyses, and summarizes the deficiencies found in the model simulations.

The District's potable water distribution system was simulated using the WaterCAD software to determine if system components adequately operate under various water demand conditions and against the criteria listed in the previous section. The simulation software also allows the District to estimate how the water system will operate if new connections, supply sources, system's improvements and/or storage facilities are added. The scenarios modeled include:

Maximum Flow Analysis

- MDD under current conditions (2016)
- MDD under future conditions (addition of 600 connections): The addition of 600 connections was selected as a conservative long-term growth scenario for MWSD's system.

Fire Flow Analysis

- System-wide fire flow analysis under current (2016) MDD conditions
- Simulation of fire events under current (2016) MDD conditions:
 - Fire event simulation in Moss Beach pressure zone
 - Fire event simulation in Upper Moss Beach pressure zone
 - Fire event simulation in Pillar Ridge pressure zone
 - Fire event simulation in Regulated pressure zone
 - Fire event simulation in Portola pressure zone

Based on the results of these analyses, deficiencies in the distribution system were identified and further analyzed to determine what improvements would be needed. Improvement scenarios modeled include:

Pipeline and Pressure Regulating Valves Settings Improvements Analysis

- MDD under current (2016) conditions with needed pipeline improvements
- System-wide fire flow analysis under current (2016) MDD conditions with needed pipeline and PRV settings improvements
- Fire event simulations in Moss Beach, Upper Moss Beach, Pillar Ridge, Regulated and Portola pressure zones under current MDD conditions with needed pipeline and PRV settings improvements

5.3.1. Development and Calibration

The WaterCAD Analyzer hydraulic model simulates water system operations and generates information on pressure, flow, velocity, and headloss that can be used to analyze the performance of the system and identify its deficiencies. The water distribution system is represented in the model as a schematic network of pipes, tanks,

valves, pumps and reservoirs. The model is constructed by assigning nodes at each pipeline intersection or change in diameter, thus forming a network of pipelines that connect the various model elements.

Citizens Utility Company of California developed a base H2ONET Analyzer hydraulic model of the MWSD water system in 2003. Due to a lack of model documentation, the origin of the input data used in that version of the model was unknown, and model run results could not be verified with operational data. Errors were found in the configurations of certain areas of the distribution system as well as in the design and elevation data.

As a result, the pipeline network was reconfigured in WaterCAD using MWSD data and topographic data published by the United States Geological Survey (USGS). MWSD data includes physical data, such as pipe diameters, Supervisory Control and Data Acquisition (SCADA) data, such as continuously monitored flows and pressures, and assumed pressure losses in the system. The model can satisfactorily predict tank levels and source flow patterns, but it cannot predict most fire hydrant flows and actual water flow in most pipes.

The model is regularly updated, and most recently in 2017 for the purposes of this Master Plan Update. Calibration of the model was achieved in 2013 through fire hydrant test results and flow monitoring at critical locations.

5.3.2. Maximum Flow Analysis

To assess the current distribution system's ability to deliver water under MDD conditions, twenty-four (24)-hour simulations were run for current and future MDD. The scenarios in this analysis include:

- Current (2016) conditions: 332 gpm, MDD
- Long-term scenario - addition of 600 connections: 454 gpm, MDD

To analyze distribution system performance, headlosses in each pipeline were examined to determine which parts of the distribution system are "stressed" in meeting MDD while maintaining a minimum pressure of fifty (50) psi. A pipeline was considered "stressed" if it experienced a headloss greater than five (5) feet per 1,000 feet (ft/1,000 ft) during the course of the simulation. Results of the maximum day flow analysis are presented in Table 23.

Table 23 Maximum Flow Analysis Results

| Criteria | Demands | |
|--|----------------|------------------------------------|
| | Current (2016) | Future Scenario 600 connections |
| Percentage of pipes with headloss greater than 5 ft per 1,000 ft | 0.7% | 1.6% |

The existing distribution system demonstrated adequate performance and capacity to accommodate current (2016) MDD flow. Most pipelines sustained a headloss of less than five (5) ft/1,000 ft. Out of the 740 feet (0.5-percent) of pipeline which exceeded the 5 ft/1,000 ft headloss criteria, the highest headloss occurred in a two (2)-inch diameter pipe and PRV located along Buena Vista Street. Under the future scenario demand conditions (addition of 600 connections), the percentage of pipelines exceeding the 5 ft/1,000 ft headloss criteria increased to almost two (2)-percent.

“Stressed” pipelines under current (2016) MDD conditions should be addressed in the near term and include:

- The 2-inch pressure regulating valve station and the adjacent 2-inch piping, along Buena Vista Street.
- Approximately 10 feet of 4-inch pipe downstream of the Alta Vista well.
- Approximately 100 feet of 4-inch pipe located downstream of the Drake and Wagner Well No.3 Wells.

5.3.3. Fire Flow Analysis

To evaluate the system’s ability to provide fire flow within the system, system-wide fire simulations and steady-state fire event simulations were performed. In order to balance the hydraulic model, the system-wide fire flow simulation conducted incorporated the Alta Vista, Charthouse, Schoolhouse, Moss Beach/Seal Cove and Upper Moss Beach pressure zones. Five fire event simulations were performed for the Moss Beach, Upper Moss Beach, Pillar Ridge, Regulated and Portola pressure zones.

The fire flow analysis considered that the Portola Tank is in service and feeding the system.

5.3.3.1. *System-wide Response*

To assess the current distribution system’s ability to deliver adequate fire flow under the MDD condition of 332 gpm, a system fire flow analysis was performed. To analyze distribution system performance, pressures and available flows were examined for each node representing a possible fire hydrant in the system. Nodes were considered inadequate if the available flow at each node was less than 2,000 gpm. The results for a fire flow of 2,000-gpm and 1,500-gpm fire are presented in Table 24 and Figure 14.

Table 24 *System Fire Flow Analysis Results*

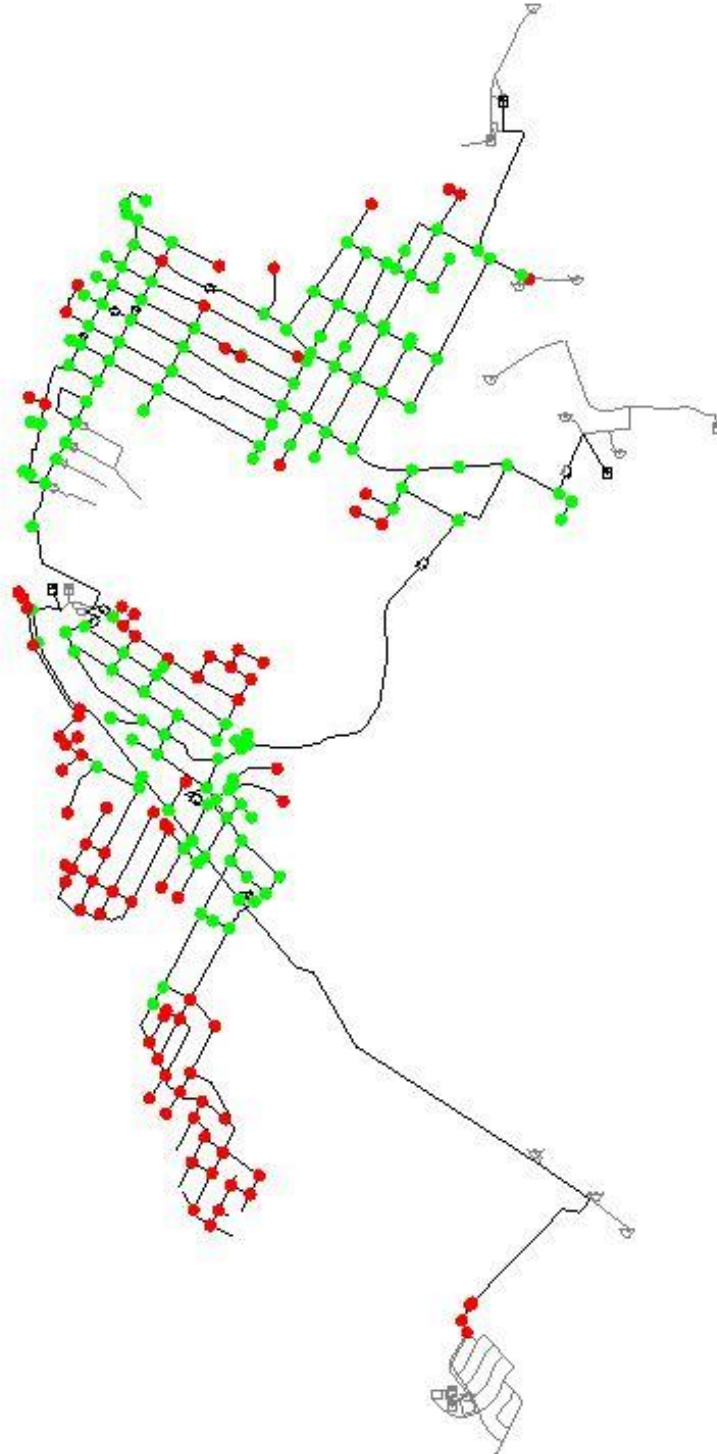
| | |
|---|-----|
| Percentage of nodes unable to deliver 2,000 gpm at 20 psi | 39% |
| Percentage of nodes unable to deliver 1,500 gpm at 20 psi | 19% |

As shown in Table 24, a non-negligible percentage of nodes in the zones of interest (Alta Vista, Schoolhouse, Charthouse, Moss Beach/Seal Cove and Upper Moss Beach) did not pass the fire flow requirements of 2,000 gpm at twenty (20) psi. However, the analysis shows that the amount of failed nodes drops significantly when considering a fire flow of 1,500 gpm at twenty (20) psi.

This system-wide fire flow simulation shows that thirty-nine (39)-percent of the nodes in the distribution system were unable to provide adequate fire flow. Most of these nodes are located in the Schoolhouse, Moss Beach/Seal Cove and Upper Moss Beach pressure zones. It must be noted that a significant number of the failing nodes are located at the end of small diameter dead-end pipes, which is to be expected and does not necessarily reflect the overall ability of the system to supply fire flow to its connections. To mitigate this effect, the dead-end pipes can be connected to the closest water mains and convert the dead-end pipes into loops in the system, which will improve the delivery of fire flow to these nodes.

Based on these results, it appears that the replacement and upsizing of pipelines in the Alta Vista, the Upper Moss Beach and the Schoolhouse pressure zones are required to support the provision of fire flow throughout the system. Additionally, the adjustment of pressure regulating valves stations is required to ensure pressures higher than 20 psi during a fire event. Since the Schoolhouse and Moss Beach/Seal Cove pressure zones are primarily affected, the adjustment of the settings at the PRVs located on Sunshine Valley Road and the PRVs at the Etheldore and Lancaster intersection is expected to greatly improve the system-wide fire flow results.

Figure 14 System Fire Flow Analysis Results – 2,000 gpm at 20 psi



5.3.3.2. *Fire Event Simulations*

To assess the existing distribution system’s ability to handle fire flows, five (5) fire event simulations were run in the following pressure zones:

- Moss Beach
- Upper Moss Beach
- Pillar Ridge
- Regulated
- Portola

A two (2)-hour, 2,000-gpm fire event under MDD conditions, was simulated at a single node in each pressure zone. The nodes in each pressure zone were selected to show a fire event at the most remote location of each pressure zone. A pipeline was considered “stressed” if it suffered a headloss greater than ten (10) ft/1,000 ft. Table 25 illustrates the percentage of existing pipelines that are “stressed” during the fire event simulations. The following figures highlight the “stressed” pipelines that have headlosses higher than 20ft/1,000 ft.

Table 25 *Fire Event Simulation Results*

| Percentage of pipelines with headloss greater than the criteria | Headloss Criteria | |
|---|-------------------|------------------|
| | 10 ft / 1,000 ft | 20 ft / 1,000 ft |
| Fire Simulation 1: Moss Beach | 24.6% | 11.3% |
| Fire Simulation 2: Upper Moss Beach | 18.1% | 9.6% |
| Fire Simulation 3: Pillar Ridge | 2.1% | 1.4% |
| Fire Simulation 4: Regulated | 15.1% | 9.4% |
| Fire Simulation 5: Portola | 0.9% | 0.9% |

Based on this analysis, some pipelines require replacement, particularly two (2)- and four (4)-inch diameter pipelines in the Alta Vista pressure zone, as shown in the following Figures. The results also show that the 8-inch transmission pipe downstream of the Alta Vista Tanks needs to be upsized. The results also confirm that the Pillar Ridge and Portola pressure zones can independently provide their respective fire flow and these fire event simulations therefore resulted in very localized temporarily stressed pipelines.

Figure 15 Results of Fire Simulation 1: Moss Beach

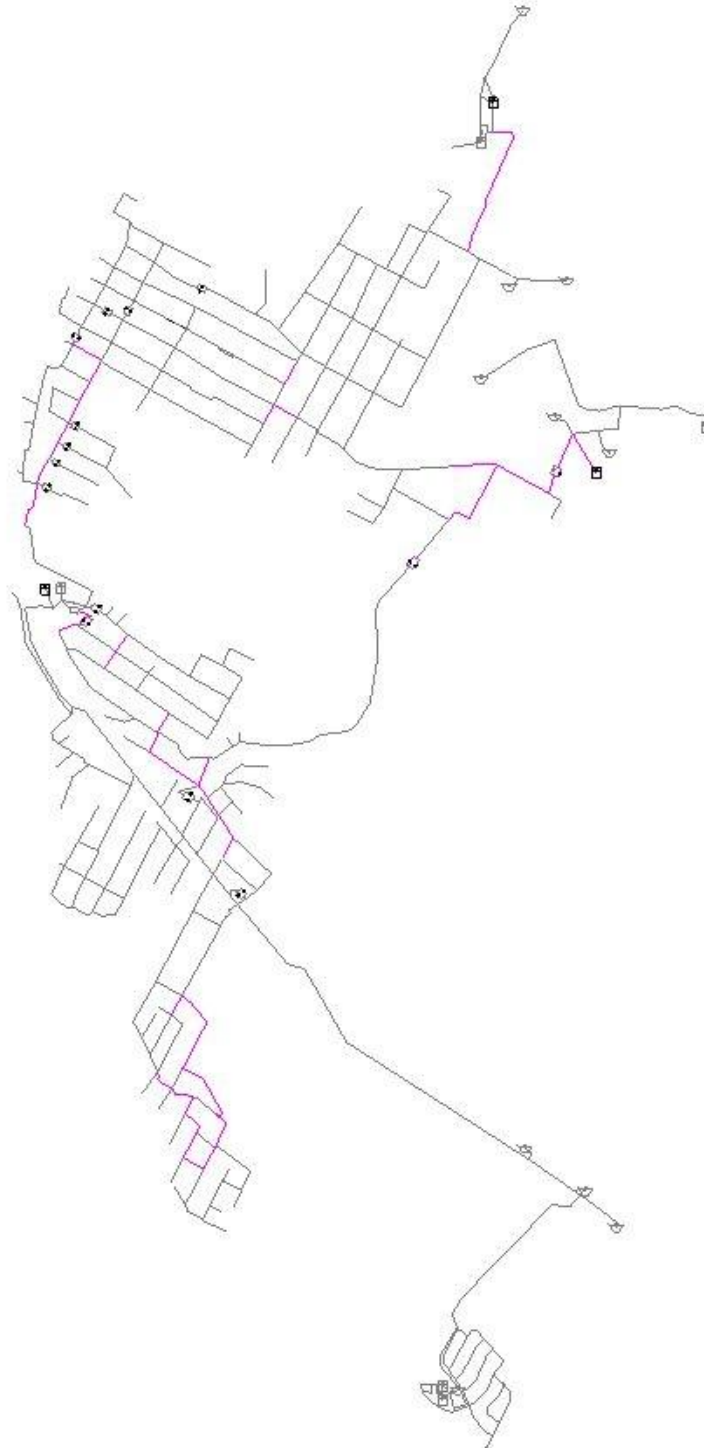


Figure 16 Results of Fire Simulation 2: Upper Moss Beach

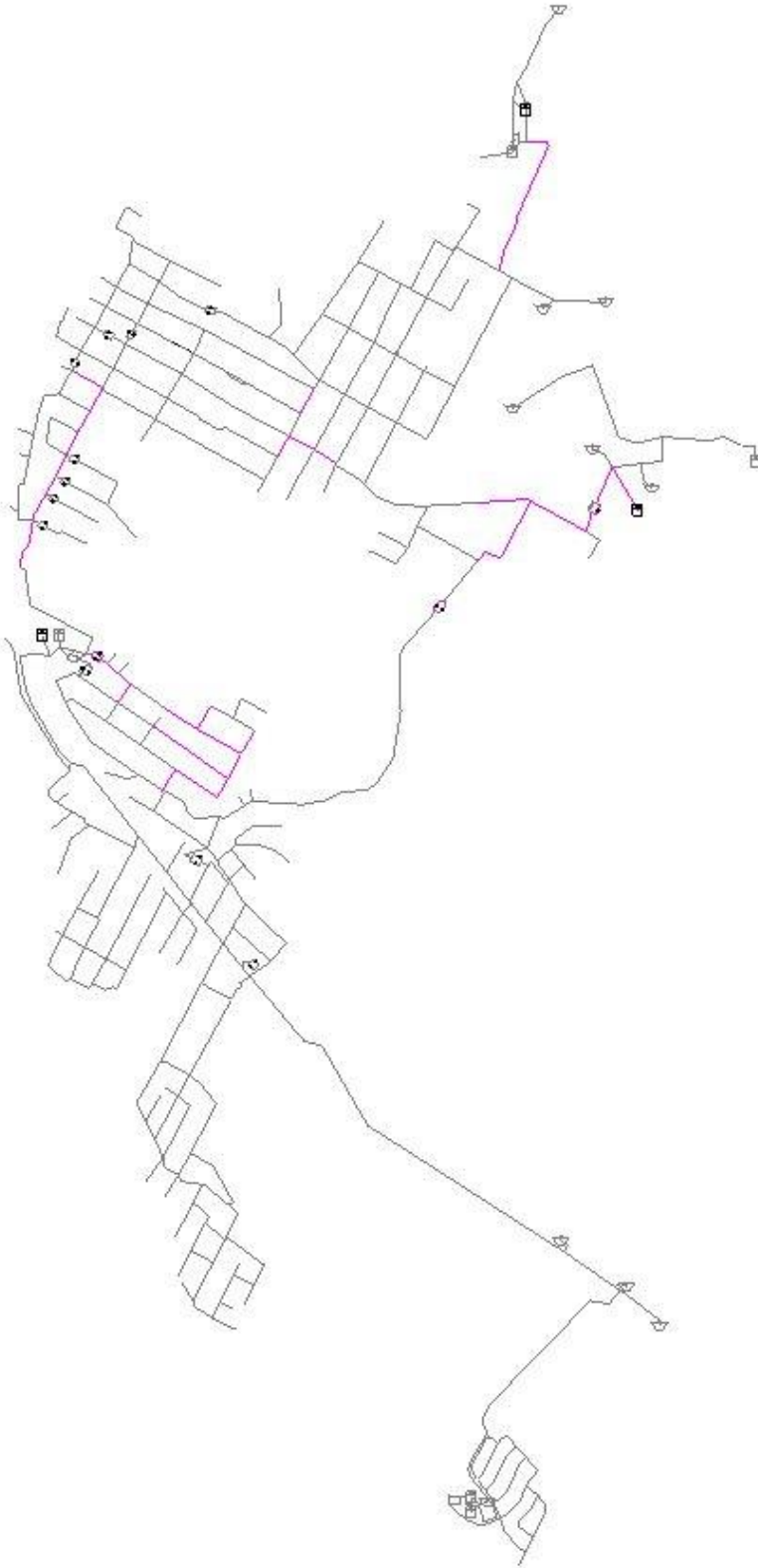


Figure 17 Results of Fire Simulation 3: Pillar Ridge

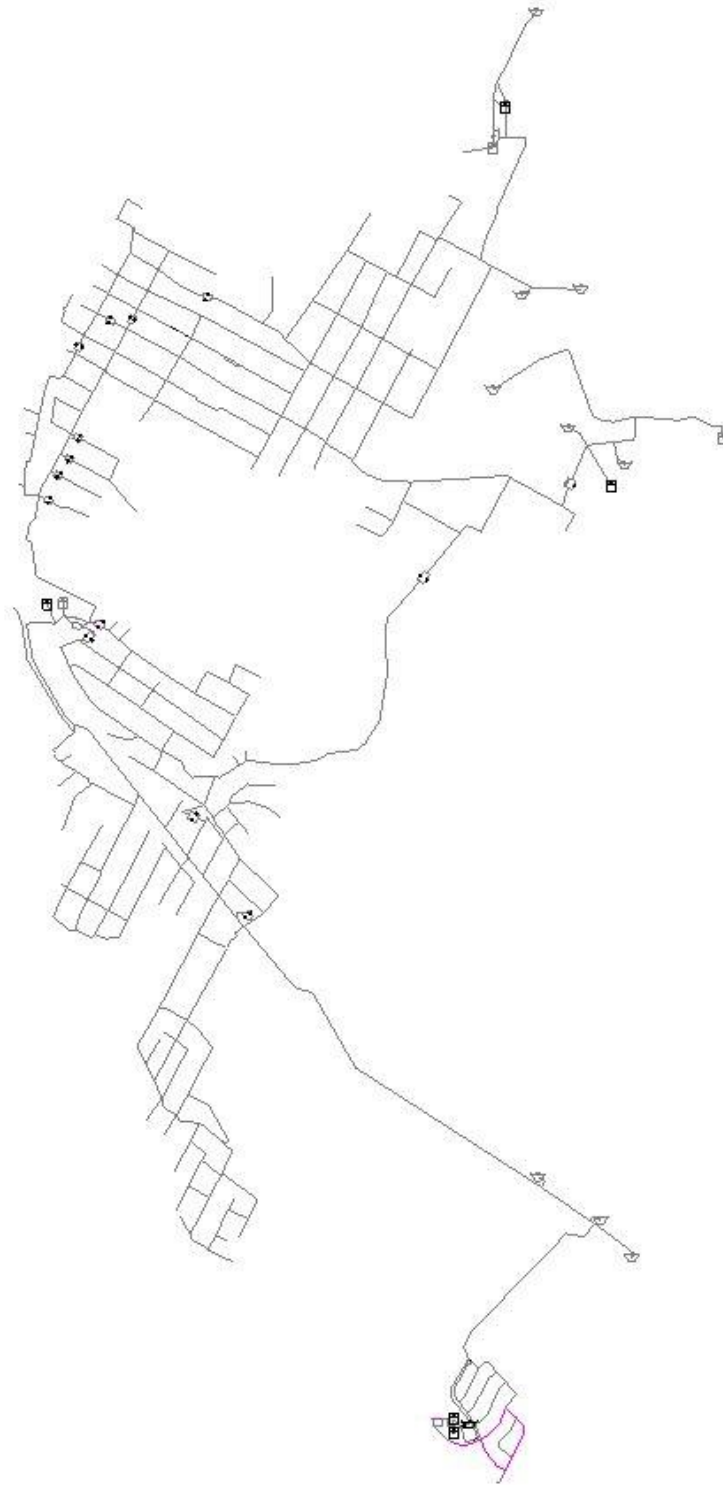


Figure 18 Results of Fire Simulation 4: Regulated

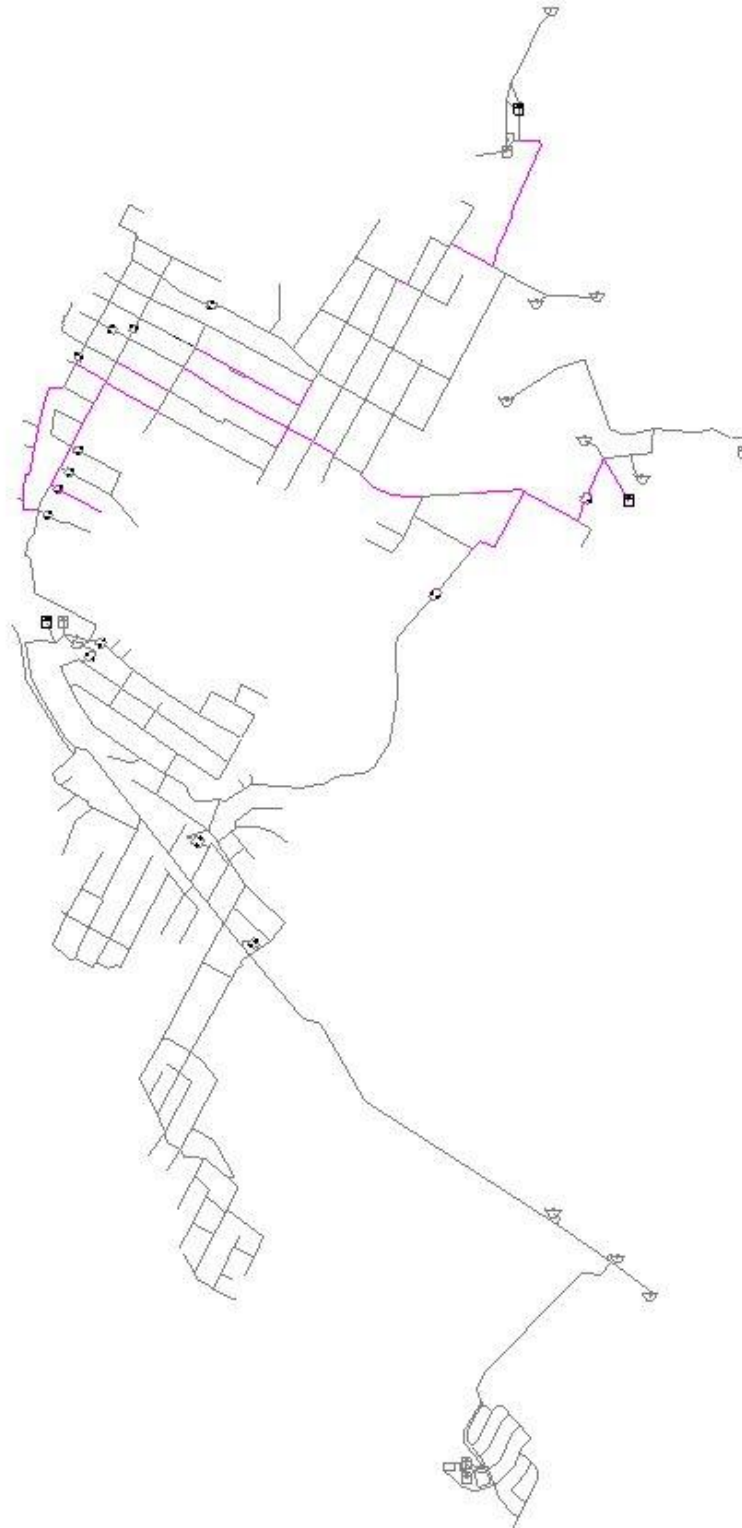
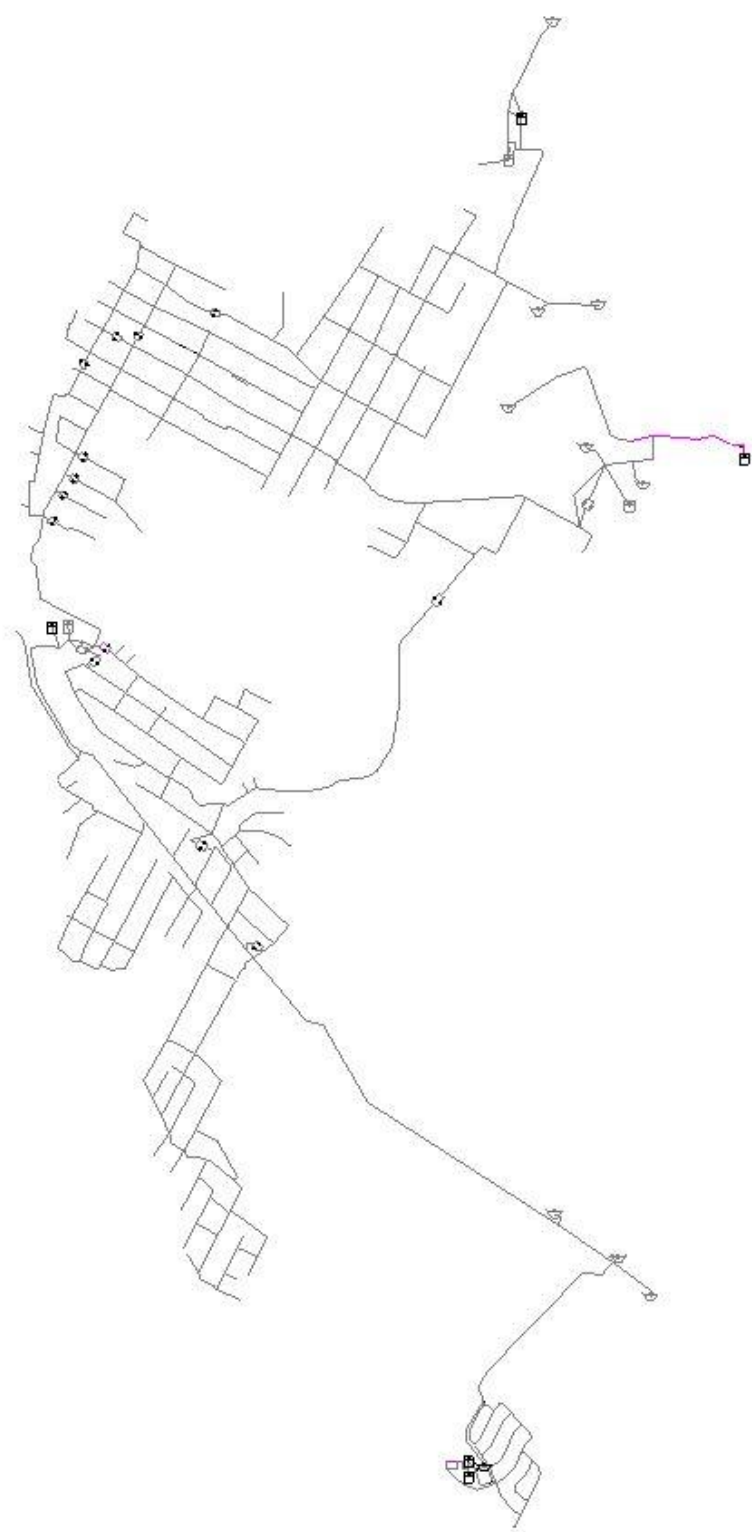


Figure 19 Results of Fire Simulation 5: Portola



5.3.4. System Improvements Analysis

The maximum flow and fire flow analyses identified deficiencies in MWSD's water system, including:

- “Stressed” pipelines,
- “Stressed” pressure regulating stations, and
- Required change of PRV settings.

System improvements were simulated to assess the adjusting the PRV settings at 2 PRV stations and upsizing the pipelines and PRVs identified in the aforementioned analyses.

5.3.4.1. Pipeline & PRV Stations Improvements

To address the deficiencies identified in the maximum flow analysis, all 1.5-, 2-, 3- and 4-inch pipelines were assumed to be replaced with 6-inch pipelines, as follows:

- 310 feet of 1.5-inch diameter pipelines upsized to 6-inch diameter pipelines
- 1,725 feet (old number 1,970 feet) of 2-inch diameter pipelines upsized to 6-inch diameter pipelines.
- 1,215 feet of 2.5-inch of diameter pipelines upsized to 6-inch diameter pipelines.
- 475 feet of 3-inch diameter pipelines upsized to 6-inch diameter pipelines
- 4,670 feet (old number 5,940 feet) of 4-inch diameter pipelines upsized to 6-inch diameter pipelines

Improved Maximum Flow Analysis

Under the current MDD conditions, the following pipeline improvements to the pipes that showed headlosses over the criteria will ensure compliance of the entire water system at current MDD:

- Upsize the 100-foot long 4-inch pipe downstream of the Drake and Wagner Well No.3 wells to a 6-inch pipeline,
- Upsize the 10-foot long 4-inch pipe downstream of the Alta Vista well to a 8-inch pipeline, and
- Upsize the 2-inch PRV and adjacent 2-inch piping on Buena Vista Street.

- Upsize the 8-inch transmission pipe downstream of the Alta Vista tanks, on Alta Vista Road.

Since the headlosses are not significant, these are not high priority replacement projects.

Improved System-wide Fire Flow Analysis

To alleviate the deficiencies in the Schoolhouse pressure zone, 2,240 feet of pipeline located along Highway 1 and along California Avenue were upsized to 10-inch diameter pipeline.

To alleviate the deficient in the Upper Moss Beach pressure zone, 750 feet of pipeline located along California and Pearl Street were upsized to 6-inch diameter pipeline.

To ensure that the required fire flow was supplied, 6,250 feet of pipeline in the Alta Vista pressure zone were upsized, from 4-inch to 6-inch and from 6-inch to 8-inch.

To alleviate the deficiencies in the Moss Beach pressure zone, the settings at the Sunshine Valley Road PRV station were changed from 35 psi to 60 psi on the 2-inch side and from 30 psi to 55 psi on the 6-inch side.

The PRV settings at the PRV station located at the intersection of Etheldore and Lancaster were adjusted from 40 psi to 55 psi on the 2-inch side and from 35 psi to 50 psi on the 6-inch side in order to allow the supply of the fire flow at a minimum of 20 psi to a larger number of nodes in the Schoolhouse pressure zone.

The remaining failing nodes are mostly nodes located at the end of small diameter dead-end pipes. The provision of fire flow to these nodes can be highly improved by connecting the end of these pipes to the closest water mains.

Table 26 System Fire Flow Analysis with Improvements Results

| | |
|---|-----|
| Percentage of nodes unable to deliver 2,000 gpm at 20 psi | 21% |
| Percentage of nodes unable to deliver 1,500 gpm at 20 psi | 13% |

Improved Fire Event Simulations Analysis

With the pipeline and PRV settings improvements in place, the percentage of “stressed” pipelines further decreased during the fire event simulations in the Moss Beach, Upper

Moss Beach, and Regulated pressure zones, as shown in the Table 27 and the following Figures.

Table 27 Fire Event Simulation Results with Pipeline and PRV Improvements

| Percentage of pipelines with headloss greater than the criteria | Headloss Criteria | |
|--|--------------------------|-------------------------|
| | 10 ft / 1,000 ft | 20 ft / 1,000 ft |
| Fire Simulation 1: Moss Beach | 13.5% | 5.6% |
| Fire Simulation 2: Upper Moss Beach | 8.6% | 4.4% |
| Fire Simulation 3: Pillar Ridge | 2.1% | 1.4% |
| Fire Simulation 4: Regulated | 10.4% | 5.3% |
| Fire Simulation 5: Portola | 0.9% | 0.9% |

Figure 20 Results of System Wide Fire Simulation with System Improvements

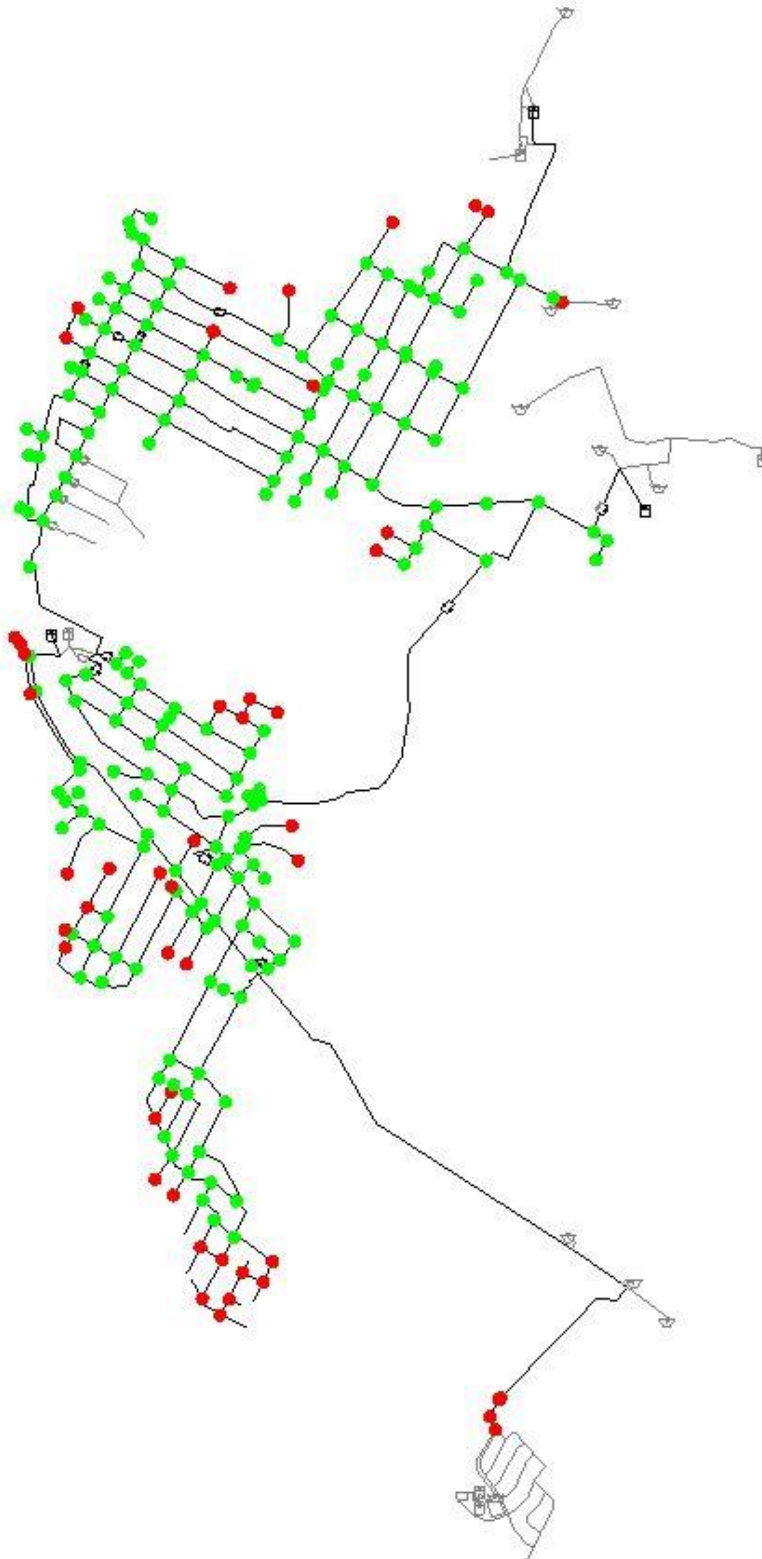


Figure 21 Results of Fire Simulation 1 with System Improvements: Moss Beach



Figure 22 Results of Fire Simulation 2 with System Improvements: Upper Moss Beach

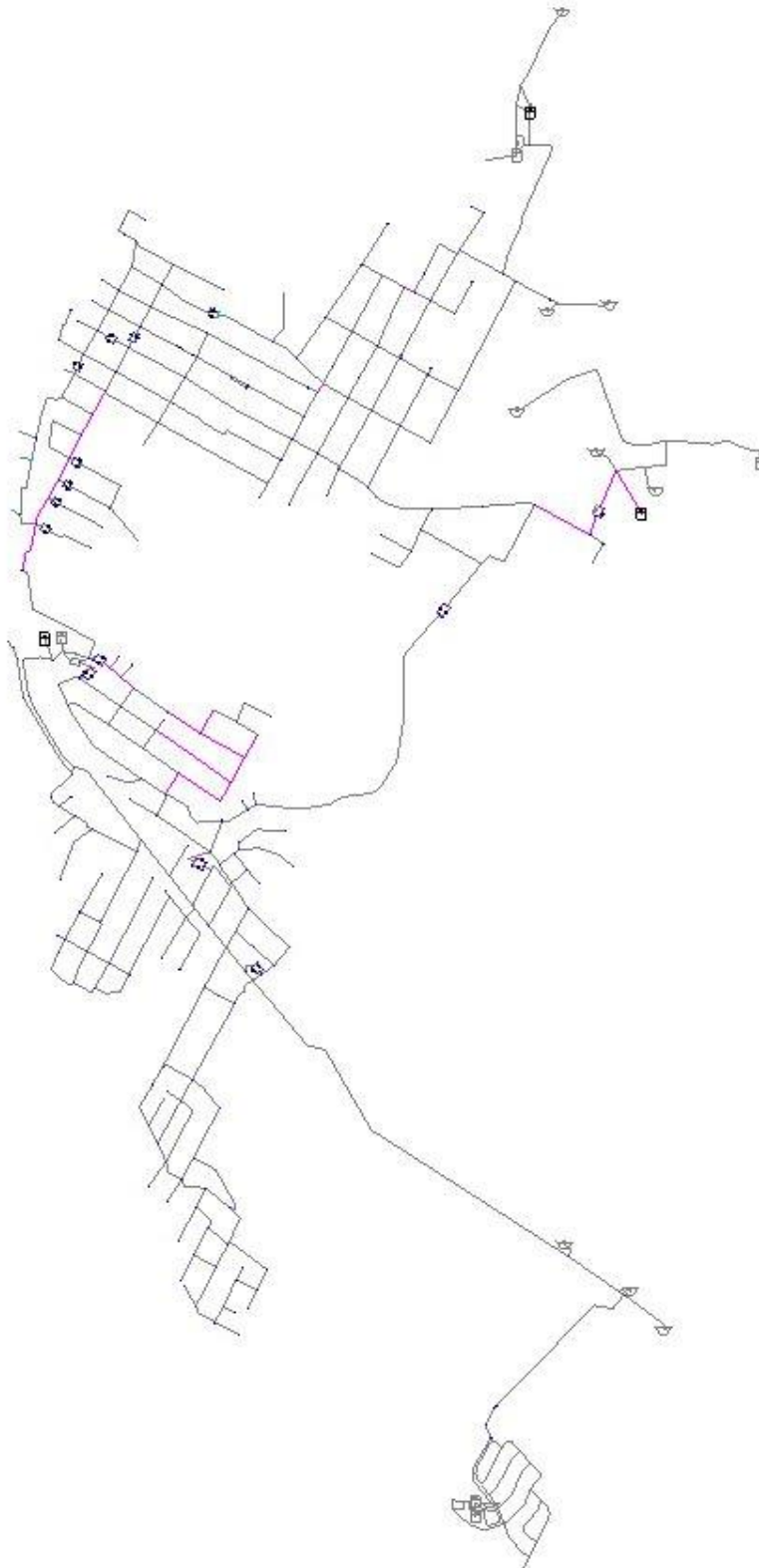


Figure 23 Results of Fire Simulation with System Improvements: Regulated

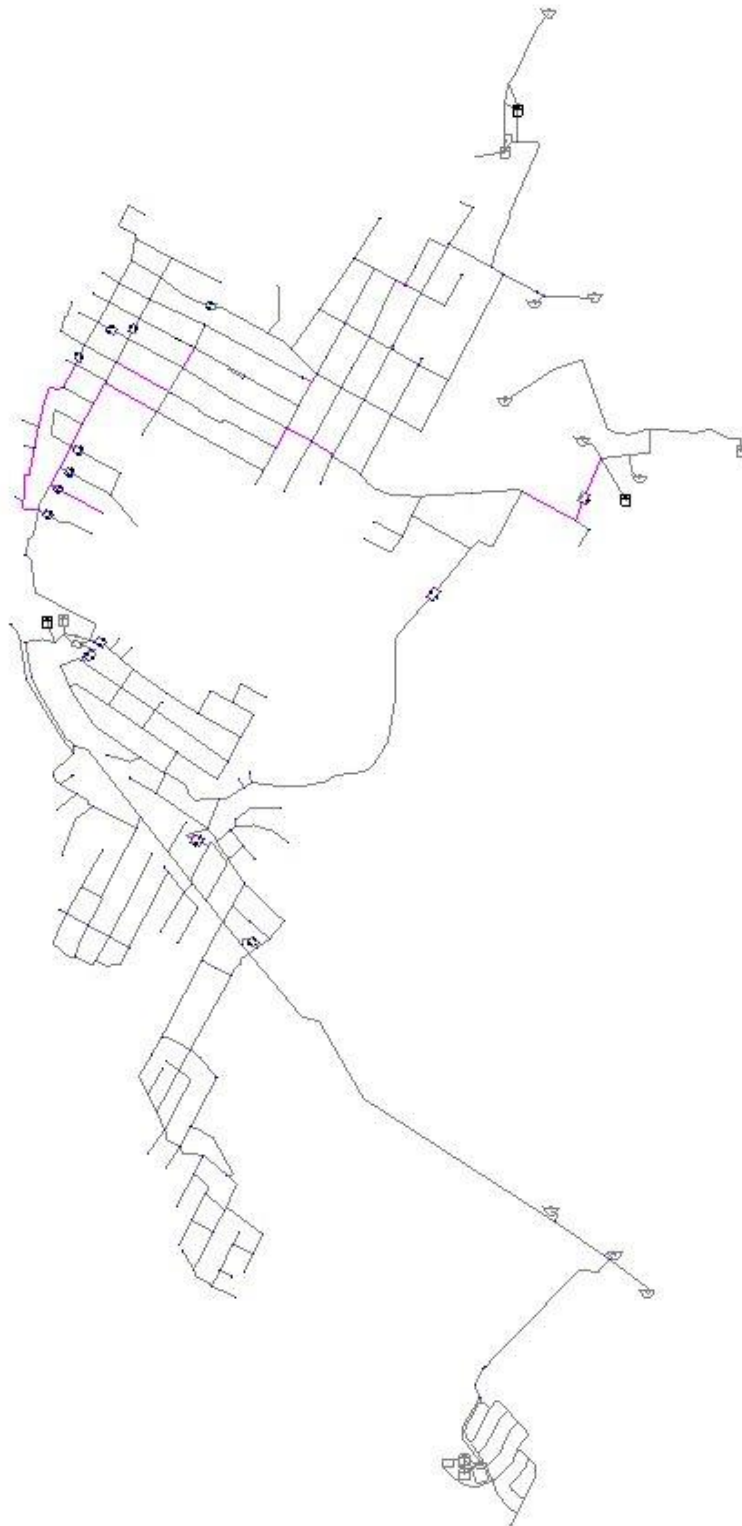
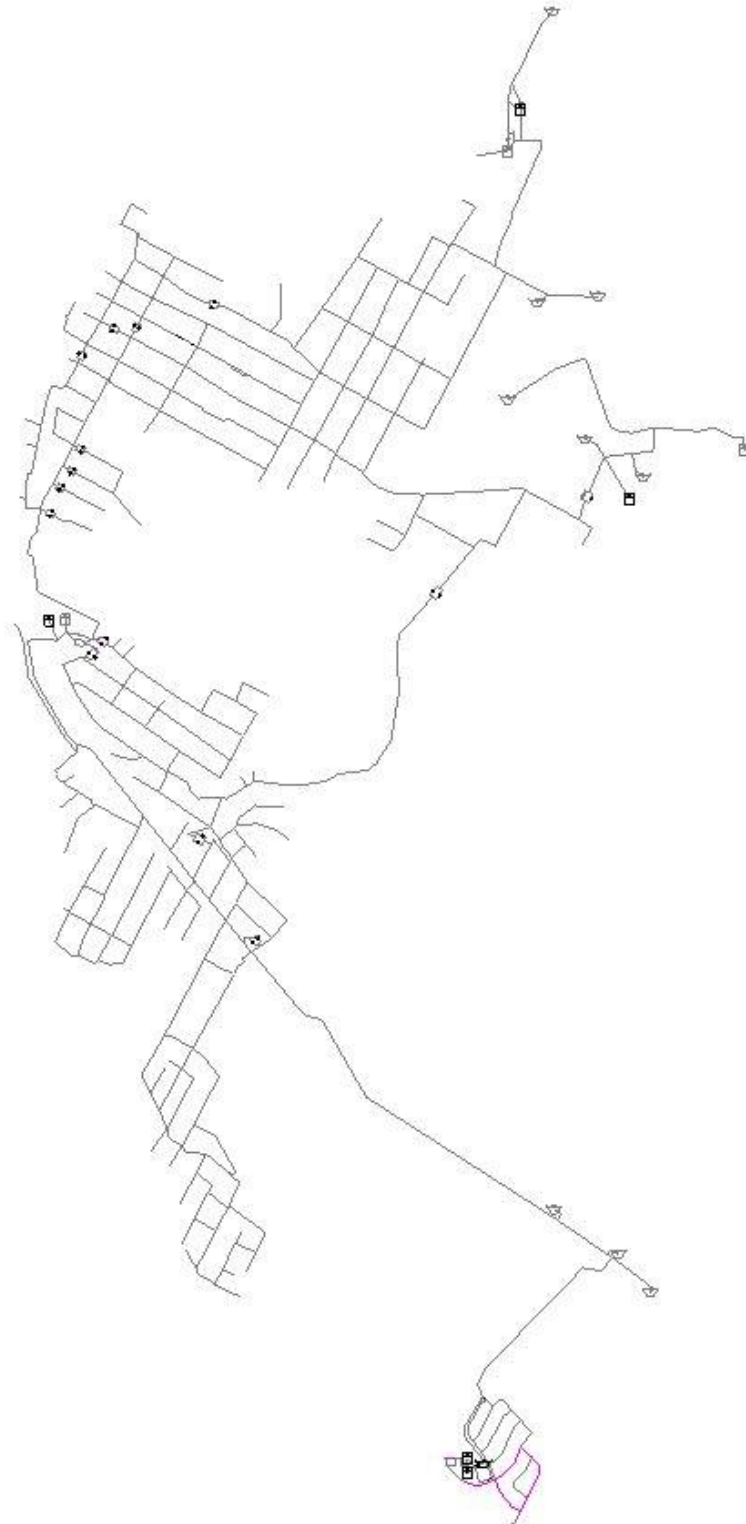


Figure 24 Results of Fire Simulation with System Improvements: Pillar Ridge



As indicated in these Figures, some pipelines remained “stressed” during a fire event. However, 2,000 gpm of fire flow can be maintained and system pressure above twenty (20) psi can also be maintained. Replacement of “stressed” pipelines will further improve system performance and the priority of these improvements needs to be addressed in the main replacement program.

5.3.5. Summary of Potential Improvements

The following improvements, in addition to the improvements required to satisfy the current MDD as summarized above, would allow the District’s water system to meet the requirements of the future MDD scenario (addition of 600 connections) shown in Figure 25:

- Replace 320 feet of 8-inch diameter pipeline with 10-inch diameter pipeline along Drake Street, between Cedar Street and Elm Street.
- Replace 570 feet of 4-inch diameter pipeline with 6-inch diameter pipeline along Audubon Avenue in the Alta Vista pressure zone.
- Replace 1,480 feet of 8-inch diameter pipeline with 10-inch diameter pipeline downstream of the Alta Vista Tank, along Alta Vista Road.
- Upsize the 3-inch PRV and adjacent 3-inch piping located on Farallone Street.
- Upsize the 100-foot long 4-inch pipeline downstream of the Wagner well.

The following improvements would allow the District’s water system to meet the requirements of the current (2016) fire flow criteria of the system-wide fire flow and fire event simulations, as shown in Figure 26:

- Replace 8,395 feet of 1.5-, 2-, 2.5-, 3- and 4-inch diameter pipelines with 6-inch diameter pipeline.
- Adjust the setting of the PRV located on Sunshine Valley Road to allow an increased downstream pressure.
- Adjust the setting of the PRV located at the intersection of Etheldore and Lancaster Street to allow an increased downstream pressure.
- Replace 1,300 feet of 6-inch pipeline with an 8-inch pipeline along 6th Street in the Alta Vista pressure zone.

- Replace 1,305 feet of 6-inch pipeline with an 8-inch pipeline along 5th Street in the Alta Vista pressure zone.
- Replace 1,400 feet of 8-inch pipeline with 10-inch diameter pipeline in the Schoolhouse pressure zone, along Highway 1 downstream of the Schoolhouse tanks.
- Replace 840 feet of pipeline with 10-inch diameter pipeline in the Schoolhouse pressure zone.
- Replace 380 feet of 4-inch diameter pipeline with a 6-inch diameter pipeline along 8th Street in the Alta Vista pressure zone.
- Replace 470 feet of 4-inch diameter pipeline with 6-inch diameter pipeline along Pearl Street in the Upper Moss Beach pressure zone.

Figure 25 Pipeline Improvements for Future MDD

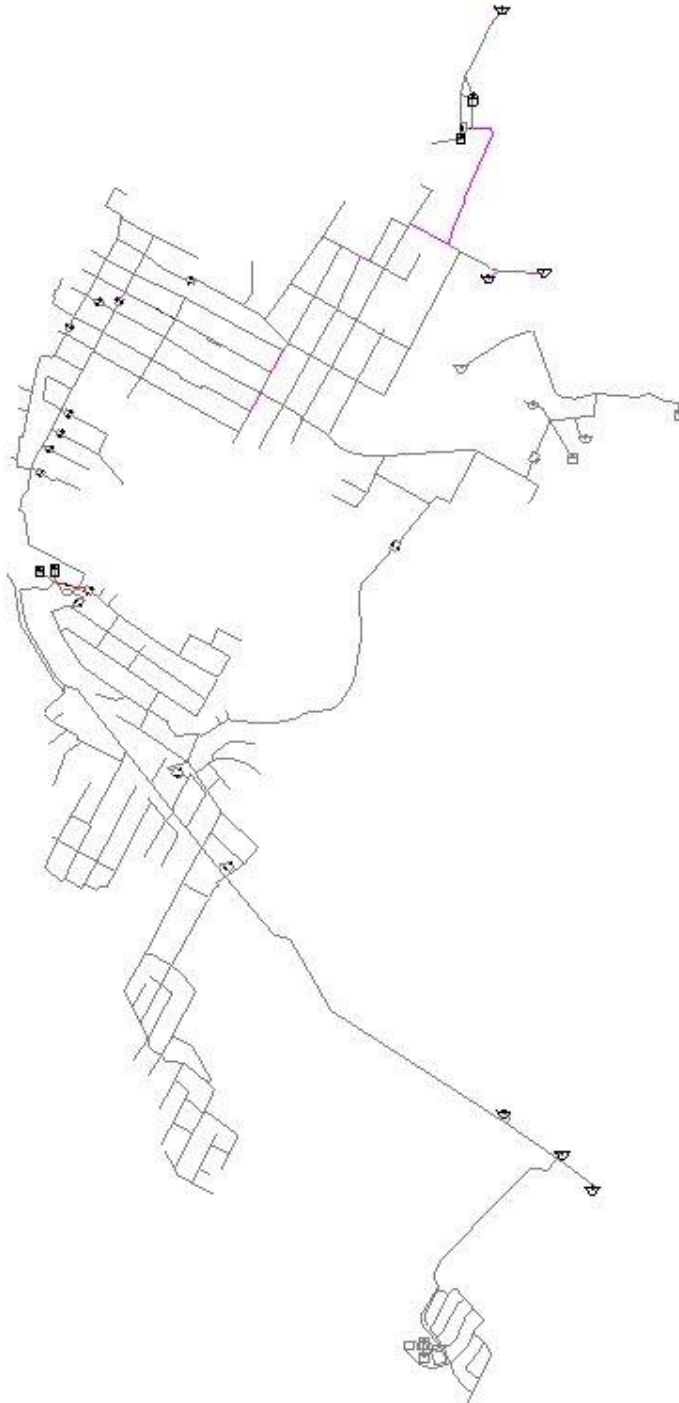
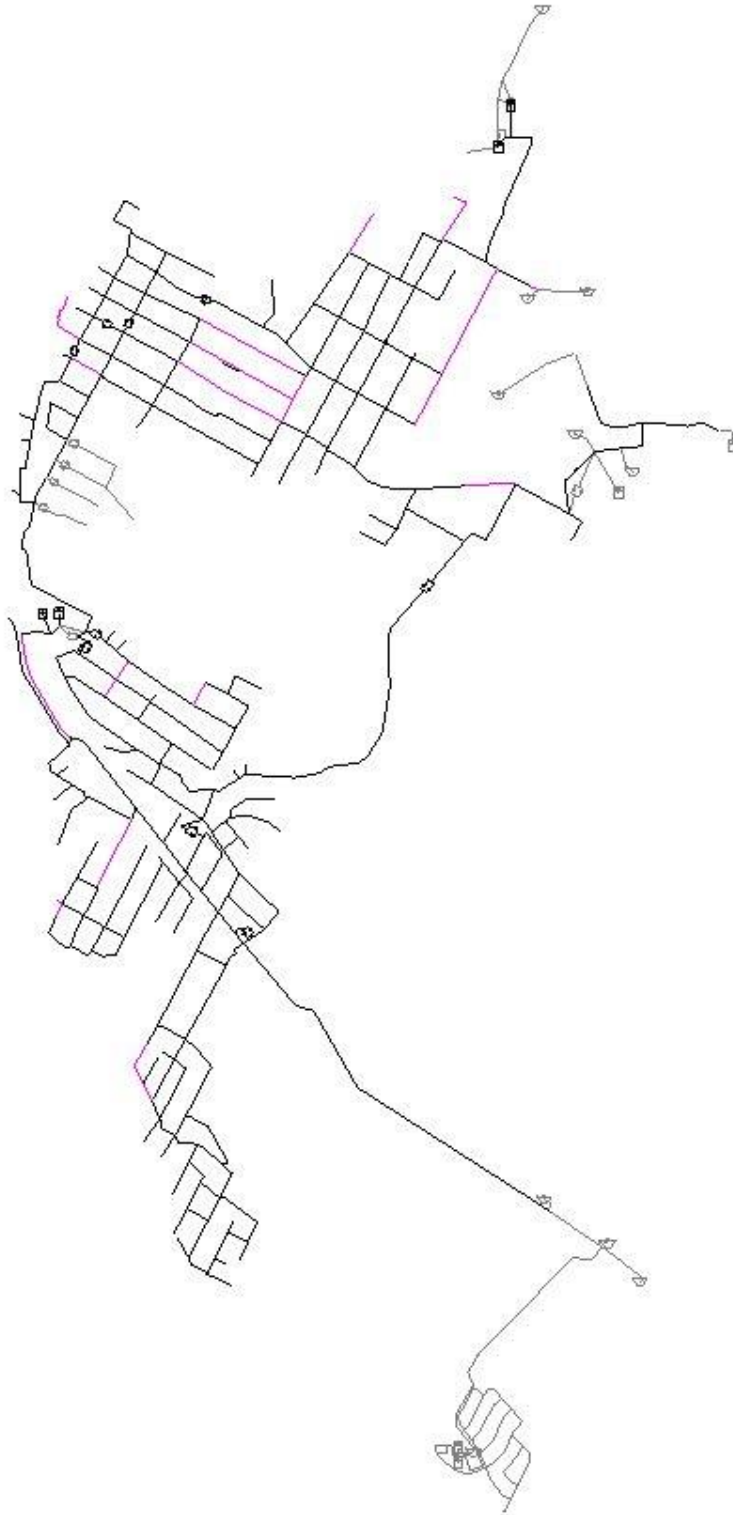


Figure 26 Pipeline Improvements for Fire Scenario



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SECTION SIX

Capital Improvements Program

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6. Capital Improvements Program

The results of analysis presented in previous sections demonstrate that MWSD’s water system requires improvements to address system weaknesses, continue to improve water supply reliability, and ensure sufficient response under daily operational scenarios, fire flow, and emergency conditions. These potential improvements make up the District's Capital Improvements Program (CIP) and include the rehabilitation of the existing infrastructure, addition of new facilities, development of new sources of supply, implementation of repair and replacement, and preventive maintenance programs. The proposed improvements are categorized as Priority Level 1, based on the District's CIP prioritization criteria.

In 2003, MWSD established CIP prioritization criteria that serve as the foundation for the District's capital improvements decision-making process to ensure a relevant implementation schedule and adequate funding for the improvements. The criteria provides a method to rate the relative importance of a particular project based upon factors such as protection of public health, employee safety, legal and regulatory requirements, and funding constraints. These criteria established which projects should be implemented in any given year and over the CIP planning horizon. The prioritization criteria used by MWSD are presented in Table 28 and are categorized into three (3) project levels in order of most to least critical for implementation.

Table 28 *Prioritization Criteria*

| Prioritization Level | Description | Examples |
|---------------------------------|--|--|
| Level 1: Mandatory Projects | “Must do”, highest priority. District has little or no control to defer. | (1) Projects required by law/legislation, regulations; (2) Projects protecting health and safety of employees and the public; and (3) Project funded by others. |
| Level 2: Necessary Projects | Must be done. District has moderate level of control over the timing of implementation. | (1) Projects required for providing adequate emergency storage and meeting fire flow requirements; (2) Projects reducing water system losses and reducing pipeline leaks. |
| Level 3: Discretionary Projects | Should be done. District has significant level of control over the timing of implementation. | Projects that are required but can be deferred to a later date. Level 3 projects can be completed as needed, if Level 1 or Level 2 projects are postponed. |

In addition, following introduction of new domestic connections to the water system in 2011 by the Board, the District has started developing a two-part CIP that includes projects designed exclusively for or shared by the new customers connecting to the water system. This category is funded through the Water Capacity Charge (WCC). The second category of projects is needed for the existing customers and designed to provide appropriate levels of renewal and replacement for the current water system. The water rate revenues fund these projects.

The planning-level cost estimates included in this CIP are total project costs with the +50%/-30% estimating accuracy and include the following elements:

1. Engineer's opinion of probable construction cost
2. Planning, permitting, legal, and administrative costs 40 percent
3. Planning-level contingency 25 percent

The CIP projects and programs presented in Table 29 include Priority Level 1 projects for the water system. Project descriptions that follow include the cost of the entire project or program. The actual timing of implementing the project would depend on various factors, including but not limited to the number of customers requesting water connections, regulatory climate, etc.

Table 29 Summary of New Customer CIP Projects and Costs

| Program/Project | Total Program/Project Cost |
|---|----------------------------|
| 1. Water Main Upgrades Program | \$7,484,500 |
| 2. Existing Well Upgrade Program | \$3,389,000 |
| 3. New and Upgraded PRV Stations' Program | \$1,856,000 |
| 4. Emergency Generator Upgrades Program | \$889,500 |
| 5. Schoolhouse Booster Pump Station Upgrade | \$1,545,000 |
| 6. Portola Tank Telemetry Upgrade | \$250,000 |
| 7. Develop Additional Supply Reliability | \$1,984,000 |
| 8. Big Wave NPA Main Extension Project | \$2,030,000 |

6.1. Priority Level 1 Improvements

Near-term improvements are *Priority Level 1* projects that almost exclusively address the system deficiencies related to adding new customers to the system. Most of the anticipated system deficiencies are due to adding new connections to the system and increasing demand. These are the highest priority, “must do” capital projects. The District has little or no control to defer these projects. Examples of such projects include: (1) Projects required by law/legislation, regulations; (2) Projects protecting health and safety of employees and the public; and (3) Project funded by others.

The projects and actions described below would allow the District to address system deficiencies and continue to operate an efficient and reliable system. The proposed *Priority Level 1* near-term improvements continues the District’s progress toward sustainability through investments that: (1) diversify sources of water supply, (2) improve water quality, (3) encourage conservation of water and energy, and (4) meet current and future infrastructure needs. The near-term improvements will be almost entirely funded through the Water Capacity Charge (WCC).

The following Table contains all *Priority Level 1* projects that have been formulated to provide benefit to, and be paid for by, new District customers. The projects will benefit new and existing customers, and a percentage of these project costs will be funded through water rates. A detailed discussion of each of the projects follows.

6.1.1. Water Main Upgrade Program

Under the water main upgrade program, the District will undertake the effort of designing and constructing upsizing of the existing distribution system mains to accommodate increasing demands due to the addition of new water customers. This program includes an estimated 12,800 linear feet of 8-inch- and 10-inch-diameter mains installed in the water system replacing existing 2-inch, 4-inch, and 6-inch-diameter mains.

Upsizing of existing water mains and isolation and control valves will be required to accommodate new water customers.

The Water Main Upgrade Program will involve the strategic upgrade of existing water mains to incorporate “arterial distribution loops” throughout the system. These arterial loops will provide added redundancy and reinforcement to handle the addition of new customers or potential leaks and pipe failures. The loops will be designed utilizing the existing distribution system and the installation of short spans of new pipelines. Isolation and control valves will also be installed in critical locations as part of the loop design. As a whole, the arterial loops will provide the District’s Operations Staff the ability to isolate and repair critical sections of the distribution system while still conveying water throughout the system. Additionally, this program includes upsizing of the existing mains that would become deficient due to added new customer demands.

The estimated cost of this program is \$7,484,500 and will be paid by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures redundancy and reinforcement of the distribution system to handle the addition of new customers or potential leaks and pipe failures.

6.1.2. Existing Well Upgrade Program

The existing District’s wells operate within their design parameters in the existing water system. Hydraulic analysis demonstrates, however, that with increased demands due to new water customers, existing wells’ pumps and motors would need to be upsized to pump into the system. The pump and motor replacement and piping modifications are required to accommodate new customers due to increased pressures at each wellhead they would have to overcome. This program would involve replacement of all existing motor control centers (MCCs) and associated power supply improvements.

The estimated cost of this project is \$3,389,000 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it is required to accommodate new customers.

6.1.3. New and Upgraded Pressure-Regulating Stations Program

Due to the District's water system configuration and the terrain of the service area, the District operates over 20 existing pressure-regulating stations (PRVs). With the addition of new customers throughout the service area, this project will install up to 5 new PRV stations and increase the capacity of 13 existing PRV stations.

The estimated cost of this project is \$1,856,000 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures efficient water distribution under new demand conditions.

6.1.4. Emergency Generator Upgrade Program

Existing generators at the District's pumping and treatment facilities will become undersized following upgrades of the existing pumps and motors and would require replacement. This program would secure safe and reliable emergency power to the District's critical water treatment and delivery facilities and provide safe operation by staff under the increased demand conditions due to new customers. The associated appurtenances, including automatic transfer switches (ATS) would also have to be replaced due to the increased generator and system capacities.

The estimated cost of this project is \$889,500 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures efficiency of operations under new demand conditions.

6.1.5. Schoolhouse Booster Pump Station Upgrade

The District owns and operates the existing Schoolhouse Booster Pump Station. The addition of new water customers throughout the service area necessitates installation of a new set of booster pumps to accommodate the distribution system expansion for new customers and a new set of parameters under which the system would operate when demand increases. This project will include an addition of a new set of pumps and replacement of the existing pumps with larger pumps and motors.

The estimated cost of this project is \$1,545,000 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures water deliveries to new customers with increased flows in the distribution system.

6.1.6. Portola Tank Telemetry Upgrade

The existing Portola Tank currently operates with no telemetry link to the District's SCADA system. While this arrangement works to serve existing water customers,

addition of new customers throughout the District's service area will require adding the tank to SCADA to ensure operational optimization of the tank under new demand conditions.

The estimated cost of this project is \$250,000 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures operational optimization of the Portola Tank under new demand conditions.

6.1.7. Develop Additional Supply Reliability

This project provides for planning, permitting, and implementation of water supply augmentation to ensure that the water system's reliability remains intact with the addition of the new water customers to the system. Currently, the District has over 20 percent reliability and redundancy in its water supply portfolio achieved by existing District's customers through adding new sources, implementing water system improvements, securing the existing Airport Wells for its water supply portfolio, and through conservation. This portion of the water supply portfolio will initially be utilized to add new customers to the system; however, the supply reliability needs to be replenished and paid for by the new customers to ensure consistent continued reliability of the water system. The project includes new groundwater source planning, permitting, and development.

The estimated cost of this project is \$1,984,000 and will be funded by new customers through the WCC.

This project is ranked as Priority Level 1 because it ensures consistent continued reliability of the District's water system.

6.1.8. Big Wave NPA Water Main Extension

This project provides for the installation of a new 12-inch-diameter, 4,400-foot-long water main extension required to serve the Big Wave NPA development with 2,000 gallons-per-minute fire flow for 2 hours with the residual pressure at the hydrant on the Big Wave NPA property of 20 pounds per square inch.

The developer will fund this project in its entirety. This project is NOT included in the water connection fee calculations.

The estimated cost of this project is \$2,030,000. This project will be funded entirely by the developer and is not included in the water connection fee calculations. It is ranked as Priority Level 1 because it is paid by others.

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APPENDICES

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7. Appendices Table of Contents

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APPENDIX A

Rates of Production

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7.1. Appendix A: Rates of Production

Average Annual Rates of Production, All Sources, 2004 – October 2007

| Source | Rated Capacity (gpm) | Rates of Production (gpm) | | | | |
|---|----------------------|---------------------------|------------|------------|------------------|----------------------------|
| | | 2004 | 2005 | 2006 | Jan. – Oct. 2007 | Average Rate of Production |
| North Airport Well | 100 | 77 | 51 | 46 | 49 | 56 |
| South Airport Well | 55 | 44 | 43 | 40 | 41 | 42 |
| Airport Well No. 3 | 100 | 62 | 65 | 90 | 77 | 73 |
| Drake Well | 35 | 37 | 40 | 34 | 37 | 37 |
| Portola Well No. 1 | 9 | 7 | 6 | 5 | 5 | 6 |
| Portola Well No. 3 | 10 | 7 | 7 | 6 | 7 | 7 |
| Portola Well No. 4 | 16 | 8 | 3 | 5 | 9 | 6 |
| Wagner Well No. 3 | 70 | 52 | 46 | 63 | 69 | 58 |
| Montara Creek Surface Diversion | 75 | 66 | 67 | 69 | 51 | 63 |
| Total Monthly Rate of Production | 470 | 359 | 329 | 359 | 345 | 348 |
| Total Groundwater Rate of Production | 395 | 293 | 262 | 290 | 294 | 285 |

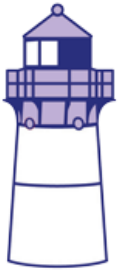
Average Annual Rates of Production, All Sources, November 2007 – 2014

| Source | Rated Capacity (gpm) | Rates of Production (gpm) | | | | | | | | Average Rate of Production |
|---|----------------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------|
| | | Nov. – Dec. 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | |
| Alta Vista Well | 150 | 41 | 75 | 81 | 93 | 140 | 109 | 131 | 133 | 100 |
| North Airport Well | 100 | 53 | 55 | 64 | 186 | 91 | 81 | 25 | 62 | 77 |
| South Airport Well | 55 | 48 | 37 | 32 | 21 | 23 | 0 | 0 | 0 | 20 |
| Airport Well No. 3 | 100 | 67 | 54 | 60 | 17 | 0 | 0 | 0 | 0 | 25 |
| Drake Well | 35 | 37 | 38 | 36 | 37 | 46 | 34 | 29 | 29 | 36 |
| Portola Well No. 1 | 9 | 8 | 5 | 6 | 5 | 5 | 4 | 5 | 5 | 5 |
| Portola Well No. 3 | 10 | 7 | 7 | 6 | 6 | 8 | 5 | 2 | 11 | 6 |
| Portola Well No. 4 | 16 | 10 | 6 | 8 | 7 | 9 | 8 | 5 | 3 | 7 |
| Wagner Well No. 3 | 70 | 73 | 73 | 64 | 64 | 65 | 56 | 45 | 36 | 59 |
| Montara Creek Surface Diversion | 75 | 22 | 51 | 55 | 65 | 85 | 73 | 47 | 53 | 56 |
| Total Monthly Rate of Production | 620 | 365 | 400 | 412 | 503 | 472 | 370 | 290 | 332 | 393 |
| Total Groundwater Rate of Production | 545 | 344 | 350 | 357 | 438 | 388 | 297 | 243 | 278 | 337 |

Average Annual Rates of Production, All Sources, 2015

| Source | Rated Capacity (gpm) | Rates of Production (gpm) | |
|---|----------------------|---------------------------|----------------------------|
| | | 2015 | Average Rate of Production |
| Alta Vista Well | 150 | 122 | 122 |
| North Airport Well | 100 | 49 | 49 |
| South Airport Well | 55 | 0 | 0 |
| Airport Well No. 3 | 100 | 0 | 0 |
| Drake Well | 35 | 30 | 30 |
| Portola Well No. 1 | 9 | 0 | 0 |
| Portola Well No. 3 | 10 | 40 | 40 |
| Portola Well No. 4 | 16 | 1 | 1 |
| Wagner Well No. 3 | 70 | 42 | 42 |
| Pillar Ridge Wells No. 1 – 3 | 57 | 40 | 40 |
| Montara Creek Surface Diversion | 75 | 54 | 54 |
| Total Monthly Rate of Production | 677 | 379 | 379 |
| Total Groundwater Rate of Production | 602 | 325 | 325 |

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APPENDIX B

Production Data and Analysis

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7.2. Appendix B: Production Data and Analysis

2004 Monthly Production Data

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|--------------------|
| North Airport Well | 333,890 | 202,780 | 104,900 | 629,130 | 747,140 | 1,000,110 | 495,470 | 1,021,420 | 2,197,710 | 1,290,660 | 316,790 | 512,400 | 8,852,400 |
| South Airport well | 778,870 | 972,180 | 806,970 | 1,586,650 | 2,088,760 | 2,168,910 | 2,120,940 | 2,044,140 | 1,975,030 | 1,723,820 | 1,588,930 | 1,826,810 | 19,682,010 |
| Airport Well No. 3 | 1,620,780 | 1,454,660 | 1,719,280 | 2,793,080 | 2,683,820 | 2,161,420 | 1,452,070 | 1,549,660 | 1,627,050 | 1,343,490 | 1,213,590 | 805,150 | 20,424,050 |
| Drake Well | 1,442,860 | 1,290,500 | 1,400,080 | 1,478,970 | 1,514,190 | 1,518,750 | 1,514,520 | 1,510,970 | 1,518,980 | 1,501,210 | 1,477,380 | 1,567,860 | 17,736,270 |
| Portola Well No. 1 | 324,150 | 297,890 | 299,150 | 266,350 | 298,920 | 281,280 | 290,690 | 295,210 | 283,150 | 275,900 | 274,350 | 278,220 | 3,465,260 |
| Portola Well No. 3 | 0 | 0 | 349,510 | 370,070 | 380,440 | 361,130 | 366,400 | 359,920 | 340,390 | 341,060 | 327,390 | 332,620 | 3,528,930 |
| Portola Well No. 4 | 480,260 | 444,820 | 449,190 | 369,710 | 384,190 | 378,290 | 389,110 | 326,250 | 273,500 | 208,500 | 200,880 | 198,510 | 4,103,210 |
| Wagner Well No. 3 | 1,862,870 | 1,691,330 | 1,805,780 | 2,072,960 | 2,020,630 | 2,025,650 | 1,955,640 | 1,952,410 | 1,935,590 | 1,796,320 | 1,680,480 | 1,904,810 | 22,704,470 |
| Montara Surface Diversion | 2,415,900 | 2,145,600 | 2,653,600 | 1,533,300 | 3,222,500 | 3,149,700 | 3,256,500 | 3,076,700 | 2,909,800 | 2,304,600 | 2,244,400 | 1,634,100 | 30,546,700 |
| Total Monthly Production | 9,259,580 | 8,499,760 | 9,588,460 | 11,100,220 | 13,340,590 | 13,045,240 | 11,841,340 | 12,136,680 | 13,061,200 | 10,785,560 | 9,324,190 | 9,060,480 | 131,043,300 |

2005 Monthly Production Data

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|--------------------|
| North Airport Well | 697,990 | 436,900 | 724,300 | 787,120 | 826,490 | 652,870 | 553,590 | 430,760 | 440,610 | 205,920 | 175,760 | 262,210 | 6,194,520 |
| South Airport well | 1,782,830 | 1,696,510 | 1,745,200 | 1,616,180 | 1,760,140 | 1,738,970 | 1,757,000 | 1,672,860 | 1,450,600 | 1,589,260 | 1,528,950 | 1,514,370 | 19,852,870 |
| Airport Well No. 3 | 1,003,250 | 661,070 | 1,155,800 | 788,230 | 1,382,530 | 1,894,540 | 2,863,070 | 3,216,770 | 2,578,360 | 2,741,550 | 2,471,900 | 2,379,800 | 23,136,870 |
| Drake Well | 1,522,410 | 1,281,320 | 1,407,460 | 1,302,600 | 1,461,330 | 1,496,440 | 1,631,360 | 1,495,540 | 1,354,460 | 1,377,150 | 1,373,900 | 1,467,190 | 17,171,160 |
| Portola Well No. 1 | 277,090 | 245,500 | 267,160 | 263,670 | 256,990 | 232,630 | 241,010 | 240,510 | 241,620 | 240,040 | 231,250 | 237,660 | 2,975,130 |
| Portola Well No. 3 | 335,720 | 298,800 | 329,600 | 319,980 | 327,750 | 308,100 | 314,870 | 311,260 | 300,280 | 304,520 | 291,200 | 296,510 | 3,738,590 |
| Portola Well No. 4 | 194,940 | 165,460 | 119,110 | 195,870 | 179,040 | 152,120 | 87,990 | 12,110 | 59,260 | 59,260 | 32,650 | 0 | 1,257,810 |
| Wagner Well No. 3 | 1,825,310 | 1,670,660 | 1,864,160 | 1,483,220 | 1,575,280 | 1,507,340 | 1,727,700 | 1,890,250 | 1,719,020 | 1,762,890 | 1,759,970 | 1,942,610 | 20,728,410 |
| Montara Surface Diversion | 1,667,000 | 1,819,100 | 1,827,700 | 2,773,200 | 2,679,900 | 2,797,700 | 3,057,500 | 3,068,800 | 2,891,700 | 2,778,200 | 2,259,300 | 1,621,400 | 29,241,500 |
| Total Monthly Production | 9,306,540 | 8,275,320 | 9,440,490 | 9,530,070 | 10,449,450 | 10,780,710 | 12,234,090 | 12,338,860 | 11,035,910 | 11,058,790 | 10,124,880 | 9,721,750 | 124,296,860 |

2006 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|--------------------|
| North Airport Well | 346,600 | 183,430 | 443,990 | 229,040 | 575,860 | 1,464,560 | 1,252,640 | 296,090 | 245,790 | 190,270 | 421,940 | 224,410 | 5,874,620 |
| South Airport well | 1,597,240 | 1,591,350 | 1,462,920 | 1,305,640 | 1,585,310 | 1,617,650 | 1,571,620 | 1,439,120 | 1,313,210 | 1,316,440 | 1,276,600 | 1,132,960 | 17,210,060 |
| Airport Well No. 3 | 2,455,890 | 2,341,560 | 2,455,550 | 2,231,840 | 2,680,040 | 3,510,980 | 3,151,620 | 2,283,820 | 1,912,550 | 1,722,420 | 2,773,560 | 1,852,210 | 29,372,040 |
| Drake Well | 1,464,940 | 1,238,060 | 1,504,090 | 1,448,320 | 1,501,750 | 1,613,440 | 1,579,610 | 1,313,590 | 1,248,940 | 1,240,060 | 2,540 | 352,430 | 14,507,770 |
| Portola Well No. 1 | 222,470 | 185,600 | 255,540 | 216,200 | 266,740 | 251,110 | 253,300 | 243,810 | 222,820 | 236,220 | 222,900 | 62,330 | 2,639,040 |
| Portola Well No. 3 | 299,740 | 274,690 | 305,820 | 222,520 | 0 | 0 | 117,480 | 357,660 | 332,620 | 352,070 | 328,910 | 333,220 | 2,924,730 |
| Portola Well No. 4 | 11,860 | 0 | 0 | 0 | 105,070 | 103,930 | 179,640 | 437,750 | 407,400 | 415,930 | 392,180 | 379,400 | 2,433,160 |
| Wagner Well No. 3 | 2,200,610 | 1,865,420 | 2,191,810 | 2,142,380 | 1,609,710 | 0 | 838,190 | 2,515,570 | 2,279,220 | 2,069,980 | 2,576,510 | 2,313,460 | 22,602,860 |
| Montara Surface Diversion | 1,243,500 | 2,037,800 | 1,070,400 | 1,096,400 | 2,500,800 | 2,936,300 | 3,062,600 | 3,065,000 | 2,967,100 | 2,948,100 | 2,627,300 | 2,190,500 | 27,745,800 |
| Total Monthly Production | 9,842,850 | 9,717,910 | 9,690,120 | 8,892,340 | 10,825,280 | 11,497,970 | 12,006,700 | 11,952,410 | 10,929,650 | 10,491,490 | 10,622,440 | 8,840,920 | 125,310,080 |

2007 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 3,970 | 1,572,300 | 1,798,500 | 3,374,770 |
| North Airport Well | 32,120 | 175,270 | 62,490 | 70,960 | 223,640 | 551,580 | 290,400 | 456,910 | 407,850 | 321,440 | 226,100 | 173,520 | 2,992,280 |
| South Airport well | 1,074,110 | 984,150 | 1,064,260 | 1,109,110 | 1,131,380 | 1,353,850 | 1,804,120 | 1,921,580 | 1,704,950 | 1,594,710 | 1,449,300 | 1,506,640 | 16,698,160 |
| Airport Well No. 3 | 1,048,660 | 1,489,160 | 1,509,090 | 1,562,100 | 2,015,520 | 2,508,740 | 2,055,280 | 2,213,300 | 1,740,030 | 1,384,030 | 1,160,190 | 989,090 | 19,675,190 |
| Drake Well | 1,251,860 | 1,267,260 | 1,285,010 | 1,306,040 | 1,333,680 | 1,412,840 | 1,484,800 | 1,501,588 | 1,370,535 | 1,462,547 | 1,355,136 | 1,310,911 | 16,342,207 |
| Portola Well No. 1 | 0 | 0 | 0 | 0 | 79,510 | 249,560 | 260,450 | 333,250 | 338,440 | 383,110 | 366,860 | 350,350 | 2,361,530 |
| Portola Well No. 3 | 337,770 | 302,420 | 330,600 | 305,110 | 331,660 | 292,400 | 302,390 | 279,840 | 304,960 | 284,540 | 299,120 | 301,410 | 3,672,220 |
| Portola Well No. 4 | 395,310 | 360,410 | 394,160 | 343,530 | 312,540 | 372,560 | 412,940 | 308,700 | 453,380 | 461,510 | 437,960 | 438,640 | 4,691,640 |
| Wagner Well No. 3 | 1,805,090 | 1,805,090 | 2,123,710 | 2,259,830 | 2,292,980 | 2,264,760 | 2,334,470 | 2,407,530 | 2,162,290 | 2,268,860 | 2,130,670 | 1,936,720 | 25,792,000 |
| Montara Surface Diversion | 2,866,800 | 1,391,200 | 2,228,200 | 1,672,600 | 2,131,100 | 1,802,400 | 1,731,900 | 1,645,700 | 1,868,400 | 1,480,700 | 273,300 | 0 | 19,092,300 |
| Total Monthly Production | 8,811,720 | 7,774,960 | 8,997,520 | 8,629,280 | 9,852,010 | 10,808,690 | 10,676,750 | 11,068,398 | 10,350,835 | 9,645,417 | 9,270,936 | 8,805,781 | 114,692,297 |

2008 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 1,863,000 | 2,957,400 | 2,519,000 | 2,707,300 | 2,867,200 | 2,935,500 | 2,853,100 | 2,994,200 | 2,891,000 | 2,737,100 | 2,987,000 | 2,965,900 | 33,277,700 |
| North Airport Well | 101,070 | 21,700 | 8,960 | 5,460 | 72,890 | 142,060 | 16,240 | 14,110 | 7,120 | 0 | 10,610 | 32,970 | 433,190 |
| South Airport well | 1,444,940 | 986,250 | 1,083,380 | 1,106,560 | 1,278,680 | 1,287,120 | 1,288,230 | 1,259,440 | 1,209,100 | 1,128,160 | 1,050,740 | 1,019,308 | 14,141,908 |
| Airport Well No. 3 | 901,770 | 260,090 | 240,980 | 627,410 | 1,087,910 | 1,336,680 | 749,700 | 719,380 | 773,490 | 320,090 | 410,410 | 326,690 | 7,754,600 |
| Drake Well | 1,231,373 | 717,954 | 594,040 | 887,606 | 1,068,330 | 1,037,700 | 1,136,410 | 1,038,070 | 1,045,000 | 1,106,390 | 989,920 | 908,600 | 11,761,393 |
| Portola Well No. 1 | 337,540 | 290,540 | 318,320 | 150,710 | 0 | 0 | 0 | 0 | 211,050 | 343,080 | 310,990 | 301,460 | 2,263,690 |
| Portola Well No. 3 | 300,080 | 252,970 | 310,120 | 260,780 | 307,480 | 292,670 | 291,080 | 287,320 | 268,410 | 275,100 | 72,050 | 247,680 | 3,165,740 |
| Portola Well No. 4 | 429,880 | 354,280 | 424,210 | 189,050 | 0 | 0 | 0 | 0 | 251,450 | 449,430 | 442,420 | 429,140 | 2,969,860 |
| Wagner Well No. 3 | 2,001,170 | 875,730 | 507,500 | 1,042,300 | 1,479,970 | 1,466,100 | 1,668,970 | 1,548,080 | 1,417,980 | 1,594,360 | 1,279,410 | 996,108 | 15,877,678 |
| Montara Surface Diversion | 0 | 915,400 | 2,555,700 | 2,694,900 | 3,049,700 | 2,725,800 | 2,630,200 | 2,453,100 | 2,092,400 | 1,714,700 | 1,347,400 | 1,168,300 | 23,347,600 |
| Total Monthly Production | 8,610,823 | 7,632,314 | 8,562,210 | 9,672,076 | 11,212,160 | 11,223,630 | 10,633,930 | 10,313,700 | 10,167,000 | 9,668,410 | 8,900,950 | 8,396,156 | 114,993,359 |

2009 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 2,842,100 | 2,648,100 | 2,970,300 | 2,737,500 | 3,036,900 | 2,985,600 | 3,728,700 | 3,430,400 | 3,273,000 | 3,411,900 | 3,418,400 | 3,335,300 | 37,818,200 |
| North Airport Well | 27,400 | 25,550 | 19,330 | 66,080 | 99,280 | 62,830 | 17,800 | 12,700 | 122,280 | 130,250 | 167,840 | 89,620 | 840,960 |
| South Airport well | 859,222 | 345,520 | 321,420 | 692,490 | 860,910 | 850,380 | 450,040 | 697,430 | 226,780 | 575,325 | 630,418 | 298,480 | 6,808,415 |
| Airport Well No. 3 | 87,530 | 25,750 | 10,190 | 45,000 | 390,990 | 498,370 | 347,340 | 276,310 | 12,750 | 0 | 12,890 | 18,590 | 1,725,710 |
| Drake Well | 975,810 | 891,290 | 997,030 | 181,840 | 1,231,340 | 1,229,370 | 1,340,430 | 1,339,780 | 1,320,590 | 900,030 | 538,140 | 1,352,150 | 12,297,800 |
| Portola Well No. 1 | 305,730 | 266,120 | 279,640 | 269,000 | 263,730 | 271,630 | 262,160 | 262,460 | 251,960 | 228,280 | 229,480 | 219,970 | 3,110,160 |
| Portola Well No. 3 | 284,170 | 261,050 | 285,200 | 277,680 | 281,870 | 268,790 | 270,040 | 267,250 | 255,270 | 257,920 | 245,150 | 248,130 | 3,202,520 |
| Portola Well No. 4 | 414,130 | 360,360 | 384,280 | 374,450 | 371,050 | 352,880 | 351,220 | 371,480 | 377,290 | 377,450 | 365,580 | 351,170 | 4,451,340 |
| Wagner Well No. 3 | 1,189,262 | 1,229,290 | 1,332,140 | 1,543,580 | 1,251,770 | 1,303,040 | 1,626,730 | 2,564,660 | 2,616,810 | 2,329,980 | 2,571,270 | 2,088,880 | 21,647,412 |
| Montara Surface Diversion | 1,306,100 | 840,700 | 1,153,700 | 1,205,500 | 1,135,200 | 1,013,500 | 913,100 | 870,600 | 758,400 | 775,100 | 726,300 | 567,500 | 11,265,700 |
| Total Monthly Production | 8,291,454 | 6,893,730 | 7,753,230 | 7,393,120 | 8,923,040 | 8,836,390 | 9,307,560 | 10,093,070 | 9,215,130 | 8,986,235 | 8,905,468 | 8,569,790 | 103,168,217 |

2010 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 3,032,400 | 2,737,600 | 2,177,700 | 2,184,700 | 1,491,500 | 2,016,400 | 2,510,800 | 2,479,400 | 2,908,300 | 3,189,400 | 3,323,500 | 3,724,000 | 31,775,700 |
| North Airport Well | 90,140 | 11,650 | 119,720 | 33,950 | 83,180 | 65,930 | 231,700 | 39,350 | 4,580 | 7,140 | 26,170 | 8,300 | 721,810 |
| South Airport well | 321,195 | 134,225 | 147,920 | 168,150 | 166,578 | 100,650 | 309,600 | 31,200 | 1,950 | 21,000 | 11,700 | 22,050 | 1,436,218 |
| Airport Well No. 3 | 13,300 | 0 | 14,390 | 17,470 | 6,690 | 1,390 | 0 | 0 | 0 | 0 | 0 | 0 | 53,240 |
| Drake Well | 1,003,680 | 728,570 | 979,200 | 849,270 | 887,440 | 905,490 | 1,156,630 | 817,420 | 598,080 | 667,310 | 644,370 | 632,580 | 9,870,040 |
| Portola Well No. 1 | 221,540 | 194,380 | 233,270 | 230,270 | 242,340 | 225,480 | 213,250 | 191,980 | 164,860 | 189,860 | 125,240 | 210,400 | 2,442,870 |
| Portola Well No. 3 | 213,980 | 236,300 | 268,770 | 260,430 | 265,130 | 251,960 | 254,750 | 226,500 | 203,290 | 232,160 | 156,100 | 250,490 | 2,819,860 |
| Portola Well No. 4 | 376,520 | 316,440 | 347,950 | 345,000 | 322,360 | 300,580 | 319,770 | 276,240 | 246,800 | 269,400 | 178,960 | 300,340 | 3,600,360 |
| Wagner Well No. 3 | 2,201,070 | 1,806,940 | 2,017,440 | 1,881,970 | 1,948,590 | 1,975,200 | 2,256,990 | 2,001,180 | 1,822,410 | 1,584,150 | 1,552,710 | 1,595,070 | 22,643,720 |
| Montara Surface Diversion | 381,200 | 659,500 | 1,526,200 | 1,725,800 | 3,118,500 | 3,135,300 | 3,172,700 | 3,275,800 | 2,907,800 | 2,250,000 | 1,739,800 | 796,800 | 24,689,400 |
| Total Monthly Production | 7,855,025 | 6,825,605 | 7,832,560 | 7,697,010 | 8,532,308 | 8,978,380 | 10,426,190 | 9,339,070 | 8,858,070 | 8,410,420 | 7,758,550 | 7,540,030 | 100,053,218 |

2011 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Alta Vista Well | 2,826,900 | 2,958,700 | 3,514,400 | 2,884,700 | 2,675,900 | 1,786,500 | 1,928,100 | 1,917,200 | 1,659,000 | 2,380,400 | 2,119,300 | 1,421,500 | 28,072,600 |
| North Airport Well | 8,670 | 12,100 | 2,310 | 4,680 | 10,430 | 16,290 | 14,090 | 5,520 | 1,770 | 4,810 | 21,660 | 26,720 | 129,050 |
| South Airport well | 2,550 | 8,700 | 1,200 | 4,350 | 3,950 | 18,070 | 6,300 | 4,650 | 1,050 | 3,725 | 13,500 | 900 | 68,945 |
| Airport Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 307,050 | 498,170 | 657,390 | 471,750 | 695,990 | 1,241,030 | 1,295,410 | 1,351,100 | 1,192,610 | 1,375,920 | 1,189,010 | 1,150,050 | 11,425,480 |
| Portola Well No. 1 | 204,510 | 190,060 | 198,400 | 192,130 | 200,370 | 161,290 | 149,180 | 180,000 | 186,300 | 184,500 | 179,140 | 179,420 | 2,205,300 |
| Portola Well No. 3 | 265,730 | 241,410 | 265,560 | 256,870 | 210,030 | 210,080 | 220,080 | 248,690 | 253,240 | 252,740 | 211,530 | 251,670 | 2,887,630 |
| Portola Well No. 4 | 290,470 | 296,840 | 318,050 | 304,750 | 248,430 | 272,870 | 257,860 | 296,740 | 313,080 | 314,250 | 310,070 | 309,890 | 3,533,300 |
| Wagner Well No. 3 | 993,830 | 1,342,770 | 1,616,320 | 1,365,820 | 1,588,860 | 1,912,540 | 1,970,310 | 1,909,360 | 1,685,940 | 1,098,270 | 1,309,870 | 1,892,430 | 18,686,320 |
| Montara Surface Diversion | 2,591,200 | 1,459,100 | 1,004,500 | 2,193,000 | 3,179,800 | 2,858,200 | 2,923,900 | 2,693,500 | 3,170,000 | 2,396,900 | 2,303,200 | 2,569,700 | 29,343,000 |
| Total Monthly Production | 7,490,910 | 7,007,850 | 7,578,130 | 7,678,050 | 8,813,760 | 8,476,870 | 8,765,230 | 8,606,760 | 8,462,990 | 8,011,515 | 7,657,280 | 7,802,280 | 96,351,625 |

2012 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 2,012,000 | 1,818,800 | 2,654,100 | 2,738,100 | 2,194,000 | 2,256,200 | 2,620,600 | 2,584,800 | 2,737,000 | 3,328,100 | 4,138,800 | 4,777,900 | 33,860,400 |
| North Airport Well | 3,780 | 62,420 | 5,310 | 12,790 | 9,420 | 332,530 | 52,950 | 45,060 | 15,230 | 35,440 | 32,100 | 87,840 | 694,870 |
| South Airport well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Airport Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 1,153,140 | 1,032,520 | 1,309,770 | 1,271,570 | 1,161,700 | 1,175,630 | 1,189,060 | 1,118,792 | 1,158,928 | 1,282,950 | 2,000,264 | 689,103 | 14,543,427 |
| Portola Well No. 1 | 178,390 | 147,530 | 168,530 | 163,390 | 166,520 | 161,230 | 156,070 | 155,420 | 143,570 | 162,590 | 55,690 | 141,530 | 1,800,460 |
| Portola Well No. 3 | 246,160 | 210,420 | 247,100 | 241,290 | 242,990 | 232,890 | 234,600 | 230,140 | 218,150 | 185,360 | 17,330 | 128,020 | 2,434,450 |
| Portola Well No. 4 | 312,630 | 262,170 | 301,990 | 293,580 | 296,180 | 291,630 | 300,832 | 351,480 | 328,820 | 279,040 | 36,070 | 213,220 | 3,267,642 |
| Wagner Well No. 3 | 2,134,800 | 1,898,470 | 1,865,290 | 1,717,290 | 1,666,000 | 1,734,140 | 2,144,770 | 1,416,670 | 1,260,160 | 1,497,040 | 1,506,090 | 1,015,710 | 19,856,430 |
| Montara Surface Diversion | 2,157,800 | 1,889,580 | 1,055,600 | 1,099,300 | 2,840,100 | 3,050,400 | 2,915,800 | 3,261,900 | 2,902,700 | 2,004,300 | 874,800 | 660,000 | 24,712,280 |
| Total Monthly Production | 8,198,700 | 7,321,910 | 7,607,690 | 7,537,310 | 8,576,910 | 9,234,650 | 9,614,682 | 9,164,262 | 8,764,558 | 8,774,820 | 8,661,144 | 7,713,323 | 101,169,959 |

2013 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 3,763,100 | 2,792,800 | 2,957,800 | 3,219,900 | 4,100,100 | 4,498,000 | 5,036,000 | 4,670,800 | 4,841,600 | 4,801,000 | 4,537,100 | 5,266,600 | 50,484,800 |
| North Airport Well | 0 | 9,590 | 0 | 0 | 79,660 | 0 | 0 | 0 | 27,880 | 0 | 0 | 19,820 | 136,950 |
| South Airport well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Airport Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 814,940 | 727,092 | 858,846 | 862,458 | 989,748 | 1,032,058 | 1,061,251 | 993,096 | 941,106 | 906,727 | 1,048,125 | 825,370 | 11,060,817 |
| Portola Well No. 1 | 246,050 | 210,830 | 215,640 | 219,810 | 235,550 | 224,180 | 227,470 | 225,770 | 214,560 | 211,360 | 203,040 | 203,840 | 2,638,100 |
| Portola Well No. 3 | 251,240 | 221,480 | 227,370 | 214,050 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 914,140 |
| Portola Well No. 4 | 431,550 | 303,270 | 135,690 | 129,920 | 160,560 | 158,030 | 170,670 | 184,210 | 193,760 | 213,420 | 209,480 | 199,370 | 2,489,930 |
| Wagner Well No. 3 | 597,570 | 721,300 | 860,190 | 921,790 | 1,514,058 | 1,512,800 | 1,597,850 | 1,364,270 | 1,331,770 | 1,326,760 | 1,370,530 | 1,071,410 | 14,190,298 |
| Montara Surface Diversion | 1,454,000 | 2,003,600 | 2,178,000 | 2,405,400 | 2,329,200 | 1,792,400 | 1,909,500 | 1,753,100 | 1,384,000 | 1,414,600 | 815,500 | 862,500 | 20,301,800 |
| Total Monthly Production | 7,558,450 | 6,989,962 | 7,433,536 | 7,973,328 | 9,408,876 | 9,217,468 | 10,002,741 | 9,191,246 | 8,934,676 | 8,873,867 | 8,183,775 | 8,448,910 | 102,216,835 |

2014 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Alta Vista Well | 5,420,600 | 4,358,600 | 4,566,800 | 4,981,200 | 5,515,100 | 5,625,300 | 5,699,300 | 5,185,000 | 4,700,300 | 4,904,600 | 4,274,500 | 3,366,200 | 58,597,500 |
| North Airport Well | 23,410 | 0 | 18,870 | 0 | 187,850 | 31,370 | 453,160 | 1,290,510 | 1,045,350 | 1,013,440 | 489,490 | 221,440 | 4,774,890 |
| South Airport well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Airport Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 903,546 | 769,810 | 885,266 | 791,729 | 945,007 | 965,663 | 993,688 | 778,750 | 782,431 | 620,949 | 559,754 | 826,726 | 9,823,319 |
| Portola Well No. 1 | 165,740 | 163,060 | 183,620 | 174,460 | 180,190 | 169,170 | 171,090 | 116,780 | 168,210 | 166,860 | 82,040 | 7,280 | 1,748,500 |
| Portola Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44,626 | 834,844 | 1,598,550 | 2,478,020 |
| Portola Well No. 4 | 94,360 | 0 | 0 | 14,650 | 134,450 | 159,430 | 143,780 | 119,940 | 149,110 | 157,440 | 65,870 | 8,690 | 1,047,720 |
| Wagner Well No. 3 | 1,111,090 | 948,570 | 1,361,970 | 951,500 | 912,500 | 946,180 | 939,990 | 614,100 | 751,180 | 372,520 | 372,200 | 558,530 | 9,840,330 |
| Montara Surface Diversion | 824,700 | 510,700 | 699,400 | 452,800 | 701,000 | 688,700 | 679,200 | 700,500 | 553,400 | 547,800 | 327,300 | 262,900 | 6,948,400 |
| Total Monthly Production | 8,543,446 | 6,750,740 | 7,715,926 | 7,366,339 | 8,576,097 | 8,585,813 | 9,080,208 | 8,805,580 | 8,149,981 | 7,828,235 | 7,005,998 | 6,850,316 | 95,258,679 |

2015 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Alta Vista Well | 3,895,700 | 3,656,300 | 4,151,800 | 3,525,000 | 3,357,300 | 3,320,800 | 4,021,300 | 4,135,400 | 4,470,100 | 4,140,800 | 3,955,400 | 3,727,400 | 46,357,300 |
| North Airport Well | 34,270 | 0 | 700 | 0 | 6,060 | 0 | 19,470 | 148,160 | 303,280 | 4,250 | 480 | 50,390 | 567,060 |
| South Airport well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Airport Well No. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 635,996 | 496,522 | 667,050 | 438,974 | 556,544 | 687,896 | 741,370 | 682,536 | 492,552 | 581,700 | 501,538 | 621,100 | 7,103,778 |
| Portola Well No. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26,780 | 0 | 26,780 |
| Portola Well No. 3 | 1,783,480 | 1,491,650 | 1,650,620 | 1,963,530 | 2,004,500 | 1,782,250 | 1,797,360 | 1,898,270 | 1,225,450 | 1,312,220 | 1,055,240 | 1,223,540 | 19,188,110 |
| Portola Well No. 4 | 390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 390 |
| Wagner Well No. 3 | 510,610 | 412,350 | 482,000 | 276,700 | 477,238 | 716,670 | 714,180 | 670,350 | 483,385 | 511,876 | 499,040 | 488,670 | 6,243,069 |
| Pillar Ridge Wells Nos. 1 – 3 | 1,008,045 | 898,874 | 1,057,237 | 998,567 | 1,030,083 | 999,727 | 1,084,084 | 977,255 | 971,757 | 1,002,786 | 972,991 | 977,203 | 11,978,609 |
| Montara Surface Diversion | 622,700 | 529,400 | 589,400 | 612,900 | 792,600 | 666,995 | 770,900 | 769,700 | 746,600 | 725,500 | 638,500 | 276,900 | 7,742,095 |
| Total Monthly Production | 8,491,191 | 7,485,096 | 8,598,807 | 7,815,671 | 8,224,325 | 8,174,338 | 9,148,664 | 9,281,671 | 8,693,124 | 8,279,132 | 7,649,969 | 7,365,203 | 99,207,191 |

2016 Monthly Production Data (Gallons)

| Source | January | February | March | April | May | June | July | August | September | October | November | December | Total Production |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Alta Vista Well | 4,018,100 | 3,667,400 | 3,194,800 | 2,656,900 | 3,172,400 | 3,234,100 | 1,661,200 | 1,667,200 | 1,646,100 | 2,032,100 | 1,778,600 | 2,621,500 | 31,350,400 |
| North Airport Well | 0 | 175,650 | 1,288,420 | 1,465,760 | 734,880 | 7,710 | 0 | 62,150 | 14,100 | 0 | 14,930 | 10,220 | 3,773,820 |
| South Airport Well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Airport Well #3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 563,040 | 426,856 | 383,882 | 591,944 | 689,988 | 646,272 | 631,082 | 587,818 | 588,066 | 568,028 | 563,426 | 490,748 | 6,731,150 |
| Portola Well #1 | 0 | 0 | 0 | 0 | 0 | 87,146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Portola Well #3 | 973,760 | 712,070 | 961,950 | 597,000 | 945,310 | 310,300 | 1,634,460 | 1,674,720 | 1,628,620 | 1,618,830 | 1,495,870 | 1,374,790 | 87,146 |
| Portola Well #4 | 0 | 0 | 0 | 411,154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 411,14 |
| Wagner Well #3 | 508,610 | 415,060 | 510,390 | 1,003,810 | 1,274,810 | 1,319,350 | 1,232,360 | 1,076,290 | 1,145,280 | 1,098,910 | 1,164,300 | 1,081,090 | 11,830,260 |
| Pillar Ridge Wells Nos. 1-3 | 972,235 | 0 | 0 | 0 | 615,477 | 933,048 | 1,046,527 | 1,049,414 | 1,026,705 | 1,055,899 | 1,001,430 | 1,001,452 | 88,702,187 |
| Montara Surface Diversion | 273,300 | 887,500 | 1,029,500 | 1,046,200 | 1,174,800 | 2,416,100 | 3,041,300 | 2,945,200 | 2,689,600 | 1,870,000 | 1,511,900 | 1,143,600 | 20,029,000 |
| Total Production (Gallons) | 7,309,045 | 6,284,536 | 7,368,942 | 7,772,768 | 8,607,665 | 8,954,026 | 9,246,929 | 9,062,792 | 8,738,471 | 8,243,767 | 7,530,456 | 7,723,400 | 96,842,797 |

Average Monthly Production Data (Gallons), 2004 – 2016

| Source | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total Production |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|--------------------|
| Alta Vista Well | 3,709,238 | 3,449,463 | 3,588,338 | 3,454,413 | 3,551,300 | 3,582,300 | 3,757,388 | 3,633,050 | 3,640,800 | 3,865,675 | 3,816,575 | 3,900,788 | 43,949,325 |
| North Airport Well | 141,612 | 109,753 | 233,275 | 275,414 | 304,732 | 360,653 | 283,126 | 318,562 | 402,796 | 266,968 | 158,656 | 143,322 | 2,998,868 |
| South Airport well | 655,080 | 559,907 | 552,773 | 632,428 | 739,642 | 761,300 | 775,654 | 755,868 | 656,889 | 662,703 | 629,178 | 610,127 | 7,991,549 |
| Airport Well #3 | 594,265 | 519,358 | 592,107 | 672,094 | 853,958 | 992,677 | 884,923 | 854,937 | 720,353 | 625,965 | 670,212 | 530,961 | 8,511,808 |
| Drake Well | 1,105,887 | 947,160 | 1,077,426 | 990,256 | 1,169,753 | 1,246,882 | 1,312,968 | 1,210,754 | 1,134,357 | 1,132,581 | 1,020,292 | 1,016,235 | 13,364,551 |
| Portola Well #1 | 206,934 | 182,626 | 201,606 | 178,833 | 182,572 | 192,892 | 185,389 | 187,099 | 202,212 | 218,483 | 192,313 | 182,705 | 2,313,664 |
| Portola Well #3 | 440,986 | 375,272 | 461,018 | 440,776 | 441,430 | 359,214 | 483,626 | 511,798 | 444,223 | 455,096 | 444,561 | 548,886 | 5,406,885 |
| Portola Well #4 | 286,025 | 238,671 | 239,553 | 247,639 | 209,489 | 211,860 | 217,818 | 223,742 | 254,488 | 267,136 | 222,677 | 235,698 | 2,854,793 |
| Wagner Well #3 | 1,536,107 | 1,355,660 | 1,502,359 | 1,471,612 | 1,528,132 | 1,447,035 | 1,647,983 | 1,737,869 | 1,622,146 | 1,517,751 | 1,550,729 | 1,483,701 | 18,401,083 |
| Pillar Ridge Wells | 1,980,280 | 898,874 | 1,057,237 | 998,567 | 1,645,560 | 1,932,775 | 2,130,611 | 2,026,669 | 1,998,462 | 2,058,685 | 1,974,421 | 1,978,655 | 20,680,796 |
| Montara Surface Diversion | 1,483,683 | 1,424,098 | 1,630,992 | 1,709,275 | 2,404,600 | 2,419,458 | 2,505,425 | 2,464,967 | 2,320,158 | 1,934,208 | 1,474,083 | 1,146,183 | 22,917,131 |
| Average Monthly Production | 8,428,441 | 7,496,899 | 8,320,586 | 8,389,045 | 9,641,729 | 9,831,906 | 10,229,616 | 10,104,192 | 9,643,200 | 9,158,281 | 8,584,310 | 8,218,334 | 108,046,540 |

Source Production (Gallons), 2004 – 2016

| Source | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| Alta Vista Well | | | | 3,374,770 | 33,277,700 | 37,818,200 | 31,775,700 | 28,072,600 | 33,860,400 | 50,484,800 | 58,597,500 | 46,357,300 | 31,350,400 |
| North Airport Well | 8,852,400 | 6,194,520 | 5,874,620 | 2,992,280 | 433,190 | 840,960 | 721,810 | 129,050 | 694,870 | 136,950 | 4,774,890 | 567,060 | 3,773,820 |
| South Airport well | 19,682,010 | 19,852,870 | 17,210,060 | 16,698,160 | 14,141,908 | 6,808,415 | 1,436,218 | 68,945 | 0 | 0 | 0 | 0 | 0 |
| Airport Well #3 | 20,424,050 | 23,136,870 | 29,372,040 | 19,675,190 | 7,754,600 | 1,725,710 | 53,240 | 0 | 0 | 0 | 0 | 0 | 0 |
| Drake Well | 17,736,270 | 17,171,160 | 14,507,770 | 16,342,207 | 11,761,393 | 12,297,800 | 9,870,040 | 11,425,480 | 14,543,427 | 11,060,817 | 9,823,319 | 7,103,778 | 6,731,150 |
| Portola Well #1 | 3,465,260 | 2,975,130 | 2,639,040 | 2,361,530 | 2,263,690 | 3,110,160 | 2,442,870 | 2,205,300 | 1,800,460 | 2,638,100 | 1,748,500 | 26,780 | 87,146 |
| Portola Well #3 | 3,528,930 | 3,738,590 | 2,924,730 | 3,672,220 | 3,165,740 | 3,202,520 | 2,819,860 | 2,887,630 | 2,434,450 | 914,140 | 2,478,020 | 19,188,110 | 13,927,680 |
| Portola Well #4 | 4,103,210 | 1,257,810 | 2,433,160 | 4,691,640 | 2,969,860 | 4,451,340 | 3,600,360 | 3,533,300 | 3,267,642 | 2,489,930 | 1,047,720 | 390 | 411,154 |
| Wagner Well #3 | 22,704,470 | 20,728,410 | 22,602,860 | 25,792,000 | 15,877,678 | 21,647,412 | 22,643,720 | 18,686,320 | 19,856,430 | 14,190,298 | 9,840,330 | 6,243,069 | 11,830,860 |
| Pillar Ridge Wells Nos. 1-3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 11,978,609 | 8,702,187 |
| Montara Surface Diversion | 30,546,700 | 29,241,500 | 27,745,800 | 19,092,300 | 23,347,600 | 11,265,700 | 24,689,400 | 29,343,000 | 24,712,280 | 20,301,800 | 6,948,400 | 7,742,095 | 20,029,000 |
| Total Gallons Produced | 131,043,300 | 124,296,860 | 125,310,080 | 114,692,297 | 114,993,359 | 103,168,217 | 100,053,218 | 96,351,625 | 101,169,959 | 102,216,835 | 95,258,679 | 99,207,191 | 96,843,397 |

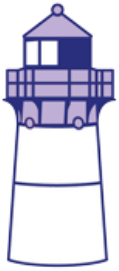
Production, Consumption, and Unaccounted-for-Water, 2004 – 2016

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Average |
|---|---------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total Annual Production (MG) | 131.04 | 124.30 | 125.31 | 114.69 | 114.99 | 103.17 | 100.05 | 96.35 | 101.17 | 102.22 | 95.26 | 99.21 | 96.84 | 108.05 |
| Total Annual Production (gpd) | 359,023 | 340,539 | 343,315 | 314,225 | 315,050 | 282,653 | 274,118 | 263,977 | 277,178 | 280,046 | 260,983 | 271,801 | 265,324 | 296,018 |
| Total Annual Consumption (MG) | 117.41 | 114.99 | 111.17 | 104.61 | 106.72 | 98.93 | 92.83 | 87.75 | 93.11 | 94.67 | 86.48 | 89.53 | 90.07 | 99.10 |
| Average Daily Consumption (gpd) | 321,671 | 315,041 | 304,575 | 286,603 | 292,384 | 271,041 | 254,329 | 240,411 | 255,107 | 259,367 | 236,921 | 245,274 | 246,786 | 271,501 |
| Unaccounted-for-water (MG) | 13.63 | 9.31 | 14.14 | 10.08 | 8.27 | 4.24 | 7.22 | 8.60 | 8.06 | 7.55 | 8.78 | 9.68 | 6.78 | 8.95 |
| Unaccounted For Water (gpd) | 37,352 | 25,498 | 38,740 | 27,623 | 22,667 | 11,612 | 19,790 | 23,566 | 22,071 | 20,679 | 24,062 | 26,527 | 18,538 | 24,517 |
| Percentage Unaccounted-for-water | 10.40% | 7.49% | 11.28% | 8.79% | 7.19% | 4.11% | 7.22% | 8.93% | 7.96% | 7.38% | 9.22% | 9.76% | 7.00% | 8.22% |

Maximum Daily Demand (MDD), 2006 – 2016

| Year | MDD (gpd) | Month of MDD |
|----------------------------------|------------------|---------------------|
| 2006 | 534,360 | July |
| 2007 | 511,980 | August |
| 2008 | 437,440 | June |
| 2009 | 406,780 | July |
| 2010 | 478,230 | July |
| 2011 | 379,610 | July |
| 2012 | 381,080 | June |
| 2013 | 414,676 | June |
| 2014 | 386,610 | August |
| 2015 | 402,210 | August |
| 2016 | 400,876 | July |
| Assumed MDD (2008 – 2015) | 478,230 | |

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APPENDIX C

2016 Consumer Confidence Report

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7.3. Appendix C: 2016 Consumer Confidence Report

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